

NEWMAN NON- MOTORIZED TRANSPORTATION PLAN



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INTRODUCTION

1



CITY OF NEWMAN
ALABAMA
DOWNTOWN PLAZA

2010

1 INTRODUCTION

The Newman Non-Motorized Transportation Plan guides the development of bicycle and pedestrian facilities in Newman. The City of Newman is dedicated to the health and happiness of its residents and the environment, and the Plan is intended to make Newman a more pleasant, convenient, and safe place for people who walk and bike. The Plan promotes healthy lifestyles by encouraging residents, employees, and visitors to walk and bike, and supports the City's goals of becoming more sustainable by building upon the existing pedestrian and bicycle facilities to encourage biking and walking trips for both recreation and transportation.

The Plan represents the City's first comprehensive bicycle and pedestrian planning effort. The Plan integrates the existing planning and policies related to bicycling and walking, including the Newman General Plan, the Stan-COG Bicycle and Pedestrian Master Plan, and the Stanislaus County Regional Transportation Plan.

Developing a pleasant, safe, and convenient non-motorized transportation system in Newman will help the City achieve the following goals:

- **Safety:** Improve Pedestrian and Bicyclist Safety.
- **Accessibility:** Provide accessibility for all non-motorized user groups, including pedestrians, bicyclists, and the physically disabled.
- **Connectivity:** Create a cohesive pedestrian and bicycle network that meets the needs of Newman residents and encourages bicycling and walking as a means of transportation and recreation.
- **Community Design:** Implement the Newman General Plan Policies in order to create an enjoyable environment that promotes walking and bicycling.
- **Education and Encouragement:** Educate the residents of Newman on the benefits of bicycling and walking, and encourage them to use non-motorized modes of transportation.
- **Maintenance:** Maintain the non-motorized transportation network in Newman.
- **Implementation:** Implement the Newman Non-Motorized Transportation Plan.

I. PLAN CONTENTS

The Newman Non-Motorized Transportation Plan contains the following contents:

- **Chapter 1: Introduction.** This chapter describes the public involvement during the creation of the Plan and outlines how the Plan fulfills the BTA requirements.
- **Chapter 2: Goals, Policies, and Actions.** This chapter contains the goals, policies, and actions that the City of Newman will follow in implementing the Non-Motorized Transportation Plan.
- **Chapter 3: Existing Conditions and Needs Analysis.** This chapter provides a description of the pedestrian and bicycle conditions in the City of Newman, an overview of relevant planning and policy documents, and a summary of bicycle and pedestrian improvement needs.
- **Chapter 4: Recommended Projects.** This chapter recommends a list of projects that will enhance walking and bicycling environments and improve safety and accessibility in Newman. The chapter also explains project prioritization methodology and includes estimated costs for the recommended projects.
- **Chapter 5: Support Programs.** This chapter outlines recommendations for support programs that promote walking and biking.
- **Chapter 6: Implementation and Funding.** This chapter describes processes and strategies for implementation of the recommended projects, and identifies potential funding sources that could help fund the implementation of the Plan.
- **Chapter 7: Design Guidelines.** This chapter outlines design guidelines and best practices for bicycle and pedestrian facilities recommended for the City of Newman.
- **Appendices:**
 - Appendix A: Project Priority Worksheet.
 - Appendix B: Conceptual Cost Estimates.
 - Appendix C: Community Letters of Support.

II. PLAN DEVELOPMENT AND PUBLIC INVOLVEMENT

This Plan was developed by The Planning Center | DC&E under contract with the City of Newman. As part of the Plan development process, The Planning Center | DC&E met with City staff, the Non-Motorized Transportation Plan (NMTP) Steering Committee, and members of the public to collect information on existing conditions and to identify needed improvements. During the planning process The Planning Center | DC&E also coordinated with the Stanislaus Council of Governments, which was concurrently updating the regional bicycle and pedestrian master plan.

In the beginning of the process, the City formed a NMTP Steering Committee to guide development of the plan and hosted meetings throughout the planning process. The Steering Committee consisted of representatives from the Newman-Crows Landing Unified School District, Newman Chamber of Commerce, local business owners, and members of the public. The Steering Committee provided information of the existing pedestrian and bicycle conditions and community needs, helped to develop the proposed bicycle and pedestrian networks, and vetted the proposed improvements.

III. BTA COMPLIANCE

To be eligible for State of California Bicycle Transportation Account (BTA) funding, Caltrans requires cities to prepare and adopt a bicycle transportation plan that complies with California Streets and Highways Code (SHC) Section 891.2. SHC Section 891.2 requires a bicycle transportation plan to include eleven elements, as shown in Table 1-1. Table 1-1 also shows where these requirements are addressed in this Plan.

BTA funding may not be sufficient to implement all projects identified in this Plan, but having an adopted Plan will position the City to qualify for BTA funding and allow the City to begin the implementation process by seeking additional outside funding. Refer to Chapter 6, Implementation and Funding for more information about funding.

TABLE 1-1 BTA REQUIREMENTS

<p align="center">REQUIRED ELEMENTS FOR A BICYCLE TRANSPORTATION PLAN (CALIFORNIA STREETS & HIGHWAYS CODE SECTION 891.2)</p>	<p align="center">LOCATION OF ELEMENT IN NEWMAN NMTP</p>
<p>(a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.</p>	<p>Section 3.III Tables 3-1 and 3-2</p>
<p>(b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.</p>	<p>Section 3.I.B Figures 3-2 and 3-3</p>
<p>(c) A map and description of existing and proposed bikeways.</p>	<p>Sections 3.IV.B and 4.11 Figures 3-5 and 4-3</p>
<p>(d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.</p>	<p>Sections 3.IV.E and 4.II.C Figures 3-5, 4-3, and 4-4</p>
<p>(e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.</p>	<p>Sections 3.VI and 4.III.H Figures 3-9 and 4-4</p>
<p>(f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.</p>	<p>Section 3.IV.E.4 and 4.II.C Figures 3-5 and 4-3</p>
<p>(g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.</p>	<p>Section 5.II</p>
<p>(h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.</p>	<p>Section 1.II Appendix C</p>
<p>(i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.</p>	<p>Section 2.II</p>
<p>(j) A description of the projects proposed in the plan and a listing of their priorities for implementation.</p>	<p>Sections 4. II and 6.I.C</p>
<p>(k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.</p>	<p>Section 3.IV.F</p>

GOALS, POLICIES, AND ACTIONS

2



STOP

STOP

SCHOOL BUS

FIRST STUDENT

06794

06794

2 GOALS, POLICIES, AND ACTIONS

This chapter contains the goals, policies, and actions that the City of Newman will work to achieve by implementing the Non-Motorized Transportation Plan. These goals, policies, and actions will ensure that the implementation of this Plan meets the vision presented in the General Plan, which is listed below:

- Newman will be a walkable community, with a well-connected street grid, pedestrian amenities, and bike lanes. Residents will be able to walk to downtown, to school, to work, and through the city on safe, tree-lined streets.
- A network of pedestrian trails and bike paths will connect residents to parks, schools, downtown, and other destinations.

Goals are broad statements of purpose; policies are the course of action to achieve the goals; and actions are the elements to implement the policies. The following outlines the goals, policies, and actions:

SAFETY GOAL

Improve Pedestrian and Bicyclist Safety.

Policy 1. Monitor bicycle- and pedestrian-related accident levels and seek a reduction in these accident levels.

Action A. Collect and evaluate pedestrian and bicycle related collision data on an annual basis. Analyze data to identify potential “trouble” locations and/or areas for focused enforcement.

Action B. Update the Capital Improvement Plan to prioritize improvements at “trouble” locations.

Policy 2. Adopt bicycle and pedestrian safety ordinances.

Action A. Prohibit motor vehicles from parking in bike lanes. Consider adding the following language into the City’s ordinance: “No driver shall stand or park any motor vehicle in a marked or shared bike lane in the City of Newman.”

Action B. Prohibit drivers from stopping or parking their vehicle within an intersection, in a crosswalk, on a sidewalk, or on any portion of the area extended from the edge of the curb (or from the highest point of a rolled curb) to the sidewalk.

Policy 3. Enforce pedestrian- and bicycle-related laws.

Action A. Provide training to the Newman Police Department to educate them on laws pertaining to walking and bicycling.

Policy 4. Encourage new development to include traffic calming and intersection improvements in order to improve safety for pedestrians and bicyclists.

ACCESSIBILITY GOAL

Provide accessibility for all non-motorized user groups, including pedestrians, bicyclists, and the physically disabled.

Policy 1. Amend the General Plan Circulation Element to adopt Complete Streets policies to accommodate bicyclists, pedestrians, and other non-motorized users when planning, designing, and developing transportation improvements.

Policy 2. Develop and adopt an ADA Transition Plan (see Chapter 4, Recommended Projects).

Policy 3. Ensure that sidewalks and other facilities meet the principle of universal design and adhere to legally mandated accessibility guidelines.

Action A. Prioritize the “priority pedestrian network” in Chapter 4 of this document with upgrades to sidewalks, crosswalks, and curb ramps to meet current ADA standards.

Action B. Upgrade sidewalks and curb ramps as part of any roadway construction projects or improvements that entail substantial changes.

CONNECTIVITY GOAL

Create a cohesive pedestrian and bicycle network that meets the needs of Newman residents and encourages bicycling and walking as a means of transportation and recreation.

Policy 1. Develop a complete network of bikeways, walkways, and paths that connects residential neighborhoods to employment and shopping areas, schools, parks and recreational facilities, and other destinations.

Action A. Require developers to dedicate public access easements for mid-block paths where the block length exceeds 400 feet or where cul-de-sacs and/or dead-ends are planned.

Policy 2. Improve regional bicycle connectivity.

Action A. Coordinate with Stanislaus County and other regional agencies to provide connections to a regional bicycle network.

Policy 3. Develop a citywide signage system to clearly designate the pedestrian and bicycle network.

Policy 4. Maximize pedestrian and bicycle access to transit.

Action A. Work with Stanislaus Council of Governments to identify priority locations for shelters, route information, benches, lighting, and adequate bicycle parking at bus stops.

COMMUNITY DESIGN GOAL

Implement the Newman General Plan Policies in order to create an enjoyable environment that promotes walking and bicycling.

Policy 1. Continue to integrate walking and bicycling supportive policies into future planning documents.

Policy 2. Encourage new development to provide streetscape improvements and pedestrian-friendly environments, including wide sidewalks, compact intersections, sidewalk-oriented buildings, and short block lengths.

Policy 3. Develop a Public Art Master Plan

EDUCATION AND ENCOURAGEMENT GOAL

Educate the residents of Newman on the benefits of bicycling and walking, and encourage them to use non-motorized modes of transportation.

Policy 1. Provide end-of-trip facilities, such as bicycle racks to make bicycling a viable alternative to driving.

Action A. Encourage employers of over 10 employees to provide end-of-trip facilities, such as shower and enclosed bicycle parking facilities.

Action B. Continue to implement bicycle parking requirements for new development and ensure approved developments provide parking facilities.

Action C. Install bicycle parking at high-activity destinations, such as schools, parks, and the West Side Marketplace.

Policy 2. Develop adult and youth bicycle and pedestrian education and safety programs. Plan city-wide events to help educate the public and promote bicycling and walking (see Chapter 5, Support Programs).

Policy 3. Develop and distribute a map illustrating the citywide bicycle and pedestrian network and containing tips on bicycling and walking safety.

Policy 4. Work with school districts to develop programs such as “walk-to-school day” for elementary students that would encourage more students to walk or bicycle to school.

Action A. Establish a committee that consists of parents, teachers, student representatives, police, active bicyclists, and City staff to develop and implement such programs.

MAINTENANCE GOAL

Maintain the non-motorized transportation network in Newman.

Policy 1. Provide for routine maintenance of bicycle and pedestrian facilities, such as regular sweeping, pavement repairs, and landscape maintenance.

Policy 2. Ensure that the costs of maintaining bicycle and pedestrian facilities are incorporated into street maintenance estimates.

Policy 3. Minimize disruption to the bicycle and pedestrian environment and/or provide alternate routes when repairing and constructing transportation facilities.

Policy 4. Develop a maintenance monitoring program that facilitates reporting and responding to maintenance problems on existing bike routes, crosswalks, and sidewalks.

Policy 5. Require a bicycle and pedestrian maintenance funding plan upon project construction.

IMPLEMENTATION GOAL

Implement the Newman Non-Motorized Transportation Plan.

Policy 1. Adopt the Newman Non-Motorized Transportation Plan.

Action A. Prepare a feasibility study that includes conceptual designs and cost estimates for the recommended priority projects.

Policy 2. Maximize coordination between Stanislaus County, Caltrans, school districts, and other organizations to address bicycle and pedestrian related issues in Newman.

Policy 3. Update the Newman Non-Motorized Transportation Plan and the list of recommended projects at least every five years to reflect new policies and funding requirements.

Policy 4. Maximize funding for non-motorized transportation projects by seeking various funding opportunities, including all levels of public funding and private funding sources, such as donations and corporate sponsorships.

Action A. Work with other local and regional agencies to prepare joint applications for competitive federal and State funding programs.

Action B. Incorporate bicycle and pedestrian projects into the City's traffic impact fee program.

Policy 5. Incorporate the priority projects into the City's annual Capital Improvement Plan list.

Policy 6. Implement the recommended priority projects.

Policy 7. Use the Project Prioritization Worksheet to rank future bicycle and pedestrian improvement projects.

EXISTING CONDITIONS AND NEEDS ASSESSMENT 3



3 EXISTING CONDITIONS AND NEEDS ASSESSMENT

This existing conditions and needs assessment is an introduction to the pedestrian and bicycle conditions in the City of Newman. This chapter covers regional context, transportation and circulation, City standards, and existing facilities. Information in this chapter is based on review of existing documentation, from City, regional, and State sources, and on field visits in and around Newman conducted in the winter and spring of 2012.

I. PHYSICAL CONTEXT

A. REGIONAL SETTING

The City of Newman is located in Stanislaus County, in the Central Valley region of California, approximately 100 miles south of Sacramento and 100 miles south east of San Francisco, as shown in Figure 3-1. Within Stanislaus County, the City is approximately 30 miles south of Modesto, and abuts Merced County to the southeast. State Route 33/N Street and the Union Pacific Railroad (UPRR) train tracks, parallel to State Route 33, bisect Newman in a north-south direction.

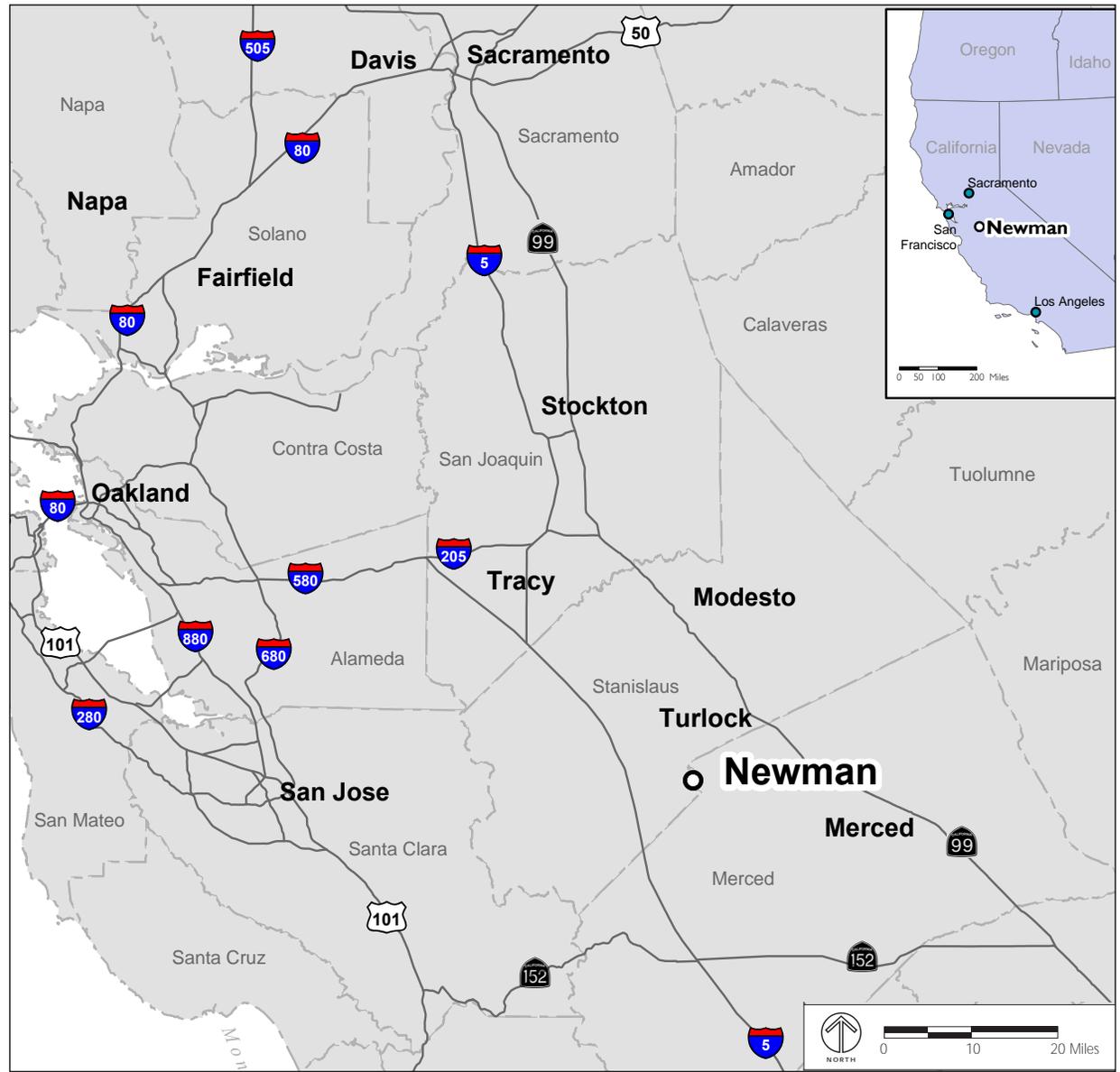
The City covers approximately 2.14 square miles with a population of approximately 10,224.¹ Newman has recently experienced a large amount of growth, with a 54 percent population increase in the last 10 years, as compared to the State of California's population growth of 14.7 percent. Stanislaus County's proximity to the Bay Area and San Jose, as well as less expensive land and home values in the city, contributed to the population increase. However, this growth has slowed since 2008, given the downturn in the economy.

B. GENERAL CHARACTER

The City of Newman is a small agricultural city, comprised of predominately single family residential neighborhoods. School-age children walk around Downtown feeling safe, leaving their bicycles unlocked, and as a result of the small size of the city neighbors know; increasing the security of neighborhoods. Good weather also con-

1

US Census Bureau, 2010 Census, 2010 Demographic Profile.



Source: The Planning Center | DC&E, 2012.

FIGURE 3-1 REGIONAL CONTEXT

tributes to quality of life; annual average temperatures range from 45 to 75 degrees.² The City has a high percentage of families with school-age children³ due largely to a safe environment and quality of life, as well as the affordability of housing. Downtown Newman, centered along the tree-lined Main Street, provides a historic atmosphere, a pedestrian-friendly streetscape, an historic movie theater, and small shops; many of which date to the early 20th Century.

As illustrated in Figure 3-2, the northwestern portion of the city mainly consists of low-density residential development, which is laid out in a traditional grid pattern. The southwestern and eastern portions of the city have been developed as subdivisions since the 1980s, with many cul-de-sacs and a loop street pattern. A shopping plaza and multi-family housing were developed in the southern part of the city in the 1990s and the 2000s, respectively.

The area adjacent to the rail tracks, bounded by State Route 33 to the west, Kern Street to the north, L Street to the east, and the city limits to the south, predominately consists of industrial and commercial use. Commercial development includes a lumber yard and cheese factory, and light industrial uses include warehouses, automobile garages, and production-oriented small businesses. The City is surrounded by agricultural lands.

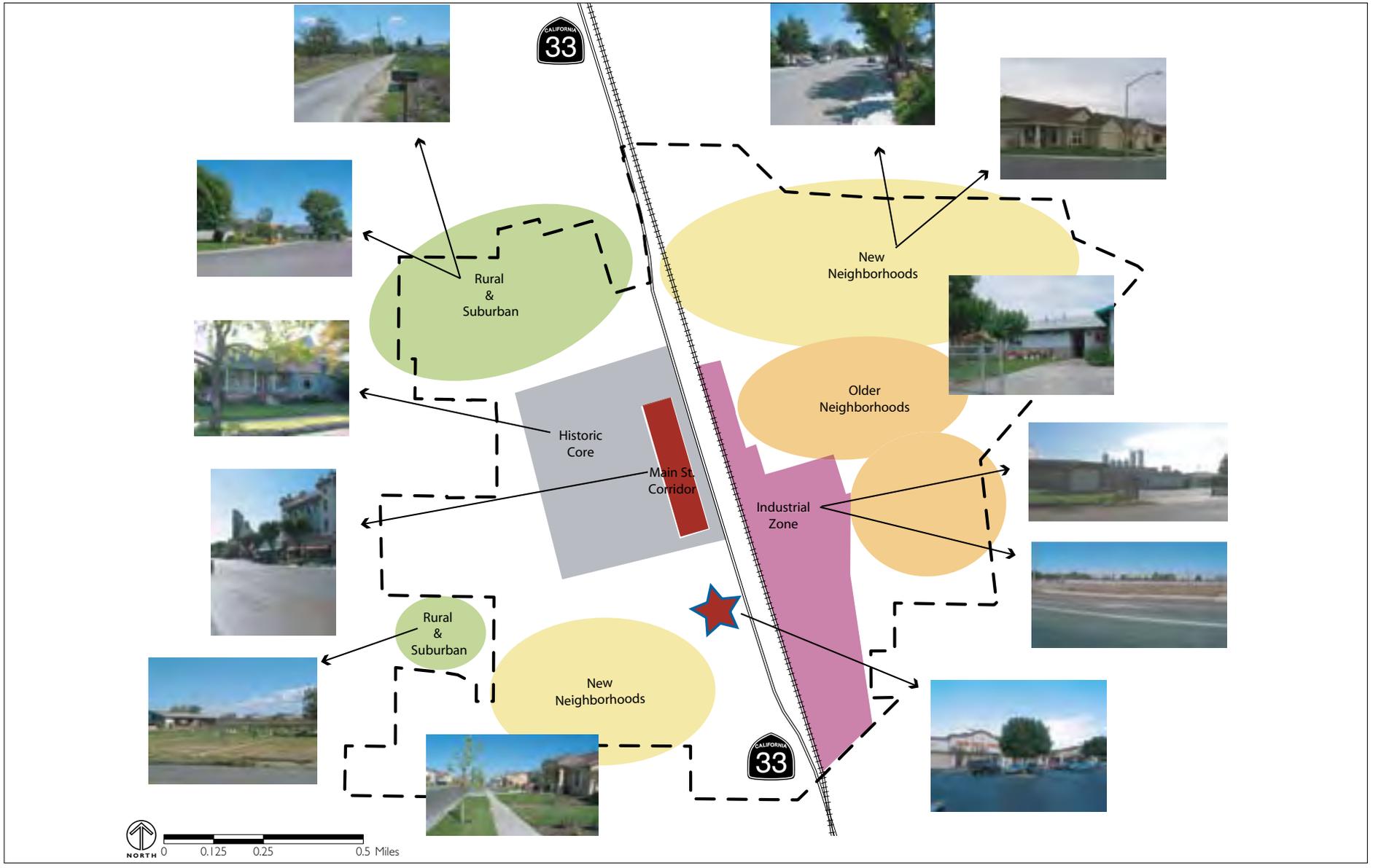
C. ROADWAY NETWORK

Roadways in the City of Newman are comprised of arterials, collectors, and local streets. Arterials provide primary routes across Newman and connect the City with surrounding areas; collectors link streets to arterials; and local streets provide access to properties. The arterials in Newman include State Route 33, Hills Ferry Road, Merced Road, a portion of Prince Street, Kern Street, Canal School Road, and Sherman Parkway.

State Route 33, a two-lane road, passes through the middle of Newman and runs north to Patterson and south to Gustine. State Route 33 is a Caltrans-owned and operated facility. Within Newman, State Route 33 has a center-turning lane. The UPRR tracks run parallel to the east of State Route 33. Connections across State Route 33 and the train tracks are limited. Four roadways cross the highway and train tracks in Newman, but only two intersections, at Merced Street and at Kern Street, are signalized. The majority of the roadways in Newman have two lanes, and a much wider than average lane width.

² Weather Reports, http://www.weatherreports.com/United_States/CA/Newman, accessed on March 28, 2012.

³ The city's average household size of 3.38 is much higher than the State average of 2.9, according to Census 2010 data. More than 50 percent of families in the city have children under 18-year-olds, compared to the State average of 37.5 percent.



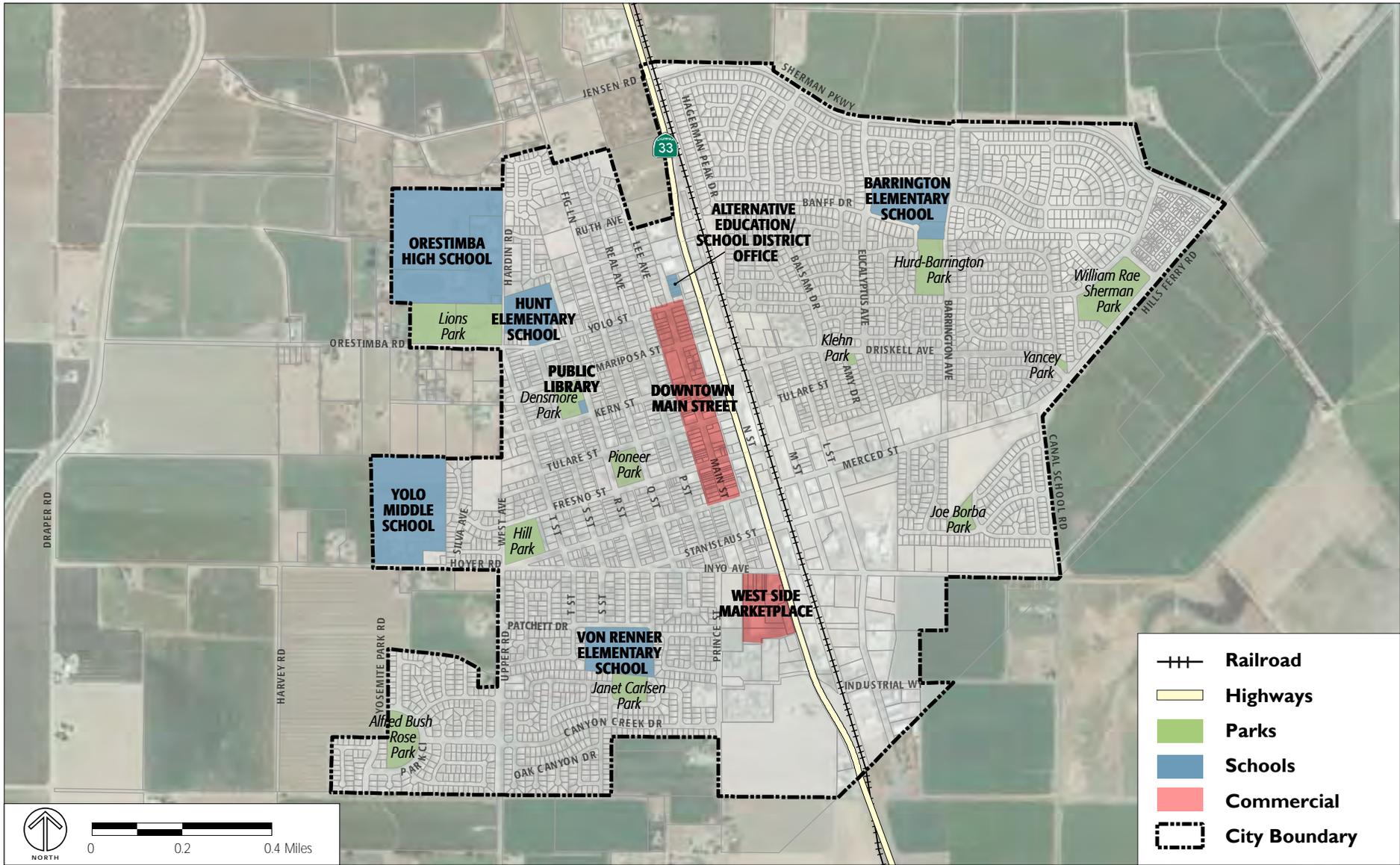
Source: City of Newman 2030 General Plan, 2006.

FIGURE 3-2 COMMUNITY CHARACTER

D. MAJOR DESTINATIONS

Major destinations within the City, shown in Figure 3-3, include schools, parks, the Main Street in Downtown, a library, a health care center, and the West Side Marketplace. These destinations have the potential to attract the greatest number of trips because the destinations are within walking or bicycling distance from the majority of the residents in the city. The location of these destinations is important in determining areas and routes of potential heavy use. The following describes major destinations in Newman.

- **Schools:** Newman-Crows Landing Unified School District has three elementary schools, one middle school, one high school, a continuing education school, and a migrant education center in Newman. All facilities except Barrington Elementary School are located west of State Route 33.
- **Parks:** There are eleven neighborhood parks in Newman, ranging from approximately 6,000 square feet to nine acres. All of the schools in Newman have a park located either adjacent to the school or within a block. These parks are heavily used after school hours, making the safety of pedestrian connections between the schools and parks important. A teen center and skate park are located near Orestimba High School on Hardin Road. An aquatic center is planned for the lot at the intersection of Merced Street and West Avenue.
- **Downtown:** Main Street, which runs parallel to, and one block west of, State Route 33, serves as the main downtown commercial street for the City of Newman. Retail shops, restaurants, the Newman Police Department, and a theater are located along four commercial blocks of Main Street and attract residents to the area. A public plaza is located on the block between Fresno Street and Tulare Street, facing both Main Street and State Route 33. City Hall, which recently moved to 938 Fresno Street, provides government services to Newman residents. Main Street is a two-lane road with angled parking on both sides for four commercial blocks of Main Street. Streetscape improvements, including bulb-outs, special paving at crosswalks, pedestrian scaled lighting, neighborhood historic character signs, bollards, and planters, located at four intersections along the street, contribute to slower traffic speeds and create a safer and attractive environment for pedestrians.
- **Library:** The Newman Public Library is located at the intersection of Kern and R Streets, three blocks west of Main Street and adjacent to Densmore Park. The library hosts various community group meetings.
- **Shopping Center:** The West Side Marketplace shopping center, located along State Route 33 south of Inyo Avenue, has a grocery store, pharmacy, and restaurants. This shopping center provides the only large grocery store in Newman.
- **Employment Centers:** Downtown Newman contains offices, commercial services, and light industrial uses that draw employees from other parts of the city and outside of town. Newman-Crows Landing Unified School District's main office at the northern end of Main Street, as well as its five schools, are also



Source: The Planning Center | DC&E, 2012.

FIGURE 3-3 MAJOR DESTINATIONS

major employment centers in Newman.⁴ Another major employer in the City is Saputo Cheese, located on Inyo Avenue.

- **Golden Valley Health Center:** The Golden Valley Health Center is the only health care center in Newman, located at 637 Merced Street. This facility provides both medical and dental services.

II. PLANNING AND POLICY CONTEXT

This section provides an overview of planning and policy documents of the City of Newman, Stanislaus County, and adjacent jurisdictions and agencies that are relevant to the Non-Motorized Transportation Master Plan. These include the City of Newman 2030 General Plan and the StanCOG Bicycle and Pedestrian Master Plan.

A. CITY OF NEWMAN

1. NEWMAN 2030 GENERAL PLAN (2007)

The Newman 2030 General Plan, adopted in 2007, is intended to guide the physical development of Newman to the year 2030. The General Plan contains goals, policies, and objectives intended to preserve Newman's quality of life, small-town atmosphere, and agricultural traditions while meeting the challenges of managing growth. The General Plan includes eight elements: Land Use, Transportation and Circulation, Public Facilities and Services, Recreation and Cultural Resources, Natural Resources, Health and Safety, Community Design, and Housing.

The General Plan's Vision Statement asserts that "Newman will be a walkable community, with a well-connected street grid, pedestrian amenities and bike lanes" and "[a] network of pedestrian trails and bike paths will connect residents to parks, schools, Downtown, and other destinations." The Transportation and Circulation Element includes a thorough discussion of the existing conditions of the pedestrian and bicycle networks in Newman. The Community Design Element lists Pedestrian Orientation as one of the urban design principles and provides guidance for the physical design and character of development in order to create a pedestrian- and bicyclist-friendly environment. The Land Use Element contains a map, illustrating planned land uses for the City of Newman, which reflect its goals and policies and are designed to help implement the future vision of the City. Figure 3-4 shows the General Plan land use designation map.

Goals, policies, and actions throughout the General Plan emphasize the importance of pedestrian and bicycle facilities in the city's circulation network.

4 U.S. Census Bureau, OnTheMap Application, <http://lehdmap.ces.census.gov>, accessed on March 22, 2012.

Goals and policies related to non-motorized transportation facilities within the Transportation and Circulation Element include the following:

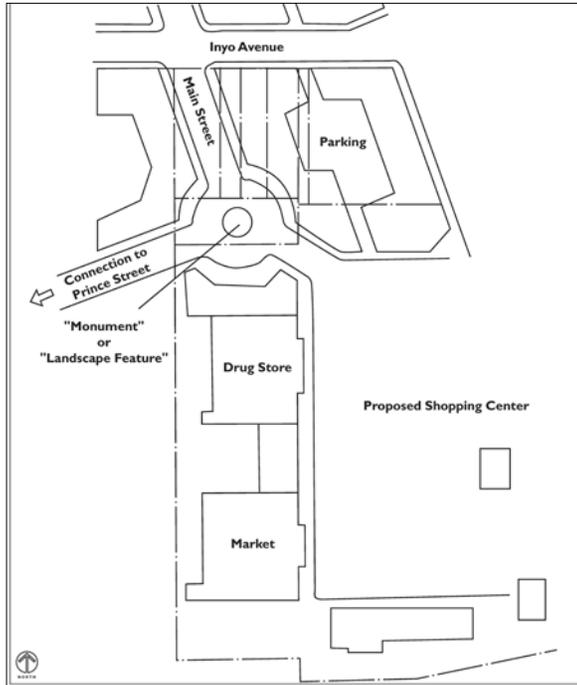


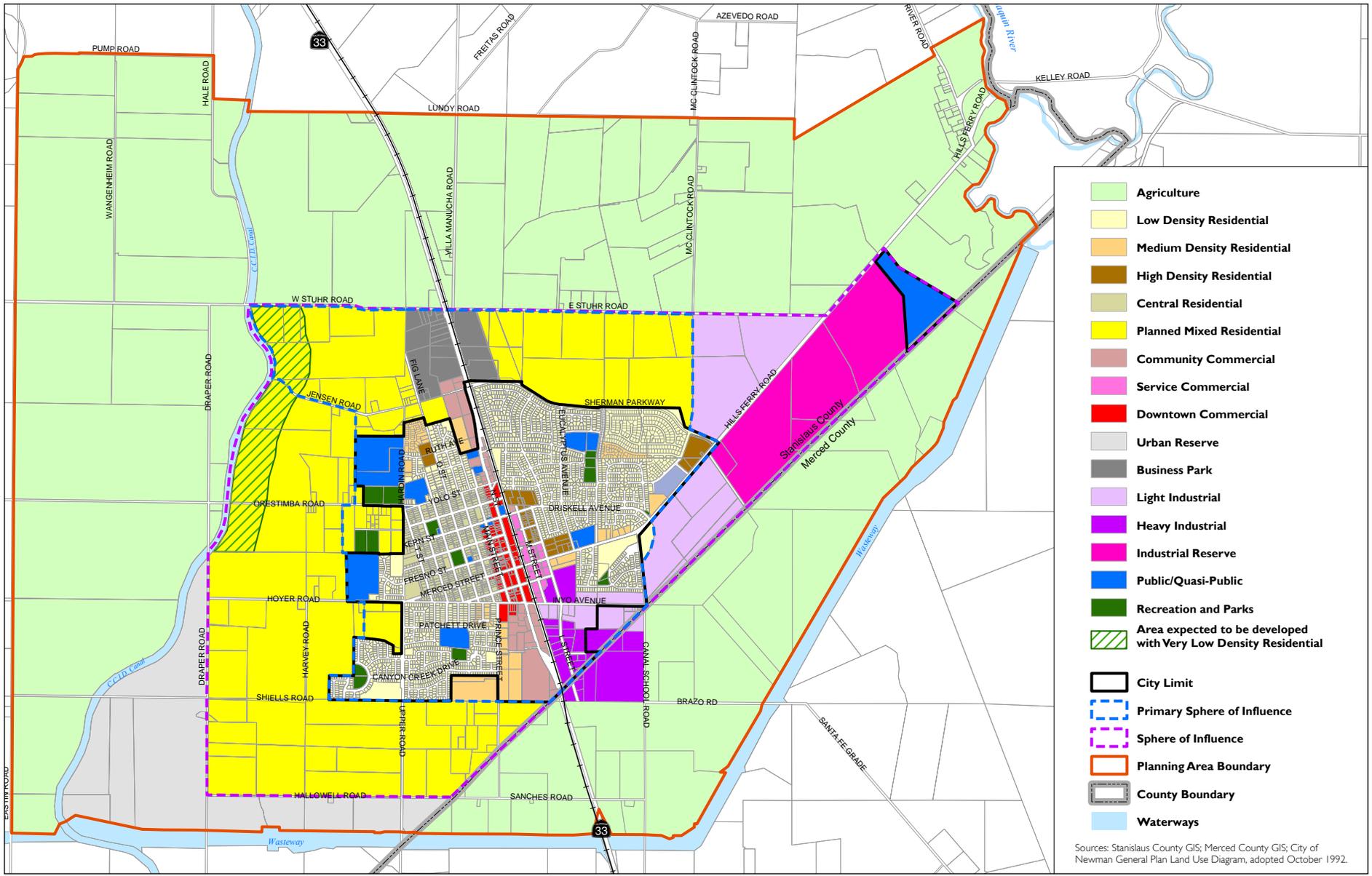
Figure TC-5 Conceptual Diagram of Main Street Extension

■ **Goal TC-1: Create and maintain a roadway network that provides for the safe and efficient movement of people and goods throughout the city while maintaining the quality of life for residents.**

- **Policy TC-1.4:** Development of cul-de-sacs that do not provide for through bicycle and pedestrian connections shall be discouraged.
- **Policy TC-1.7:** Traffic calming measures shall be incorporated into the design and construction of new roadways to discourage speeding of motor vehicles. On arterials and collectors, traffic calming measures could include intersection and mid-block bulb-outs, large canopy street trees, pedestrian refuge islands, and narrower street widths, consistent with Policy TC-1.5 above. On local streets, traffic calming measures could also include street trees, bulb-outs and narrower streets widths or other measures approved by the City.
- **Policy TC-1.9:** The City shall provide for the southern extension of Main Street south of Inyo Avenue into the West Side shopping center as shown in Figure TC-5, with an additional connection to Prince Street. As an interim measure a pedestrian only connection might be established from Prince Street to the shopping center.

