

FINAL City of Oxnard Bicycle & Pedestrian Facilities Master Plan

Approved by the City of Oxnard City Council
February 2012



Prepared for:
City of Oxnard



Prepared by:
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Oxnard Bicycle and Pedestrian Master Plan

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1 Introduction

The City of Oxnard recognizes that walking and bicycling enhances the quality of life for its residents and visitors, both directly and indirectly. The Bicycle and Pedestrian Facilities Master Plan is for all residents and visitors of Oxnard who desire to walk or bike for purposes of recreation, commuting, or physical health.

1.1 Benefits of Walking and Bicycling

Bicycling and walking are important to Oxnard's future due to their potential for addressing several interrelated challenges, including traffic, air quality, creating a sense of community, and public health. Non-motorized transportation infrastructure can also provide economic benefits to the community. As the city becomes more inviting to pedestrians and bicyclists, increasing numbers of work, school, shopping, and recreational trips will be made on bicycle and foot. Cumulatively, this pattern may reduce traffic in some areas and improve air quality. Furthermore, providing facilities for walking and bicycling increases a community's livability. More activity at a slower rate provides what Jane Jacobs referred to as "eyes on the street," increasing an area's sense of place and safety. Walking and bicycling can also improve public health through an increase in physical activity. In recent years, public health professionals and urban planners have become increasingly aware that dependency on motor vehicles can make people more sedentary. The resulting health care cost savings, as well as reduced expenditures on gas, can enliven the local economy.¹ Additionally, building local pride and recognition for Oxnard's non-motorized infrastructure will likely increase the attraction of the area for tourists interested in conferences, races, and other related events and associations. Developing these facilities can potentially enhance the economy through tourism dollars. By planning a region that is more bikeable and walkable, Oxnard can affect all of these elements and collectively influence existing and future quality of life.

1.2 Plan Overview

The Bicycle and Pedestrian Facilities Master Plan provides a broad vision, strategies, and actions for the improvement of bicycling and walking in the City of Oxnard. This Plan is an update to the Bicycle and Pedestrian Facilities Master Plan adopted in 2002 and was developed to build upon and enhance that plan. The purpose of this Plan is to expand the existing networks, close gaps, address constrained areas, provide greater connectivity, educate, encourage, and maximize funding sources.

¹ Litman T.A. (2011). *Economic value of walking*. Victoria: Victoria Transport Policy Institute.

Litman T.A. (2011). *Evaluating non-motorized transportation benefits and costs*. Victoria: Victoria Transport Policy Institute 2011.

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2 Plan Goal and Objectives

This chapter presents the goal and objectives of the Oxnard Bicycle and Pedestrian Master Plan.

2.1 Goal

The Oxnard Bicycle and Pedestrian Facilities Master Plan intends to make bicycling and walking integral modes of transportation in Oxnard through a safe, interconnected system of bicycle and pedestrian facilities. The following objectives serve to implement this overarching goal:

2.2 Objectives

- Continue to improve and expand pedestrian and bicycle facilities, as needed throughout the community, with a focus on improved connectivity within the city.
- Ensure that pedestrian and bicycle networks provide direct connections between major activity centers (e.g., civic, employment, and retail centers) and minimize conflicts with other modes of transportation.
- Improve bicycle and pedestrian access and safety to public transportation stops and stations.
- Regard facilities for bicyclists and pedestrians as important parts of the overall transportation system and not just recreational facilities.
- Increase the bicycle mode share throughout the city and improve bicycle access to the city's transportation system.



Cyclist along Vineyard Avenue.

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3 Existing Conditions

The Existing Conditions chapter reviews existing plans, policies, programs, and facilities related to walking and bicycling in the City of Oxnard.

3.1 Relevant Documents and Policies

This section summarizes relevant documents and policies that regulate and establish a framework for bicycling and walking in Oxnard. These include Oxnard plans and policies, as well as plans from neighboring and regional jurisdictions. This Plan is consistent with not only these local transportation plans, but also existing energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting (see *Appendix B: Trip and Emission Reduction Estimates* for breakdowns of estimates that are required to make Oxnard eligible for funding from the State Bicycle Transportation Account).

3.1.1 Oxnard Plans and Policies

Major plans and policies within Oxnard include the 2002 Bicycle and Pedestrian Facilities Master Plan, the 2030 General Plan, the Channel Islands Harbor Public Area Plan, and all relevant city ordinances.

3.1.1.1 Oxnard Bicycle and Pedestrian Facilities Master Plan (2002)

The 2002 Oxnard Bicycle and Pedestrian Facilities Master Plan provides recommendations for new bicycle and pedestrian facility segments, programs, and policies in Oxnard.

The 2002 plan recommends facilities focusing on connections to existing segments of bike lanes and sidewalks. It addresses bicycle and pedestrian routes and specific regional and local access opportunities. The recommendations consist of gap closures and new links, creating a network along major thoroughfares. The 2002 plan recommends other routes, lanes, and multi-use paths connecting residential neighborhoods in Oxnard with schools, parks, libraries, employment centers, shopping areas and the downtown area. Figure 3-1 provides an overview of the existing and recommended bikeways and pedestrian facilities from the 2002 plan.

In addition, the plan recommends that safe, secure bicycle parking capacity be included throughout the city at both public and private destinations. It also recommends informational signage be provided at public destinations; including parks, schools, the downtown area, the Oxnard Transportation Center, and the Civic Center.