■ **Goal TC-7: Provide a bicycle and pedestrian network to encourage bicycling and walking for both transportation and recreation.**

- **Policies TC-7.1:** The City shall create and maintain a safe and convenient system of pedestrian and bicycle facilities that encourages walking or bicycling as an alternative to driving. These routes should directly link residential neighborhoods, parks, schools, Downtown, neighborhood shopping centers public facilities, and employment centers. New development shall be required to develop and/or contribute to the development of these facilities.
- **Policy TC-7.2:** The City shall promote development and street patterns that encourage walking, bicycling and other forms of nonmotorist transportation.
- **Policy TC-7.3:** The City shall require installation of sidewalks and/or walking paths along all City streets in newly developing areas.
- **Policy TC-7.4:** New development shall meet the requirements of the ADA to further facilitate the mobility of persons with accessibility needs.
- **Policy TC-7.5:** Within the Master Plan Subareas a system of pedestrian trails shall be developed within linear open space corridors linking residential neighborhoods, Downtown, shopping areas, employment centers, and parks, schools and other public facilities.
- **Policy TC-7.6:** Bicycle facilities shall be developed on all new arterials and collectors and on all existing arterials and collectors, where feasible. Bicycle facilities on arterials should consist of either Class I (Bike Path) or Class II (Bike Lane) facilities. On collector streets, Bicycle facilities should consist of Class II bike lanes. Figure TC-2, the Bicycle Network Diagram, shows the ultimate location of Class I and Class II bicycle facilities in Newman.
- **Policy TC-7.7:** The City shall require inclusion of bicycle parking facilities at all new major public facilities and commercial and employment sites.



Source: City of Newman 2030 General Plan, 2007.

FIGURE 3-4 GENERAL PLAN LAND USE DESIGNATIONS

- **Policy TC-7.8:** Bicycle and pedestrian safety shall be considered when designing and implementing improvements for automobile traffic operations. Improvements for motor vehicle circulation shall not detract from or degrade the pedestrian and bicycle circulations system.
- **Policy TC-7.9:** The City shall work with Stanislaus County, Merced County, the cities of Patterson and Gustine, the community of Crows Landing and other West Side communities in an effort to develop a regional bike path along the railroad right-of-way, the CCID canal and the Delta Mendota Canal linking Newman with other West Side communities.

2. NEWMAN ZONING ORDINANCE

The City of Newman Zoning Ordinance contains the following language related to operation of a bicycle:

10.05.020 Riding on bicycles, restrictions.

- No person shall ride a bicycle upon any sidewalk in the business district of the City.
- Any person riding a bicycle upon any sidewalk where such riding is permitted shall exercise due care and shall yield the right-of-way to all pedestrians.

10.05.030 Parking and parking spaces.

- When official signs or markings restricting parking of bicycles only are in place in areas designated by the City Council upon recommendation of the Chief of Police, bicycles shall be parked only in such places, and it shall be unlawful for any person to park or stand any vehicle other than a bicycle in such designated space.
- No person shall park a bicycle against any window or on the main travelled portion of a sidewalk, nor in such manner as to constitute a hazard to pedestrians, traffic or property and where bicycle parking spaces have been established and designated by official signs and markings, no persons shall park a bicycle in the vicinity thereof except in such designated bicycle parking spaces.

5.17.030 Off-street parking requirements.

- Each parking area associated with any type of land use, except single-family and two-family residential dwellings, shall provide a number of bicycle parking spaces with secured bicycle racks. The number of bicycle parking spaces required is based on the number of vehicle parking spaces, and ranges from 0 (if there are 1-4 vehicle parking spaces), to 10 (if there are 400 or more vehicle parking spaces).

B. STANCOG BICYCLE AND PEDESTRIAN MASTER PLAN

The Stanislaus Council of Governments (StanCOG) is the designated Metropolitan Planning Organization and Regional Transportation Planning Agency for the Stanislaus Region, which means it has specific responsibilities under State and Federal law. Specifically, StanCOG is responsible for developing and updating a variety of transportation plans, such as regional transportation plans and non-motorized transportation plans, and for allocating the federal and State funds to implement them.

StanCOG is slated to adopt the recently updated Bicycle and Pedestrian Master Plan in 2013. The Plan will guide the future development of bicycle and pedestrian facilities within the County. The Plan covers both incorporated cities such as Newman as well as unincorporated lands under the jurisdiction of Stanislaus County.

The Plan includes goals, objectives, and policy actions that call for providing bikeways and trails for all residents, increasing the number of people who bike and walk for everyday needs, improving safety for bicyclists and pedestrians, and improving positive attitudes about biking and walking. The following are the goals of the Plan:

- **Goal 1: Increased Bicycle and Pedestrian Access and Safety**
- **Goal 2: Increased Bicycle and Pedestrian Trips**
- **Goal 3: Improve Regional and Local Connections**

The Plan also outlines a range of recommendations to implement its objectives, including bicycle and pedestrian infrastructure improvements, safety and education programs, funding and implementation strategies, and design and policy recommendations.

The funding and implementation strategies include a list of high priority projects and the estimated costs of proposed improvements. The Plan identifies a segment of Kern Street west of SR 33 as a high priority bikeway project. The Plan's estimated cost of bicycle and pedestrian improvements in Newman was approximately \$2.2 million dollars.

C. STATE PLANS AND AGENCIES

1. CALIFORNIA DEPARTMENT OF TRANSPORTATION

The California Department of Transportation (Caltrans) is responsible for the maintenance and operation of state routes and highways. Caltrans has divided the state of California into 12 districts for operational purposes. Stanislaus County is in District 10, with Alpine, Amador, Calaveras, Mariposa, Merced, San Joaquin, and Tuolumne Counties. In Newman, Caltrans has jurisdiction over State Route 33 (N Street).

2. CALTRANS HIGHWAY DESIGN MANUAL

Caltrans Division of Design provides the procedures, policy, standards, guidance, and technical assistance, to improve safety, access, and mobility across the state. Particularly, pedestrians and bicyclists issues are addressed through Caltrans Highway Design Manual (HDM).

Pursuant to California Complete Streets Act of 2008 (AB 1358), Caltrans recently proposed revisions to the HDM.⁵

5 Caltrans, <http://www.dot.ca.gov/hq/oppd/drafthdm/index.htm>.

The revised HDM would ensure that bicycle, pedestrian, and transit modes are considered as integral elements of transportation systems.⁶

The current HDM partially addresses some of these issues: Topic 105, Pedestrian Facilities, includes guidelines for ADA accessibility; and Chapter 1000, Bikeway Planning and Design, provides bikeways and bicycle facilities design manuals.

3. CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD 2010)

The CA MUTCD contains standards and guidance on traffic control devices, which include “signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, pedestrian facility, or bikeway by authority of a public agency having jurisdiction.” The CA MUTCD provides standard design guidelines for the placement and location of traffic control devices along bikeways and pedestrian crosswalks, such as crosswalk warning signs and supplementary markings.

D. FEDERAL PLANS

1. AMERICANS WITH DISABILITIES ACT (1990)

The Americans with Disabilities Act (ADA) protects people with disabilities from discrimination in employment, public services, public accommodations, and telecommunications.

Title II of the ADA requires that the services and programs of local and State governments be readily accessible to and usable by individuals with disabilities. It calls for removing physical barriers, such as stairs, and providing auxiliary aids to help persons with visual, hearing, or sensory impairments. In addition, Title II seeks to ensure that people with disabilities have access to existing public transportation services, including buses and paratransit services.

In 2010, the Department of Justice adopted revised regulations for Titles II and III of the ADA. Pursuant to the revised regulations, the 2010 ADA Standards for Accessible Design sets guidelines for accessibility to places of public accommodation and commercial facilities by individuals with disabilities.

2. AASHTO GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES (1999)

The American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities contains planning and design guidance for the development of bicycle facilities. The Guide is intended to provide guidelines to promote safe bicycling, and offers guidance on planning bikeway networks and improvements, designing bikeways and facilities, and maintaining facilities.

⁶ The revised draft HDM went through a public review and comment period in 2011. The comments and related resolutions are available online. It is not known when the draft HDM will be adopted.

E. UNION PACIFIC RAILROAD

California Northern Railroad operates the segment of the UPRR line from Tracy to Los Banos, which parallels State Route 33, under a long-term lease. The UPRR transports mainly food and agricultural commodities. Currently, one freight train goes southbound to Volta and then returns northbound each weekday.⁷

F. NEWMAN-CROWS LANDING UNIFIED SCHOOL DISTRICT

Newman-Crows Landing Unified School District (NCLUSD) provides local school services (grades K-12) to students in Newman. The NCLUSD boundaries incorporate the entire area of the City of Newman and portions of unincorporated Stanislaus County, including Crows Landing and Diablo Grande. Existing NCLUSD schools include four elementary schools, one middle school, one high school, and two alternative schools. Seven out of eight NCLUSD schools are located in Newman.

The safety of students bicycling and walking to and from school is a major concern for the NCLUSD. Given the small size of Newman, there are very few students within the City who qualify for school shuttles. As such, the NCLUSD is trying to reduce bus expenditures while creating a safer environment for students to walk and bike.

7 City of Newman, Newman 2030 General Plan, 2007.

III. COMMUTE PATTERNS

Commute patterns identify the current mode of transportation that people select to travel to or from the workplace.⁸ Understanding commute patterns in Newman is critical in order to increase the percentage of people who choose to bike or walk rather than drive or be driven.

A. COMMUTE TO WORK

As shown in Table 3-1, the automobile is the primary mode of transportation for Newman residents, with over 90 percent of residents traveling in a car alone or in a carpool. About 0.3 percent of all employed Newman residents, which represents 11 out of 3,740 employed residents, commute primarily by bicycle, which is lower than the national or State average. The percentage of walking commuters is also slightly lower than the national or State average.

Travel time, presented in Table 3-2, can give an indication of the number of potential new bicycle commuters. Assuming that travel occurs on local roads during peak hours, less than 10 minutes of driving could be converted to 20 minutes of bicycling. In other words, some of the 21 percent of Newman commuters who spend less than 10 minutes commuting may have the potential to use their bicycle as a transportation mode in their short distance trips.

B. COMMUTE TO SCHOOL

Understanding school commute patterns is important because a substantial portion of local trips in Newman are made by students or parents dropping off or picking up their children. Since the Census data does not reflect these trips, a separate school survey was conducted by the superintendent of Newman-Crows Landing Unified School District in 2012. The informal survey asked Principals to estimate the mode of transportation for their students. Table 3-3 presents students commute information provided from each school.

As shown, local principals estimate that only 1 or 2 percent of Newman students ride their bicycles as a primary transportation mode. A lack of existing bikeways in the vicinity of schools may contribute to this, considering that only Hunt Elementary School is served by Class II bikeways on Yolo and S Streets.

8 The best available data on commute patterns are collected through the US Census. However, it is important to note that the Census data does not include the number of people who ride their bicycle for school commute, recreation, or other purpose, such as shopping. In addition, the Census data only indicate the primary transportation mode, and therefore multimodal trips are not shown in the data. So, if someone rides their bike one mile to a bus stop, then takes a bus ten miles to work, the Census data would only capture the bus trip.

TABLE 3-1 JOURNEY TO WORK

MODE	UNITED STATES	CALIFORNIA	NEWMAN
Drove Alone	76.0%	73.0%	70.8%
Carpool	10.4%	11.9%	19.9%
Public Transit	4.9%	5.1%	0.4%
Walked	2.8%	2.8%	2.1%
Bicycle	0.5%	0.9%	0.3%
Other	1.2%	1.3%	1.7%
Worked at Home	4.1%	5.0%	4.7%

Source: U.S. Census Bureau, 2006-2010 American Community Survey.

TABLE 3-2 TRAVEL TIME TO WORK

	UNITED STATES	CALIFORNIA	NEWMAN
Less than 10 minutes	14.1%	11.4%	21.1%
10 to 14 minutes	14.5%	13.8%	8.5%
15 to 29 minutes	36.2%	35.8%	18.6%
30 to 44 minutes	19.7%	21.2%	14.8%
45 to 59 minutes	7.5%	7.9%	10.8%
60 minutes or more	8.0%	10.0%	26.2%

Source: U.S. Census Bureau, 2006-2010 American Community Survey.

The number of students who walk to and from school varies. As shown in Table 3-3, more than 60 percent of the middle school students and 80 percent of the high school students walk to school. Barrington Elementary students have a relatively high percentage of walking trips compared to other elementary schools in the city. Hunt Elementary did not provide the percentage of students walking to the school, but indicated that about 75 percent of students are using school shuttles as their commute mode. A detailed description of pedestrian safety in school vicinity is included in Section E, Pedestrian Conditions.

C. FUTURE BICYCLE COMMUTERS

It is expected that the popularity of bicycling in Newman would increase, based upon the proposed improvements and programs in this Plan and the current trends of increasing use of bicycling as transportation because of its health and economic benefits. Bicycling for school, shopping, and recreational purposes is not taken into account as commute trips, and therefore is not captured in this estimate. However, it should be noted that bicycle commuters represent only a small portion of total bicyclists in Newman.

The Plan estimates that Newman bicycle commuters could increase up to two percent of the total employed residents, representing approximately 164 bicycle trips per day, as shown in Table 3-4. This assumes that the implementation of this Plan would achieve Stanislaus County's goal of capturing 10 percent of potential bicyclists⁹ and the total number of the employed Newman residents remains the same. A number of factors, such as the availability of bikeways and bicycle parking facilities, the type of future land uses, and weather conditions, can affect an increase or a decrease in the future bicycle commuter population.

9 Stanislaus Council of Governments, Stanislaus County Non-Motorized Transportation Plan, 2008, Page 20.

TABLE 3-3 SCHOOL SURVEY SUMMARY

SCHOOL	% OF STUDENTS WALKING	% OF STUDENT BIKING	TOTAL ENROLLMENT
Von Renner Elementary	9%	Less than 1%	339
Barrington Elementary	45%	1%	548
Hunt Elementary	No Response	Less than 1%	300
Yolo Middle	60 - 65%	Less than 1%	636
Orsetimba High	80%	2%	755

Source: Newman-Crows Landing Unified School District, 2012.

TABLE 3-4 POTENTIAL FUTURE BICYCLE COMMUTERS

CATEGORY	NUMBER OF COMMUTERS	NOTE
Number of Workers Who Already Bicycle to Work	11	U.S. Census Bureau, 2006-2010 American Community Survey (3,740 x 0.3%)
Number of Potential Bicycle Commuters	715	Number of workers who commute primarily by cars with commutes 9 minutes or less (3,740 x 21.1% x 90.7%)
Future Number of New Bicycle Commuters	71	Based on capture rate goal of 10% of potential bicycle commuters
Total Future Daily Bicycle Commuters	82	Current bicycle commuters + future bicycle commuters
Total Future Daily Bicycle Trips	164	Total future bicycle commuters x 2 (round trip)

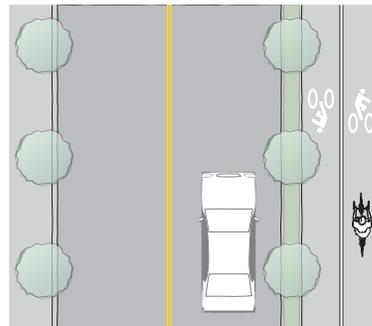
IV. BICYCLE CONDITIONS

This section describes the existing conditions of bicycle facilities and routes in Newman, and identifies existing bicycle needs.

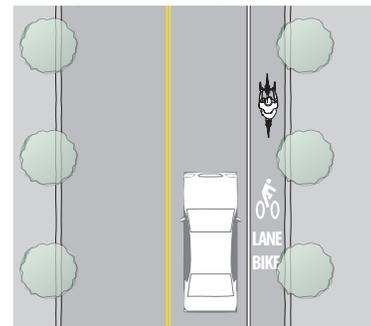
A. TYPE OF BIKEWAYS

Based on the California Streets and Highways Code, Caltrans identifies three types of pathways, as described and illustrated below.¹⁰

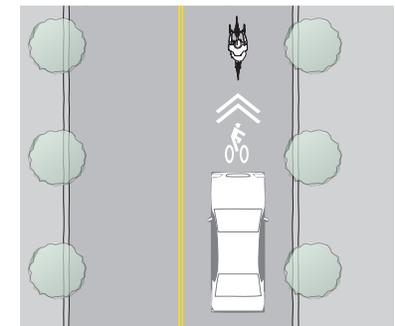
- Class I bikeways (Bike Path), also known as multi-use paths, are separated completely from motor vehicle traffic but may be shared with pedestrians. The California Manual on Uniform Traffic Control Devices (CA MUTCD) recommends that signage type R44A (CA) be installed along Class I bikeways.
- Class II bikeways (Bike Lane) are striped in the roadway for the exclusive use of bicycles. Vehicle and pedestrian cross-flow are permitted. The striping is supported by pavement markings and signage. CA MUTCD requires signage type R81 (CA) be installed along Class II bikeways.
- Class III bikeways (Bike Route) are located on roadways shared with motor vehicles. Bike routes are designated by signage and/or shared roadway bicycle markings (sharrows). CA MUTCD recommends that signage type D11-1 be installed along Class III bikeways.



Class I Bike Path



Class II Bike Lane



Class III Bike Route

10

California Streets and Highways Code Section 890.4.

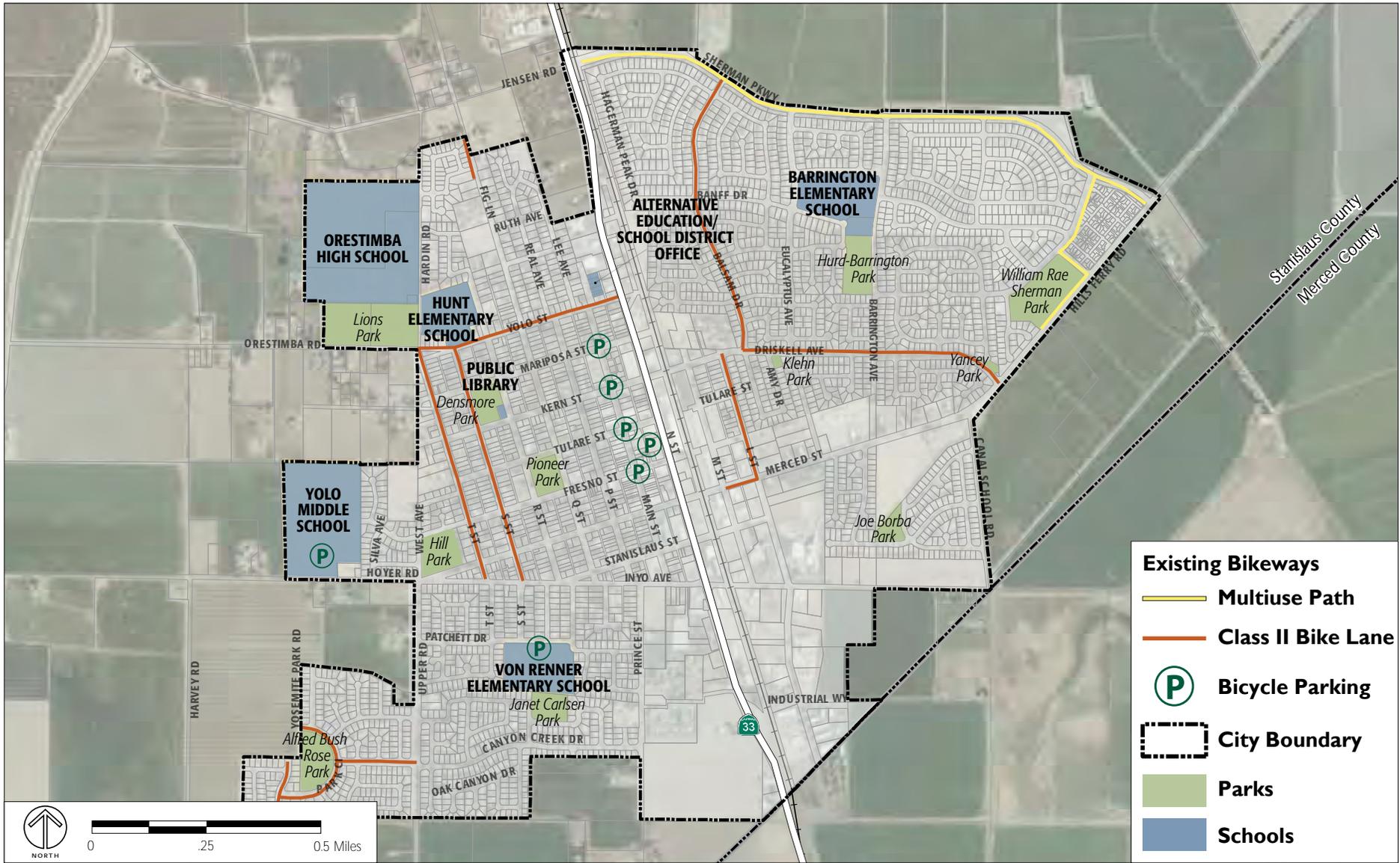
TABLE 3-5 EXISTING BIKEWAY MILEAGE

SEGMENT NAME	FROM	TO	BIKEWAY CLASS	LENGTH (MILES)
Balsam Dr.	Sherman Pkwy.	Kern St.	II	0.6
Canyon Creek Dr.	Park Cl.	Upper Rd.	II	0.2
Driskell Ave.	N St.	Hills Ferry Rd.	II	0.8
L St.	Driskell Ave.	Merced St.	II	0.3
Sherman Pkwy.	SR 33	Hills Ferry Rd.	I	1.3
T St.	Orestimba Rd.	Merced St.	II	0.5
Yolo St.	Hardin St.	N St.	II	0.5
S St.	Yolo St.	Inyo Ave.	II	0.5
Hills Ferry Rd.	Driskell Ave.	Monville Way	I	0.3
Cinnamon Teal Way	Hills Ferry Rd.	Sherman Pkwy.	I	0.3
Park Cl. & Grand Canyon Way	Yosemite Park Rd.	Grand Canyon Way	II	0.4
Fig Ln.	Newman City Limits	Angelina Ave.	II	0.1
Total				5.8

Source: Based on field observations conducted by The Planning Center | DC&E in 2012.



Yolo Street is designated as a Class II bikeway but is not striped or signed to meet Caltrans Standards.



Source: Based on field observations, conducted by The Planning Center | DC&E in 2012.

FIGURE 3-5 EXISTING BIKEWAYS AND BICYCLE FACILITIES

The StanCOG Bicycle and Pedestrian Master Plan also uses a 3.5 bicycle route designation. Class 3.5 facilities indicate a Class 3 bicycle route, as defined by Caltrans, with wide shoulders, typically four to eight feet in width. On rural roadway Caltrans's current standard is an eight foot shoulder on both sides of the roadway. These areas are not designate with an official bicycle lane, however they can effectively provide the same level of comfort as Class II bikeways. Within the Newman area, Class 3.5 bikeways are recommended along State Route 33 outside of the City limits where there is no sidewalk and curb and gutter.

B. EXISTING BIKEWAYS

As shown in Table 3-5, Newman has approximately 6 miles of bikeways, but most of them are not continuous. Figure 3-5 illustrates the existing bikeways in the city. The majority of the bikeways are Class II; only one Class I bike path segment, which is shared with pedestrians, runs along Sherman Parkway and Hills Ferry Road, as shown in Figure 3-5. No Class III bikeways are designated in the city, but because most residential streets are wide enough and have low traffic volumes, residents, including children, often use local streets as Class III bikeways.

Driskell Avenue provides an east-west Class II bikeway in the eastern portion of the city. In the western part of the city, Yolo Street has been designated as an east-west connection, a Class II bikeway. However, Class II bike lanes are faded and inconsistent along Yolo Street and bike signs are not highly visible. North-south bicycle connections are more limited. Balsam Drive provides a bicycle connection from the northeast part of Newman to Driskell Avenue, which connects to the center of the city. T and S Streets also serve as a north-south bicycle route in the western part of the city. However, these two parallel routes continue only for five blocks between Yolo Street and Inyo Avenue, leaving northwestern and southwestern parts of the city difficult to access. Remnants of bike lanes are scattered in a few locations in Newman, in the form of a fragment of a bike lane that runs the length of only a block.

C. PROPOSED BIKEWAYS

The StanCOG Bicycle and Pedestrian Master Plan identifies a regional network of bikeways. Within the context of Newman the Plan proposes a regional bicycle route along State Route 33 as Plan identifies a Class 3.5 Bicycle Route along State Route 33 north of the City of Newman. This bikeway would entail widening the shoulder along the highway to create a more comfortable and safe bicycling lane. Within the City of Newman State Route 33 has a curb and gutter, and is proposed as a Class II bicycle lane. Within the City limits, the Plan integrates the bikeways developed as part of this planning process.

D. EXISTING BIKEWAY CONDITION

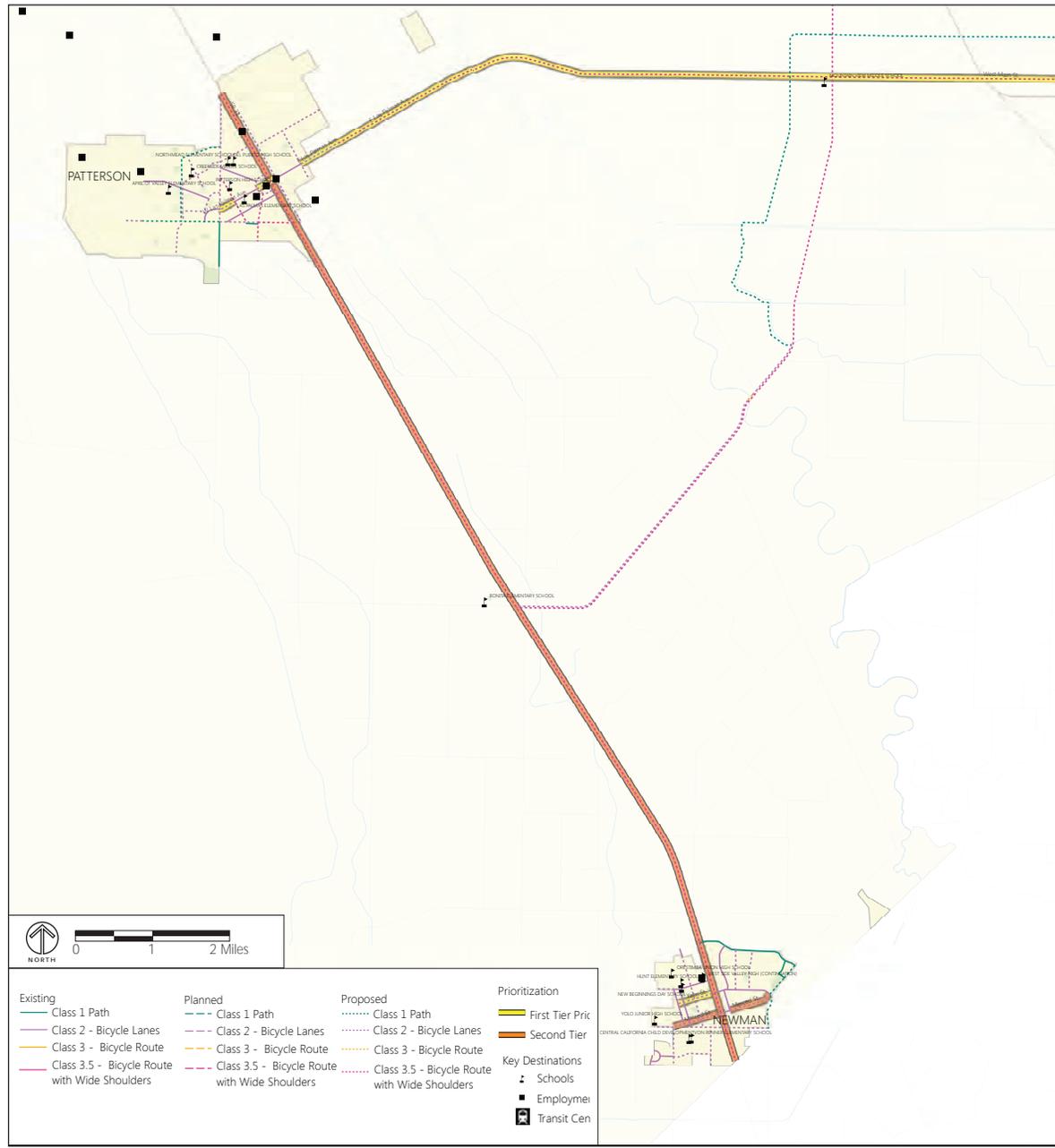
Most of the bike lanes in the city are located adjacent to a parking lane and generally range from 5 to 6 feet in width. The lanes in the northeastern neighborhoods are only striped on their left side, letting parked cars and bi-



Faded bike lanes on T Street.



Bicycle/parking lanes on Balsam Drive, letting cars encroach onto the bicycle right-of-way.



Source: StanCOG Draft Bicycle and Pedestrian Master Plan, 2012.

FIGURE 3-6 PROPOSED REGIONAL BIKEWAYS

cyclists share one lane. This kind of striping can pose a challenge for bicyclists because it does not clearly identify the “door zones” and bicycle right-of-way, resulting in cars parked on bike lanes or “dooring” accidents. The lanes in other areas of town are typically striped on both sides. Some bike lanes, especially along S Street, are not well maintained, with worn-away striping and cracked pavement.

E. BICYCLE FACILITIES

Bicycle facilities include bike parking, signage, and support facilities that encourage bicycling, such as showers. The following describes each facility and the existing condition of bicycle facilities in Newman.

1. PARKING

Class I bike parking provides long-term, secure and covered bike parking typically for commuters, while Class II bike parking provides short-term parking, typically for visitors through the use of bike racks located along a sidewalk.

Currently the City of Newman has only Class II bike parking, along Main Street and at a couple of school sites as identified in Figure 3-5. Other major destinations, such as parks and the West Side Marketplace, do not provide sufficient bicycle parking. Given that Newman residents often leave their bicycles on Main Street unlocked, and that the parking racks on Main Street are underutilized, there may be no need for additional bicycle parking facilities in Downtown Newman. However, as discussed in Section B.5., Planning and Policy Context, the Newman Municipal Code requires having a designated place for bicycle parking to prevent unattended bicycles from encroaching on the pedestrian realm. Providing designated parking at schools and parks could also encourage people to ride their bicycles. Additionally, as the number of bicyclists increases in the city, the need for secured bicycle parking may increase in the future.

2. SIGNAGE

Signage can provide bikeway visibility and promote it to potential and existing users. By increasing the driver’s awareness of bicyclists on the road, signage can prevent potential bicyclist-vehicle collisions. Signage includes bicycle route signs, bikeway stencils on the road, and wayfinding systems. As described in Section D.1., CA MUTCD requires proper bike signs and markings for Class II and III bikeways. Wayfinding and destination signage can help to clarify routes, by providing mileage to a destination.

Newman has only a few bike route signs. A lack of signage can make it confusing for new cyclists to find their way. Additionally, drivers are often not aware of their encroachment on the bicyclist’s right-of-way, or do not feel obligated to avoid the encroachment.

3. BICYCLE CROSSINGS

Bicycle crossings should be carefully designed because most bicycle-vehicle collisions occur at intersections.



A bicycle parking rack on Main Street.

Various facilities have been introduced to improve safety in bicycle crossing, including bicycle detector loops, marked crossing, bicycle boxes, and signals. Bicycle detector loops are sensors that activate traffic signals when a bicyclist arrives at signalized intersections.

In Newman, bicycle detector loops are installed at two signalized intersections along N Street/State Route 33, but a Newman NMTP Steering Committee member reported that the sensors are too weak to recognize bicyclists. Other major streets have intersections with two-way stop signs. This poses difficulty for bicyclists in crossing major streets, such as Inyo Avenue, because these streets are wide and drivers often drive faster than posted speed limits, which are 25 miles per hour.

4. SUPPORT FACILITIES

Support facilities offer showers or lockers, particularly at destination points such as at places of employment. Support facilities also include bicycle shops, which make repair or tune-up services readily available to bicyclists. Currently none of these facilities are provided in Newman.

F. PAST EXPENDITURES

The City of Newman has spent approximately \$10,000 for the last 10 years on bicycle facilities, such as striping bike lanes and installing bicycle parking racks throughout Newman.¹¹

G. NEEDS ANALYSIS

The City of Newman is a great place to bicycle; it is generally flat, has temperate weather most of the year, has easily accessible destinations, and low traffic volumes on local streets. However, some parts of the city have bicycle safety issues, requiring improvements. In creating a bicycle network in Newman, the following elements should be considered:

1. BICYCLE-VEHICLE COLLISIONS

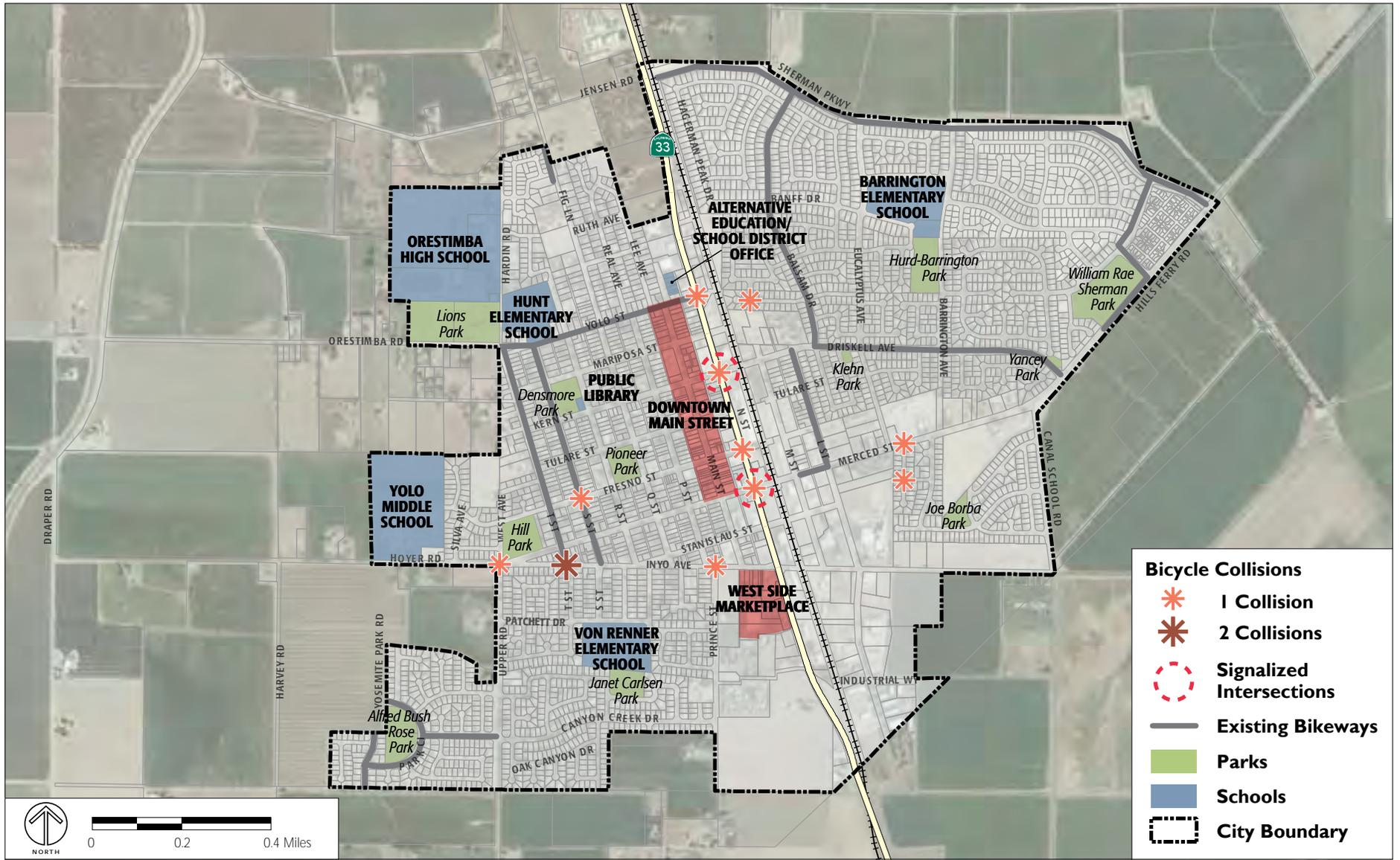
As shown in Figure 3-7, a total of 12 bicycle-vehicle collisions occurred in Newman from 2001 to 2011.¹² Ten of them took place along major roads, such as State Route 33, Merced Street, and Hoyer Road/Inyo Avenue. Particularly, the intersection of T Street and Inyo Avenue has had two collisions, increasing concerns about Yolo Middle and Von Renner Elementary School students' safety. This collision map also highlights locations where installing traffic calming devices and bicycle facilities should be considered to prevent future accidents.



Bicyclists crossing the railroad tracks on Merced Street.

11 Garner Reynolds, Director of Public Works, City of Newman, Email communication with the Planning Center | DC&E on August 16, 2012.

12 Statewide Integrated Traffic Records System (SWITRS), <http://iswitrs.chp.ca.gov/Reports/jsp/CollisionReports.jsp>, accessed on March 14, 2012.



Source: The Planning Center | DC&E, 2012.

FIGURE 3-7 BICYCLE COLLISIONS, 2001-2011

2. CROSSING STATE ROUTE 33 AND UPRR

State Route 33 and the UPRR tracks create a significant barrier, limiting east-west travel throughout the city due to the limited number of physical crossings and high volumes of traffic on both facilities. State Route 33 is a Caltrans facility and the railroad tracks are a UPRR facility, and therefore the City does not have jurisdiction over adding or improving bicycle and pedestrian facilities, including traffic signals and crosswalks, at these intersections.

State Route 33 has four crossings in Newman. The intersections at Merced Street and at Kern Street are signalized. However, bicyclists are forced to ride in the same lane as vehicles on these streets, due to a lack of proper bicycle lanes. There are also problems with existing bicycle facilities, such as the detector loops' reported lack of functioning. The other two unsignalized intersections, controlled with two-way stop signs, are even harder to cross. The most problematic intersection is State Route 33 at Sherman Parkway/Jensen Road, which is used by high school students who live on the east side of town and walk, drive, or bike to the high school. The intersection of State Route 33 and Inyo Avenue also has increases safety concerns. The volume of traffic along Inyo Avenue to and from the West Side Marketplace can frustrate bicyclists when crossing this intersection.

The UPRR tracks, running parallel along or a half block to the east of State Route 33, are slightly elevated above the ground level on either side. The tracks are bordered by looser, gravel paving on the road segments between the rail tracks and State Route 33, ranging between 50 and 210 feet in length. On these roadway segments, bicyclists must share the road with vehicles without proper protection, such as striped bicycle lanes.



Jensen Road is a narrow road with uneven paving.



An isolated bike lane segment on Fig Lane.

3. JENSEN ROAD

West of State Route 33 and at the northern periphery of the City limits, Sherman Parkway turns into Jensen Road, which is a narrow unimproved roadway consisting of approximately 10 feet in width of asphalt. Bicyclists and pedestrians on Jensen Road need to deal with cars turning onto or off of the narrow road and uneven paving with no shoulder. Even though this road is outside of the City's jurisdiction, since it is major school commute route for Orestimba High School students, and still within the sphere of influence (SOI) of Newman, the NMTP steering committee has expressed their interest in improving safety for bicyclists, pedestrians, and motorists traveling to and from Orestimba High School.

4. NETWORK CONNECTIVITY

Currently, there are no complete east-west or north-south bikeways in the city. Driskell Avenue provides a good east-west Class II bikeway in the eastern portion of the city, but unfortunately this does not link to the western part of the city across State Route 33. In the western part of the city, Yolo Street is an east-west connection, designated as a Class II bikeway. However, the Class II bike lane striping is faded on Yolo Street and bike signs are not highly visible. North-south bicycle connections are more limited. Balsam Drive successfully provides a bicycle connection from the northeast part of Newman to Driskell Avenue, which connects to the center of the city. T

and S Streets also serve as partial north-south bicycle routes in the western part of the city. However, these two parallel routes continue only for five blocks between Yolo Street and Inyo Avenue, leaving northwestern and southwestern parts of the city difficult to access.

There are fragments of bike lanes that run the length of only a block in a few locations in Newman. As shown in Figure 3-5, the roads that have short isolated segments of bike lanes include Fig Lane, L Street, Merced Street, Hills Ferry Road, and Canyon Creek. Filling gaps between these segments and the existing bikeways would help improve bicycle safety and connectivity in the city.

5. CONNECTIVITY TO DESTINATION POINTS

Connections to destination areas need to be considered in the development of the bicycle route network. The existing bikeway network allows for limited connection to Main Street. It does not include any connection to the West Side Marketplace and has partial connections to school and park areas, as described below:

- Main Street: Currently, only Yolo Street, a Class II bikeway, provides bicycle access to Main Street.
- Schools: Hunt Elementary School can be reached by bike lanes along Yolo Street and S Street. However, there is no existing bike lane or path to Orestimba High School, Yolo Middle School, Von Renner Elementary School, or Barrington Elementary School. However, many residential streets allow for safe bicycle travel even though they are not formal routes.
- Parks: Only Sherman Park, Lions Park, Yancey Park, Klehn Park, Densmore Park, and Bush Rose Park are connected to the existing bikeway network even though, as mentioned previously, the bikeways to Bush Rose Park and Sherman Park are short segments.
- West Side Marketplace: Currently, no bikeways reach the West Side Marketplace. As described above, the volume of traffic along Inyo Avenue to and from the West Side Marketplace increases safety concerns.
- Golden Valley Health Center: There is no existing bike lane or path to the Golden Valley Health Center.

6. PAVEMENT CONDITION

Pavement conditions influence the experience of bicycling. The pavement condition on many of the newer roads, such as in the northeastern part of the city, is smooth and well-suited for bicycle riding. However, roads in the older neighborhoods are cracked, uneven, potholed, and/or have faded striping.

7. MAIN STREET

Main Street has relatively higher traffic than surrounding collector and local streets, and has front-in angled parking, which creates an uncomfortable bike throughway environment. Because sight distance between drivers and bicyclists is restricted, locating bike lanes adjacent to front-in angled parking is not desirable unless sufficient space exists to enable vehicles to back out of the space without intruding on the bicycle lane. In order



Cracked asphalt on R Street.



Front-in angled parking on Main Street.



Cars parked on a bike lane on Merced Street.

to avoid being backed into, bicyclists (mostly children), currently ride on the sidewalk, increasing chances of collisions with pedestrians or with vehicles at intersections. In addition, it is common for bicyclists to leave bikes unattended on the sidewalk, interfering with pedestrian travel. The community has expressed interest in providing a parallel bike route to Main Street, in order to keep bicyclists out of conflict with angled parking.

8. BICYCLE FACILITIES

As discussed in Section D.3, improvements to bicycle facilities, in addition to expanding the City's bicycle network, are needed in Newman. Class I parking is not provided, and Class II parking only can be found in Downtown, at the public library, and at some school sites. Providing sufficient bicycle parking racks at major destinations, including schools and parks, could encourage bicycling in Newman.

At intersections crossing main arterials or collectors, lack of signalization creates difficult bicycle crossings. Visible bicycle signage, stencils, and bicycle crossing warning devices should be considered at these intersections to inform drivers about bicycle rights-of-way, increase public awareness, and promote safe bicycling.

9. ENFORCEMENT

Under California law, it is legal to park cars in bike lanes unless the City restricts it. However, parked cars in bike lanes force bicyclists to ride onto the vehicle right-of-way, which increases the potential of vehicle-bicyclists conflicts. In Newman, when there is no parking lane, drivers tend to park their cars in bike lanes, especially along Merced Street. If the City intends to restrict vehicle parking on bike lanes, proper signage and enforcement is necessary.

V. PEDESTRIAN CONDITIONS

This section describes the existing conditions of the pedestrian environment and facilities in Newman, and identifies pedestrian improvement needs.

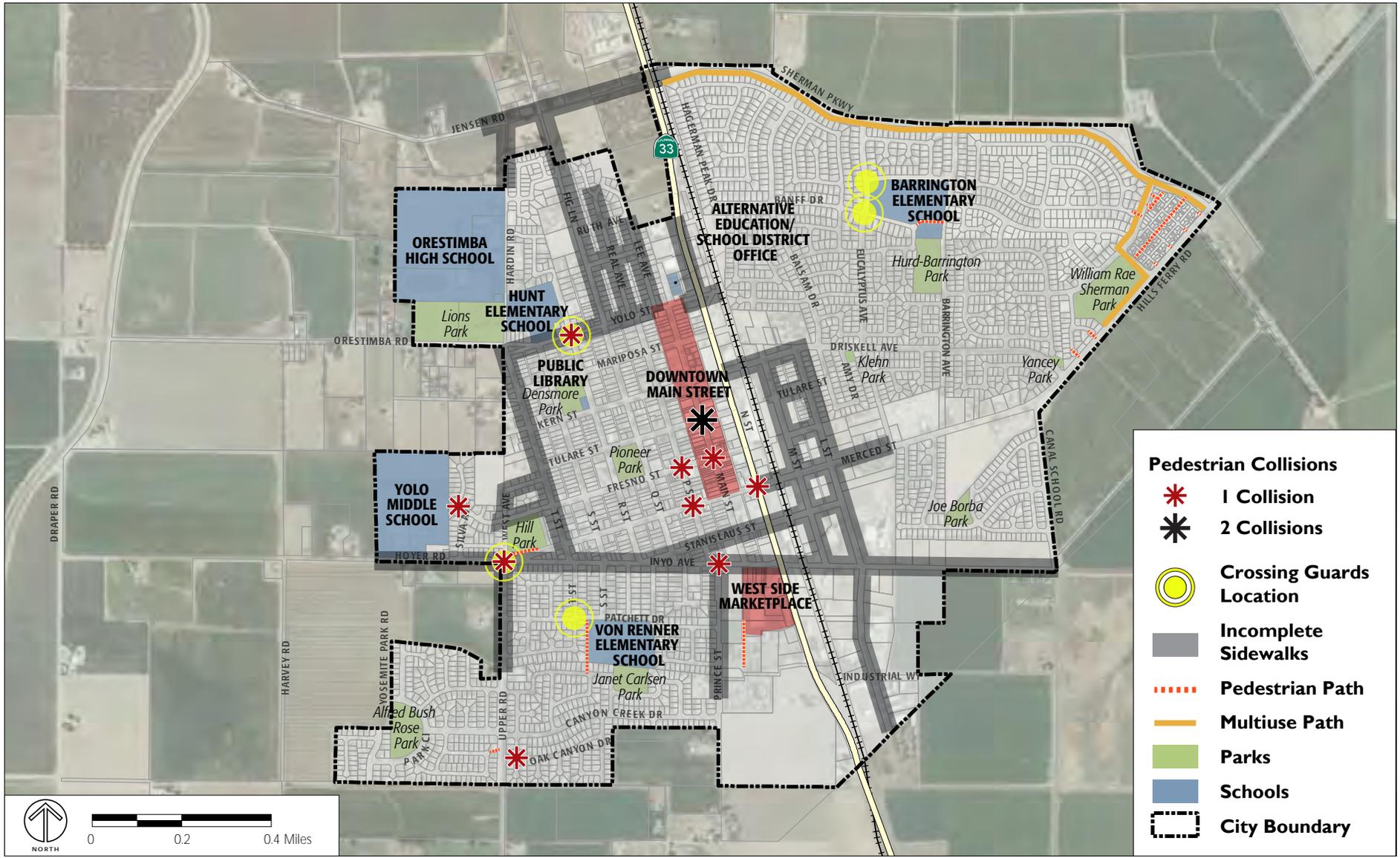
A. WALKABILITY AND PEDESTRIAN FACILITIES

Walkability is a qualitative measure of the degree to which a pedestrian network encourages walking. Walkability is influenced by all aspects of the built environment, including availability of pedestrian facilities and amenities, such as benches, store frontage, and wayfinding signage. Pedestrian facilities are critical elements to improve a safe and functional pedestrian environment. To achieve an enjoyable pedestrian environment, pedestrian facilities need to be designed with consideration of the surrounding context.

Pedestrian facilities include sidewalks and pathways, which form a connected network, as well as crosswalks, pedestrian crosswalk signals, lighting, street trees, and curb ramps. Sidewalks and pathways should be wide enough to comfortably accommodate the existing or the expected pedestrian volume, and be safe and accessible to pedestrians of all abilities. Sidewalk surfaces should be kept smooth enough to accommodate wheelchairs and strollers. All corners of intersections should have well-designed curb ramps. At signalized intersections, all crosswalks should be marked with highly visible painting and signage. Traffic signal phasing should allow adequate crossing time for pedestrians. The connected network must provide access to destinations that attract pedestrian travel, such as schools, parks, and stores. Additionally, the Americans with Disabilities Act (ADA) requires other treatments, such as audible signals and curb ramps with truncated domes, to promote safety and accessibility for disabled users.

B. EXISTING PEDESTRIAN FACILITIES AND NETWORK

The state of Newman's pedestrian network varies greatly based on the age of a neighborhood or area. The older part of the city, around the Downtown, has a walkable environment, comprised of small blocks, complete sidewalks, and street trees. For instance, the Downtown streets, laid out in a traditional grid pattern with block lengths of 400 feet, provide pedestrians with a high level of accessibility to destinations, often providing direct or nearly direct walking routes. Main Street in the Downtown is very pedestrian friendly as well, with newly added bulb-outs, curb ramps, bollards, planters, pedestrian-scaled lighting, special crosswalk paving to slow vehicles, as well as street furniture to allow visitors to sit and spend time along the street. In comparison, the more recent residential neighborhoods are built with few through streets and multiple cul-de-sacs that do not provide through pedestrian connections. This circulation pattern creates long and indirect walks to destinations and discourages walking.



Source: Based on field observations conducted by The Planning Center | DC&E in 2012.

FIGURE 3-8 EXISTING PEDESTRIAN NETWORK AND COLLISIONS, 2001-2011

1. SIDEWALKS

Newman has a fairly complete sidewalk network. Many streets within the city have sidewalks on both sides. There are, however, locations where there are gaps in the sidewalk system, and sidewalks end abruptly, as shown in Figure 3-8.¹³ These locations are generally adjacent to undeveloped lots, within industrial areas, along M Street, L Street, and Prince Street, and along streets that were likely developed during a time when sidewalks were not required. The major roads with intermittent sidewalks include Inyo Avenue/Hoyer Road, Yolo Street, T Street, and part of Merced Street east of State Route 33. Some residential roads in the older parts of the city, such as Lee Avenue, Real Avenue, and Fig Lane, do not provide sidewalks.

There are rolled-edge curbs in some sections of the southwestern part of the city. Rolled-edge curbs often encourage drivers to park on sidewalks and obstruct pedestrians. Particularly, the rolled-edge curbs on Patchett Drive and S Street in front of Von Renner Elementary School can pose obstacles for parents and students.

2. CROSSINGS

Crossing major roads poses a challenge to pedestrians. Most major roads in the city are wide and significant amounts of traffic but do not provide proper crosswalks. There are usually two-way stop signs along major roads, forcing pedestrians, including seniors and children, to negotiate with drivers, cross wide intersections, or make a long detour to use a safer crossing.

Two intersections, State Route 33 at Merced Street and at Kern Street, provide signalized crosswalks with pedestrian push buttons. However, these push buttons are not universally accessible because they cannot be easily operated by persons with limited hand strength or dexterity, and do not respond to activation with a noise or vibration to alert the pedestrian that the button has been activated.

3. TREES AND LANDSCAPING

The streetscape environment varies greatly between neighborhoods within Newman. The Downtown and most of the older neighborhoods have separated sidewalks, which have landscaped parking strips between the curb and the sidewalk. These parking strips often contain street trees that provide shade for pedestrians. However, some of the developments built since the 1980s, for instance near Barrington Elementary School, have solid curbs and sidewalks, with no parking strip to provide a buffer between pedestrians and vehicle traffic. In the new subdivisions, trees were planted in front yards near sidewalks. Even though they are not street trees, they provide shade for pedestrians.

4. PEDESTRIAN PATHWAYS

Newman has one private and five public dedicated pedestrian pathways that are located outside of public street right-of-ways. These pathways are located adjacent to Von Renner Elementary School, West Side Marketplace,



At the intersection of State Route 33 and Sherman Parkway, no crosswalks or signals are provided for pedestrians.



Street trees provide a pedestrian-friendly environment along Main Street in Downtown.

13 The sidewalk data was collected during the field visits in 2012 as noted in Section A, Introduction.



Pedestrian pathways.



Newman banners, bollards, and pedestrian-scaled lighting along Main Street.

William Rae Sherman Park, and Upper Road as shown in Figure 3-8.

In addition to the dedicated pedestrian pathways, Newman has multi-use pathways, which are paths that bicyclists and pedestrians share, along Sherman Parkway and Hills Ferry Road. These paths are approximately 10 feet in width and buffered with landscaped parking strips, providing a pleasant walking environment despite the adjacent traffic on the road.

5. PEDESTRIAN AMENITIES

Pedestrian amenities, such as benches, pedestrian-scaled lighting, and transparent store frontage, can provide a comfortable and enjoyable environment for people to walk. As described above, Downtown Newman provides a range of pedestrian amenities along Main Street. However, there is a lack of pedestrian amenities outside of Downtown. In particular, pedestrian-scaled lighting, which provides adequate lighting levels and ensures public nighttime safety, is missing in most residential areas, near schools, and in parks.

6. WAYFINDING AND SIGNAGE

An effective signage and wayfinding system also contributes to creating a pedestrian-friendly environment. Uniform and complementary signs throughout a city help tourists or residents effectively navigate while avoiding the frustration of getting lost and wasting time. Since smartphone technology has spread, getting lost can be less of a concern than in the past, but memorable signage can serve as public art, enhance pedestrian experience, and reinforce a unique local character and identity. Although Downtown Newman provides a uniform signage system, it is easy to get lost outside of Downtown because of a lack of wayfinding system, dead ends, and cul-de-sacs.

C. NEEDS ANALYSIS

As discussed above, the pedestrian network in the city is not complete and requires improvements. Furthermore, collision data shows that some intersections or segments of streets need special treatment to improve safety. In creating a complete pedestrian network in Newman, the following elements should be considered:

1. PEDESTRIAN COLLISIONS

As shown in Figure 3-8, during the 10-year period from 2001 to 2011, there were 11 reported collisions in Newman involving pedestrians, with a total of 9 reported injuries.¹⁴ Four accidents were caused by the motorist failing to yield to a pedestrian in the crosswalk. Most accidents have occurred around Downtown and in the vicinity of Hunt Elementary School and Yolo Middle School, where there is a high volume of pedestrian activity. There have been two collisions at Tulare Street and Main Street.

¹⁴ Statewide Integrated Traffic Records System (SWITRS), <http://iswitrs.chp.ca.gov/Reports/jsp/CollisionReports.jsp>, accessed on March 14, 2012.

2. AMERICANS WITH DISABILITIES ACT COMPLIANCE

The Americans with Disabilities Act (ADA) requires a consistent and complete sidewalk network that meets ADA standards, such as a minimum sidewalk width, a smooth sidewalk surface, and a maximum curb ramp slope. The sidewalk network in the city is not currently ADA-compliant because it is not complete, and because many intersections either have no ramps or ramps without truncated domes. In particular, the two signalized intersections in the city lack truncated domes and audible signals.

The sidewalk gaps in the pedestrian network can be hazardous, especially when the gaps are along the high-trafficked routes to major destinations. As described in Section E.2.a, Inyo Avenue/Hoyer Road, Yolo Street, T Street, and part of Merced Street east of State Route 33 lack continuous sidewalks. The community indicated these streets need sidewalk improvements because they are main routes to schools, the Golden Valley Health Center, and the West Side Marketplace. The lack of sidewalks imposes difficulties for pedestrians walking along these high-trafficked streets.

Newman has some sidewalk surfaces that are not up to ADA standards. Old sidewalks often have cracked surfaces with abrupt level changes. Additionally, sidewalks are frequently obstructed by signs, poles, benches, or other streetscape amenities. Sidewalks should have a continuous surface that is not interrupted by steps or abrupt changes in level and have a slip resistant surface.

3. STATE ROUTE 33/N STREET

Sidewalks along State Route 33/N Street are intermittent and directly adjacent to travel lanes without any buffer between pedestrians and traffic, which contributes to an uncomfortable walking environment.

4. STATE ROUTE AND RAILROAD CROSSINGS

As discussed in Section D, Bicycle Conditions, crossing State Route 33 and the railroad tracks poses difficulty to bicyclists and pedestrians, including seniors, children, and people with disabilities. The following describes each intersection in detail, from north to south.

a. Sherman Parkway/ Jensen Road

The intersection at Sherman Parkway and State Route 33 is one of the most difficult areas to cross in the city. There are no sidewalks or crosswalks, only two-way stop signs on Sherman Parkway and Jensen Road. Crossing the railroad requires walking along an uneven dirt road, while vehicles drive along Sherman Parkway. Moreover, west of State Route 33, outside the City limits, Sherman Parkway becomes Jensen Road, which is a partially paved road without sidewalks. Because Sherman Parkway/Jensen Road is the only east-west through street in the northern part of the city, and because it provides a connection to both Hunt Elementary and Newman's only high school, there is often traffic crossing this dangerous intersection. Particularly, students and parents walk, bike, or drive this route in school commute hours, increasing safety concerns. The closest alternative east-west



Pedestrians crossing State Route 33 to get to the West Side Marketplace.



A student walking along an uneven dirt road at the intersection of Jensen Road and the railroad tracks.



Intermittent sidewalks on Merced Street crossing State Route 33 and the railroad tracks.

route is along Driskell Avenue/Kern Street, which is approximately 0.6 miles south.

b. Kern Street and Merced Street

The intersection of State Route 33 at Kern Street and at Merced Street are signalized and provide pedestrian-activated crossing signals. However, the sidewalk connection is not complete, especially as it crosses the railroad tracks. People using wheelchairs and parents with strollers have difficulty in navigating across the tracks along unpaved sidewalks.

c. Stanislaus Street

The intersection of State Route 33 and Stanislaus Street is not signalized and has no sidewalks or crosswalks. Some parts of West Stanislaus Street have sidewalks, but on the east side of the highway, Stanislaus Street does not have sidewalks until it ends at L Street. The intermittent sidewalks force pedestrians to walk along Stanislaus Street without a buffer from cars, which creates an uncomfortable pedestrian environment, especially when crossing State Route 33.

d. Inyo Avenue

The intersection of State Route 33 and Inyo Avenue is not signalized and has incomplete sidewalks and no crosswalks. The West Side Marketplace shopping center, located at the southwestern corner of this intersection is one of the major attractions of the city, drawing pedestrian traffic from the east, west, and north. Given the level of pedestrian activity and traffic, this intersection may be signalized in the near future with Caltrans' approval. Either signalized or not, proper pedestrian facilities, such as high visibility crosswalks and pedestrian safety signage, would be necessary to further protect pedestrians.

5. ROUTES TO SCHOOLS

The City of Newman has three elementary schools, one middle school, and one high school, as well as a continuing education school and a migrant education center. The following describes pedestrian conditions in the vicinity of each school.

a. Hunt Elementary

Hunt Elementary School is located on Yolo Street, which is a wide street that carries a high volume of traffic during school commute hours. The school provides a crossing guard at Yolo Street and R Street to protect students at this busy intersection. However, walking along Yolo Street is not easy for children and parents with strollers because of rough surface condition, discontinuous sidewalks, and missing curb ramps. Because sidewalks along R Street are not wide enough to carry peak hour pedestrian traffic, especially parents with strollers, pedestrians sometimes walk along the road. Some parents have expressed their concern about the potholed asphalt on R Street because children often trip when walking along the road when the sidewalks are busy.

b. Orestimba High

As shown in Table 3-3, about 80 percent of students walk to and from Orestimba High School. The school does not have crossing guards. The superintendent reported that the intersection of Hardin Road/Yolo Street and T Street is an intersection of concern. This intersection is controlled by four-way stop signs, but does not provide sidewalks or curb ramps. The southwestern corner of this intersection, which is adjacent to an undeveloped lot, is outside of the City limits. However, given that this intersection is heavily used by students walking to school, sidewalk improvements are necessary.

As described above, T Street also needs significant sidewalk improvements. The community indicated that this is one of the busiest streets in Newman, but T Street currently does not provide any sidewalks. Installing sidewalks along T Street will help students commute to and from Orestimba High School safely.

c. Von Renner Elementary

Von Renner Elementary School is surrounded by subdivision neighborhoods. The area around the school has limited connectivity because of the many cul-de-sacs. For instance, the school is only accessible from Patchett Drive. One mid-block pedestrian path is located along the western perimeter of the school site connecting Patchett Drive to Sandy Creek Drive to the south, but the area needs more than one pedestrian path to improve its connectivity.

Patchett Drive has continuous sidewalks and two intersections with crosswalks. However, sidewalks along Patchett Drive are not wide enough to carry peak hour pedestrian traffic, including parents with strollers. The sidewalk width ranges between 4 and 5 feet with rolled-edge curbs, which often allow cars parked on the sidewalk, narrowing the pedestrian right-of-way. Moreover, the asphalt pavement on Patchett Drive is in bad condition. This may result in children tripping when crossing the road. The curb ramps are not ADA compliant.

d. Barrington Elementary

Barrington Elementary School is located within the Sherman Ranch subdivision. Continuous sidewalks and traffic-calming devices, such as speed humps, are provided. A crosswalk with a flashing crosswalk warning device at the intersection of Barrington Avenue and Red Lion Way helps pedestrians cross the intersection safely. However, in the vicinity of the school, cul-de-sacs, a lack of street trees, and wide roads make the environment less pedestrian-friendly. Eucalyptus Avenue is a busy street during school commute hours because of school drop-off/pick-up and bus traffic. The school's crossing guards control two intersections along Eucalyptus Avenue at Banff Drive and at Crow Mountain Drive. However, the intersection of Crow Mountain Drive and Eucalyptus Avenue, with a two-way stop sign, is difficult for students to cross because of car and bus traffic when there are no crossing guards.



A lack of pedestrian facilities along Yolo Street near Hunt Elementary.



Pedestrians walking in a vehicle lane due to a lack of sidewalks on T Street



A car parked on the sidewalk due to a rolled-edge curb.



In-road warning lights in a crosswalk at the intersection of Barrington Avenue and Red Lion Way.



Sidewalks in front of Yolo Middle School, missing curb ramps, crosswalks, and parking strips.

e. Yolo Middle

Although Yolo Middle School reports that over 60 percent of students walk, the pedestrian network and facilities around the school have not yet been developed to City standards. Inyo Avenue/Hoyer Road, between Yolo Middle School and Downtown, lacks sidewalks, so students and other pedestrians walk on dirt pathways without buffer zones from high-speed traffic. In particular, the intersection of Hoyer and Upper Road, a location of previous collisions, does not provide crosswalks and sidewalks with parking strips. A Community Development Block Grant project addressing this issue is currently undergoing environmental review.¹⁵ Another intersection with safety concerns in the vicinity of Yolo Middle School is at Inyo Avenue and T Street. Because T Street is not perpendicular to Inyo Avenue, this intersection is skewed, limiting sight distance and pedestrian visibility. The community suggested pedestrian safety signs and high visibility crosswalks be installed at this intersection to help ensure safe pedestrian crossing.

6. PARKS

Parks attract pedestrian activity. Four parks are located near schools, used by students and neighborhood residents, while others are located further from schools and are mostly likely to be used only by neighborhood residents.

The parks nearby schools are heavily used after school hours, making the safety of pedestrian connections between the schools and parks important. The state of pedestrian facilities around parks is variable. In neighborhoods, especially neighborhoods that were not developed as part of subdivisions, or those that are located on the rural periphery, sidewalks are missing altogether. On the other hand, newer development areas, such as Sherman Ranch, contain cul-de-sacs, which prohibit through traffic and immediate access to parks for some neighborhoods.

Pioneer Park is equipped with pedestrian amenities, including benches and kiosks, but the other parks in Newman generally do not provide sufficient pedestrian amenities, especially benches, trash receptacles, and pedestrian-scale lighting.

7. WEST SIDE MARKETPLACE

The West Side Marketplace is another important destination, as it houses the city's largest grocery store. However, the Main Street pedestrian improvements do not continue for the length of Main Street to Inyo Avenue, and Main Street does not connect through to the West Side Marketplace, limiting safe access for pedestrians. The back entrance to the shopping plaza has a sidewalk on one side, but no crosswalks that connect this entrance to the surrounding neighborhood. As described in Section E.3.d, access to the shopping center from east of State

¹⁵ Stephanie Ocasio, City of Newman, Email communication with the Planning Center | DC&E on May 1, 2012.

Route 33 and the railroad tracks is very limited because the intersection of State Route 33 and Inyo Avenue is un-signalized and because the width of State Route 33 requires considerable time for pedestrians to cross, especially younger and older citizens.

8. PEDESTRIAN AMENITIES AND SIGNAGE SYSTEM

As described in Section 2 above, there is a lack of pedestrian amenities outside of Downtown. In particular, the community shared a need for pedestrian-scaled lighting, safety signs, benches, and trash receptacles be provided along the multi-use path on Sherman Parkway.

Most public parks and some residential streets do not have pedestrian-scaled lighting. The City is planning on installing ambient lighting in Hill Park to discourage after-hour behaviors. Illuminating the sidewalks with high volumes of pedestrian traffic and the other parks is critical to increase nighttime safety and pedestrian visibility to drivers and bicyclists.

Newman does not have a citywide signage system. Providing direction and distance information for major destinations can enhance residents' walking experience as well as help strangers find their way in Newman. Information kiosks can provide more detailed information while presenting a community's character and historical value.

9. PUBLIC ART

The community expressed an interest in installing public art throughout Newman to make the city more playful and visually interesting. The community identified several public areas with blank walls or empty plazas, including Downtown Plaza and Hurd-Barrington Park, which can be an opportunity for public art or mural installation. Electrical and traffic signal boxes on sidewalks are also potential sources for public art projects.



Because of a lack of sidewalks, pedestrians from the West Side Marketplace use a dirt path along Prince Street.

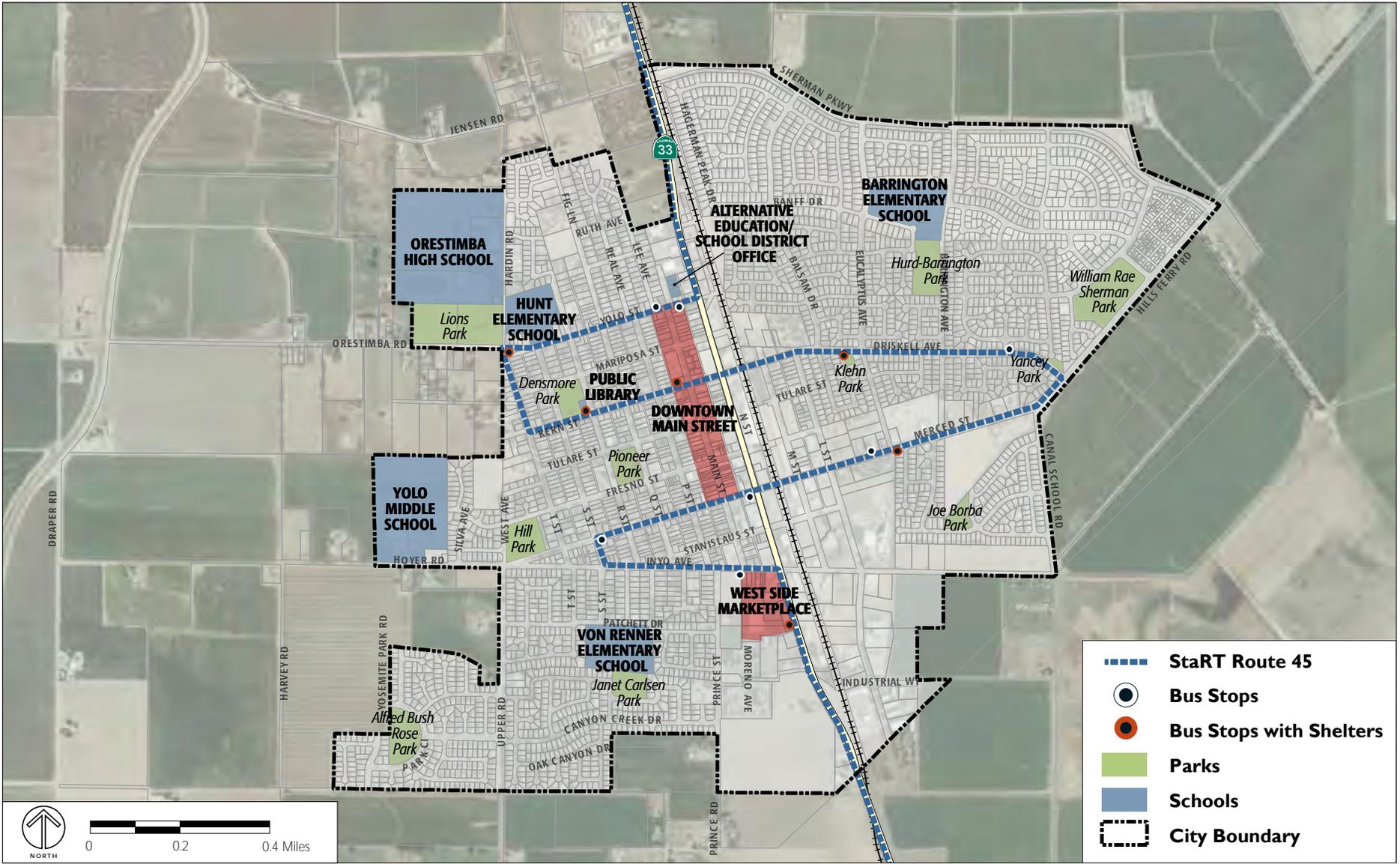


A bus stop with no shelter or transit information for riders.

VI. MULTIMODAL CONNECTIONS

“Multimodal” refers to the use of two or more modes of transportation in a single trip. Currently, only 0.4 percent of commuters use public transit in Newman. Improving non-motorized access to transit is an important part of making walking and bicycling a part of daily life in Newman. Linking bicycles with public transit allows bicyclists to reach more distant areas and to overcome barriers, such as nighttime bicycling, poor weather, or steep hills. Bicycling to transit creates benefits for the community by reducing air pollution, energy consumption, and traffic congestion, all with relatively low cost investments.

Local and regional bus service is provided by Stanislaus Regional Transit (StaRT). StaRT provides fixed route, roundabout, and Dial-A-Ride services to cities and towns in Stanislaus County. Route 45 connects Gustine to Turlock, going through Newman, Crows Landing, and Patterson. Route 45 serves both directions four times a day on weekdays and three times a day on Saturday. The northbound buses are scheduled from 5:30 am to 3:30 pm, while the southbound buses are scheduled from 11:20 am to 7:10 pm. Approximately 13 stops are located throughout Newman, as shown in Figure 3-9. Some of the stops do not provide ADA-compliant facilities, bus route maps, or shelters, which can protect riders from poor weather. All StaRT busses are equipped with exterior bicycle racks, but none of the bus stops in Newman provide bicycle parking facilities.



Source: The Planning Center | DC&E, 2012 and Stanislaus Regional Transit, 2012.

FIGURE 3-9 EXISTING TRANSIT STOPS AND ROUTES

RECOMMENDED PROJECTS

4



WELCOME
HISTORIC DISTRICT OF NEWMAN

HISTORIC DISTRICT OF NEWMAN

STOP

4 RECOMMENDED PROJECTS

This chapter recommends a list of projects that will enhance walking and bicycling environments and improve safety and accessibility in Newman. These projects are categorized into three groups: Pedestrian Improvements, Bicycle Improvements, and Citywide Improvements. Each project contains cost estimates and a detailed description of the proposed improvements. Sections I and II include figures that illustrate the locations of the recommended improvements.

This chapter identifies recommended projects that are necessary to create a comprehensive bicycle and pedestrian network. However, these types of improvements entail significant resources including capital costs and City staff time, which are currently limited. The City will implement the recommended projects as funds become available and in conjunction with the City's other capital improvement needs. Chapter 6 identifies potential outside funding opportunities the City of Newman can pursue.

The recommended projects have been prioritized in order to help the City effectively utilize limited financial resources. As described in detail in Chapter 6, based on the total scores earned from the Project Prioritization Worksheet (see Appendix A), the recommended projects are categorized into three phasing groups: Phase I (short-term projects), Phase II (medium-term projects), and Phase III (long-term projects). The priority of each project is shown in a table under each section.

Each section also includes conceptual cost estimates developed for the recommended projects. The project costs are estimated based on 2012 construction costs at a conceptual level. As such, these estimates do not include any additional soft costs, such as project management, design fees, construction management, surveys, installation, and testing. The conceptual cost estimates are presented in a table under each section of this chapter. Appendix B, Conceptual Cost Estimates, of this Plan shows general unit costs that were used to develop the conceptual cost estimates. The estimates have been rounded up to the nearest thousand dollars to simplify the numbers.

These recommendations will need further analysis and design to meet local, State and national standards and to ensure that they are feasible and appropriate. In addition, a detailed cost analysis will be needed as a next step towards implementing any of the following recommendations. Further detail about specific design criteria for these recommendations can be found in the Bicycle and Pedestrian Design Guidelines in Chapter 7.

I. PEDESTRIAN IMPROVEMENTS

This Plan identifies a Pedestrian Priority Network that the City of Newman will use to focus and prioritize implementation efforts. Figure 4-1 illustrates the Pedestrian Priority Network, which connects major destinations to each other and to residential neighborhoods. Figure 4-2 shows the locations of the street segments within the network that require sidewalks.

The following is a list of specific improvements that should be implemented along the Pedestrian Priority Network. This section recommends two types of improvements: citywide and area-specific improvements. The first improvement topic addresses crosswalk improvements, which is a larger, citywide action to enhance safety and accessibility. The topics that follow address more specific areas, from north to south, then from west to east.

A. CITYWIDE CROSSWALK IMPROVEMENTS

Two types of crosswalk striping are recommended:

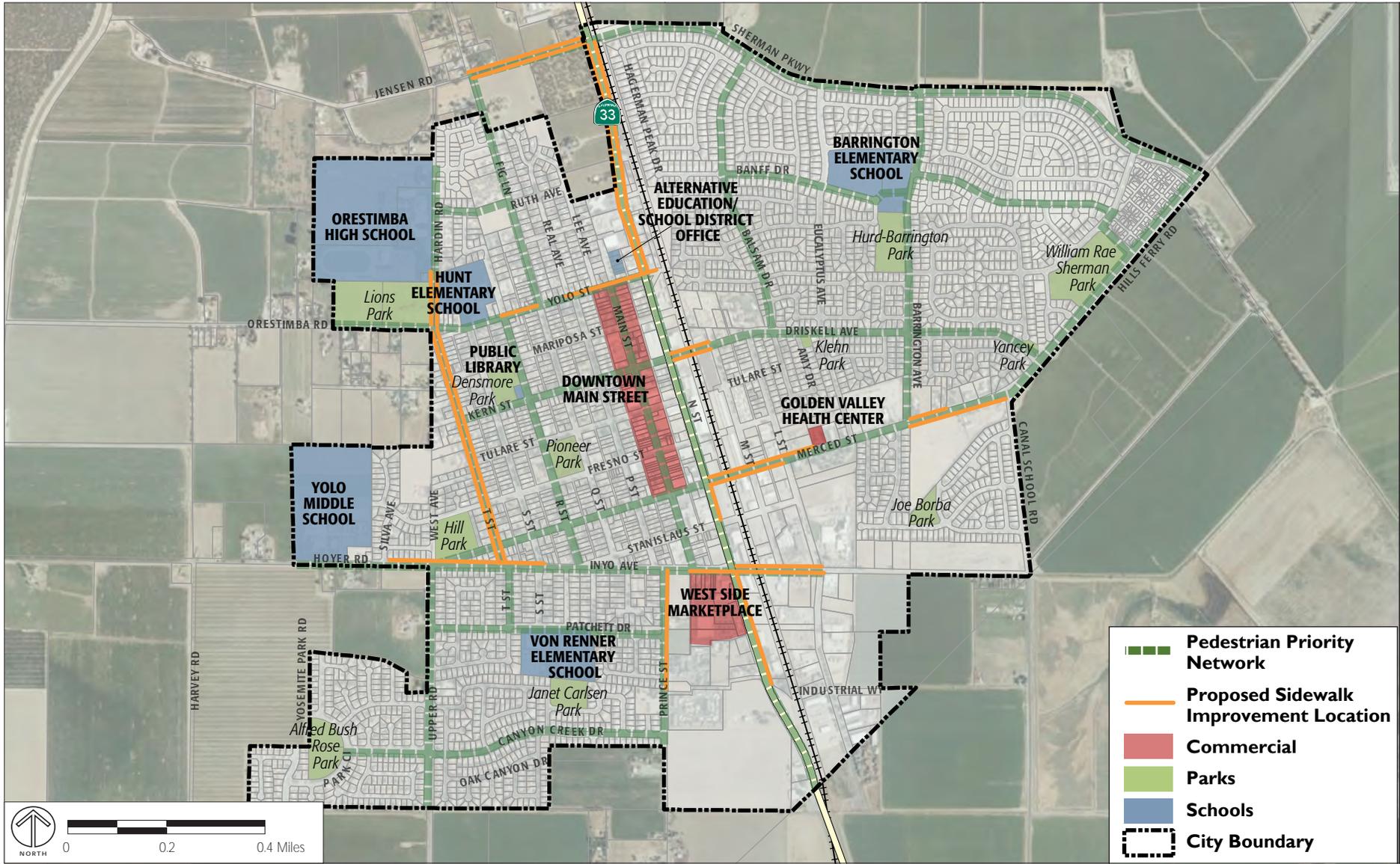
- Transverse style striping, which is the typical crosswalk striping consisting of two parallel lines, generally used for controlled intersections.
- High visibility ladder style striping, which consists of two parallel lines with ladder bars striped across the width of the crosswalk. Studies have found the ladder style crosswalk to be the most visible to drivers.

Unless specified otherwise, ladder style crosswalk treatments are recommended at all uncontrolled crossing locations and transverse style crosswalks are recommended at all stop controlled intersections. Within school zones, which usually encompass one or two blocks from the school site, California MUTCD recommends yellow high-visibility crosswalks to protect students crossing streets and high visibility school crossing signage. Figure 4-1 shows the locations of the recommended crosswalks and safety devices.

The Plan recommends three different levels of crosswalk improvements. These are categorized based on their proximity to major destinations, the volume of vehicle and pedestrian traffic, and the history of pedestrian-vehicle collisions at each intersection. The Level Three improvements require more special treatments because of greater pedestrian hazards.



A high visibility ladder-style crosswalk in the vicinity of a school.



Source: The Planning Center | DC&E, 2013.

FIGURE 4-2 RECOMMENDED SIDEWALK IMPROVEMENTS

1. NEW CROSSWALKS

The following indicates locations that need crosswalks. These locations already have existing curb ramps, which may need to be updated based upon a citywide curb ramp update.

- Jensen Road at Fig Lane (Jensen Road is currently outside of Newman’s city limits, but within the City’s Sphere of Influence. Thus the recommendation would need to be implemented by Stanislaus County in coordination with the City of Newman.)
- Along the multi-use paths on Sherman Parkway crossing Balsam Drive, Eucalyptus Avenue, Barrington Avenue, Southington Way, Cinnamon Teal Way, and Hills Ferry Road (only for east-west directions)
- Balsam Drive at Banff Drive
- Hardin Road at Stephens Avenue
- Driskell Avenue at the intersections M Street, Balsam Drive, and Barrington Avenue
- Upper Road at the intersections of Patchett Drive and Canyon Creek Drive
- Prince Street at the intersections of Strawbridge Drive and Canyon Creek Drive

Total Cost: \$15,000 (38 crosswalks)

Priority: Phase I

2. CROSSWALKS AND ADA-COMPLIANT CURB RAMPS

The following indicates the locations that need crosswalks and ADA-compliant curb ramps:

- Yolo Street at T Street, R Street, Fig Lane, Main Street, and N Street
- Kern Street at T Street and R Street
- Merced Street at T Street, R Street, L Street, and Barrington Avenue
- Inyo Avenue and Main Street and Upper Road
- Prince Street at Inyo Avenue (across Prince Street)

Total Cost: \$ 133,000 (50 crosswalks + 45 curb ramps)

3. CROSSWALKS, ADA-COMPLIANT CURB RAMPS, AND PEDESTRIAN ACTUATED IN-ROADWAY WARNING LIGHTS

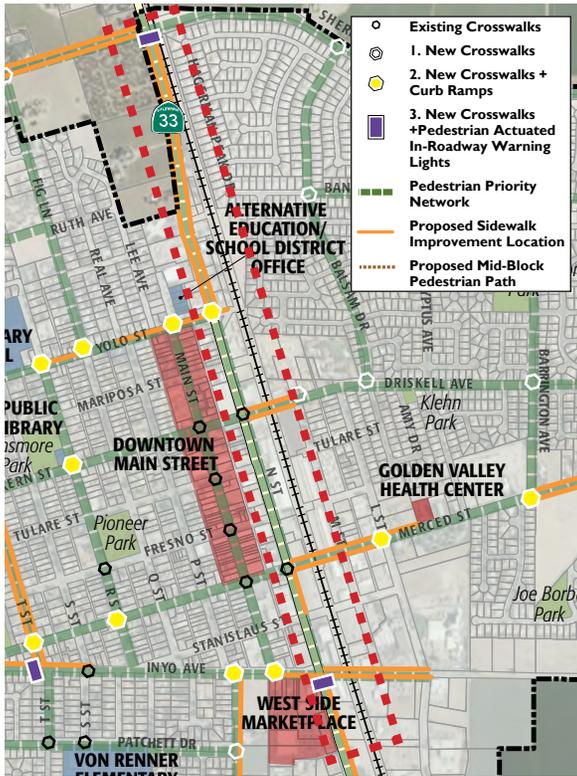
The following indicates the location of the intersection that needs high visibility crosswalks, ADA-compliant curb ramps, pedestrian actuated in-roadway warning lights, and push buttons:

- Jensen Road at State Route 33/N Street (in conjunction with recommended intersection signalization)
- Inyo Avenue at T Street and State Route 33/N Street (in conjunction with recommended intersection signalization)
- Hills Ferry Road at Canal School Road (County road)/Merced Street (recommend realignment of intersection due to sight visibility)

Total Cost: \$ 100,000



Top and Above An in-pavement lighted crosswalk and a push button to activate the warning sign.



B. UPRR CROSSINGS

Unpaved and uneven sidewalks over the UPRR tracks impose difficulties for people in wheelchairs or with strollers. Pedestrians may cross tracks illegally or trespass when there are no crossing gates for pedestrians or bicyclists.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
<p>Install detectible warnings in advance of crossing, and construct at-grade, ADA-compliant railroad crossing and sidewalks at the following intersections:</p> <ul style="list-style-type: none"> • Jensen Road/Sherman Parkway • Kern Street/ Driskell Avenue • Merced Street • Inyo Avenue 	<p>Coordination with UPRR</p>	<p>Review safety best practices at RR crossings</p> <p>Further design</p>	<p>\$120,000 (\$30,000 per crossing)</p>	<p>Phase II</p>



No at-grade, ADA-compliant crossing over the railroad tracks.

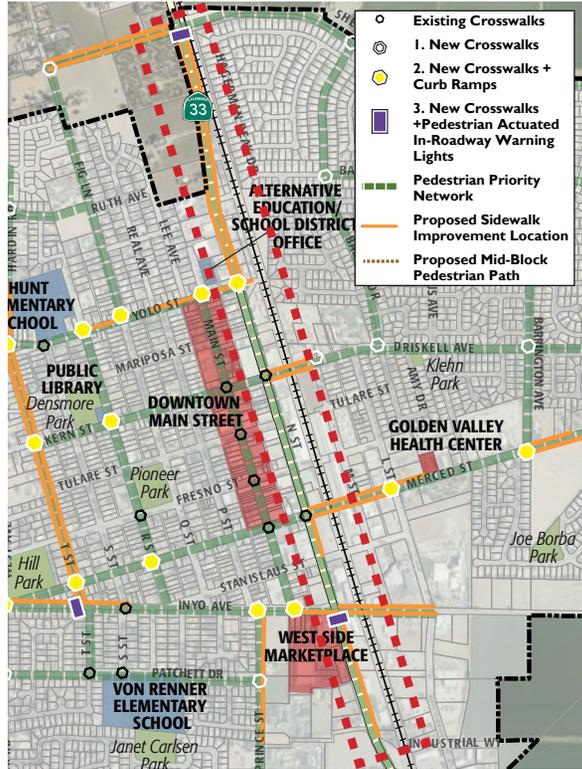
C. STATE ROUTE 33/N STREET IMPROVEMENT AREA

The sidewalks along State Route 33/N Street are intermittent, and the majority of the street lacks street trees and planting strips, which can buffer the pedestrian realm from traffic.

Drivers on the highway often do not realize that they are entering the city and may not be expecting pedestrians or bicyclists as they drive through Newman. Traffic calming devices can be used to notify the drivers that they are entering into a local road system.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/PARTNERSHIP	FUTURE ACTIONS/STUDY	COST ESTIMATE	PRIORITY
Install street trees at 25-foot interval		Identify the locations needing trees	\$20,000 (assumes 10 trees)	Phase II
Install two gateways to create a sense of place and calm traffic on State Route 33/N Street	Coordination with Caltrans	Further design	\$20,000	Phase II
Fill the following sidewalk gaps within the City limits: <ul style="list-style-type: none"> Along the both sides of the street between Yolo Street and the northern City boundary west of State Route 33 (0.4 miles x 2) Along the east side of the street between Merced Street and Stanislaus Street (0.06 miles) Along the east side of the street for approximately 0.25 miles from Inyo Avenue to the south (0.25 miles) 	Coordination with Caltrans	Further design	\$586,000*	Phase II

* Cost includes sidewalk, curb, and gutter. Additional cost estimates will be required to include other roadway improvements, such as lightings and utilities.



Sidewalks along State Route 33 lack street trees and parking strips.



Top Jensen Road has a narrow paved area and lacks sidewalks and other pedestrian facilities.

Above At the intersection of State Route 33 and Sherman Parkway, no crosswalks or signals are provided for pedestrians.

D. JENSEN ROAD IMPROVEMENT AREA

Jensen Road, which connects Orestimba High School to the neighborhoods east of State Route 33, does not have sidewalks and crosswalks. Even though this road is outside of the City’s jurisdiction, since it is a major school commute route for Orestimba High School students and still within the sphere of influence (SOI) of Newman, the NMTP steering committee has expressed their interest in improving safety for pedestrians, bicyclists, and motorists traveling to and from Orestimba High School. Walking along Jensen Road is difficult because pedestrians and bicyclists are forced to share the narrow road with cars. The intersection of Jensen Road and State Route 33 needs a special treatment to facilitate safe crossing.

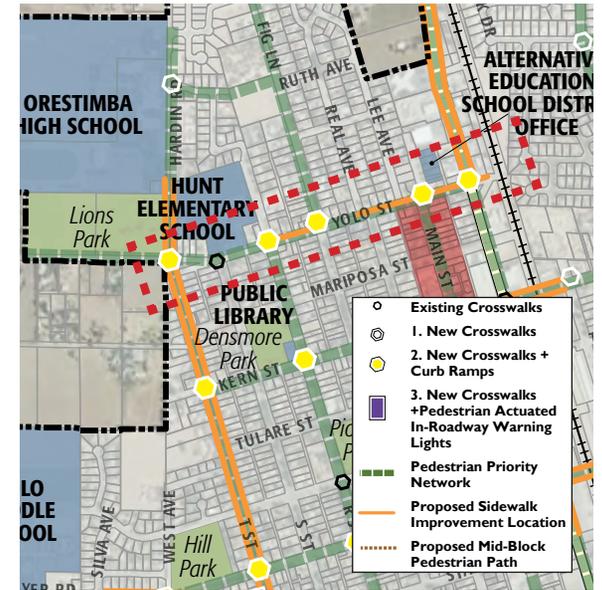
DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Install crosswalks at the intersections identified in Section A above.	Coordination with Caltrans and Stanislaus County	Further design	\$25,000	Phase II
Along Jensen Road between Fig Lane and the UPRR tracks, implement roadway improvements, including sidewalks, curbs, and gutters.	Coordination with Stanislaus County, UPRR Crossings Project (Section I.B), and Multiuse Path Project (Section II.B).	Further design	\$132,000	Phase II

E. YOLO STREET/ORESTIMBA ROAD IMPROVEMENT AREA

Yolo Street is a main route to access Hunt Elementary and Orestimba High School, either for students on foot or bicycle or their parents driving to drop them off or pick them up. Additionally, there has been a history of pedestrian-related collisions along Yolo Street. Yolo Street does not support a safe environment because of a lack of sidewalks and crosswalks.

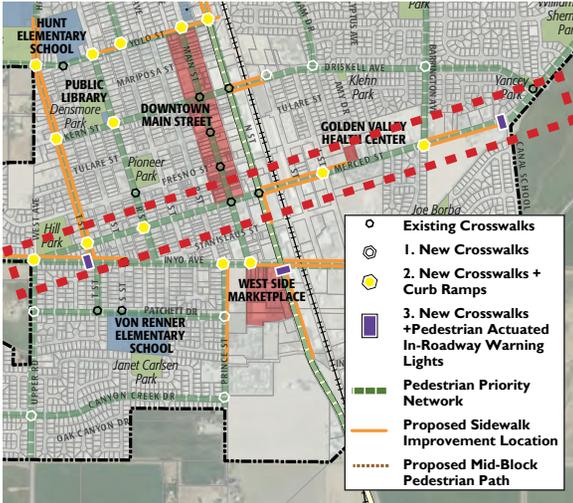
DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/PARTNERSHIP	FUTURE ACTIONS/STUDY	COST ESTIMATE	PRIORITY
Install crosswalks at the intersections identified in Section A above.	Coordinate with Caltrans Repairing or repaving R Street Project. Orestimba Road and T Street Intersection Improvement.	Further design	\$43,000*	Phase II
Install sidewalks in the following street segments: <ul style="list-style-type: none"> Between R Street and Q Street (North) Between Real Avenue and N Street (North) 		Further design	\$158,000	Phase II

* Cost includes Orestimba Road and T Street Intersection Improvement (\$12,000)



Top A lack of pedestrian facilities along Yolo Street near Hunt Elementary.

Above A lack of sidewalks and curb ramps at the intersection of T Street and Yolo Street.



A lack of continuous sidewalks in the vicinity of the Golden Valley Health Center.

F. MERCED STREET/HILLS FERRY ROAD IMPROVEMENT AREA

Merced Street has a high volume of pedestrian traffic, especially near the Golden Valley Health Center, but this area lacks continuous sidewalks and adequate crosswalks. The T-shape intersection, where Hills Ferry Road hits Canal School Road, does not provide sidewalks, pedestrian refuges, or crosswalks, creating an unsafe pedestrian environment to walk along or cross the road.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/PARTNERSHIP	FUTURE ACTIONS/STUDY	COST ESTIMATE	PRIORITY
Install crosswalks at the intersections identified in Section A above. (Intersection will need realignment for sight lines)	Coordination with Stanislaus County	Further design and traffic analysis Potential intersection realignment	\$71,000*	Phase I
Fill the following sidewalk gaps: <ul style="list-style-type: none"> Between N Street and L Street (over the UPRR tracks) (Both) Between the PG&E facility and the Douglas J. Lucas Real Estate property (Both) Between the Douglas J. Lucas Real Estate property and Canal School Road (South) 	Coordination with the UPRR Crossing Project	Further design	\$422,000	Phase I

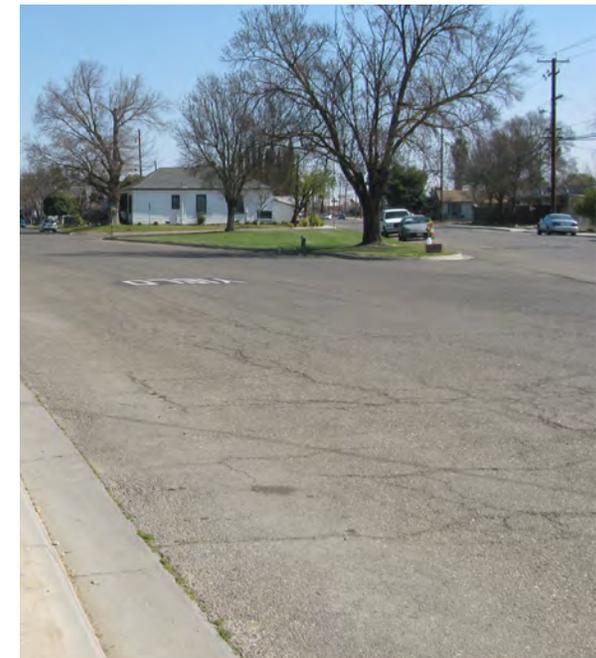
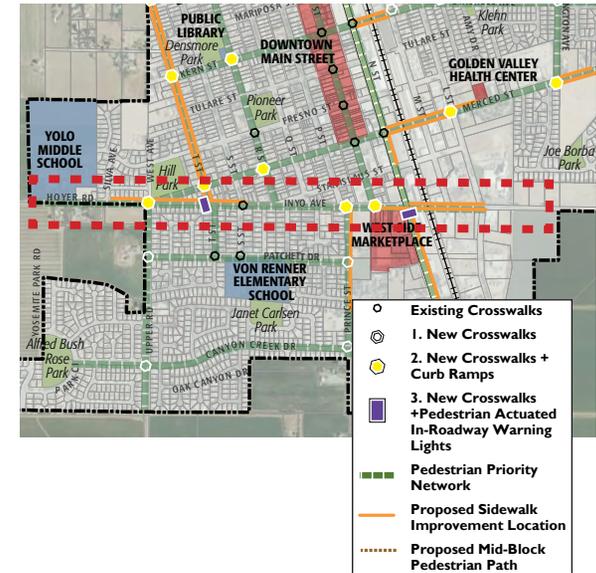
*Cost includes Merced Street and T Street Intersection Improvement (\$12,000), does not include intersection realignment

G. INYO AVENUE/ HOYER ROAD IMPROVEMENT AREA

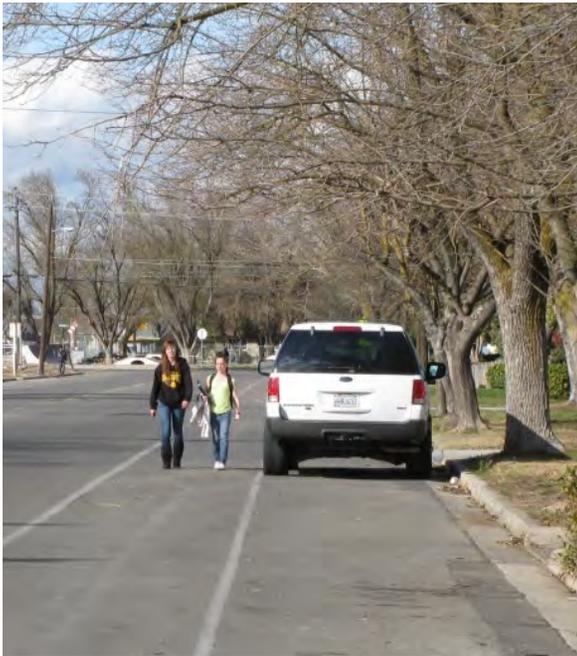
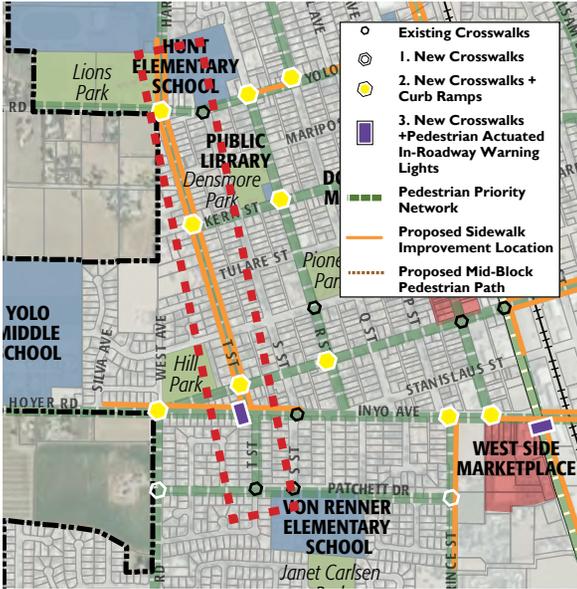
There has been a history of pedestrian-related collisions along Inyo Avenue. Two offset grid patterns merge along Inyo Avenue, and this creates a hazardous pedestrian environment due to a lack of sight distance, pedestrian visibility, and turning vehicles. This pedestrian-vehicle conflict is particularly apparent at the intersection of Inyo Avenue and T Street. Additionally, there are high volumes of pedestrian traffic along Inyo Avenue because it connects important destinations like the West Side Marketplace and schools. However, there is not a comprehensive safe pedestrian environment because of a lack of crosswalks and intermittent sidewalks.

DETAIL OF PROPOSED IMPROVEMENT		FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Install crosswalks at the intersections identified in Section A above.	<p>Coordination with Caltrans</p> <p>Coordination with the Prince Street Project</p>	<p>Further design and traffic analysis</p> <p>Potential intersection realignment at Inyo Avenue/T Street Intersection</p> <p>Study signalization at Inyo Avenue/SR 33 Intersection</p>	\$82,000*	Phase I
<p>Fill the sidewalk gaps in the following segments:</p> <ul style="list-style-type: none"> • Between S Street and Silva Avenue (North) • Between Main Street and UPRR (South) • Between UPRR and L Street (Both) 	<p>Coordination with the UPRR Project</p>	<p>Further design</p>	\$475,000	Phase I

* Cost includes Inyo Avenue and Prince Street Intersection Improvement (\$11,000) and two Level Three crosswalk improvements at T Street and State Route 33 (\$50,000)



An angled intersection at Inyo Avenue and Stanislaus Street.



Pedestrians walking in a bike lane due to a lack of sidewalks on T Street.

H. T STREET IMPROVEMENT AREA

The community indicated that T Street is one of the busiest streets in Newman and there are high volumes of pedestrian traffic along T Street because of the nearby schools. However, there is not a comprehensive safe pedestrian environment because there is no sidewalk along T Street.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Install crosswalks at the intersections identified in Section A above.	Coordinate with the Yolo Street, Merced Street, and Inyo Avenue Crosswalk Improvement Projects	Further design and traffic analysis	\$35,000*	Phase II
Install sidewalks on both sides of T Street as well as ADA-compliant curb ramps from Inyo Avenue to Orestimba Road/Yolo Street.	Coordinate with the crosswalk improvement projects identified above	Further design	\$558,000	Phase II

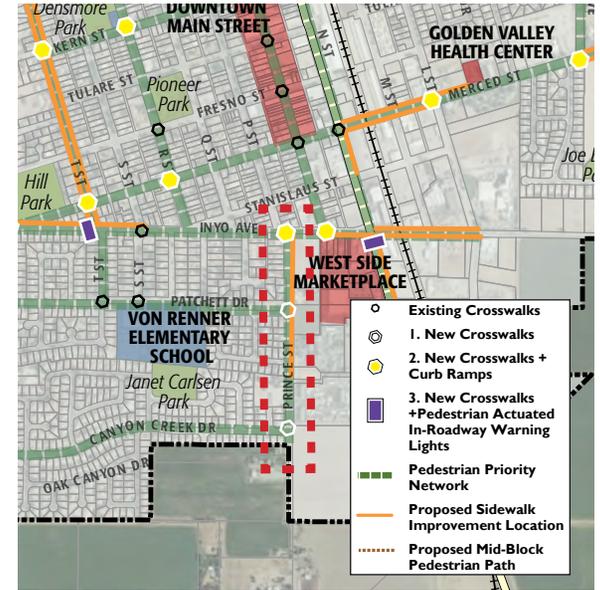
*Cost includes Merced Street and Yolo Street Improvement (\$23,000)

I. PRINCE STREET IMPROVEMENT AREA

The West Side Marketplace shopping center, located at the southwestern corner of the intersection at Prince Street and Inyo Avenue is one of the major attractions of the city, drawing pedestrian traffic from the east, west, and north. West Side Marketplace customers often walk along Prince Street, but the street lacks sidewalks for pedestrians walking to and from the marketplace.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Install crosswalks at the intersections identified in Section A above.	Coordination with the Inyo Avenue Crosswalk Project	Further design and traffic analysis	\$17,000*	Phase II
Install sidewalks along the east side of Prince Street (between Inyo Avenue and Stoneglen Drive)		Further design	\$132,000	Phase II

* Cost includes Inyo Avenue and Prince Street Intersection Improvement (\$11,000)



Because of a lack of sidewalks, pedestrians walking to and from the West Side Marketplace use a dirt path along Prince Street.



Above A bench and a banner on Main Street.
Right Pedestrian amenities in Sherman Park.

J. PEDESTRIAN AMENITIES

There are areas within Newman that could benefit from the addition of pedestrian amenities, such as street furniture, waste receptacles, and wayfinding systems. Pedestrian amenities help create a pedestrian-friendly environment and encourage walking.

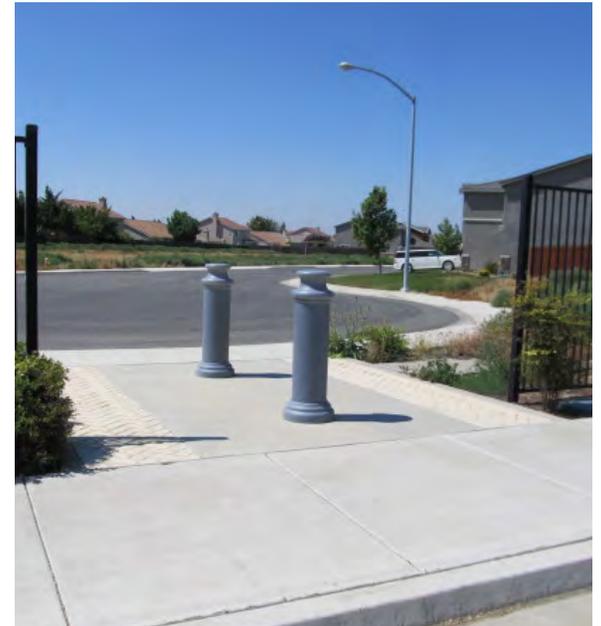
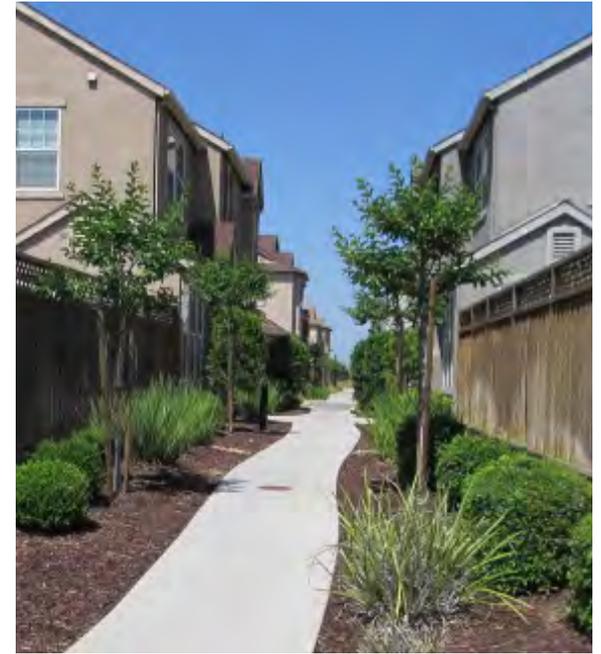
DETAIL OF PROPOSED IMPROVEMENT		FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Provide benches, waste receptacles, and information and community kiosks: <ul style="list-style-type: none"> • Install additional benches and waste receptacles in Alfred Bush Rose Park, Pioneer Park, Klehn Park, and along Sherman Parkway. • Identify additional locations where pedestrian amenities are needed. 	Coordinate with local residents and/or businesses	Further design development Identify the locations needing benches and waste receptacles	\$13,000 (assumes 10 benches and 10 waste receptacles)	Phase III



K. MID-BLOCK PEDESTRIAN PATHWAYS

Long blocks can become barriers to pedestrian network connectivity. Cul-de-sacs also impose challenges for pedestrians by making them take a long detour to get to a nearby destination. The neighborhoods east of State Route 33, in particular, need more mid-block pathways because of cul-de-sac style subdivisions. Figure 4-1 shows the recommended mid-block pedestrian pathways.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Develop a network of mid-block pedestrian pathways to encourage future development to include the pathways.	Coordinate with future private developers		N/A	Phase II
Consider building pathways at the locations proposed in Figure 4-1.	Coordinate with private developers	Further design	TBD	Phase II
Consider incorporating the following sample language into the zoning ordinance: "New development shall provide pathways (for pedestrians and bicycles) at or near midblock where the block length exceeds the length of 500 feet. Pathways shall also be provided where cul-de-sacs or dead-end streets are planned, to connect ends of streets together."	Newman Planning Commission and City Council		N/A	Phase II



Top and Above Mid-block pedestrian pathways in Newman.

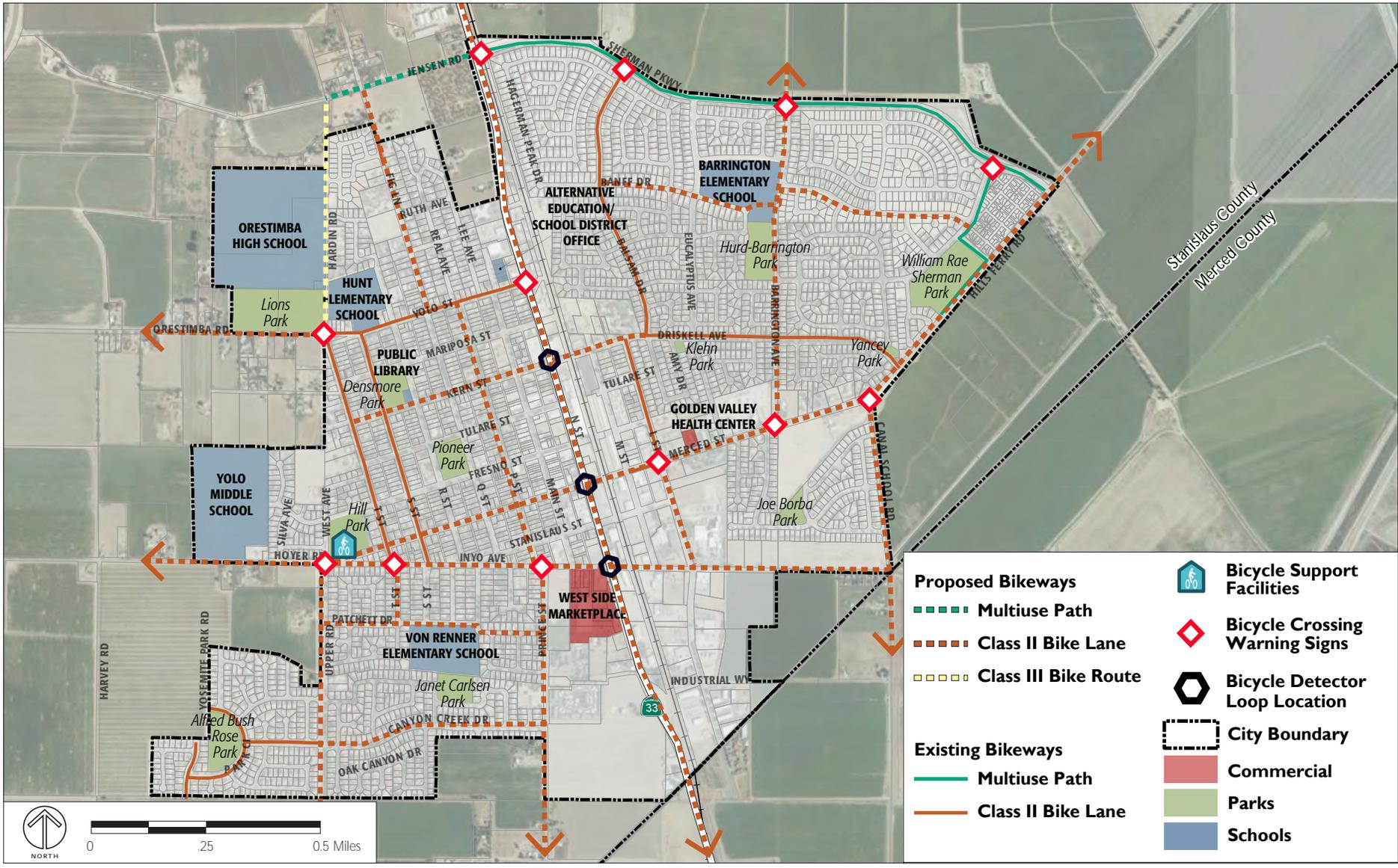


II. BICYCLE IMPROVEMENTS

The goal of the recommended bicycle improvements is to build a bikeway network that will create safer and more direct routes for bicyclists. The network takes into consideration the major destinations for bicyclists and a range of ages and skill levels of bicyclists in Newman.

The proposed network is a tool that can be used by the City of Newman to focus and prioritize implementation efforts where they will have the most community benefit. Streets that are identified as part of the bicycle network should also be prioritized for regular maintenance and upgraded to ensure that the roadways are conducive to safe bicycling.

The proposed bicycle routes include approximately 0.6 miles of multi-use paths, 20 miles of Class II bicycle lanes, and 2 miles of Class III bicycle routes. Additionally, Section II.A identifies short-term projects, which do not require extensive studies or construction work, and which can be implemented at relatively low cost in the near future. Figure 4-3 shows the locations of the proposed bicycle routes and bicycle facilities.



Source: The Planning Center | DC&E, 2013.

FIGURE 4-3 RECOMMENDED BIKEWAYS AND BICYCLE FACILITIES

A. NEW AND EXISTING BIKEWAYS (SHORT-TERM PROJECTS)

Currently Newman does not have a comprehensive bicycle network. Gaps and a lack of connectivity in the bicycle network impose challenges to bicyclists in reaching their destinations safely and efficiently. Additionally, some of the existing bicycle lanes striping is faded, diminishing the visibility of bicyclists to drivers.



Top Yolo Street is designated as a Class II bikeway but is not striped or signed to meet Caltrans Standards.

Above Bicycle/parking lanes on Balsam Drive, letting cars encroach onto the bicycle right-of-way.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Install Class II Bicycle Lanes and Signs: <ul style="list-style-type: none"> • Kern Street • Merced Street • Inyo Avenue (between Yolo Middle School and Canal School Road) • Canyon Creek Drive • Upper Road • T Street extension (between Inyo Avenue and Patchett Drive) • Orestimba Road • P Street • L Street extension • Barrington Avenue • Canal School Road 	Adjacent schools and businesses	Further design and traffic analysis	\$92,000 (bicycle signs at a 1/2 mile interval and thermo-plastic striping)	Phase I
Restripe the existing lanes and install additional bicycle signs where necessary: <ul style="list-style-type: none"> • Yolo Street • T Street • L Street 			\$18,000 (signs at a 1/2 mile interval)	Phase II
Stencil door-zone marks in the existing lanes and install signs to prevent dooring accidents: <ul style="list-style-type: none"> • Balsam Drive 			\$7,000	Phase II

B. NEW BIKEWAYS ROUTES (LONG-TERM PROJECTS)

It is critical to provide bicycle routes near major destinations, such as schools, but there are gaps in the bicycle network in Newman. To implement the proposed bikeways, in some cases, it will require road improvement and coordination with other regional agencies, which may take time and require funding.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Install Class III bicycle routes and signs: <ul style="list-style-type: none"> • Hardin Road • Patchett/Strawbridge Drive 	Coordinate with Patchett Drive Repairing/Re-paving Project	Further design and traffic analysis	\$6,000 (bicycle signs at a 1/2 mile interval)	Phase II
Install Class II bicycle lanes and signs:* <ul style="list-style-type: none"> • Fig Lane • Prince Street • Highway33/ N Street • Hills Ferry Road 	Coordinate with Prince Street Improvement Project Coordinate with Caltrans and Stanislaus County	Further design, traffic analysis, and additional street improvements	\$46,000 (bicycle signs at a 1/2 mile interval)	Phase II
Install multiuse paths and signs: <ul style="list-style-type: none"> • Jensen Road 	Coordinate with Stanislaus County and Jensen Road Improvement Project	Further design, traffic analysis, and additional street improvements	TBD	Phase II

* Would require additional street improvements



A Class III bicycle route in Oakland.

C. BICYCLE FACILITIES

Newman needs more bicycle parking racks and bicycle support facilities, especially at the major destinations, to encourage people to ride their bicycles. Crossing intersections without proper bicycle facilities imposes difficulties for bicyclists. In addition to adding bike lanes, installing bicycle detector loops at the signalized intersections would help cyclists cross the intersection safely and efficiently. At the unsignalized intersections, bicycle crossing warning signs would increase bicycle visibility and safety.



A bicycle detector loop with a pavement marking at a signalized intersection. When the detector senses the bicyclist, it changes traffic lights from red to green.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Install short-term bicycle parking racks: <ul style="list-style-type: none"> • Every Park • Every School 	Newman-Crows Landing Unified School District and Newman Recreation Department	Further design	\$70,000 (3 racks per park and 10 racks per school)	Phase I
Install bicycle support facilities, such as shower facilities, changing rooms, and bicycle storage, at the future aquatic center (see Figure 4-3)	Newman Recreation Department	Further design	TBD	Phase I
Install bicycle detector loops and stencils at the following signalized intersections: <ul style="list-style-type: none"> • At Kern Street and State Route 33/N Street • At Merced Street and State Route 33/N Street • At Inyo Street and State Route 33/N Street (when signalized) 	Coordinate with Caltrans	Further design and traffic analysis	\$21,000 (\$7,000 per each)	Phase I
Install bicycle crossing warning signs at the following unsignalized intersections: <ul style="list-style-type: none"> • At Jensen Road and N Street • Along Sherman Parkway • At Orestimba Road and T Street • At Inyo Avenue and Upper Road • At Inyo Avenue and T Street • At Inyo Avenue and P Street/Prince Street • At Merced Street and Barrington Avenue • At Hills Ferry Road and Canal School Road 	Coordinate with Caltrans and Stanislaus County	Further design	\$27,000	Phase I

III. CITYWIDE IMPROVEMENTS

The following improvements address citywide opportunities to enhance pedestrian and bicycle safety and experience.

A. ADA TRANSITION PLAN

The Americans with Disabilities Act (ADA) requires public entities to develop a Transition Plan. The goals of the plan are to identify physical obstacles that limit accessibility for individuals with disabilities, the methods that will be used to make the facilities accessible, the schedule for taking the steps necessary to achieve compliance, and the official responsible for implementing the plan.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	COST ESTIMATE	PRIORITY
<p>Develop an ADA Transition Plan. In the ADA Transition Plan, the City should include the following items:</p> <ul style="list-style-type: none"> • Identify existing facilities that limit access for persons with disabilities. • Describe in detail (at a planning level) the methods to be used to make facilities accessible. • Specify a schedule and funding sources for improving facilities by prioritizing the needs of persons with disabilities in existing facilities. • Indicate the official who will be responsible for implementation of the plan. • Develop a procedure for installation of accessible facilities. • Monitor the Transition Plan via milestones. • Provide an avenue for citizens to request curb ramps, Accessible Pedestrian Signals, and sidewalk repair. • Coordinate with the State Transportation Improvement Program (STIP) and the Transportation Improvement Program (TIP). 	<p>Coordinate with local residents and businesses</p>	<p>N/A</p>	<p>N/A</p>



An ADA-compliant curb ramp should be provided at each end of the crosswalk.

B. SIDEWALK AND CURB RAMP IMPROVEMENTS

Newman has some sidewalk surfaces that are not up to ADA standards. Old sidewalks often have cracked surfaces with abrupt grade changes. Additionally, sidewalks are frequently obstructed by signs, poles, benches, or other streetscape amenities. To promote connectivity and accessibility, the City needs to ensure that all sidewalk surfaces meet ADA standards. Sidewalks should have a continuous surface that is not interrupted by steps or abrupt changes in grade and have a slip resistant surface.

Some curb ramps in the older neighborhoods do not have truncated domes, which are required per ADA standards. In addition to implementing the priority projects listed in Section I of this chapter, the Plan recommends a citywide approach to upgrading all the existing sidewalks and curb ramps to meet ADA standards.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Conduct an audit of the sidewalks and curb ramps and identify locations that need to be updated to meet the minimum ADA requirements.	Coordinate with local residents and businesses	Audiet	N/A	N/A
Repair cracked sidewalk surfaces and upgrade curb ramps that are identified in the audit. Prioritize the locations in proximity to major destinations.	Newman Public Works Department		N/A	N/A

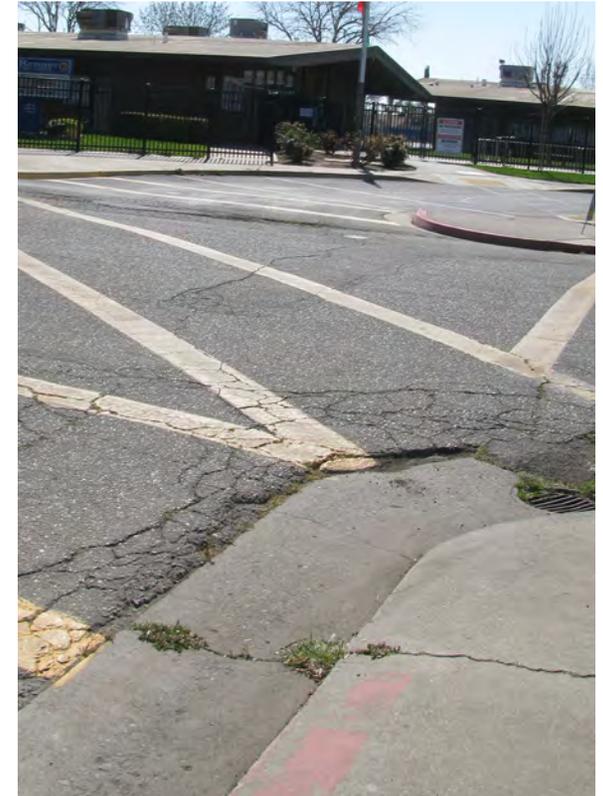


Uneven sidewalk surfaces on Kern Street

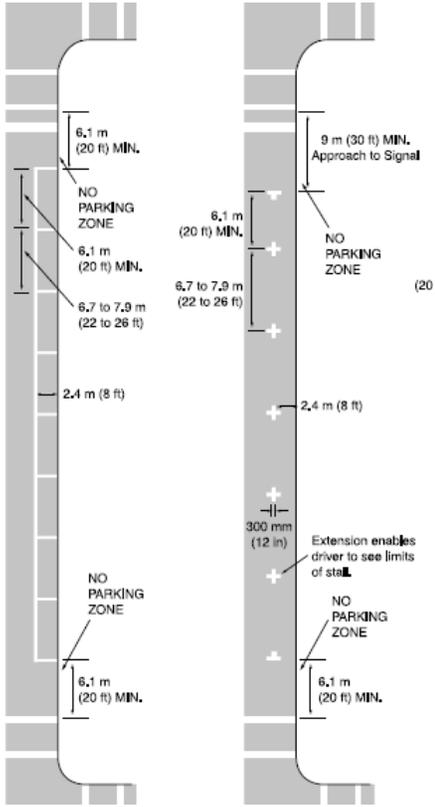
C. ROAD MAINTENANCE

In some neighborhoods, particularly in the older neighborhoods, there are cracked, uneven, or potholed asphalt roads. These pavement conditions influence the experience of bicycling and walking and sometimes create hazards for pedestrians and cyclists.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Repair the roads that have cracked, uneven, or potholed surface conditions: <ul style="list-style-type: none"> • At the intersection of T Street and Orestimba Road • Patchett Drive • R Street 	Newman Public Works Department		N/A	N/A
Develop a program for routine maintenance of bikeway and walkway network facilities, including regular sweeping, pavement repairs, restriping crosswalks, and trimming vegetation.	Newman Public Works Department		N/A	N/A



Cracked pavement on a scramble crosswalk at S Street and Patchett Drive.



Top MUTCD recommendations for parking space markings (source: MUTCD Figure 3B-17).

Above A car parked adjacent to a crosswalk can limit visibility of and for pedestrians.

D. PARKING RESTRICTIONS AT INTERSECTIONS AND IN CROSSWALKS.

Vehicles parked in parking lanes adjacent to intersections can limit the visibility of pedestrians at intersections and crosswalks. Implementing parking restrictions adjacent to intersections and crosswalks is a relatively easy method of improving pedestrian visibility.

Based upon Caltrans' Manual on Uniform Traffic Control Devices (MUTCD) recommendations¹, the City of Newman should ensure that parking is restricted for a minimum of 1.5-car-lengths (30 feet) on the near side of a signalized intersection and for 1-car-length (20 feet) on the far side of a signalized intersection. Similarly, a parking restriction of 1-car-length (20 feet) should be installed adjacent to both sides of all marked crosswalks. Red "no parking zones" should be regularly maintained to enforce these recommendations.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Consider implementing the MUTCD recommendations (Section 3B.18).	Newman Public Works Department		N/A	N/A
Consistently enforce these rules through warnings and ticketing.	Newman Police Department		N/A	N/A

1 Caltrans, *Manual on Uniform Traffic Control Devices*, 3B.18. 2010 edition.

E. WAYFINDING

Newman lacks a comprehensive citywide signage system. Providing direction and distance information for major destinations can enhance residents' walking and bicycling experience and help visitors find their way in Newman.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Consider installing information signs along the pedestrian priority network and bicycle network.		Further design	\$8,000 (10 signs)	Phase III
Consider providing information and community kiosks in Downtown and parks.	Coordinate with Pedestrian Amenities Project	Further design	\$4,000 (two kiosks)	Phase III
Develop and distribute a map illustrating the citywide non-motorized network and containing tips on bicycling and walking safety.	Coordinate with schools and local businesses			Phase III



Top A wayfinding sign for bicyclists in Oakland.

Above An information kiosk in Downtown Morgan Hill.



Pedestrian-scaled lighting on Main Street.

F. LIGHTING

Some residential streets and the multi-use paths along Sherman Parkway are not well-lit. Walking along dark streets often makes pedestrians feel insecure. To increase nighttime safety and pedestrian visibility for drivers and bicyclists, the City should consider illuminating the sidewalks within the Pedestrian Priority Network with pedestrian-scaled lighting. As recommended in Chapter 7, Design Guidelines, street lamps should be oriented toward the ground and designed to preserve views of the night sky and minimize glare.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Develop a citywide lighting plan to increase the illumination of sidewalks and create a sense of security.		Further Design	TBD	Phase II
Consider the following areas to install pedestrian-scaled lighting and/or light bollards at a 75-foot interval: <ul style="list-style-type: none"> • Along the multi-use paths on Sherman Parkway • Along T Street (residential areas) • Along R Street (residential areas) 	Coordinate with T Street Sidewalk Installation	Further design	\$36,000 (120 lighting features)	Phase II

G. PUBLIC ART

Integrating art into public spaces can create unique public places and yield aesthetic, social, and economic benefits for the community. Newman has many opportunity areas to install public art.

DETAIL OF POPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Develop a Public Art Master Plan, including a public art mural program.			N/A	Phase III
Consider the following areas for mural projects: <ul style="list-style-type: none"> • Hurd-Barrington Park • Downtown Plaza • Canal School Road • Sherman Parkway 			N/A	Phase III
Consider using electrical box for public art murals.			N/A	Phase III
Consider building a partnership with local schools or volunteer groups to recruit local artists.	Local artists and schools		N/A	Phase III



Public art covering an electrical box.



A mural painted on a wall in a park.



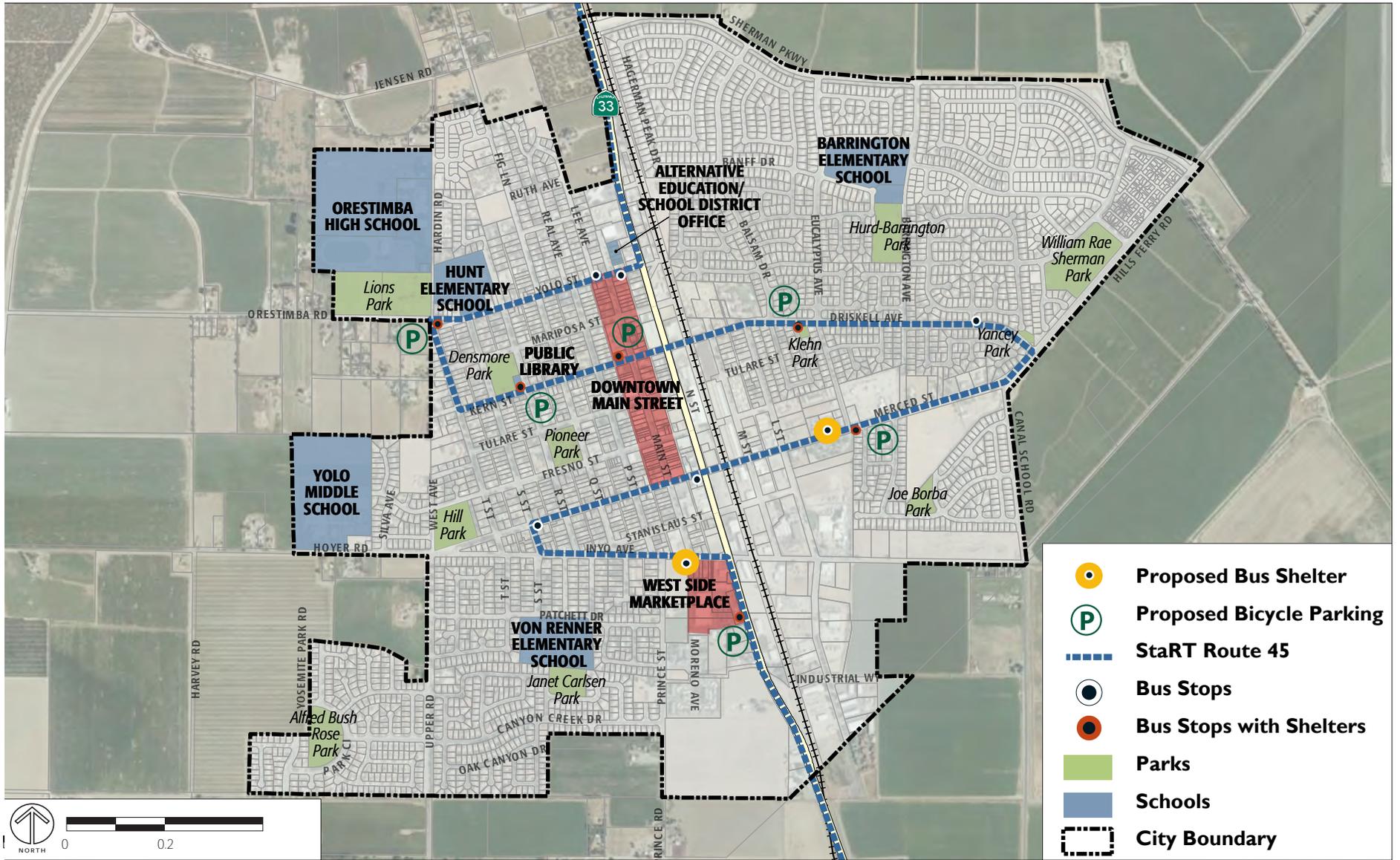
A bus stop with no shelter or transit information for riders.

H. BUS STOPS

Some bus stops in Newman do not provide proper shelters, benches, or route information. Access for pedestrians in wheelchairs should also be improved at bus stops.

Currently none of the bus stops in Newman provide bicycle parking facilities. For the bus stops near major destinations, bicycle parking facilities can improve multi-modal connections.

DETAIL OF PROPOSED IMPROVEMENT	COORDINATION/ PARTNERSHIP	FUTURE ACTIONS/ STUDY	COST ESTIMATE	PRIORITY
Install bicycle parking at proposed bus stops (see Figure 4-4).	Coordinate with Stanislaus Regional Transit		\$12,000 (6 locations)	Phase III
Identify bus stops that need wheelchair access.	Coordinate with Stanislaus Regional Transit	Further Study	TBD	Phase III
Install bus shelters at bus stops on Merced Street (near the Golden Valley Health Center) and Inyo Avenue (near the West Side Market Place).	Coordinate with Stanislaus Regional Transit	Further design	\$30,000 (two bus stops)	Phase III
Identify bus stops that are frequently used and/or need route information.	Stanislaus Regional Transit	Further Study	N/A	Phase III



Source: The Planning Center | DC&E, 2013.

FIGURE 4-4 RECOMMENDED BUS STOP AND BIKE FACILITY IMPROVEMENTS

SUPPORT PROGRAMS

5



5 SUPPORT PROGRAMS

This chapter outlines recommendations for support programs that promote non-motorized transportation. Support programs will play an important role in implementing the Non-Motorized Transportation Plan by increasing public awareness and interests in the benefits of bicycling and walking as well as by improving safety and convenience for bicyclists and pedestrians.

Support programs are categorized into five groups: Safe Routes to School, education, encouragement, maintenance, and enforcement programs. The following describes each group in detail.

I. SAFE ROUTES TO SCHOOL

Making walking and bicycling to school safer for children can increase the number of children who walk and bicycle to schools. This is especially true in Newman where most schools are within a walkable and bikeable distance from the neighborhoods. It is critical to alleviate the safety concerns that often prevent parents from allowing or encouraging their children to walk or bike to schools. Encouraging walking and bicycling to school also can reduce peak-hour traffic congestion around schools caused by parents dropping their children off by car and address existing safety problems near schools.

Safe Routes to School (SRTS) refers to all programs designed to encourage walking and bicycling to schools. In addition to reducing traffic congestion near schools, SRTS programs can help improve children's health and reduce air pollution. The following provides a framework for establishing a SRTS program:¹

1 <http://guide.saferoutesinfo.org/steps/index.cfm>

1. Create a coalition that represents a wide range of interests and expertise that are related to SRTS. The potential members include school district staff, parents, local pedestrians, bicycle and safety advocates, City Council members, transportation or traffic engineers, local planners, and local pedestrian and bicycle coordinators.
2. Develop a SRTS Plan to create a vision and identify issues and solutions. The SRTS plan should address issues and strategies related to engineering, enforcement, education, encouragement, and evaluation. The following describes four basic elements of a SRTS program:
 - Education strategies include teaching students how to walk and bike safely and the benefits of walking and bicycling as well as reminding parents, neighbors, and drivers to yield to pedestrians and bicyclists while driving.
 - Encouragement strategies aim to inspire children, parents, teachers, and others to walk or ride their bicycle through fun programs and special events. These strategies can be relatively inexpensive.
 - Enforcement strategies seek to change the unsafe behaviors of drivers, bicyclists, and pedestrians. This also includes educating pedestrians and bicyclists on walking and bicycling safely and paying attention to their environment.
 - Engineering strategies aim to create a built environment that can safely accommodate all modes of transportation as well as creating a built environment that can influence people's behavior, such as encouraging more walking and bicycling.
3. Seek funding for the SRTS Plan. There are various funding sources supporting SRTS program activities, such as Congestion Mitigation and Air Quality, Surface Transportation Program, and State SRTS programs. See Chapter 6, Implementation and Funding or see Legislation and Funding at www.saferoutesinfo.org/legislation_funding for more information.
4. Implement and Evaluate the SRTS Plan. During the implementation of the SRTS Plan, the Coalition should continue monitoring it to identify the most and least effective strategies. Based on the evaluation, the Coalition should make adjustments to the SRTS Plan. Keeping the program going is also important for the success of the plan. Key strategies include:
 - Identify best practices.
 - Get visibility for activities through local media.
 - Encourage school districts and the City to adopt policies that support children walking and bicycling to school.
 - Create a permanent committee to continue implementing and updating the SRTS Plan.

II. EDUCATION PROGRAMS

This section outlines recommended education programs that target residents of all ages in Newman. Providing education to children as early as possible is especially critical since this can help them build life-long habits regarding safe walking and bicycling. Educating adults is also an important component of this program because they are role models for children. These education programs aim to remind adults of safety rules so as to encourage them to maintain safe habits and to adopt the most up-to-date safety practices. This section provides details on major education programs, which target three different groups: school children, adults, and motorists.

A. SCHOOL CHILDREN EDUCATION

School-based education is important in building safe walking and bicycling habits because most life-long habits are built at a young age. Schools should include bicycle education programs into third, fourth, and fifth grade curriculums and provide lessons on safe walking and bicycling on an annual basis or more. Pedestrian education should be incorporated into first grade to third grade curriculums. Through the program, school children should learn defensive walking and crossing the street, such as looking both ways for cars at intersections, crossing the street at marked crosswalk locations, and avoiding crossing the street behind a bus or car. Members of the police department should be involved in the programs and teach the safety rules. The programs should be accompanied by incentive programs, such as giving a reward for modeling safe techniques. The education program should include the following lesson items:

- Training on how to safely ride a bicycle.
- Use of bicycle helmets and hand signals.
- Bicycle repair and maintenance.
- Importance of visible clothes and lights during nighttime bicycling.
- Safe bicycle riding tips:
 - Negotiating at intersections
 - Avoiding sidewalk riding
 - Defensive bicycling and walking
 - Traffic rules

Schools should be responsible for preparing educational materials, including maps of the areas around the school site for bicyclists and pedestrians, a description of the proper school drop-off and pick-up procedures for parents, and pamphlets on safety tips and the benefits of walking and bicycling.

Creating a Safety Committee can help develop and implement the program, find additional funding, and communicate with the School Boards or City Council. The committee should consist of parents, teachers, student representatives, police, active bicyclists, and City staff.

B. ADULT BICYCLE EDUCATION

The City of Newman should establish an adult bicycle education program in cooperation with Stanislaus County Bicycle Club and/or other City departments. Adult bicycle education programs include bicycle training sessions, tours, and rides, as well as bicycle maintenance lessons. These programs will allow adults to learn defensive bicycling and share bicycling information. As a result, they will feel more comfortable bicycling, which may encourage them to commute to and from work by bicycle or ride their bicycle for other utilitarian or recreational purposes.

C. MOTORIST EDUCATION

Many motorists do not know the laws governing bicycling and walking. Some motorists believe that bicyclists are not allowed to share travel lanes with cars when there are no bicycle lanes. Motorists may also not know that it is legal for pedestrians to cross the street at any intersection, unless specifically posted otherwise. Motorists often fail to yield to bicyclists or realize that bicyclists are riding closely next to them. The main means of educating motorists include installing signs that warn motorists about the potential existence of bicyclists and pedestrians, providing a brochure on bicycle and pedestrian safety and laws for public distribution, and including bicycle safety into traffic school curriculum.

III. ENCOURAGEMENT PROGRAMS

A. EMPLOYER INCENTIVE PROGRAMS

Employers can encourage employees to ride a bicycle or walk by providing incentives to those who commute by bicycle or foot. Similarly, the City may establish an incentive program to encourage employers to provide bicycle lockers and shower facilities or to pay for transit or taxis during inclement weather. In exchange for implementing employer incentive programs, the City could offer lowered parking requirements, reduced traffic impact fees, or other incentives that encourage employers to incentivize bicycling and walking.

B. SUPPORT A BICYCLE SHOP

Currently there is no bicycle shop in Newman. Bicycle shops can be a great asset for the community to encourage bicycling. Bicycle shops can provide repair services, training sessions, lessons about the fundamentals of mechanics, safety, and operation, and education materials. The City may need to work with bicycle organizations in adjacent communities and local businesses in Downtown to find the best way to support the establishment of the business, including financial incentives, permit streamlining, or reduced permit fees.

C. PROMOTIONAL EVENTS

The City may hold bicycle and pedestrian promotional and educational events, such as bike-to-work day, bike-to-school day, and walk-a-child-to-school day. A bike-to-work day event can be held in May when California bike-to-work week activities are happening. The presence of police and City staff in these events is important for both of safety and promotional purposes. School Districts should play the lead role in school-related events, such as bike-to-school day and walk-a-child-to-school day.

Newman should also consider joining established events in adjacent communities. For instance, Modesto has a few bicycle-related events that have effectively promoted bicycling in the community. Modesto's events include bike and walking fairs, bike races, and the local Family Cycling Festival. During these events, the public can benefit from practical programs, such as a bicycle safety check, bicycle safety courses, bicycle licensing, as well as bicycle stunt shows and amateur bicycle races. These events also provide a great opportunity to effectively educate and encourage inexperienced bicyclists and children.

Usually, the City plays an important role in these events because these events require permits, financial assistance, police, and staff time. Local businesses can help sponsor the events in conjunction with the City.

D. BICYCLE AND PEDESTRIAN MAP

Maps can promote bicycling and walking for Newman residents as well as visitors. These maps should show different types of bikeways and pedestrian paths, major destinations, the location of bicycle parking facilities, and safety information. Advertising revenues from local bike shops and other local businesses can subsidize the cost of producing these maps. Information centers, employers, schools, libraries, bike shops, other retail shops, and the City's website can distribute the maps.

IV. MAINTENANCE PROGRAMS

Maintaining the existing Newman Non-Motorized Transportation network is as important as developing the network. The City should ensure that all the routes and roads within the non-motorized transportation network are regularly maintained.

Table 5-1 shows the typical frequency of bicycle and pedestrian facility maintenance tasks, but this can vary depending on local conditions. The City should develop a maintenance plan and secure funding for ongoing maintenance costs. The City can employ several funding programs to secure outside funding sources besides the City's general fund, such as "Adopt-a-Path" programs and fundraising activities. Additional discussion of funding can be found in Chapter 6, Implementation and Funding.

As suggested in Chapter 6, the proposed Bicycle and Pedestrian Program Manager should take the lead in developing and implementing the maintenance plan and collaborating with the Public Works Department. This maintenance plan should address the following items:²

- Annual assessment of bicycle and pedestrian facility conditions.
- Maintenance budget.
- A checklist of all maintenance items, the frequency of each task, the cost for each task, the annual cost of each task, and the responsible person or department for each task.
- A list of maintenance activities that are divided into "routine" and "major" maintenance categories. The major routine activities should address the following issues:
 - Signs and Traffic Markings
 - Sight Distance and Clearance
 - Surface Repair
 - Sweeping and Cleaning
 - Structural Deterioration
 - Illumination
- A list of maintenance priority tasks. The City should prioritize the maintenance needs on bikeways and along the Priority Pedestrian Network.
- A tracking system to complete maintenance activities in a timely manner.
- An evaluation system to collect the feedback of residents or claims resulting from poor maintenance.

2

http://www.bicyclinginfo.org/bikesafe/case_studies/casestudy.cfm?CS_NUM=403

TABLE 5-1 TYPICAL FREQUENCY OF BICYCLE AND PEDESTRIAN FACILITY MAINTENANCE TASKS

ITEM	FREQUENCY
<p>Roadway Repair Sealing cracked pavement and potholes in roadway and bicycle lanes.</p>	Bi-Annually
<p>Roadway Marking Repainting faded bicycle lanes and crosswalk markings.</p>	Bi-Annually
<p>Sweeping Cleaning and removing obstacles in roadway and bicycle lanes.</p>	Monthly
<p>Pruning Preventing vegetation from encroaching into sidewalk or street and ensuring adequate sight distance.</p>	Monthly
<p>Sidewalk Repair Repairing cracks, gaps, or pits and ensuring smooth, leveled sidewalk surfaces.</p>	Bi-Annually
<p>Sign Replacement and Repair Repairing damaged traffic and street signs and poles.</p>	Annually
<p>Rail Crossings Ensuring railroad crossings have smooth surfaces and are ADA accessible; coordinating with UPRR.</p>	Annually
<p>Maintain Pedestrian Amenities Repairing street furniture and pedestrian-scaled lighting and removing graffiti.</p>	Annually

V. ENFORCEMENT PROGRAMS

Enforcing traffic laws can be a very effective tool to improve safety for pedestrians and bicyclists, but at the same time, implementation can be expensive because it often requires police staff time. This section contains two enforcement programs and strategies.

A. ENHANCING POLICE ENFORCEMENT

The City may enhance police enforcement in the areas of high pedestrian and bicycle traffic. A stronger police presence and more frequent citation issuance for traffic violations can effectively reduce potential hazardous situations. Frequent bicycle violations include wrong-way bicycling, failure to obey traffic control devices, and lack of required safety equipment, such as helmets and lights. Prior to implementation of this program, the Police Department should educate police staff on bicycle and pedestrian laws, the best way to approach an offender, and violations to target for enforcement.

B. CHANGING FINE STRUCTURE

For drivers, increasing traffic fines can discourage violations. The City may consider doubling fines in school zones to enhance pedestrian safety near schools and target violations at crosswalks.

IMPLEMENTATION AND FUNDING

6



6 IMPLEMENTATION AND FUNDING

This chapter describes process and strategies for implementation of the recommended projects in this Plan, explains project prioritization methodology, and identifies potential funding sources.

I. IMPLEMENTATION

A. IMPLEMENTATION PROCESS

The following outlines typical steps that are expected during the implementation process:

1. Apply for grants to fund improvements.
2. Coordinate with other jurisdictions as necessary.
3. Develop further design, engineering, and cost estimates as necessary.
4. Secure environmental review and permitting as necessary.
5. Construct the project.

B. IMPLEMENTATION STRATEGIES

Designating Bicycle and Pedestrian Program staff can help City staff focus on implementing pedestrian and bicycle improvements. The City should designate a staff person as a Bicycle and Pedestrian Program Manager who will be responsible for overall implementation of the Non-Motorized Transportation Plan, as well as plan review, coordination with other agencies, and financing. The following describes the roles and responsibilities of the Bicycle and Pedestrian Program Manager.

- Participate in the City's plan review process, including traffic impact studies, street improvement projects, and development projects, so as to manage the implementation of the recommended projects, the collection of impact fees, and the application of design guidelines and goals presented in this Plan.
- Prepare a monitoring plan in coordination with the Newman Police Department to evaluate bicycle and pedestrian-related collision data and provide needed enforcement with regard to issues of security, vandalism, and crime along the pedestrian and bicycle network.
- Monitor funding opportunities and prepare funding applications especially for competitive funding sources that require coordination with other local and regional agencies.
- Take the lead in developing and implementing the maintenance plan and collaborating with the Public Works Department.
- Work closely with adjacent communities, regional agencies, including Stanislaus Council of Governments and Caltrans, and other City Departments, including Police, Public Works, Finance, and Parks and Recreation, to capture all opportunities to implement the Non-Motorized Transportation Plan.

C. PROJECT PRIORITIZATION

Prioritization of the improvements is essential to effectively utilize limited financial resources while reflecting urgent community needs. This section contains the methodology used to prioritize the recommended projects. The recommended projects are described in detail in Chapter 4 of this Plan.

Based on input from City staff and the community, the Project Prioritization Worksheet, which is included as Appendix A in this Plan, was developed to evaluate each project. The Project Prioritization Worksheet uses various criteria to set priorities. These criteria are grouped into seven categories: Accessibility, Safety, Connection to Destination, Connectivity, Public Health, Funding and Implementation, and Community Support. Some criteria weigh more than others, representing their importance to the community.

Each project can earn applicable scores up to a total of 37 points. Based on the total scores, the recommended projects are categorized into three phasing groups, as described below:

- **Phase I (Short-Term Projects):** The highest points between 30 and 37. These projects are the highest priority and the goal is to try to implement them in the next five years.
- **Phase II (Medium-Term Projects):** Moderate points between 17 and 29. The goal is to try to implement these second priority projects within 10 years.
- **Phase III (Long-Term Projects):** The lowest points between 0 and 16. Even if these projects earn the lowest scores, they are important elements in completion of the bicycle and pedestrian network. The goal is to implement these projects within 10- 20 years.

Table 6-1 shows the prioritized projects, listed from Phase I to Phase III.

II. FUNDING

The purpose of this section is to identify funding opportunities that might help fund the implementation of the Newman Non-Motorized Transportation Plan. This section outlines the types of funding available and briefly describes how the funds can be used and the process of attaining the funds. The funding opportunities listed below include funding for further planning, construction, and implementation.

Available funding is affected by the economic climate, and as a result this list is subject to change. The City of Newman should pursue applications for the majority of the grant funding opportunities.

There are a variety of potential funding sources, including local, State, regional, and federal programs, that can be used to construct the pedestrian and bicycle improvements. The City should also take advantage of private contributions in implementing the pedestrian and bicycle improvements. This could include a variety of resources, such as volunteer labor during construction or monetary donations towards specific improvements. The funding sources considered appropriate for Newman are discussed in detail below.

TABLE 6-1 PRIORITY PROJECT LIST

PRIORITY	PROJECT	SCORE
Phase I	II.A. New Class II Bicycle Lanes and Signs (Short-Term Projects)	36
Phase I	I.F. Merced Street/ Hills Ferry Road Improvement Area	31
Phase I	I.G. Inyo Avenue/Hoyer Road Improvement Area	30
Phase I	II.C. Bike Facilities	30
Phase II	I.E. Yolo Street/Orestimba Road Improvement Area	29
Phase II	II.B. New Bicycle Routes (Long-Term Projects)	28
Phase II	I.C. State Route 33/N Street Improvement Area	25
Phase II	I.H. T Street Improvement Area	25
Phase II	I.B. UPRR Crossings	23
Phase II	II.A. Existing Bike Lane Restriping	22
Phase II	I.D. Jensen Road Improvement Area	22
Phase II	III.F. Lighting	19
Phase II	I.K. Mid-block Pedestrian Pathways	18
Phase II	I.I. Prince Street Improvement Area	17
Phase III	III.E. Wayfinding	10
Phase III	I.J. Pedestrian Amenities	6
Phase III	III.G. Bus Stops	4
Phase III	III.H. Public Art	3

A. LOCAL FUNDING SOURCES

1. DEVELOPMENT IMPACT FEES

Developers may contribute funding in support of neighborhood infrastructure and needs in the form of development impact fees. Development impact fees are payments required by local governments of new development for the purpose of providing new or expanded public capital facilities. Also, the City may require, as a condition of approval for new development, that the developer provide certain improvements, such as sidewalk improvements or transit amenities.

2. MELLO-ROOS COMMUNITY FACILITIES DISTRICTS

The Mello-Roos Community Facilities Act of 1982 allows any County, City, special district, school district, or joint powers authority to establish a Community Facilities District (CFD), which allows for financing of public improvements and services through taxation within the district. The services and improvements that CFDs can finance include streets, sewer systems, and other basic infrastructure. A CFD is created by a sponsoring local government agency and includes all properties that will benefit from the improvements to be constructed or the services to be provided. A CFD cannot be formed without a two-thirds majority vote of residents living within the proposed boundaries. Once the CFD is approved, a Special Tax Lien is placed against each property in the CFD and property owners pay a special tax annually.

B. STATE FUNDING SOURCES

The following discussion describes State funds that could be used for transportation solutions that were identified in this Plan. Each of the fund sources requires a competitive grant application process. Funds for transportation-related projects are available from the Transportation Development Act (TDA), and from various State programs and agencies, including the California Department of Transportation (Caltrans) and the California Office of Traffic Safety (OTS).

1. TRANSPORTATION DEVELOPMENT ACT ARTICLE 3

TDA funds generated from a ¼ cent of the general State sales tax are returned to the source counties to fund transportation projects. TDA Article 3 provides for 2 percent of County TDA funds to be set aside for bicycle and pedestrian projects. Eligible projects include right-of-way acquisition; planning, design, and engineering; and construction of bicycle and pedestrian infrastructure, including retrofitting to meet ADA requirements, and related facilities.

2. BICYCLE TRANSPORTATION ACCOUNT

The Caltrans Bicycle Transportation Account (BTA) provides State funds on a competitive basis for City and County projects that improve safety and convenience for bicycle commuters, including design, engineering, and construction of bicycle lanes and paths. To be eligible for BTA funds, a City or County must adopt a Bicycle Transportation Plan (BTP) that complies with Streets and Highways Code Section 891.2 within four years prior to the year of application. The BTP must be approved by the local agency's Regional Transportation Planning Agency. Caltrans anticipates that \$7.2 million funds are available annually for bicycle projects. Funds are allocated to cities and counties on a matching basis that requires a minimum of 10 percent of the total cost. No applicant can receive more than 25 percent of the total amount transferred to the BTA in a single fiscal year.

■ More information is available at: <http://www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm>

3. SAFE ROUTES TO SCHOOL (SR2S)

This program provides funding for sidewalk improvements, traffic calming and speed reduction measures, pedestrian and bicycle crossing improvements, on-street and off-street bicycle facilities, and traffic diversion improvements. To qualify for this program the project must be within the vicinity of a school. The State program was established by State legislation in 1999, and with the passage of AB 57 in 2007, the State SR2S program was extended indefinitely. \$24.25 million in funds are available annually and require a local match of 10 percent. Infrastructure projects are eligible to receive SR2S funds.

■ More information is available at: <http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm>

4. STATE HIGHWAY OPERATIONS AND PROTECTION PLAN (SHOPP)

SHOPP is a multi-year program of capital projects whose purpose is to preserve and protect the State Highway System. Caltrans administrates the State Highway Operations and Protection Plan (SHOPP). Funding is comprised of State and federal gas taxes. SHOPP funds capital improvements related to maintenance, safety, and rehabilitation of State highways and bridges. Just over \$1 billion is allocated to SHOPP annually. Caltrans typically decides where this money will be spent. Specific projects can be brought to the attention of SHOPP by contacting the appropriate program manager or appealing to the District's upper or executive management. Projects include rehabilitation, landscaping, traffic management systems, rest areas, auxiliary lanes, and safety improvements. Each project must have a completed Project Study Report to be eligible for funding. Projects are developed in the fall of every odd numbered year.

5. OFFICE OF TRAFFIC SAFETY (OTS) GRANTS

The Office of Traffic Safety (OTS) administrates federal traffic safety grant funds that are apportioned to California under the National Highway Safety Act. The OTS has several priority areas for grant funding, including: Alcohol and Other Drugs, Police Traffic Services, Occupant Protection, Traffic Records, Emergency Medical Services, Roadway Safety, Pedestrian and Bicycle Safety, and Motorcycle Safety. The OTS supports a wide variety of traffic safety programs, including pedestrian and bicycle safety programs for children, child passenger safety outreach, and support for increased law enforcement services and resources, such as safety helmet distribution, and court diversion programs for safety helmet violators. State governmental agencies, state colleges, and state universities, local City and County government agencies, school districts, fire departments, and public emergency services providers are eligible to apply for and receive OTS grant funding.

- More information is available at: http://www.ots.ca.gov/ots_and_traffic_safety/faqs.asp

6. ENVIRONMENTAL ENHANCEMENT AND MITIGATION (EEMP) PROGRAM

The EEMP is a State fund established by Caltrans to fund beautification improvements to roadsides to mitigate the effects of transportation projects. It offers a total of \$10 million each year for grants to local, State, and federal governmental agencies and to nonprofit organizations for projects to mitigate the environmental impacts caused by new or modified public transportation facilities. Typical grants range from \$200,000 to \$250,000. Up to 25 percent local matching is usually required. Eligible projects must be directly or indirectly related to the environmental impact of the modification of an existing transportation facility or construction of a new transportation facility. Grants are awarded in the categories of highway landscaping and urban forestry, resource lands, roadside recreation, and mitigation projects beyond the scope of the lead agency.

- More information is available at: <http://www.resources.ca.gov/eem/>

7. CALTRANS ENVIRONMENTAL JUSTICE (EJ) AND COMMUNITY-BASED TRANSPORTATION PLANNING (CBTP) GRANT

The Office of Community Planning (OCP) is responsible for managing the EJ and CBTP Grant Programs, which are competitive grant programs funded from the State Highway Account (SHA). A total of \$6 million in State funds are available for the both programs each fiscal year.

- More information is available at: http://www.dot.ca.gov/hq/tpp/offices/ocp/EJ_CBTP_Handbook_FY%202011-12.pdf

a. Caltrans Environmental Justice: Context-Sensitive Planning

The Caltrans EJ program provides funding for planning-related projects that promote environmental justice in local planning, contribute to early and continuous involvement of low-income and minority communities in the

planning and decision-making process, improve mobility and access for underserved communities, and create a business climate that leads to more economic opportunities, services, and affordable housing. Caltrans EJ grants require a 10-percent local match with a 5-percent in kind contribution maximum. EJ grants are available in amounts up to \$250,000.

■ More information is available at: <http://www.dot.ca.gov/hq/tpp/grants.html>

b. Caltrans Community-Based Transportation Program (CBTP)

The Caltrans CBTP grant program is primarily used to seed planning activities that encourage livable communities. Caltrans CBTP grants assist local agencies to better integrate land use and transportation planning, to develop alternatives for addressing growth and to assess efficient infrastructure investments that meet community needs. These planning activities are expected to help leverage projects that foster sustainable economies, increase available affordable housing, improve housing/jobs balance, encourage transit oriented and mixed-use development, expand transportation choices, reflect community values, and include non-traditional participation in transportation decision-making. CBTP grant-funded projects demonstrate the value of these new approaches locally, and provide best practices for statewide application. CBTP grants require a 10 percent local match. CBTP grants are available in amounts up to \$300,000.

8. RURAL OR SMALL URBAN TRANSIT PLANNING STUDIES

Funded and administered by the California Department of Transportation, in cooperation with the Federal Highway Administration, this grant is intended to fund technical planning studies for transit programs, including transit development plans, ridership surveys, and transit service implementation plans. Universities and community colleges, community-based organizations, cities, counties, public entities, and transit agencies may apply as a sub-applicant of Metropolitan Planning Organizations or Regional Transportation Planning Agencies. It offers a total of \$1 million each year and is capped at \$100,000 per grant. Up to 11.5 percent local matching is required.

■ More information is available at: http://www.dot.ca.gov/dist05/planning/pdf/CTTransPlanningGrant_01202012FINAL.pdf

C. FEDERAL FUNDING SOURCES

The primary sources of federal funding for bicycle and pedestrian facilities are from the U.S. Department of Transportation and the U.S. Department of Housing and Urban Development.

SAFETEA-LU, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, authorized

surface transportation investment and had supplied various funding programs until it expired in September 2009. President Obama signed the new two-year transportation authorization bill, Moving Ahead for Progress in the 21st Century (MAP-21), into law in July 2012. MAP-21 took effect on October 1, 2012. Specific funding programs under MAP-21 are discussed in detail below:

1. CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT PROGRAM (CMAQ)

Congestion Mitigation and Air Quality Improvement Program (CMAQ) is a federal program supporting a range of projects that reduce transportation-related air emissions in air quality nonattainment areas. StanCOG, as the Stanislaus Region's MPO, administers the CMAQ grant on a per-population and competitive basis in Stanislaus County. The CMAQ funds support transportation projects that are likely to reduce air pollution and are included in the Metropolitan Planning Organization's (MPO's) current transportation plan and transportation improvement program (TIP) or the current State transportation improvement program (STIP) in areas without an MPO. Bicycle and pedestrian facilities programs are one of the eligible activities. The CMAQ program authorizes an average of \$3.3 billion per year. Based on population, StanCOG receives approximately \$7.2 million per year, and utilizes the following methodology for the regional apportionment of the funds: a) Rideshare programming prior to formula distribution; b) 50 percent formula (based on percent by population); c) 50 percent competitive (cost effective); d) 100,000 minimum floor for the Cities of Hughson, Waterford, and Newman; e) All agencies can supplement their formula funding by securing competitive CMAQ grant funding.

- More information is available at: <http://www.fhwa.dot.gov/map21/cmaq.cfm>, and <http://www.stancog.org/pdf/ftip-amendments/2013-final-FTIP.pdf>

2. TRANSPORTATION ALTERNATIVES (TA)

This is a new program under MAP-21 that consolidates the Transportation Enhancement program with the Recreational Trails and the Safe Routes to Schools programs. Eligible projects include bicycle and pedestrian facilities, safe routes for non-drivers projects and systems, vegetation management practices in rights of ways, preservation of abandoned railway corridors including for pedestrian and bicycle trails, any environmental mitigation, including NEPA compliance. Tribal governments, local governments, transit agencies, and school districts may apply for the TA funds.

- More information is available at: <http://www.fhwa.dot.gov/map21/summaryinfo.cfm>

3. NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)

The NHPP funds provide for an interconnected system of the National Highway System (NHS) at an average of \$21.8 billion per year. The goal of the program is to afford access to major population centers, international border crossings, and transportation systems, meet national defense requirements, and serve interstate and inter-

regional travel. This travel includes access for bicyclists and pedestrians. Facilities must be located and designed pursuant to an overall plan developed by each metropolitan planning organization (MPO) and State, and incorporated into the RTP.

- More information is available at: <http://www.fhwa.dot.gov/map21/nhpp.cfm>

4. HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

The HSIP was a new program under SAFETEA-LU to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including bicycle and pedestrian pathways or trails. MAP-21 continues the implementation of the HSIP, providing average annual funding of \$2.4 billion, including \$220 million per year for the Rail-Highway Crossings program.

Both capital improvements and programs are eligible. Example projects include intersection safety improvements, pavement and shoulder widening, an improvement for pedestrian or bicyclist safety or safety of the disabled, elimination of hazards at highway-rail crossings, traffic calming features, traffic control or other warning devices, and improvement of highway signage and pavement markings. Highway safety improvement projects must be identified on the basis of crash experience, crash potential, crash rate, or other data-supported means.

To be eligible, a State must develop, implement, and update a Strategic Highway Safety Plan (SHSP), develop projects or strategies to reduce identified safety problems, and evaluate the SHSP on a regular basis.

- More information is available at: <http://www.fhwa.dot.gov/map21/hsip.cfm>

5. COMMUNITY DEVELOPMENT BLOCK GRANTS

Since 1974, the U.S. Department of Housing and Urban Development has administered CDBG funds. The goal of the CDBG program is the development of viable urban communities by providing decent housing and a suitable living environment and by expanding economic opportunities, principally for persons of low and moderate income. "Persons of low and moderate income" or the "targeted income group" (TIG) are defined as families, households, and individuals whose incomes do not exceed 80 percent of the county median income, with adjustments for family or household size. This is achieved by providing decent housing and a suitable living environment and by expanding economic opportunities, principally for persons of low and moderate income. Each year the program makes funds available to eligible jurisdictions through several allocations.

Projects must meet specific criteria of either benefiting low-income households or persons, creating new jobs, or accommodating specific business expansion/retention. CDBG funds are available for a number of different types

of projects, including housing rehabilitation, new housing construction, community facilities, public services, and public works projects.

- More information is available at: www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm

D. NON-TRADITIONAL FUNDING SOURCES

1. SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT - REMOVE II PROGRAM

The REMOVE II Program is intended to reduce motor vehicle emissions within the SJVAPC District so as to attain the requirements of the California Clean Air Act. Bicycle Infrastructure Component of this program provides incentives for Class I or Class II bicycle path construction. Any municipality, government agency, or public educational institution may apply. The incentive amount for bicycle projects will be determined based on the California Air Resources Board (ARB) calculation methodology for cost effectiveness and emissions reductions. The maximum incentives for Class I projects are up to \$150,000 per project and for Class II projects are \$100,000 per project. Only one incentive is available per application.

- More information is available at: http://www.valleyair.org/grant_programs/grantprograms.htm#PublicBenefitGrantProgram

2. ADOPT-A-TRAIL OR PATH PROGRAMS

The City may establish Adopt-A-Trail or Adopt-A-Path programs to coordinate with local groups or persons on trail or path development and maintenance. Local businesses and organizations may adopt a trail or a bicycle path similar to the adoption of segment of the Interstate Highway System. The adoption is in the form of an annual commitment to pay for the routine maintenance of the trail or path. The supporters and their contribution should be indicated on the signs posted along the trail or path.

3. REVENUE-PRODUCING OPERATIONS

The City should consider including revenue-producing operations, such as bicycle rental or repair facilities and food and drink establishments, as part of the development of a trail or bike path. The City may use the lease revenues from these operations for trail or path maintenance costs.

4. GRANT AND FOUNDATION

Private foundations or corporate donors can be great resources for funding projects or event programs. The City can find a number of foundations that support pedestrian and bicycle improvements through the Foundation Center online database at www.fconline.fdncenter.org.

DESIGN GUIDELINES

7



7 DESIGN GUIDELINES

I. BICYCLE DESIGN GUIDELINES

This section outlines design guidelines and best practices for bicycle facilities recommended for the City of Newman to improve bicycle safety and accessibility on all streets. These guidelines are based on the *Caltrans Highway Design Manual (HDM)*, the *California Manual on Uniform Traffic Control Devices (CA MUTCD)*, and the *American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities*, as well as best practices in other communities. They discuss best practices as well as practices to avoid. The Bicycle Design Guidelines are intended as a supplement to the previously mentioned documents.

BIKEWAY TYPES

Bikeway planning and design in California typically relies on the guidelines and design standards established by Caltrans as documented in “*Chapter 1000: Bikeway Planning and Design*” of the HDM. Chapter 1000 follows standards developed by AASHTO and the Federal Highway Administration (FHWA), and identifies specific design standards for various conditions. These standards provide a good framework for future implementation, but may not always be feasible given specific constraints. Bikeway design and planning standards are continually changing and expanding. Despite this, most agencies adopt the Caltrans or AASHTO standards as a minimum.



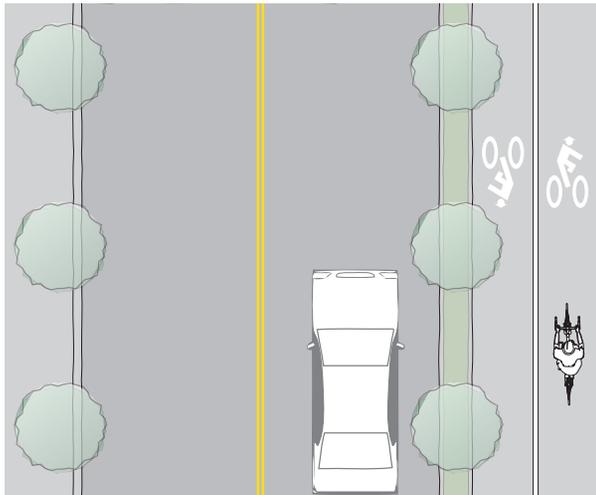
TYPES

Based on the California Streets and Highways Code, Caltrans identifies three types of bikeways, as described and illustrated below.

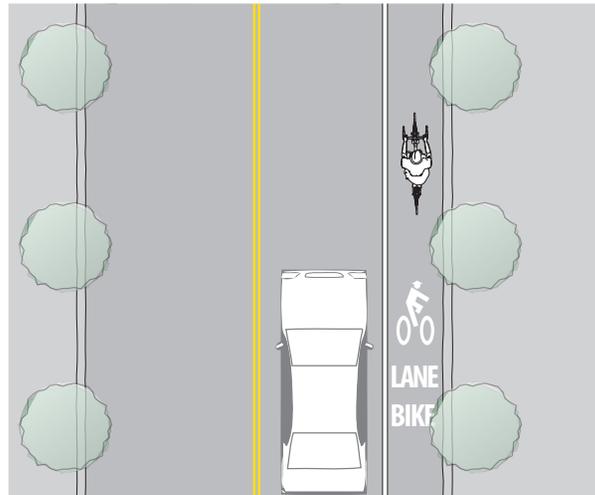
- Class I bikeways (Bike Path), also known as multi-use paths, are separated completely from motor vehicle traffic but may be shared with pedestrians.
- Class II bikeways (Bike Lane) are striped in the roadway for the exclusive use of bicycles. Vehicle and pedestrian cross-flow are permitted. The striping is supported by pavement markings and signage.
- Class III bikeways (Bike Route) are located on roadways shared with motor vehicles. Bike routes are designated by signage and/or shared roadway bicycle markings (sharrows).

TYPICAL DESIGN TREATMENTS

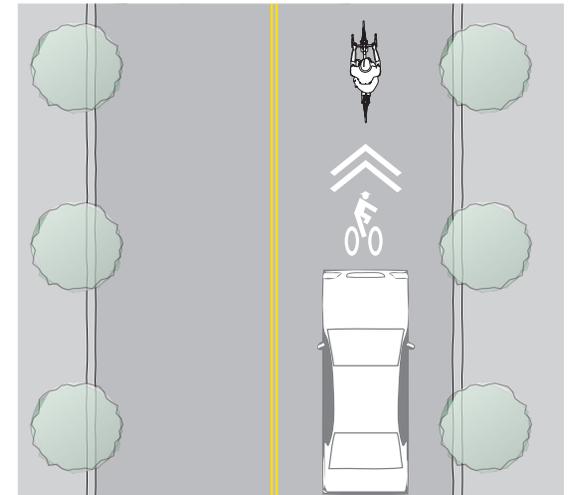
New bicycle facilities should conform to the HDM standards. The following discussion describes each bikeway type in further detail with dimension requirements, and signage and marking recommendations.



CLASS I - Off-Street Multi-Use Bike Path



CLASS II - On-Street Bike Lane



CLASS III - On-Street Bike Route

CLASS I BIKEWAYS: BIKE PATHS

Bike paths, or multi-use paths, are typically separated from roads by buffers or barriers, and cross traffic should be minimized along these paths in order to avoid conflict. Bike paths are also often part of a shared-use path for pedestrians. These paths are an important component of every bikeway network because they can provide a car-free environment for a large portion of a bicycling trip. Such paths are typically located along an existing corridor such as a canal, riverfront, or railroad.

Within a bikeway network, Class I bike paths can also close a gap in motor vehicle access such as connecting two dead-end roads, traversing a park, or by providing more direct access in a subdivision between the residential street and surrounding major roadways.

As shown in Figure 7-1, two-way bike paths must be a minimum of 8 feet wide with an additional two foot wide shoulder, required by Caltrans standards. A minimum width of 12 feet is preferable when moderate volumes of pedestrian traffic are expected along the path. A separate path for pedestrians may be appropriate if high volumes of pedestrian traffic are expected. Asphalt or concrete should be used for the bicycling path, while decomposed granite can be used for a separated pedestrian path and the pathway shoulder.

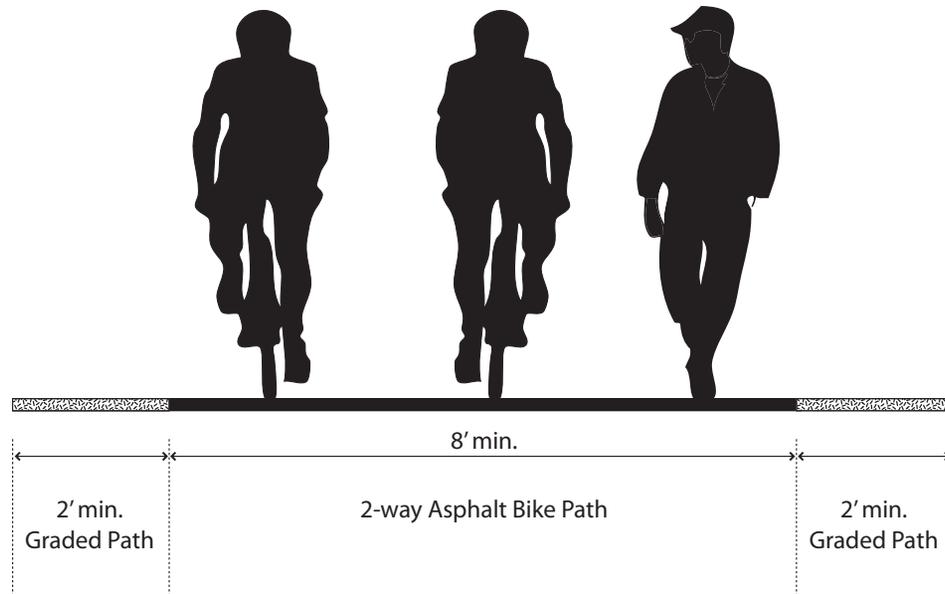


Figure 7-1 Class I bike path cross section



Class I bike path

CLASS I BIKE PATH	
Minimum Width	8 feet with additional 2 foot wide shoulder
Preferred Width	12 feet when moderate volumes of traffic are expected along the path, with additional 2 foot wide shoulder



Figure 7-2
CA MUTCD R44A signage



Push button and signage for bicycle crossing

SIGNAGE FOR CLASS I BIKE PATHS

- Pavement Markings:** When bike paths are of sufficient width for two lanes, lane markings should be used. A solid yellow or white 4-inch-wide stripe may be used to separate the two directions of travel where passing is not permitted. A broken yellow or white line with a 1-to-3 segment-to-gap ratio should be used where passing is permitted.
- Signage:** Signage should be used at multi-use path roadway crossings to alert drivers of pedestrians and bicyclists. Signage should be placed along the roadway in advance of a crossing to alert drivers to the upcoming intersection with bicyclists and pedestrians. CA MUTCD recommends that signage type R44A (CA) be installed along Class I bikeways (see Figure 7-2). Wayfinding, or destination and directional information, signs should be provided at important locations along bike paths. These signs can include mileage to a destination, mark upcoming junctions, or contain directional arrows.

CLASS I BIKE PATH CROSSINGS

Based on the AASHTO and CA MUTCD guidelines for crossing treatments, the primary objective for crossings is a safe and convenient intersection for all mode types. When paths cross roadways at intersections, they should be assigned the same traffic control as the parallel roadway. For example, if the parallel roadway has a green signal, the path should also have a green/walk signal at the same time. A leading green/walk signal time for path users is recommended to give pedestrians and bicyclists a visible head start and to avoid potential conflicts with vehicle movement. If the path is crossing an all-way stop intersection, then STOP signs should be placed along the path at each intersection approach. At uncontrolled intersections, STOP or YIELD signs should be used to give right-of-way to either the path or the roadway.



Class I bike path crossing



Class I pavement striping

CLASS II BIKEWAYS: BIKE LANES

Bike lanes are typically used on streets with higher traffic volumes or greater speeds. The bike lanes improve conditions for bicyclists in the corridor by delineating separate rights-of-way assigned to bicyclists and to motorists. Bike lanes should be considered when adequate lane width is available for striping without loss to level-of-service, such as on two-lane or wider roads that allow motor vehicles to safely pass bicyclists.

Variables on the roadway, including on-street parking, curb and gutters, and roadway speeds, influence the width and design of bike lanes. The following Class II bike lane widths are recommended (see Figure 7-3):

■ Bike Lanes Adjacent to On-street, Parallel Parking:

- Marked parking stalls or continuous parking stripe: Bike lanes should be a minimum of 5 feet wide, required by Caltrans standards, but 6 feet is preferred. Many jurisdictions prefer a minimum six foot bike lane to provide extra space for bicyclists to keep them safely outside the door zone. The door zone refers to the area where bicyclists are vulnerable to being hit by an opening car door.
- Unmarked parking stalls: The minimum combined bike lane and unmarked parking stall width should be 12 feet (measured from the curb face to the outside bike lane stripe). Many jurisdictions prefer a minimum 6 foot bike lane to ensure the bicyclists is not riding in the gutter.

■ **Bike Lanes Adjacent to Curb and Gutter:** A minimum 5 foot width with a standard gutter. However, it is preferred to maintain a minimum of 2 ½ foot clear surface beyond the gutter.

■ **On Roadways without Curb and Gutter:** The minimum width is 4 feet. Additional width is desirable especially where motor vehicle speeds exceed 35 mph.

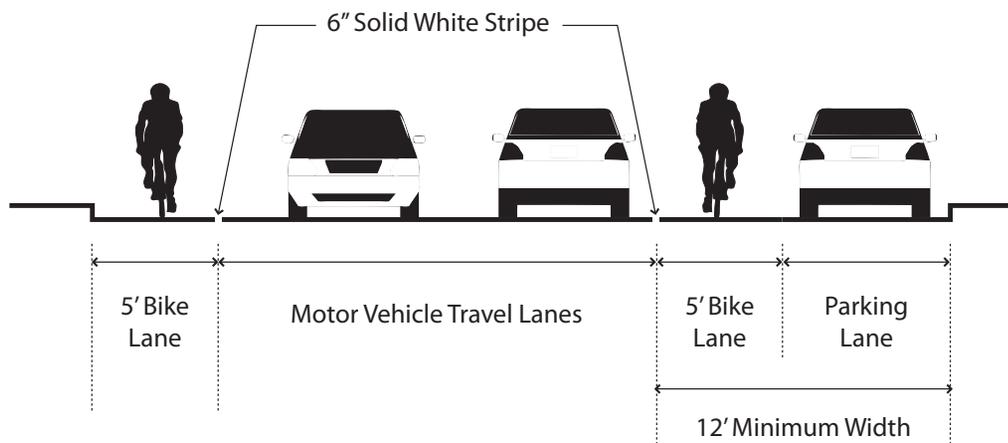


Figure 7-3 Class II bike lane cross section adjacent to curb and gutter and adjacent to parallel parking



Bike lane with door zone marking adjacent to on-street parking



Bike lane adjacent to curb and gutter

CLASS II BIKE LANE	
Adjacent to marked parallel parking	Minimum width: 5 feet Preferred width: 6 feet
Adjacent to unmarked parallel parking	Minimum bike lane and parking width: 12 feet With a rolled curb: 11 feet
Adjacent to curb and gutter	Minimum width: 5 feet Preferred width: 6 feet
On roadways without curb and gutter	Minimum width: 4 feet Preferred width: Additional width is desirable with speeds over 35mph

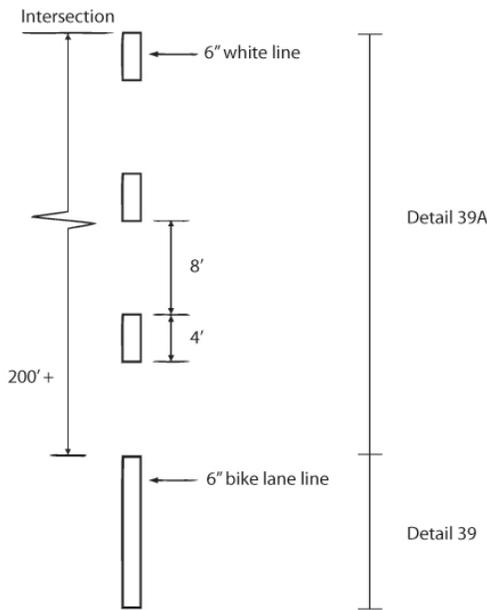


Figure 7-4 Class II bike lane striping detail

Roadway speeds impact recommended bike lane widths at the following levels:

- 35 mph or less: 5 foot bike lanes
- 40 to 50 mph: 6 foot bike lanes
- Greater than 50 mph: 8 foot bike lanes. These wide lanes should only be used when necessary and clearly marked with bike lane signs and symbols and 'No Parking' signs so that the bike lane is not misconstrued as a travel or parking lane. Bike lanes of this width are also recommended for rural highways.

SIGNAGE FOR CLASS II BIKE LANES

- **Pavement Markings:** Bike lane striping should allow bicyclists to follow a straight path. Bike lanes along roads with parking permitted should not be directed toward the curb at intersections. A six inch-wide, solid white line should be used at the right edge of the outside travel lane to designate the portion of the roadway for bicyclists. An optional solid white line can also be used at the outside of the bike lane between the bike and parking lanes. At an intersection where right turns are permitted, the bike lane line should terminate 100 to 200 feet prior to the intersection or be substituted by a dashed line marked up to the intersection.

Bike lane pavement markings should be used to further define bike lane space for bicyclists and motorists. These should be placed at the start of all bike lanes, on the far side of each intersection, and at other desired locations. The bike lane pavement marking should include a directional arrow and one of the accompanying word or bicycle symbols. The pavement marking, shown in Figure 7-5, is currently used in Newman.

Another option for pavement marking includes colored bike lanes. Colored bike lanes can be used in high-conflict areas to alert motorists to the presence of bicyclists and bike lanes.

Markings can be painted or treated with thermoplastic. Thermoplastic paving is a preferred option because of its increased durability, reflectivity, and lack of toxic solvents.



Figure 7-5 Bike lane pavement marking currently used in Newman



Figure 7-6 Additional option for bike lane pavement marking



Bicycle turn lane



Colored bike lane

■ **Signage:** The bike lane signs (CA MUTCD R81) as shown in Figure 7-7 should be placed at the beginning of each designated bike lane, on the far side of arterial intersections, at major changes in direction, and at ½ mile intervals. The BEGIN (CA MUTCD R81A) and END (CA MUTCD R81B) signs may be used below the required R81-sign to mark the beginning or end of a bike lane (Figure 7-8). If bike lane pavement markings are used it is not necessary to include the bike lane sign at each pavement marking. Signs may also be used to state BICYCLE WRONG WAY (CA MUTCD R5-1b – See Figure 7-9) on the back of bike lane signs to reinforce appropriate traffic flow for bicyclists.



Figure 7-7 CA MUTCD R81 required signage for Class II bike lane



Figure 7-8 Optional signage for the start and end of bike lanes

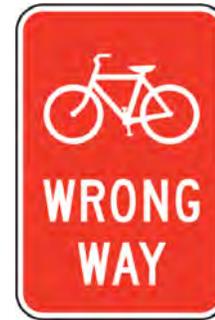


Figure 7-9 Optional Wrong Way signage

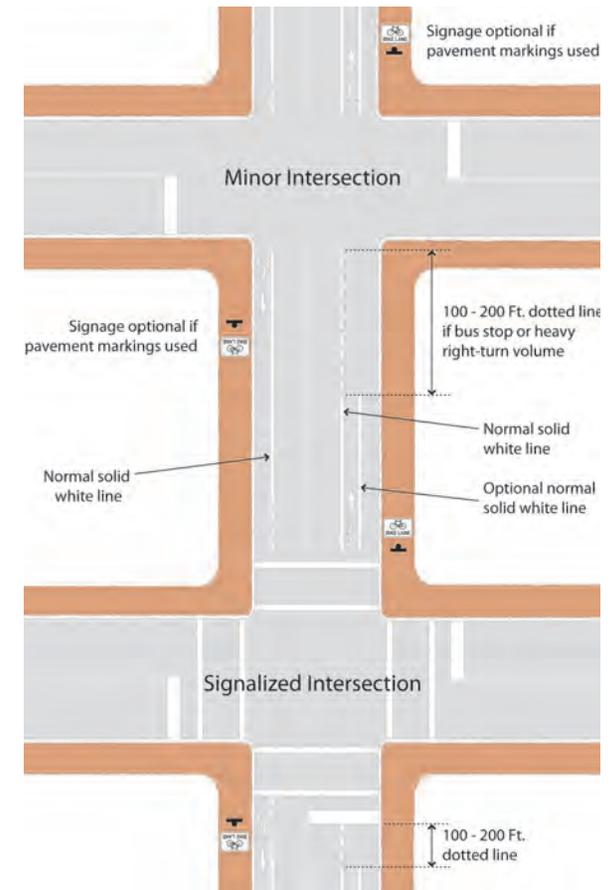


Figure 7-10 Location of signage and pavement markings on Class II bike lanes



Bicycle detector symbol

CLASS II BIKE LANES AT INTERSECTIONS

As stated earlier, collisions between motorists and bicyclists most often occur at intersections. There are several treatments that can reduce intersection conflicts. Caltrans provides recommended intersection treatments in the HDM, including loop detectors and bike lane “pockets” at right- and left-turn only lanes. The following recommendations are provided to improve safety and accessibility for bicyclists through intersections.

■ **Bicycle Detection at Actuated Traffic Signals:** Detection at actuated traffic signals provides bicyclists the ability to trigger a traffic signal, rather than activating a pedestrian push button or illegally crossing a red light. These signals should be provided where possible, particularly along bikeways. Bicycle detection can be provided with bicycle-sensitive loop detectors or video detection that prompt traffic signals to change. A bicycle detector symbol must be painted on the roadway to show bicyclists where they should be located to trigger the detection.

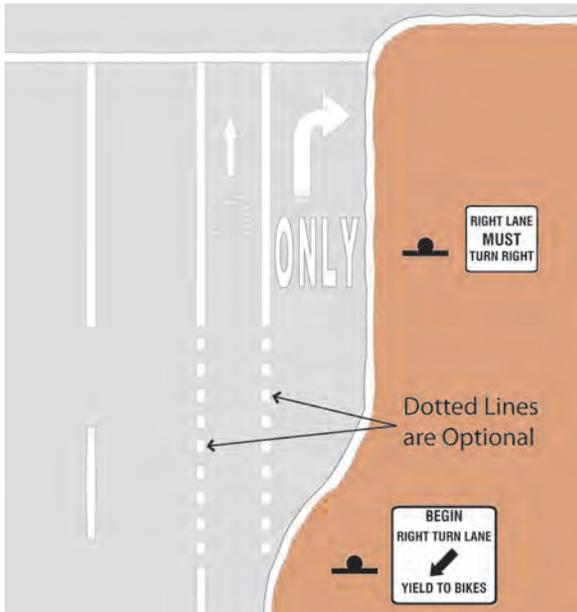


Figure 7-11 Bike lane pocket at right turn only lane. See signage information on the previous pages

- Intersections with Turn Lanes:** Bicycle lane pockets provide a marked route for bicyclists to avoid potential conflicts with turn-only lanes. An alternate treatment is a sharrow, or “shared right-of-way” marking, in the through lane adjacent to the right-turn lane. See Figures 7-11 through 7-14 for recommended treatments, including bike lane pockets at right-turn only lanes, a shared right-turn and bicycle through lane, and a bicycle left-turn pocket.

State Route 33, which passes through the middle of Newman, is under Caltrans’ jurisdiction. Coordination with Caltrans will be required in making any modifications within the State Route 33 roadway right-of-way. Specific recommendations for bike crossings at State Route 33 include:

- A bicycle detector pavement symbol, as discussed above, will be needed to show bicyclists where to locate themselves if there is an actuated signal.
- Skip-striping should be considered to provide safer crossings. Skip-striping refers to striping the bike lane through the intersection using dashed lines. These stripes direct bicyclists to the bike lane on the opposite side of the crossing and provide visibility.

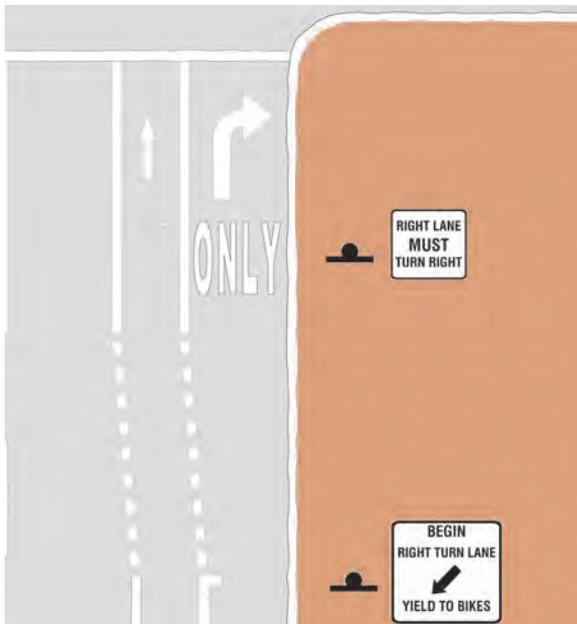


Figure 7-12 Parking lane becoming right-turn lane

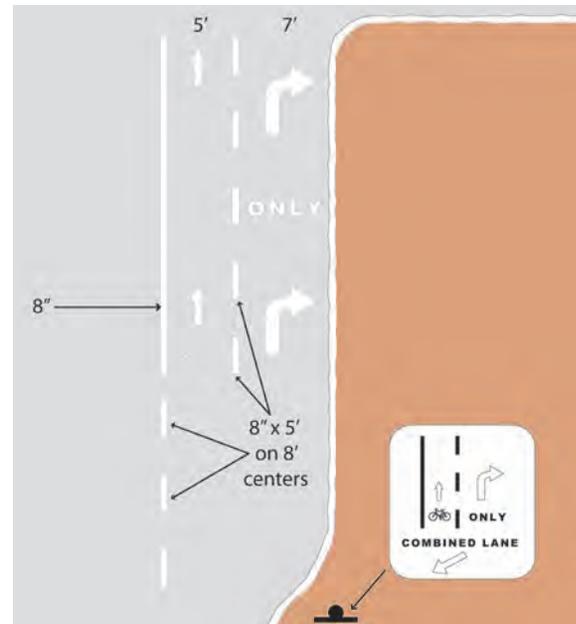


Figure 7-13 Shared right-turn/bicycle through lane

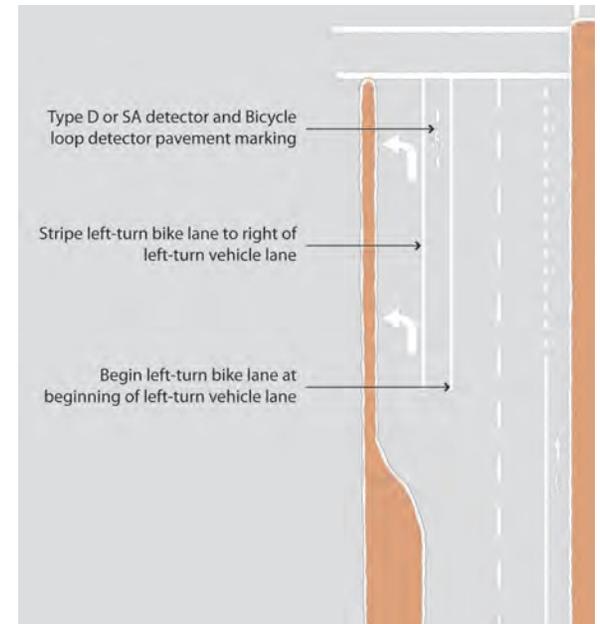


Figure 7-14 Bicycle left-turn pocket

CLASS III BIKEWAYS: BIKE ROUTES

Class III bike routes are recommended for combined use of cars and bicyclists. The roadway is shared with cars, and routes are designated with signs and pavement markings only; there is no dedicated bike lane. Wider curb lanes, pavement maintenance, and traffic calming measures make them suitable for shared use. Class III bike routes can be used on a variety of street types, ranging from low-volume residential streets to busy arterials where widening for a dedicated bike lane is infeasible. Class III bike routes are most commonly used on slower or bicycle-friendly roads. These routes typically connect other bike lanes.

As shown in Figure 7-15, a 14 foot minimum lane width is recommended for Class III bike routes. Lane width is determined from edge stripe to lane line or the gutter joint to the lane line. If 15 feet or more is available for the lane next to the curb line, striping the bike lane should be considered. Streets with speed limits of 40 mph or above should not be designated as Class III bike routes.

■ **Bicycle Boulevards:** A bicycle boulevard is a type of Class III bike route that prioritizes bicycle traffic. These boulevards allow vehicular traffic but utilize traffic calming treatments to slow vehicular speed and volume as well as discourage through traffic. The traffic calming measures can include speed humps, roundabouts, signage, and pavement markings. These routes can provide an alternative to busy arterial streets, and therefore often run parallel to arterials. They should be located within one or two blocks from the arterial. The primary characteristics of a bicycle boulevard are:

- Low vehicle volume and speed
- Well marked, direct, and continuous route
- Convenient access to desired destinations
- Minimal bicyclist delay
- Comfortable and safe crossings for bicyclists at intersections

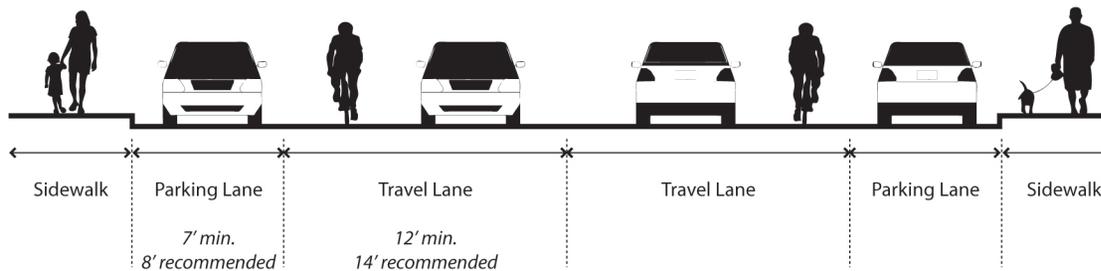


Figure 7-15 Class III bike route cross section



Bicycle boulevard



Sharrow pavement marking with additional painting of lane for visibility

CLASS III BIKE ROUTE	
Preferred Width	14 feet minimum lane width
Additional Considerations	If 15 feet or more are available for the lane, striping the bike lane should be considered



Figure 7-16 Bicycle Boulevard optional pavement marking



Figure 7-17 Sharrow pavement marking

SIGNAGE FOR CLASS III BIKE ROUTES

- Pavement Markings:** Although Class III Bike Routes do not have required pavement markings, the shared roadway bicycle marking or “sharrow” (Figures 7-17) can be used on a Class III bike route or roadway with no bikeway designation. Sharrows are on-street markings that reinforce the bikeway designation. These markings are put in place to help bicyclists avoid the hazard of the door zone and to alert road users of the location a bicyclist should occupy within the traveled way. Although, according to the CA MUTCD, sharrows are only used on roadways with on-street parking, they can be used on roadways without on-street parking but with high volumes of bicycle traffic and when other options are not available.

If used, shared roadway bicycle markings should be placed so that the centers of markings are a minimum of 11 feet from curb face or edge of paved shoulder. They should be used immediately after an intersection and spaced at intervals of 250 feet thereafter. Refer to Figures 7-21 and 7-22 for placement illustration.

For a Bicycle Boulevard, no standard pavement markings have been adopted. Common practice has been to differentiate the bicycle boulevard with a combination of directional arrows, word markings, and bicycle symbols, as shown in Figure 7-16 or the use of sharrows.

- Signage:** CA MUTCD recommends that signage type D11-1 (Figure 7-18) be installed along Class III bikeways. Signs should be placed at decision points along designated routes and at regular intervals so that bicyclists and vehicles will be informed that they are on a bicycle route. Destination signage or route number signs can be used with the bike route signage, as shown in Figure 7-19, to provide additional guidance.

No standard signage has been adopted for use on a bicycle boulevard. Some cities have introduced their own signage, using a different color from the standard regulatory sign color to differentiate it from standard regulatory, warning, and guidance roadway signage, as shown in Figure 7-20.



Figure 7-18 CA MUTCD D11-1 bike route sign



Figure 7-19 Bike route number sign



Figure 7-20 Bicycle boulevard sign

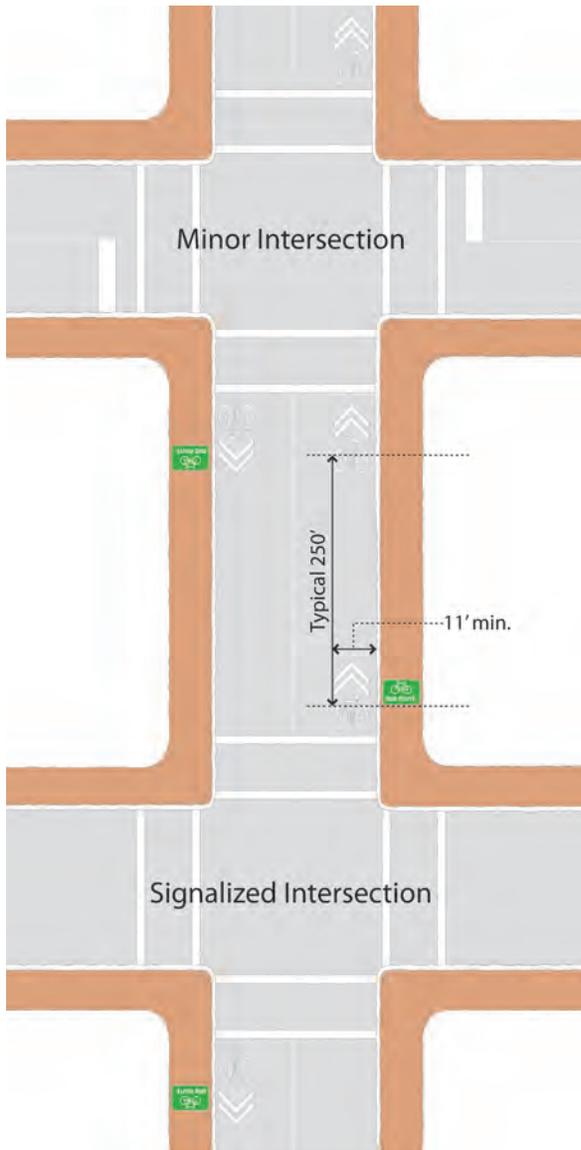


Figure 7-21 Location of signage and pavement markings on Class III bike route

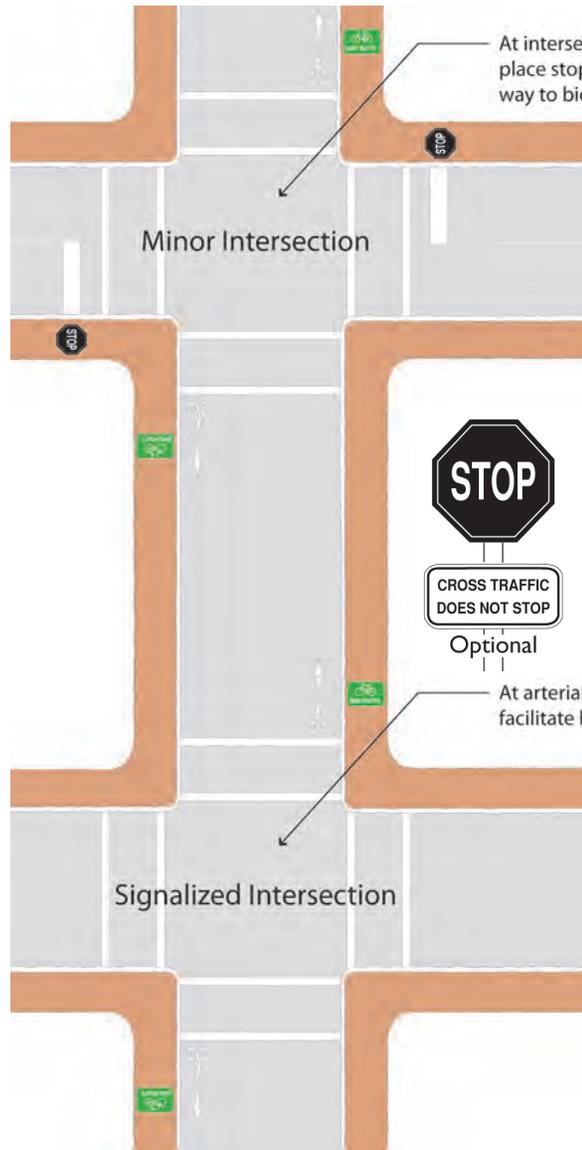


Figure 7-22 Optional locations for pavement markings and signage on Bicycle Boulevard

At intersection with local street, place stop signs to give right-of-way to bicycle route.



Bicycle Boulevard signage



At arterials, provide traffic signal to facilitate bike crossing.



Class III signage



A railroad crossing in Rohnert Park



Inverted U-Rack bicycle parking



Custom bike rack



Bike loop bollard currently used in Newman

BICYCLE CROSSINGS AT RAILROADS

Attention must be given to bikeway railroad track crossings. The Caltrans HDM addresses treatments and considerations for railroad crossings. The crossing should be straight and at a right angle to the railroad. When an angled crossing is the only option for the bikeway or roadway, the shoulder or bikeway should be widened so that bicyclists can cross at a right angle. Crossing railroad tracks at a right angle is important for bicyclists so that they do not catch bike wheels in the flangeway (the opening along a rail track). If widening is not possible, the flangeway depth and width should be kept to a minimum through special construction and materials.

Pavement should be maintained so that buildup does not occur next to the rails. All railroad crossings are regulated by the California Public Utilities Commission (CPUC), and thus all new bicycle path railroad crossings must be approved by the CPUC.

BICYCLE PARKING

Safe and secure bicycle parking is a critical component to most bicycle trips, and thus in promoting bicycle use. The following describes typical bicycle parking units for both long- and short-term parking.

SHORT-TERM BICYCLE PARKING

Short-term bicycle parking is intended for bicyclists that plan to leave their bicycle for only a few hours. Short-term parking is generally provided with bicycle racks and is appropriate at shopping areas, libraries, and other places where the typical parking duration is about two hours or less. Bike racks should support the bicycle upright and in two places, enabling the frame and one or both wheels to be secured.

- **Inverted U-Rack:** This is a relatively low-cost device that provides a location to lock a bicycle. The U-rack is generally preferred because it can provide the greatest area of support for the bicycle, is less likely to result in damage to the bicycle frame, and is easiest for access.
- **Bike Loop Bollard:** If a lot of foot traffic is expected, the bollard functions well because it does not take up very much space. It can also be strategically placed as a vehicle barrier.
- **Other Bicycle Racks:** Bicycle racks come in many shapes and sizes and can be manufactured to complement any design scheme. An example of a custom rack is shown in the adjacent image.
- **Bike Rack Placement:** Bike racks should be visibly located and near intended destinations. Bike racks are typically installed on the sidewalk or plaza spaces, but they should be placed outside of the typical pedestrian travel path. Specifications for the placement of bicycle racks on the sidewalk are shown in Figures 7-24 and

7-25. Some communities are providing bicycle parking in the street, within space converted from a vehicle parking space. Parking for 10 bicycles can be provided in one vehicle space, as shown in Figure 7-23.

The following guidelines for bike rack placement should be followed to ensure that they are safe from vandalism, are easily accessible to bicyclists, avoid adversely impacting pedestrian circulation, and can be used to their maximum design capacity:

- Racks should not be obscured by landscaping, fences, or other obstructions.
- Racks should be in a well-lit location at night to protect both the bicycle and the user.
- Visibility should be provided to at least one of the following: security guard, station agent, parking garage attendants, clerks, vendors, or passing pedestrians.
- Ground surface of the bicycle parking area should be an all-weather and drainable material such as asphalt or concrete; care should be taken when using other materials that can become slippery when wet.
- Racks should be located outside the typical pedestrian travel path, with additional room for bicyclists to maneuver outside the pedestrian way.
- Racks should be of a minimum height so as to increase their visibility to pedestrians.
- Racks should be located at a sufficient distance from motor vehicles to prevent damage to parked bicycles and motor vehicles.

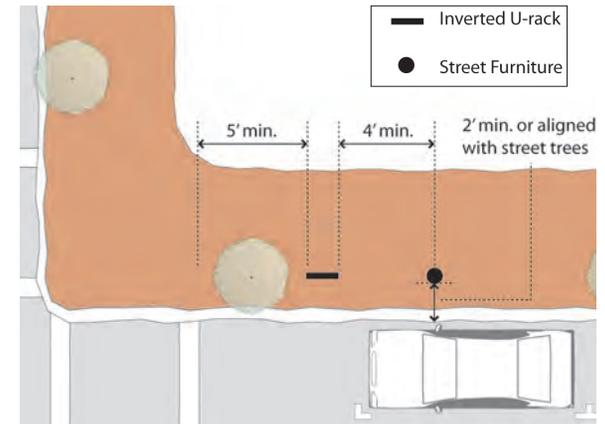


Figure 7-24 Inverted U-Rack spacing recommendations

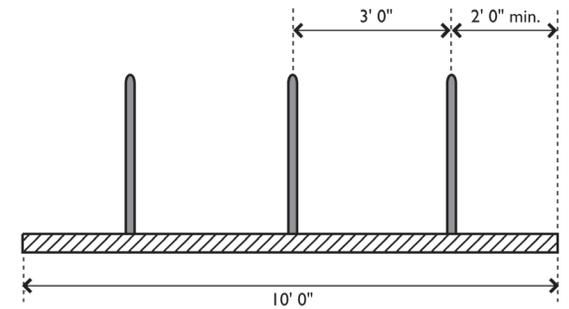


Figure 7-25 Inverted U-Rack spacing recommendations

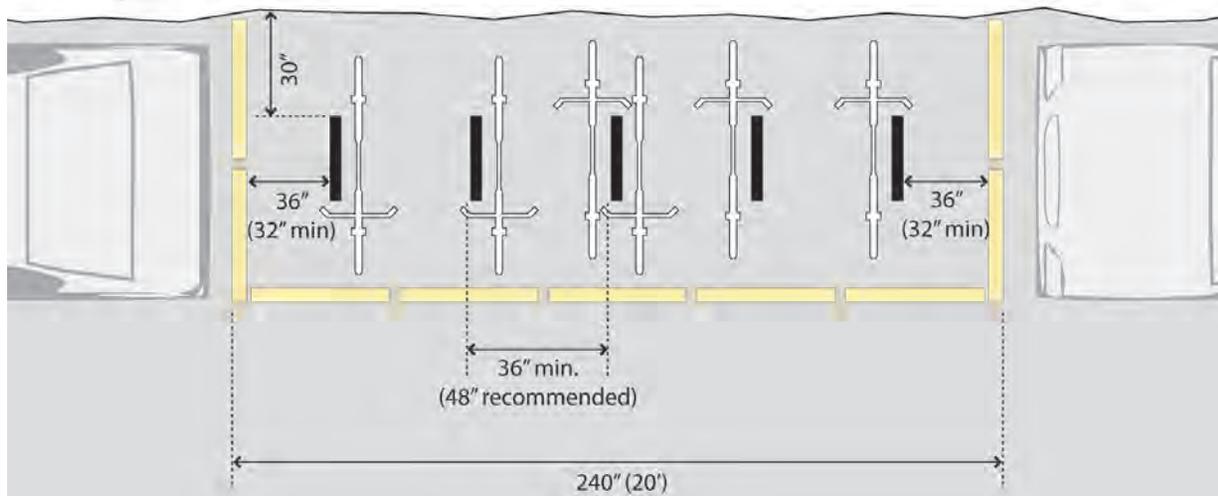
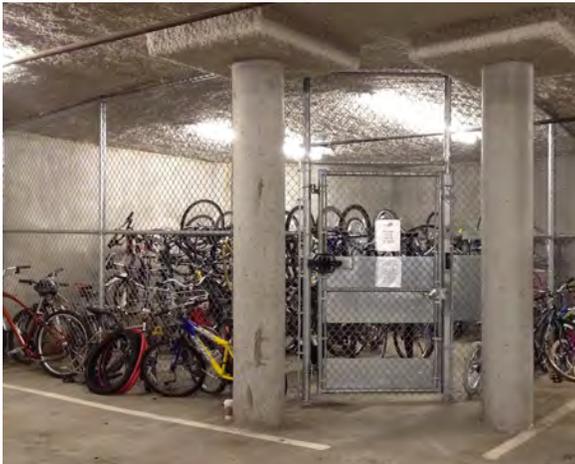


Figure 7-23 Spacing for bike rack placement in a vehicle parking space



Bicycle lockers



Bicycle cage in a parking garage

LONG-TERM BICYCLE PARKING

Long-term bicycle parking protects the entire bicycle and its components from theft, vandalism, and the weather. Long-term parking is appropriate for a few hours use up to a full day and overnight, and is usually found at employment or transit centers. Bicycle lockers, bike cages or rooms, and bike stations with valet parking are examples of long-term parking.

- Bicycle Locker:** Bicycle lockers are covered storage units that can be locked individually, providing secure parking for one bicycle. Lockers that are accessed with a key can be assigned or reserved for the use of one individual. Electronic lockers allow on-demand access to the locker when it is needed and, consequently, more efficient use of the parking space. Users must have a bicycle parking card to use the lockers, and a nominal parking fee (\$.03/hour) is generally charged. Specifications for the installation of bicycle lockers are found on Figure 7-26.
- Locked Bike Cage:** A locked bike cage or room provides long-term secure bicycle parking at a place of business or a residential development. Access should be limited to employees or residents with the use of a key, code, or access card. For additional security, it is recommended that bike racks be installed within the cage or room.
- Bike Station:** Bike stations provide attended bicycle parking at locations with large numbers of bicycle commuters, generally at intermodal connections between bicycle and transit. Bike stations can provide bicycle tune-ups, repairs, and rentals in order to sustain their operation.

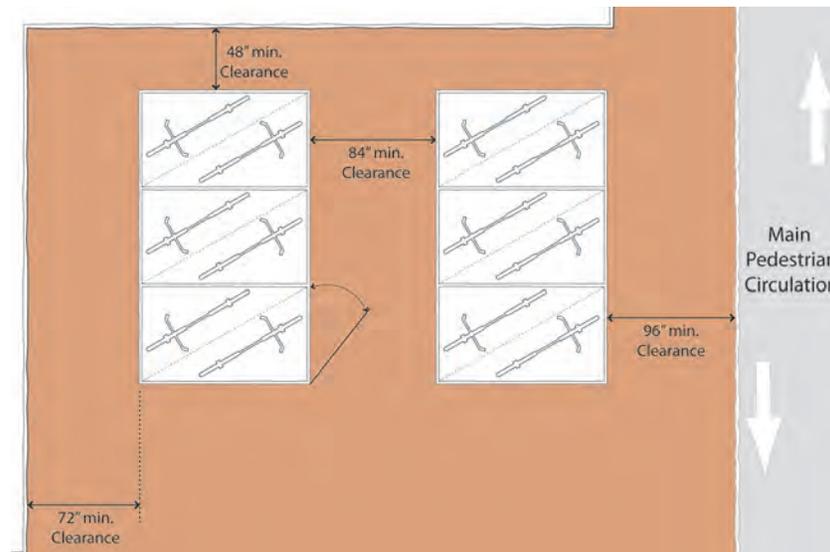
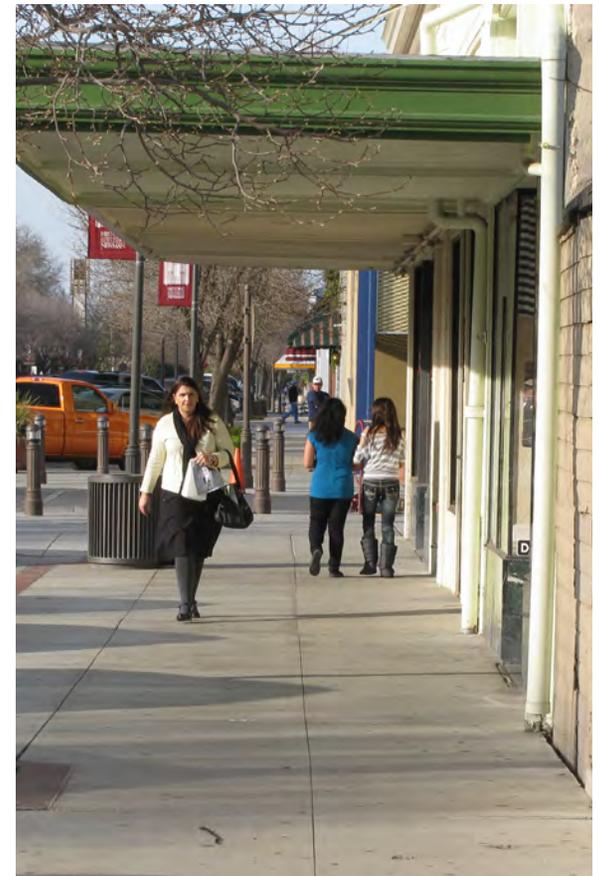


Figure 7-26 Bicycle locker placement requirements

II. PEDESTRIAN DESIGN GUIDELINES

In September of 2008, the *California Complete Streets Act of 2008* was signed into law. Complete streets are roads designed to accommodate all users, including pedestrians, bicyclists, children, the elderly, persons with disabilities, transit riders, and motorists. The legislation requires that cities and counties include complete streets policies as part of their General Plans so that roadways are designed to safely accommodate all users. The California Department of Transportation later issued a revised Deputy Directive titled *Complete Streets – Integrating the Transportation System*. These Pedestrian Design Guidelines describe a framework for pedestrian improvements in Newman following Complete Streets principles. Incorporating the Pedestrian Design Guidelines into development and redevelopment projects should improve the safety and enjoyment of pedestrians in Newman and provide accessibility for pedestrians of all mobility abilities.

The Pedestrian Design Guidelines are based upon the federal and State (California Title 24) accessibility standards. The Americans with Disabilities Act (ADA) of 1990 prohibits public agencies from discriminating against individuals with disabilities. All public facilities in Newman must comply with the *Americans with Disabilities Act Accessibility Guidelines (ADAAG)* and the State of California Code of Regulations Title 24. The *California Disabled Accessibility Guidebook (CalDAG)* synthesizes the recommendations from both sources and is the basis for many of the following guidelines. Similarly, the pedestrian network is influenced by the State and national standards for transportation design, such as the *California Manual on Uniform Traffic Control Devices (CA MUTCD)* and the *American Association of State Highway and Transportation Officials (AASHTO's) Green Book*. However, historically these standards are designed primarily to facilitate automobile traffic and pedestrian safety and not necessarily focused on the pedestrian goals of walkability or accessibility. All conditions and situations that may arise in Newman cannot be covered in this document. As a result, the Pedestrian Design Guidelines, in some instances, may conflict with these standards, in which case the standards take priority.





Visible paving pattern within the crosswalks in Downtown Newman



Crossing at a signalized intersection

CROSSWALKS

Pedestrian crossings benefit both pedestrians and drivers in a number of ways. They prepare drivers for the potential of encountering a pedestrian, guide pedestrians to safe crossing locations, and provide important links for pedestrian connectivity.

Well-designed pedestrian crossings are useful, compact, and visible.

- **Useful:** Pedestrian crossings should be useful in that they are placed in response to pedestrian need or desire. The usefulness of crosswalks should be carefully considered based upon the surrounding land uses and the safety of preferred crossing locations.
- **Compact:** The more compact a pedestrian crossing is, the less time a pedestrian is in potential conflict with vehicles. Keeping pedestrian crossing distances compact by incorporating narrow turning radii, discouraging free right turns, and narrowing roadway width with curb extensions (also known as bulb outs), which extend the sidewalk into the adjacent parking lane, are all methods of reducing the crossing distance.
- **Visible:** The pedestrian crossing should be clearly marked, and pedestrians in crossings and waiting to use crossings should be clearly visible. Visibility is generally described as sight distance. Pedestrians should be clearly visible by motorists for at least 250 feet.

CROSSINGS AT CONTROLLED INTERSECTIONS

Crossings are controlled by both traffic signals and stop signs and can be located at intersections. The following contain recommendations for treatments at controlled intersections.

- **Signalized Intersections:** Standard crosswalk markings (two white lines) should be installed on all approaches of the intersection. Advance stop bars should be included in advance of the crosswalk. Advance stop bars are 24 inch white lines installed 7 feet prior to a crosswalk. The stop bars help to prevent drivers from stopping and/or encroaching on the crosswalk.
- **Stop Controlled Intersections:** Standard crosswalk markings should be installed at all controlled approaches. Crosswalk markings should not be included on any approach of the intersection that presents a potential safety concern for the pedestrian, such as areas with high rates of accidents or poor visibility. Enhanced visibility measures should be taken in locations adjacent to major destinations and in locations with potential pedestrian safety concerns.

Exceptions to the practice of marking crosswalks on controlled approaches for pedestrian safety reasons include:

- Crossing locations with heavy right- or left-turn volumes that occur at the same time as pedestrians are crossing these motor vehicle movements. This would occur where protected signal phasing (such as left-turn arrows) or other solutions outlined above are infeasible.

CROSSINGS AT UNCONTROLLED INTERSECTIONS

The California Vehicle Code states that the driver of a vehicle shall yield the right-of-way to a pedestrian crossing the roadway within any marked crosswalk or within any unmarked (not striped) crosswalk at an intersection, except if directed otherwise. The crossings discussed in this section are located at intersections without traffic controls (uncontrolled intersections), including both marked and unmarked crossings, and at marked mid-block crossings.

There has been an ongoing debate about the potential safety implications of marked or unmarked crosswalks at uncontrolled intersections. Unfamiliarity with the Vehicle Code may prevent drivers from knowing that they need to yield at an unmarked crosswalk for pedestrians. This same lack of knowledge may deter pedestrians from crossing at unmarked intersections or may actually encourage safer habits (looking both ways) because pedestrians do not think that drivers are required to yield to them if the crossing is not marked.

It is recommended that marked crosswalks be included at any uncontrolled intersection if the location is farther than 300 feet from a controlled crossing location with a marked crosswalk, and if the location has the required 250-foot sight distance and there are no other safety concerns for a crosswalk. Additionally, pedestrian demand can identify the need for a marked crosswalk.

Safety at Uncontrolled Intersections

The City of Newman uses transverse-style striping (Figure 7-27), which is the typical crosswalk striping consisting of two parallel lines, generally used for controlled intersections. High visibility ladder striping (Figure 7-28), which consists of two parallel lines with ladder bars striped across the width of the crosswalks, is appropriate for heavily used uncontrolled intersections and at both controlled and uncontrolled intersections near schools. A study by Knoblauch, Tustin, Smith, and Pietrucha found the ladder-style crosswalk to be the most visible to drivers. Ladder-style crosswalk treatments are recommended at all uncontrolled crossing locations within 1,500 feet of a school.

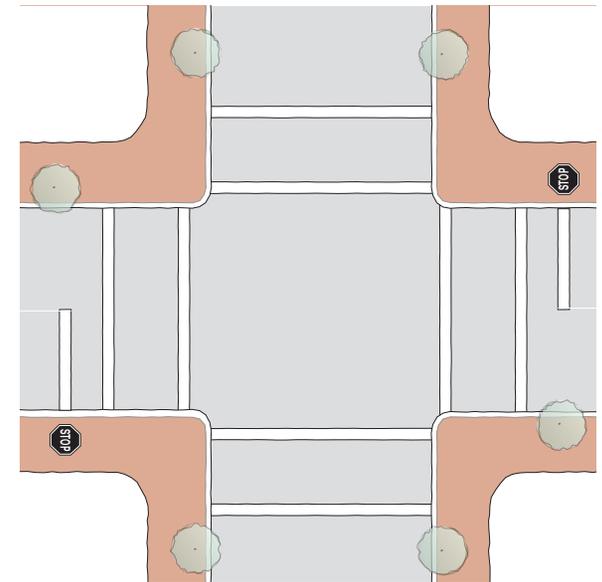


Figure 7-27 Transverse crosswalk striping

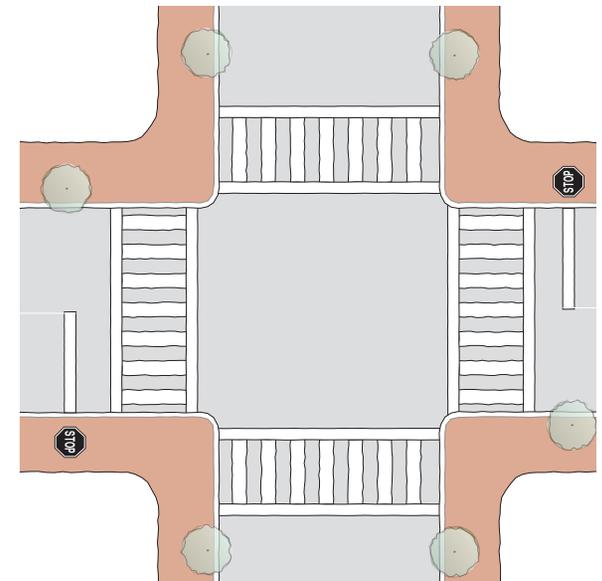


Figure 7-28 Ladder crosswalk striping



Crossing at an uncontrolled intersection

Crossing Safety Enhancements at Uncontrolled Intersections

In addition, the following enhancements are appropriate at uncontrolled intersections that need additional safety improvements. These recommendations are all minimums, and they are recommended specifically to improve safety. At locations where none of the above solutions will mitigate safety concerns, or where pedestrian volumes warrant a pedestrian signal, but the signal would degrade vehicle level-of-service, consider the installation of a grade-separated crossing, if feasible.

- Curb extensions should be used at locations where increasing pedestrian visibility will improve the safety of the crosswalk. Curb extensions are further described below.
- Overhead signs and flashing beacons showing the universal pedestrian symbol, including both standard yellow, fluorescent yellow, and LED displays, that hang from a mast arm that extends over the street. Flashing red or yellow beacons enhance overhead signs.
- Raised crosswalks use special pavers, concrete, or asphalt, to create a raised crosswalk by extending the sidewalk across the road and bringing motor vehicle traffic up to the level of pedestrians. They have the dual purpose of slowing traffic (similar to a speed table, which is a long speed hump with center flat section) and improving visibility of pedestrians. Since the crosswalk is at the same level as the sidewalk, there is no additional need for curb ramps.
- Pedestrian activated in-pavement lighted crosswalk accompanied by a flashing sign at the crosswalk and advanced flashing sign increase the number of vehicles yielding to pedestrians.
- Pedestrian-actuated signals should be used at uncontrolled intersection crossings or in areas where pedestrians need greater visibility at a crosswalk. Pedestrian actuated signals are pedestrian push buttons which activate a crosswalk light or traffic signal to turn.



Pedestrian actuated signal in Newman



In-pavement lighted crosswalk



Ladder crosswalk striping

VISIBILITY

Visibility of pedestrians at intersection crossings is important for the safety of all roadway users. Visibility is a great concern at crossing locations where parked cars, street furnishings, utilities and landscaping can potentially obstruct the line of sight for pedestrians and motorists. Pedestrians should have an unobstructed view of oncoming vehicles, and vehicles need to easily see pedestrians approaching or waiting at a crossing. Because of their height, pedestrians in wheelchairs and small children are especially difficult for drivers to see at an intersection. The following recommendations will improve the visibility of pedestrians at an intersection.

- Parking adjacent to intersections and crosswalks should be prohibited for a minimum of 20 feet from the crosswalk (Figure 7-29). On streets with higher speeds and at locations with previous collisions history or noted visibility issues, this distance should be increased. The CA MUTCD defines stopping sight distance requirements based on the approaching speed of vehicles.
- Street furniture, utility boxes and poles, signal poles, signage, trees, and newspaper racks all have the potential to reduce visibility at corners. It is recommended that no solid opaque object that is taller than 32 inches should be allowed within 10 feet of a crosswalk or 20 feet of an unmarked intersection. Utility poles, street trees, or signs should not be allowed within 5 feet of a crosswalk or 10 feet of an unmarked intersection.
- Street trees to be planted adjacent to an intersection should be chosen based upon their characteristics. They should be fast growing, upward branching, and a minimum of 30 feet tall at mature height. All street trees should be maintained and pruned to provide adequate visibility.
- Curb extensions can be used at corners to widen the sidewalk and allow the pedestrian to safely get closer to cars to improve their visibility (Figure 7-30). When street amenities or other objects that might obstruct the visibility at a corner, curb extensions should be considered.

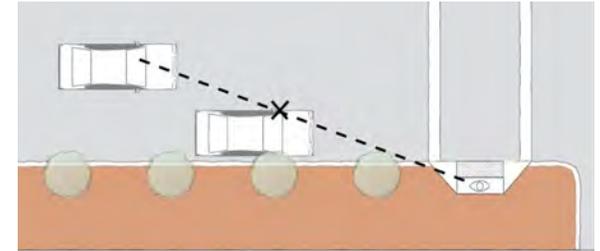


Figure 7-29 Limited visibility - Parking too close to an intersection can hinder pedestrian visibility

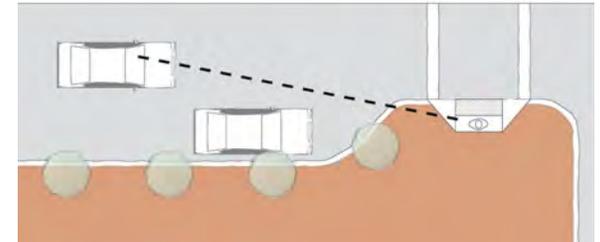
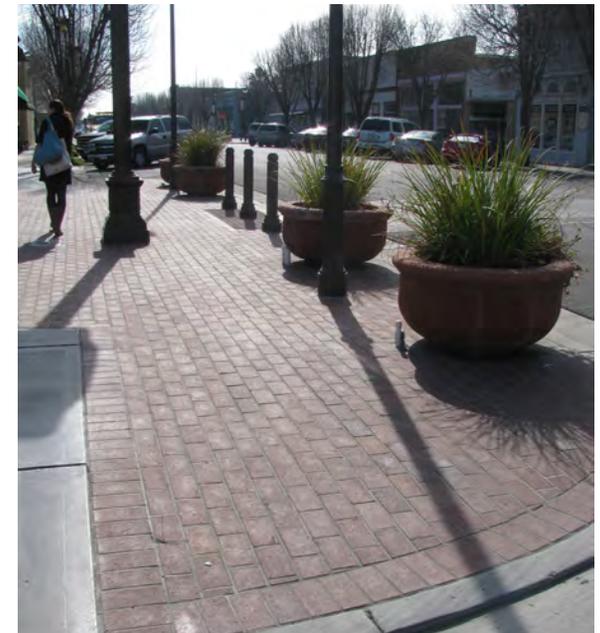


Figure 7-30 Improved visibility - Curb extensions can help improve pedestrian visibility



Curb extension in Downtown Newman

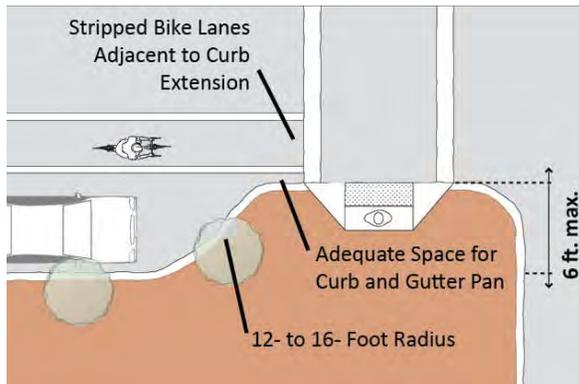


Figure 7-31 Curb extension guidelines



A curb extension providing room for sidewalk amenities



A curb extension in Downtown Newman

CURB EXTENSIONS

Curb extensions (also known as bulb-outs) extend the sidewalk into the adjacent parking lane, which narrows the roadway right-of-way and widens the pedestrian way. Curb extensions are beneficial because they improve pedestrian visibility, reduce the distance pedestrians have to walk across an intersection, and provide extra sidewalk space. They also reduce the capacity to park illegally at corners and crosswalks. Curb extensions are also used as a traffic calming measure to narrow the street. Curb extensions are typically used at intersection corners but can also be used at mid-block crossings. Curb extensions should be considered for implementation at any pedestrian crossing location where they would help to improve pedestrian safety or provide extra room to allow for the construction of an accessible curb ramp that otherwise could not be implemented.

When planning for curb extensions, it is important to consider the existing curb, gutter, and drainage. Relocating on-street storm drains may be required when implementing curb extensions, which can significantly increase construction costs. An alternative, less expensive design, would be to construct the curb extension as an island and span the sidewalk to the island with a grate. This may initially be a cost saving device, but can increase the cost of future maintenance.

The design of curb extensions should adhere to the following guidelines as shown in Figure 7-31:

- Curb extensions should extend the existing sidewalk for a maximum of 6 feet into the street adjacent to parallel parking, or 12 feet adjacent to diagonal parking.
- Curb extensions should be designed to exercise special care not to create conflicts between bicyclists and pedestrians. Where bike lanes exist adjacent to a curb extension, the bike lane should be painted continuously adjacent to the curb extension.
- The return of the curb extension to the existing curb should be designed as a concave return with a radius of approximately 12 to 16 feet. This curve in the return will facilitate easier street sweeping and prevent the corner from accumulating large amounts of trash. The minimum radius possible should be considered during design to reduce impacts to parking.

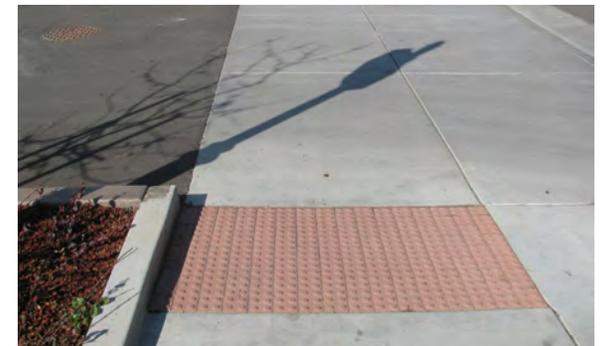
CURB RAMPS

Curb ramps provide access between a sidewalk and a surface that is located above or below an adjacent curb. Curb ramps are required wherever a pedestrian path crosses a curb, typically at every corner of an intersection. Curb ramps are an important link in providing accessibility and creating connectivity throughout the pedestrian network. Without curb ramps, curbs can create barriers for people with many types of mobility limitations. However, people with visibility limitations often rely on the curb for navigation and to identify the transition between the sidewalk and street; curb ramps can obscure this information. Given these conflicting interests, specific design strategies should be followed to ensure a safe and accessible environment for all users. The design of curb ramps is limited by site constraints, and it may not be possible to incorporate the ideal design in every situation. The following section outlines the minimum ADA requirements for curb ramps, the best practice design, and options for creating suitable design when an optimal design cannot be accommodated. The minimum ADA requirements for the construction of curb ramps are as follows:

- Curb ramp is a minimum of 4 feet in width.
- Slope of the curb ramp cannot exceed 8.33 percent.
- Curb ramp lies generally in a single sloped plane, with a minimum of surface warping and cross slope.
- Finished surface of the ramp contrasts from the adjacent sidewalk and is stable, firm, and slip resistant.
- No surface of the curb ramp contains any vertical edges of greater than ¼ inch.
- A level landing a minimum of 48 inches deep extends the full width of the ramp, provided at the upper end of the curb ramp, or the slope of the fanned or flared sides does not exceed 8.33 percent.
- Slope of the top landing area does not exceed 2 percent in any direction.
- Built-up curb ramps do not project into vehicular traffic lanes.
- Transitions from the ramp to the sidewalks, gutters, or streets are flush and free of abrupt changes.
- A 12-inch grooved border is provided along top and sides of the ramp at level surface of the sidewalk.
- Slope of the road, gutter, or sidewalk adjoining the curb ramp does not exceed 5 percent within 4 feet of the top and bottom of the curb ramp.
- Curb ramps shall be located or protected to prevent their obstruction by parked vehicles.
- Curb ramp has detectable warnings (e.g. raised domes and tactile warnings) that extend the full width and depth of the curb ramp, excluding the flared sides inside the grooved border.



Curb ramp and grooved border at a crosswalk



Curb ramp along a sidewalk at a drivewalk intersection

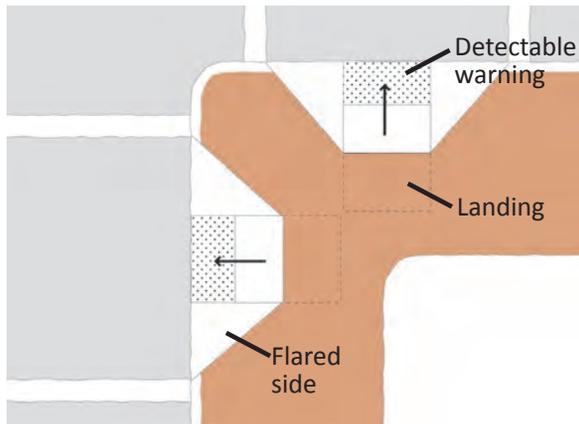


Figure 7-32 Perpendicular curb ramps - preferred

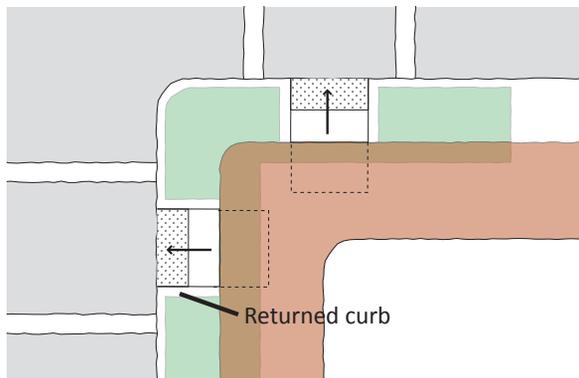


Figure 7-33 Returned-Curb curb ramps

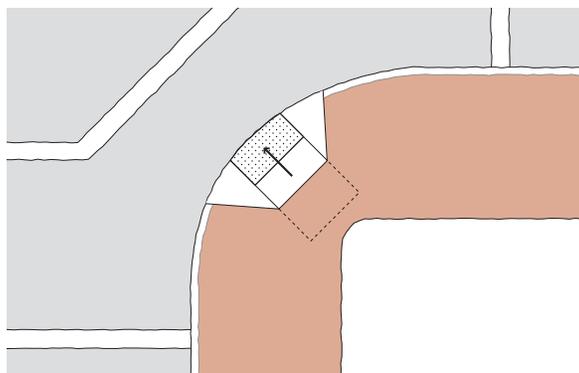


Figure 7-34 Diagonal curb ramp

The type of curb ramp used is dependent upon the location. The most common types of curb ramps are perpendicular curb ramps, returned-curb curb ramps, diagonal curb ramps, and parallel curb ramps, which are discussed further below.

PERPENDICULAR CURB RAMPS

The most common type of curb ramp is a perpendicular curb ramp, which is designed so that the ramp is perpendicular to the curb and directly in line with the crosswalk (Figure 7-32). Perpendicular curb ramps require the sidewalk to be wide enough to accommodate the width of the ramp and the minimum 4-foot landing area. The minimum width of the sidewalk required to accommodate a perpendicular curb ramp is dependent upon the height of the curb. The slope requirements for the flared sides depend on the width of the sidewalk at the top of the ramp. If the landing area is 4 feet or more, then the flared sides may slope up to 10 percent (1:10) but not more. Perpendicular curb ramps without sufficient landings create barriers because they force individuals to travel over the ramp flare, which is inaccessible.

RETURNED-CURB CURB RAMPS

Returned-curb curb ramps are perpendicular curb ramps that are used when pedestrians are not required to walk across the ramp, such as when the curb ramp is within a landscaped zone adjacent to the sidewalk (Figure 7-33). Returned-curb curb ramps have returned curbs, rather than flared curbs, on one or either side of the ramp. Returned curbs are the vertical sides to the ramp, continuing the street curb up onto the sidewalk and ending at the landing. Returned curb ramps are favorable for pedestrians with vision impairments because the curbs provide informative cues.



DIAGONAL CURB RAMPS

A diagonal curb ramp is a single curb ramp that is located at the apex of the corner radii at an intersection (Figure 7-34). Diagonal curb ramps are aligned so that the pedestrian traveling down the ramp will be diagonally facing the intersection and will need to maneuver to the right or left to travel within the crosswalk. Similar to parallel curb ramps, diagonal curb ramps require a level landing at the top of the ramp and can include returned curbs. Diagonal curb ramps require a minimum of 2 feet of straight curb located on each side of the curb ramp and within the marked crossing. Diagonal curb ramps require that both crosswalks direct pedestrians to the landing below the curb ramp. It is necessary that the crosswalk stripes meet and delineate a 4 foot clear space at the base of the curb ramp.

PARALLEL CURB RAMP

A parallel curb ramp consists of two ramps joined in the middle by a landing that is level with the roadway (Figure 7-35). Each side of the ramp requires a level landing at the top of the ramp. Parallel curb ramps run parallel to the curb and usually take up the whole width of the sidewalk. Parallel ramps can be installed on vary narrow sidewalks because the landing at the top of the ramp does not include additional sidewalk width. Parallel curb ramps are not ideal because they require pedestrians walking along the sidewalk to navigate to ramp changes, whether or not they are utilizing the crosswalk. Depending on the location and turning radius, an intersection may have either one or two parallel curb ramps.

BEST PRACTICE

The best practice for pedestrians is to have perpendicular curb ramps with either flared sidewalk or returned curbs. Perpendicular curb ramps require wide enough sidewalks to provide a top landing, which allows pedestrians not using the curb ramps to continuously walk across a level surface. Additionally, perpendicular curb ramps position users on a direct path along a crosswalk, and are positioned within the center of a crosswalk. Perpendicular curb ramps should be used at all locations within Newman that have wide enough sidewalks to accommodate the minimum design requirements. If a location does not have the space to accommodate the minimum design requirements, the use of curb extensions or widening the sidewalk at the back of the walk should be considered before utilizing another form of curb ramp.

Returned curbs are the best practice only in locations where pedestrians cannot walk across the curb ramp, such as in a planting strip. Returned curbs should not be used when the curb ramp is within the pedestrian path of travel because the curbs will create a tripping hazard.

Diagonal curb ramps are not best practice because they direct pedestrians into the street at a diagonal orientation, requiring the pedestrian to enter the street and be exposed to traffic before turning to proceed within the crosswalk. Additionally, diagonal curb ramps make it more difficult for pedestrians with limited visibility to orient to the path of the crosswalk. Diagonal curb ramps should only be designed when the limitations of the location demands, such as areas with a narrow turning radius. Diagonal curb ramps may be acceptable as retrofits in residential areas where traffic volumes are very low.

Parallel curb ramps should only be used in locations with narrow sidewalks that cannot accommodate the spatial requirements of parallel curb ramps, or in locations that require longer ramp lengths because of high curbs. Ideally, two parallel curb ramps should be used so that the direction of the curb ramp lines up with the direction of the crosswalk.

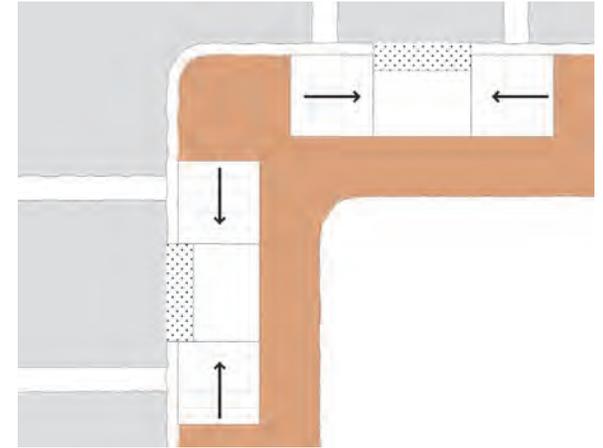


Figure 7-35 Parallel curb ramps



Preferred perpendicular curb ramps



Pedestrian push button

PEDESTRIAN SIGNALS

Pedestrian safety at signalized intersections can be enhanced by signal mechanisms that communicate more information to the pedestrian.

SIGNAL TIMING

The CA MUTCD recommends that controlled crossings should be timed for a walking speed of 3.5-feet per second, measured from the top of the curb ramp on one side of the street to the top of the curb ramp on the opposite side of the street. However, a pedestrian's walking speed is dependent upon many factors, including age and mobility. Pedestrian signal crossing times should be adjusted accordingly near major activity destinations, at intersections that are unusually long or difficult to navigate, and adjacent to any location that might have a higher proportion of pedestrians with slower walking speeds, such as senior centers.

ACCESSIBLE PEDESTRIAN SIGNALS

The CA MUTCD defines an Accessible Pedestrian Signal (APS) as "providing in non-visual format (such as audible tones, verbal messages, and/or vibrating surfaces)." They are used to help guide pedestrians with impaired vision and/or hearing. The following Accessible Pedestrian Signal guidelines are based upon the National Highway Research Program's Guidelines for Accessible Pedestrian Signals.

The recommended features for an APS include:

- **Pushbutton Locator Tone:** The tones are intended to notify pedestrians approaching the crosswalk that they need to press the button to get a WALK indication. CA MUTCD recommends locator tones that sound at one second intervals.
- **Tactile Arrow:** Tactile arrows are required to indicate which crosswalk is controlled by which push button. The arrow should be aligned in the direction of travel on the crosswalk.
- **Actuation Indication:** Actuation indication allows the pedestrian to know that they have activated the push button. This may be in the form of either a tone or speech message.
- **Audible WALK Indication:** Audible WALK indication tone should be activated for duration of the walk interval. It is recommended to repeat ten times per second and differ from locator tone in its repetition rate.
- **Vibrotactile WALK indication:** The vibrotactile arrow indicates the WALK interval to persons who have both vision and hearing limitations. The pushbutton or raised arrow on the APS vibrates during the WALK interval.
- **Response to Ambient Sound:** It is recommended that all APS are responsive to ambient sound by increasing the volume to be heard above ambient noise levels.

- **Pushbutton Information Message:** Pushbutton information messages provide users with the name of the street controlled by the signal.
- **Louder Signal (Beaconing Signal):** A louder signal is to assist pedestrians who have vision and hearing impairments. A louder signal is typically activated by an extended button press.

The location of an APS is important to prevent ambiguity about which crosswalk is being signaled. Ideally, there are two pushbuttons (one for each direction) on one corner, which are mounted on two separate poles. Mounting the APS on a traffic signal is acceptable as well. The optimal location for a pushbutton-integrated APS meets the following criteria (Figure 7-36):

- The optimal APS location is between 1.5-6 feet from the edge of the curb, with a maximum of 10 feet from the curb.
- The optimal location of the APS is between the furthest (extended) crosswalk line and the curb ramp, with the maximum distance of 5 feet from the edge of the furthest (extended) crosswalk line.
- The APS should be located adjacent to a level all-weather surface.
- The control face and tactile arrow should be carefully aligned with the direction of travel.
- At corners with two APS, they should be separated by a minimum of 10 feet.
- The optimal height for the placement of APS is between 32-42 inches. The CA MUTCD recommends a mounting height of 3.3 feet (40 inches).

INNOVATIVE PEDESTRIAN SIGNALS

There are a number of innovative treatments for pedestrian signals that help to enhance safety at pedestrian crossings. Pedestrian crossings that might require innovative treatments are intersections with high volumes of pedestrians, a history of pedestrian and vehicle collisions, or extra wide intersections. Innovative treatments include:

- **The Animated Eye Light Emitting Diode (LED) Signal** is a tool for reminding pedestrians to watch for turning vehicles. The display of animated eyes prompts pedestrians to look for vehicles, especially vehicles turning into their path. They would normally be used at intersections with large numbers of turning vehicles (vehicles turning left or right across the crosswalk).
- **Early Release or Pedestrian Lead-time Signals** provide pedestrians with a WALK signal while the parallel traffic still has a red stop light. This allows pedestrians to establish themselves in the crosswalk, increasing their visibility, and reducing conflicts between pedestrians and turning vehicles.

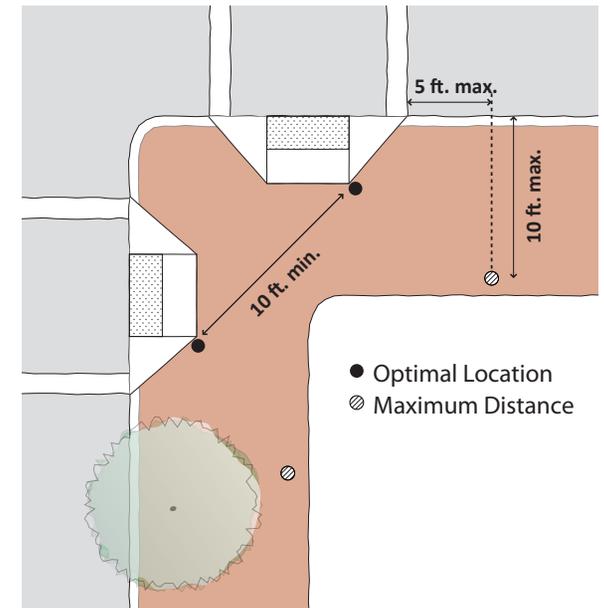


Figure 7-36 Recommended installation for accessible pedestrian signals



Pedestrian “scramble” crosswalk



Countdown signal

- **Pedestrian “Scramble” Phases**, so called because pedestrians have a walk signal in every direction while vehicles have a red light on all approaches. This treatment is appropriate in places where pedestrian volumes are exceptionally high or at locations that experience concentrated high volumes of pedestrian activity.
- **“No Right Turn on Red” Restrictions** for vehicles reduce pedestrian-vehicle conflicts at locations with high numbers of pedestrians. Drivers who are turning right on red are concentrating on looking to their left to find a gap in oncoming traffic, thus not seeing the pedestrian that may be crossing in front of them. Additionally, right turns on red create confusing information for individuals with limited vision, as traffic sounds help them to orient and navigate the intersection. This type of treatment should be considered on a case-by-case basis; limiting right turns on red reduces roadway capacity and may increase congestion or cause traffic diversions.
- **Countdown Signals** are useful at signalized locations because they provide information to the pedestrian regarding the amount of time remaining to safely cross the street. There should be adequate crossing time for the pedestrian to traverse the entire distance, and countdown signals should be used as a default.
- **Passive Pedestrian Detection Devices** monitor the presence of pedestrians in the crosswalk and can regulate the crossing time interval to ensure that pedestrians clear the crosswalk before the signal time ends. These devices are applicable in high volume locations and in locations adjacent to major destinations that may experience high volumes of pedestrians, such as schools, or adjacent to land uses that have populations that may need extra time to cross the street, such as hospitals or senior centers.

SIDEWALKS

Sidewalks provide space for more than just the movement of pedestrians. They also accommodate outdoor seating and street furniture.

SIDEWALK DESIGN

There are four distinct sidewalk zones that are applicable in different locations and have different design requirements (Figure 7-37). The four zones include: curb zone, furniture/landscaping zone, pedestrian zone, and frontage zone.

- **Curb Zone:** The curb zone is the first 6 inches of sidewalk that separates the sidewalk corridor from the street. The curb delineates the edge of the sidewalk corridor and prevents cars from driving onto the sidewalk; it is also an important element of the street drainage system. The curb is also a valuable cue for the transition between the sidewalk and street for pedestrians with impaired vision.
- **Furniture/Landscaping Zone:** The furniture zone is the interface between the curb and the pedestrian zones. This zone provides a buffer between the walking areas for pedestrians and vehicle traffic. The furniture zone is necessary to ensure that the pedestrian zone is free of any obstacles. The furniture zone provides space for opening car doors, landscape buffers, street trees, trash receptacles, utility poles, street furnishings, and other similar items.
- **Pedestrian Zone:** The pedestrian zone is the area where pedestrians can easily travel. The pedestrian zone should provide an unobstructed pedestrian path of travel. ADA standards require a minimum width of 4 feet of unobstructed pedestrian way. However, when this width is not available because of natural barriers, right-of-way restrictions or other existing conditions, the minimum width may be reduced to 3 feet. Sidewalks that are narrower than 5 feet must have a passing space of 5 feet by 5 feet every 200 feet.
- **Frontage Zone:** The frontage zone is the area adjacent to the property line. This zone provides space for pedestrians to enter and exit buildings, include street furnishings, and in some cases functions as an extension of the interior use by providing areas for outdoor displays.



Downtown Newman sidewalk



Sidewalk along N Street in Newman



Sidewalk in Downtown Newman

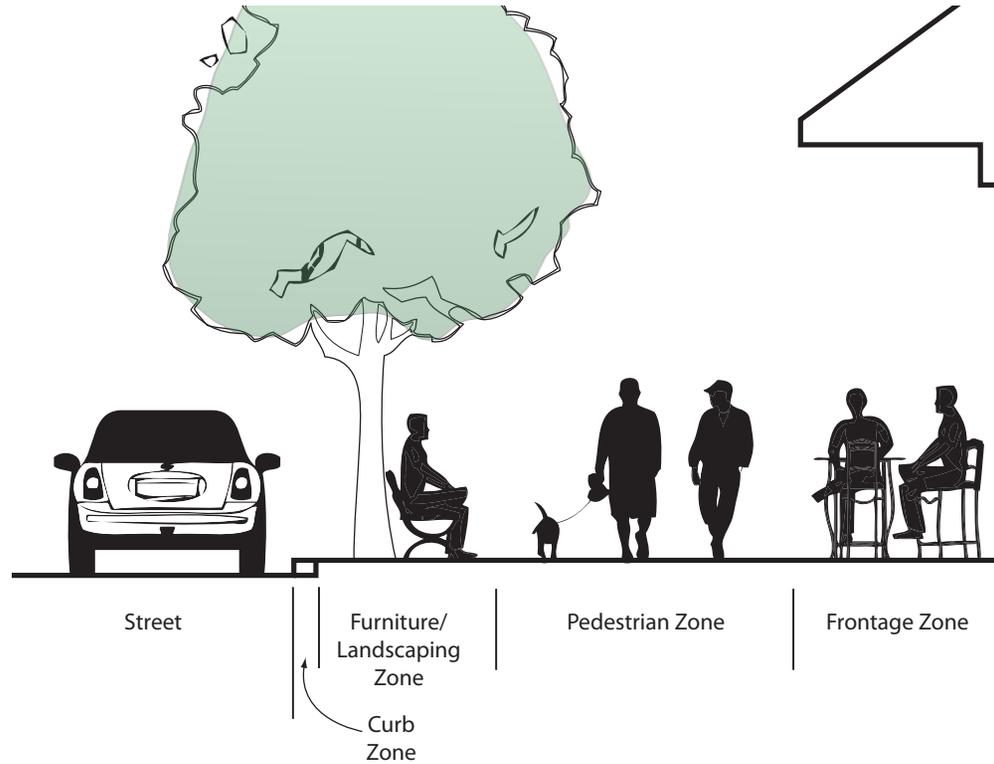


Figure 7-37 Sidewalk cross section

Design requirements for each zone can vary based on the adjacent uses, such as commercial and residential uses.

Commerical Areas

- **Curb Zone:** The curb zone is typically 6 inches in commercial areas.
- **Furniture/Landscaping Zone:** Within retail areas and areas with a significant number of pedestrians, the furniture/landscaping zone should be a minimum of 4 feet wide, and optimally be six to eight feet wide. A six to eight foot wide zone provides ample room for landscaping, bicycle parking, and signage, while still providing space for car doors to be easily opened without infringing on the pedestrian zone.
- **Pedestrian Zone:** Commercial areas should have a minimum pedestrian zone width of 5 feet, with an optimal width of 8 feet; the optimal 8 feet provides a comfortable walking environment where pedestrians can conveniently pass one another.



Frontage, Pedestrian, and Furniture Zones in Downtown Newman

- **Frontage Zone:** Frontage zones should be a minimum of 2 feet to accommodate pedestrians entering and exiting buildings. In retail areas frontage zones can greatly contribute to the liveliness of the pedestrian environment. Frontage zones can be up to 12 feet to accommodate uses such as outdoor seating.

Residential Areas

- **Curb Zone:** The curb zone is typically 6 inches in residential areas.
- **Furniture/Landscaping Zone:** The furniture/landscaping zone should be a minimum of 2 feet wide in residential areas to provide a buffer between the pedestrian zone and the street. This minimum width provides space for signs and posts to be placed without obstructing the pedestrian route of travel. Ideally this zone in residential areas should be 4 feet wide and mainly used for landscaping. It also can provide ample space for the location of driveway ramps.
- **Pedestrian Zone:** For the City of Newman, it is recommended residential areas should have a minimum pedestrian zone of 5 feet.
- **Frontage Zone:** Residential areas are not required to have a frontage zone because, typically, the building is set back from the property line.



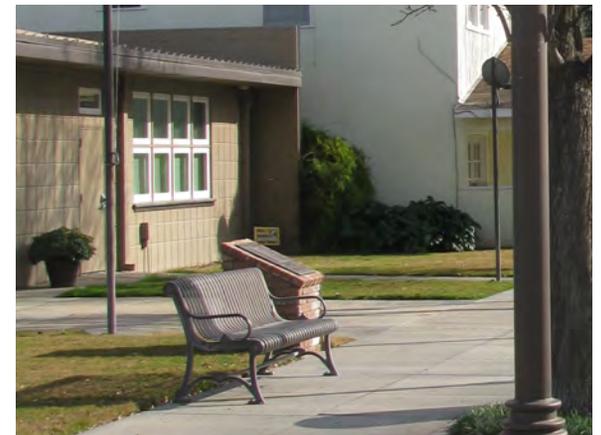
Sidewalk along a residential street in Newman

SURFACE AND CROSS SLOPE

ADA requirements dictate that walkways must be a continuous common surface that is not interrupted by changes in level. The slope of a sidewalk cannot exceed 5 percent in the travel direction, or 2 percent in the cross slope direction. The surface of public walkways must be slip-resistant.

SIDEWALK AMENITIES AND SEATING

Sidewalk amenities and seating create a welcoming environment for pedestrians. Amenities, such as trash receptacles, benches, signage, and drinking fountains, all contribute to the character and sense of community. The downtown area in Newman already includes a number of sidewalk amenities. Additional amenities should be located in areas where they will be used by the highest number of pedestrians. In Newman, these other areas include the locations adjacent to major destinations, such as the West Side Marketplace or school areas. When locating amenities, it is important to understand that an area's needs may change over time, and the placement of amenities should be flexible to change.



Sidewalk bench in Downtown Newman

The following guidelines should influence the location and choice of amenities:

- Whenever possible, sidewalk amenities should be located in the furniture zone. At no time should the placement of amenities impede on the accessible path of travel. The location of amenities should be carefully coordinated with the location of other objects within the sidewalk such as utility vaults and light poles.
- The City should utilize a consistent palette of street furniture and amenities.
- All amenities should be universally accessible.
- Placement of amenities should respond to, and not hinder, adjacent on-street parking or transit boarding zones.



Optimal driveway design provides a smooth and continuous sidewalk with the driveway apron at the street edge within the planting strip

PEDESTRIAN-SCALE LIGHTING

Pedestrian-scale street lighting will not only help improve security, but will also add to the character of the street and neighborhood. Sidewalks and landscaped areas should be lit to enhance safety and comfort. The following guidelines should influence the placement choice of pedestrian-scaled lighting.

- Sidewalks should be illuminated through the use of pedestrian-scaled pole fixtures (10 to 14 feet in height) or fixtures attached to the face of the buildings.
- The type and size of fixture should be consistent along a single block.
- Placement of lighting should not interfere with the pedestrian path of travel and should not distract or interfere with vehicular circulation.
- Street lamps should be oriented toward the ground and designed with “dark sky” technology to help preserve views of the night sky and minimize glare.

DRIVEWAY RAMPS

Driveways allow vehicles to cross the sidewalk and gain access between the street right-of-way and private parcels. It is the driver’s responsibility to yield to pedestrians on the sidewalk; however this relationship inherently places pedestrians in potential conflict with vehicles.

The design of driveway aprons also affects the accessibility and safety of the sidewalk. The driveway apron and the flare of the driveway apron (the sloped transition between the driveway apron and the sidewalk) create changes in the sidewalk cross slope that pedestrians must navigate.

The optimal design for a driveway that crosses a pedestrian walkway includes a level path of travel along the sidewalk at the back of the driveway with a more steeply sloped driveway apron at the street edge. This design requires a sidewalk that is wide enough to accommodate both the driveway ramp and a separate pedestrian zone. Ideally, the sloped driveway ramp could be accommodated in a planting strip area and pedestrians would be entirely separated from the driveway ramp and the driveway flares. In areas where there is not enough sidewalk right-of-way to accommodate this design, the City should work with property owners to gain additional right-of-way easements across adjacent property to accommodate a jogged pedestrian path.

New development should be designed to incorporate a minimum number of driveway ramps. Additionally, in areas with numerous driveways, adjacent businesses should be encouraged to combine driveway ramps, and unused driveway ramps should be removed.

LANDSCAPING

Vegetation contributes to a pleasant pedestrian environment. Vegetation not only enhances sidewalk aesthetics, but can improve comfort in sidewalk use by providing shade and contributing to lower air temperatures.

The following guidelines should influence the choice and planting of landscaping:

- When planting vegetation within planting strips or tree wells it is important that the planting areas do not create tripping hazards.
- Tree grates should be located as to not disrupt the minimum 4 feet of sidewalk. The openings in tree grates should be a maximum of ½ inch wide.
- The vegetation chosen for the pedestrian network should reflect the identity of Newman.
- Plants with minimal water and maintenance requirements should be chosen to reduce water consumption and maintenance costs.



Sidewalk vegetation contributing to a pleasant pedestrian environment in Santa Barbara

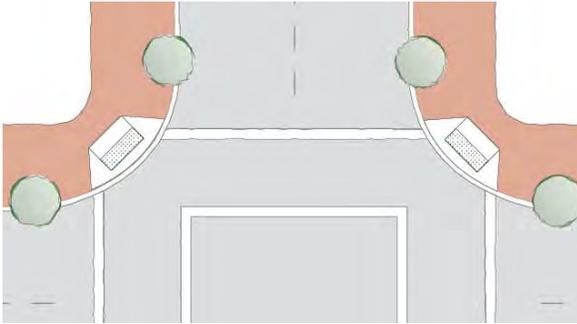


Figure 7-38 Larger Turning Radii - widen pedestrian crossing and limit amount of sidewalk available for perpendicular curb ramps

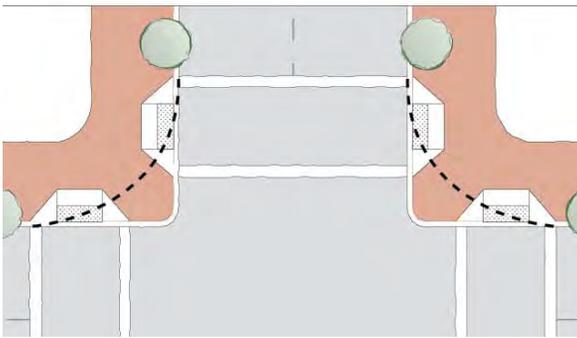


Figure 7-39 Smaller Turning Radii - reduce the pedestrian crossing distance and create more sidewalk room for perpendicular curb ramps

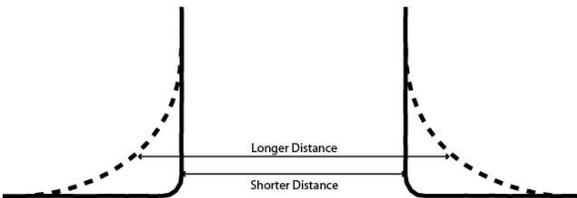


Figure 7-40 Larger versus smaller turning radius

TURNING RADIUS

The size of a corner turning radius has a significant effect on the operation and safety of an intersection. Intersections with larger turning radii promote fast traffic speeds and widen the walking distance for pedestrians (Figure 7-38). Intersections with smaller turning radii promote slower traffic speeds, shorten the pedestrian walking distance, and provide for more sidewalk space at corners (Figure 7-39). The additional sidewalk space at corners allows for perpendicular curb ramps to be used. Smaller corner turning radii are also beneficial for street sweeping operations. However, too small of a corner turning radii can reduce the efficiency of an intersection, which can have negative impacts on motor vehicle traffic and attempts by pedestrians to cross the intersection.

The general rule for choosing a corner turning radius should be to choose the smallest possible, acknowledging that each location has a unique set of factors that determine the appropriate radius. The turning radius should accommodate the expected amount and type of traffic for safe turning speeds. As the curb radius increases, incomplete stops become more frequent and drivers make turns at higher speeds.

Minimum turning radius recommendations are provided in *A Policy on Geometric Design of Highways and Streets* (AASHTO). Historically, these minimum turning radii have been exceeded in order to facilitate the efficient movement of larger vehicles. However, recent interest in balancing the needs of pedestrians and bicyclists highlight the need to adhere to minimum turning radii standards and consider alternative ways to accommodate vehicles with larger turning radii. The following are recommendations for the design of curb radii:

- At locations with curbside parking a 10-foot radius is recommended.
- At locations with no parking lane, a maximum 20-foot radius is recommended.

Potential alternatives to accommodate vehicles with larger turning radii are:

- Move stop lines back from the intersection.
- Allow vehicles that cannot navigate a tight turning radius to turn into the out-of-lane roadway.
- Add a parking lane adjacent to the corner to increase the relative turning radius.

RAILROAD CROSSINGS

Railroad crossings provide a number of potential pedestrian safety conflicts that can be mitigated with safety improvements as identified in the city-wide recommendations section of this Plan. Railroad crossings also create potential barriers to people using wheeled mobility devices, because the wheels have the potential to get caught in the rail flange-way gap. The rail flange-way is the opening adjacent to the rails that are necessary for rails to function; unfortunately they often exceed the ADA limit for openings. The following recommendations will improve the accessibility and safety of railroad crossings in Newman.

- Install detectable warning surfaces to both sides of a railroad approach.
- Widen sidewalks and crosswalks so that pedestrians have room to position themselves across railroad tracks at a 90 degree angle to minimize conflicts with the flange-way gaps.
- Use surface materials adjacent to railroad tracks that do not buckle, expand, or contract, such as concrete panels.
- Raise the sidewalk or crosswalk to be level with the top of the rail.



Detectable warning surfaces and pedestrian gates placed on sidewalk approaching railroad tracks



Sidewalk turns in order to accommodate railroad signage

III. REFERENCES AND RESOURCES

American Association of State Highway and Transportation Officials (ASSHTO), Guide for the Development of Bicycle Facilities, 1999.

American Association of State Highway and Transportation Officials (ASSHTO), A Policy on Geometric Design of Highways and Streets, 1996.

Association of Pedestrian and Bicycle Professionals (APBP), Bicycle Parking Guidelines, 2nd Edition, 2010.

California Highway Design Manual (HDM), Chapter 1000.
<http://www.dot.ca.gov/hq/oppd/hdm/pdf/chp1000.pdf>

California Manual on Uniform Traffic Control Devices (CA MUTCD),
http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/ca_mutcd2010.htm

Federal Highway Administration, U.S. Department of Transportation, Designing Sidewalks and Trails for Access Part II of II: Best Practices Design Guide, September 2001. <http://www.fhwa.dot.gov/environment/sidewalk2/pdf.htm>

Federal Highway Administration, U.S. Department of Transportation, Manual on Uniform Traffic Control Devices for Streets and Highways, 2009 Edition.
http://mutcd.fhwa.dot.gov/pdfs/2009/pdf_index.htm

Gibbens, Michael P., CalDAG 2009: An Interpretive Manual and Checklist, MPG Publishing Company, 2008.

Knoblauch RL, Tustin BH, Smith SA, Pietrucha MT. Investigation of Exposure-Based Pedestrian Accident Areas: Crosswalks, Sidewalks, Local Streets, and Major Arterials. DOT publication FHWA-RD-87-038. Washington, DC: US Dept of Transportation; 1987.

National Cooperative Highway Research Board, Transportation Research Board of the National Academies, Accessible Pedestrian Signals: A guide to Best Practices, June 2007, <http://www.trb.org/Main/Public/Blurbs/159938.aspx>

*Public Rights-of-Way Access Advisory Committee, Special Report: Accessible
Public Rights-of-Way, Planning and Designing for Alterations, Otak, Inc. July 2007,
<http://access-board.gov/prowac/alterations/guide.htm#1>*

Other Resources

Pedestrian and Bicycling Information Center

<http://www.bicyclinginfo.org/>

<http://www.walkinginfo.org/>

<http://www.pedbikeinfo.org/>

APPENDICES

APPENDIX A

Project Priority Worksheet

PRIORITIZATION OF PROJECTS:

Phase I Projects (30+ points)

Projects that scored within this category are considered the highest priority for implementation. These projects should receive priority and should be targeted for completion within five years.

Phase II Projects (13 to 29 points)

Projects that score within this category are considered moderate priority and should be targeted for completion within 10 years.

Phase III Projects (0 to 12 points)

Projects that score within this category are considered the lowest relative priority and should be targeted for completion within 10 to 20 years.

Project Prioritization Worksheet (Circle All That Apply)

1. ACCESSIBILITY	
How is accessibility improved by this project?	
a. The project will create accessibility in a location that was previously inaccessible, and/or the project will remove a major barrier/obstacle to accessibility in the citywide Pedestrian/Bicycle Network.	2
b. The project will include design features that are beyond the minimum required by ADA (i.e. extra wide sidewalks, verbal audible signals).	1
2. SAFETY	
How does the project improve pedestrian/bicyclist safety?	
a. The project is located at an intersection with a history of pedestrian/bicycle collisions.	2
b. The project is located within 1,500 feet of a school.	2
c. The project includes additional design features to increase pedestrian/bicycle safety (e.g. bulbouts, pedestrian actuated signals, bicycle stencils and warning signs).	1
3. CONNECTION TO DESTINATIONS	
How is access to key destinations improved by this project? The project is located near a:	
a. School	3
b. Downtown	2
c. Shopping Center	2
d. Health Care Facility	2
e. Park, Library, or Recreation Facility	2
f. Employer	2
4. CONNECTIVITY	
How will the project improve connectivity for pedestrians/bicyclists?	
a. The project bridges a gap in an existing bikeway or an existing sidewalk network.	1
b. The project connects to an existing or proposed bikeway or is located within the Priority Pedestrian Network.	1
c. The project encourages multi-modal transportation by connecting to a local/regional bus route or park-n-ride or carpool stop.	2
d. The project includes components of a citywide wayfinding or signage system	1
5. PUBLIC HEALTH	
Will the project encourage walking/bicycling by improving the pedestrian/bicycle environment?	
a. The project includes pedestrian amenities (e.g. seating, lighting, street trees, public art, and trash receptacles) and/or bicycle facilities (e.g. bike parking racks) that increase the public's desire to walk or bike.	2
b. The project encourages students to walk or bike to school on a regular basis.	2
6. FUNDING & IMPLEMENTATION	
Will the project be feasible to implement?	
a. The project can be implemented without extensive additional planning or study.	1
b. The project does not require extensive modifications to implement.	1
c. The project can be implemented as part of another development or redevelopment project.	1
d. The project can be implemented without coordination with agencies outside the City.	1
e. The project is eligible for County, State or federal funding sources.	2
f. The project has the potential to be part of a Safe-Routes-to-School program.	2
7. COMMUNITY SUPPORT	
Does the project have community support? (i.e. is already included in city, county, or regional adopted planning documents or has been identified or initiated by community input or request.)	
	3

TOTAL SCORE OUT OF 37 POSSIBLE: _____

APPENDIX B

Conceptual Cost Estimates

General Unit Cost Per Item

IMPROVEMENT ITEM		COST	UNIT	ASSUMPTION
Bicycle and Pedestrian	Signage	800	Each	
Bicycle	Bicycle Striping	1	Linear Foot	
	Bike Parking Rack	1,000	Each	
	Bicycle Detector	7,000	Each	
	Sharrow Marking	100	Each	
	Trail/Path	30	Linear Foot	(5' wide)
Pedestrian	Ada-Compliant Ramp	2,500	Each	
	Bench	1,250	Each	
	Crosswalk	400	Each	80 Linear Feet x \$5
	Gateway	10,000	Each	
	In-Road Light Crosswalk	25,000	Set	Including signage, push buttons, crosswalk painting, and in-road lighting
	New Sidewalk	100	Linear Foot	(5' wide) Including curb and gutter; no new storm drain
	Railroad Crossing	30,000	Set	
	Street Tree	2,000	Each	Including soil preparation, irrigation, and trenching
	Trash Can	800	Each	

APPENDIX C

Letters of Support



Bob & Patty Novoa

February 22, 2013

RE: Support for the Newman Non-Motorized Transportation Plan

To Whom It May Concern:

It is my pleasure to write a letter in support of the Newman Non-Motorized Transportation Plan being submitted to the City Council for adoption.

I had an opportunity to participate in the development of the Newman Non-Motorized Transportation Plan, including the proposed improvement projects. The plan addresses the safety and connectivity issues of Newman and reflects the community's desires. I also am aware that approval of this plan will help the City secure additional funding.

Additionally, I agree that the benefits of the Newman Non-Motorized Transportation Plan extend beyond bicycling and walking to further create a livable, safe, and healthy community.

Please adopt the Newman Non-Motorized Transportation Plan and expedite the implementation of the improvement projects in order to make Newman a more bike-and pedestrian-friendly city. Should you have any questions, please feel free to contact me at: (209) 862-2680.

Sincerely,

Mr. Robert Novoa
President & CEO
Novoa Jewelers, Inc.
novojlr@sbcglobal.net

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