Oxnard adopted the previous bicycle and pedestrian master plan in 2002.



Figure 3-1: 2002 Master Plan Recommended Facilities Map

The plan recommends a number of education, enforcement, and outreach programs, including grade school safety curriculum, school commute route improvement plans, safe-routes-to-school programs, bicycle fairs, employer incentives for alternative travel, transportation demand management, motorist education, bicycle and pedestrian maps, and walking tours.

The 2002 plan recommends the establishment of a Bicycle Advisory Committee with a prioritized set of criteria that regularly identifies and implements bicycle and pedestrian improvements.

3.1.1.2 City of Oxnard 2030 General Plan

The Oxnard 2030 General Plan sets goals related to providing a safe and comprehensive transportation network. The 2030 General Plan folds bicycle-related goals and policies into Chapter 4, Infrastructure and Community Services (Section 4.3). The 2030 General Plan identifies “Urban Villages,” a new emphasis on transit-oriented mixed-use neighborhoods, to be bicycle and pedestrian oriented.

A Safe and Comprehensive Network

The 2030 General Plan Circulation Element Infrastructure and Community Service (ICS) Goal 8 seeks to provide “Safe bicycle and pedestrian circulation throughout the City.” The 2030 General Plan (General Plan) identifies 14 policies to achieve this goal:

ICS-8.1 Improved Bicycle and Pedestrian Safety

Promote safety by minimizing conflicts between automobiles, bicycles, and pedestrians with special attention to lighting resources on commercial corridors.

ICS-8.2 Bicycle Route Plan

Plan a citywide system of safe, efficient, and attractive bicycle routes for commuter, school, and recreational use. Maintain a bicycle route map in the office of the City Traffic Engineer that is widely available for public use.

ICS-8.3 Completing Bicycle and Sidewalk Network

Prioritize plans for bicycle and pedestrian facilities that provide continuity, and close gaps in the city’s existing bike path and sidewalk network.

ICS-8.4 New Development Requires Bicycle Improvements

Where designated, require proposed developments to include bicycle paths and / or lanes in their plan and to clearly indicate possible bicycling hazards such as speed bumps and storm drain inlet grates in parking lots.

ICS-8.5 Public Sidewalks and Pedestrian Orientation

Consider and require where appropriate and feasible the enhancement of the pedestrian environment as part of private development and public works projects, especially for public sidewalks.

ICS-8.6 Americans with Disability Act (ADA) Handicap Requirements

Require installation of ADA² compliant handicapped ramp curb-cuts and other ADA access with all new roadway construction and significant reconstruction of existing roadways, parking lots, plazas and pedestrian area, and parks.

² The Americans with Disabilities Act (ADA) of 1990 prohibits discrimination of persons with disabilities. Titles II and III of the ADA require persons with disabilities be provided access to public entities, public transportation, and public accommodations.

ICS-8.7 Downtown and Beach Area Bicycle Accessibility

Support improvements to increase bicycle accessibility in and around the Downtown area and bicycle route access to the harbor, beach, and other popular destinations.

ICS-8.8 Educational Facilities

Coordinate with public school districts and other educational facilities to design pedestrian and bicycle access as the preferred access to schools rather than vehicular, and improve drop off and pick up circulation, especially during the morning and afternoon peak periods.

ICS-8.9 Street Crossings

Design street crossings to provide for the safety needs of bicyclists and pedestrians in accordance with the designations set forth in the Bicycle Master Plan.

ICS-8.10 Coastal Trail Development

Encourage, plan, and participate in development of an aesthetic, educational, safe and convenient trail program in the coastal resource areas in cooperation with other agencies, where environmentally appropriate.

ICS-8.11 Bicycle Parking and Storage

Develop standards for safe and adequate facilities for storing and locking bicycles at business and employment centers, recreation areas, and major public facilities.

ICS-8.12 Roadway Surfacing

Maintain and improve the surface quality of the right shoulder of roadways so that it is suitable for bicycle travel.

ICS-8.13 Importance of Pedestrian and Bicycle Access in Site Planning

Require that new development treat pedestrian and bicycle circulation as equal to or preferred to vehicular access in site design including, but not limited to, access to neighborhood and commercial shopping centers, schools, and parks.

ICS-8.14 Connecting Facilities

Create a physical link for pedestrian and bicycle traffic between parks and recreation facilities as specified in the Bike and Pedestrian Master Plan.

Transportation Demand Management

The General Plan also references bicycling and walking through Infrastructure and Community Services Goal 7, which addresses transportation demand management. It directs the city to promote development patterns that encourage pedestrian and bicycle travel in order to reduce vehicle trips, meet air quality goals, and minimize congestion.

Urban Villages

An important new land use overlay defined by the General Plan is “Urban Village.” These six neighborhoods are intended for transit-oriented mixed-use incorporating commercial and employment uses with residential. They are primarily designed to allow people to live near their place of employment with support and transit services. This proximity creates communities where it is easier to walk and bicycle for many short trips. Areas designated as Urban Villages include the Channel Islands Harbor Marina Village, Downtown East Transit

Oriented District (DETOD), Southeast Entry Village, Teal Club Specific Plan, East Village Phase III, and North Oxnard Transit Enhancement District (NOTED).



The Channel Islands Harbor Marina Village is designated as an Urban Village.

Figure 3-2 provides a visual representation of land use for the whole city, including identification of the seven Urban Village areas.

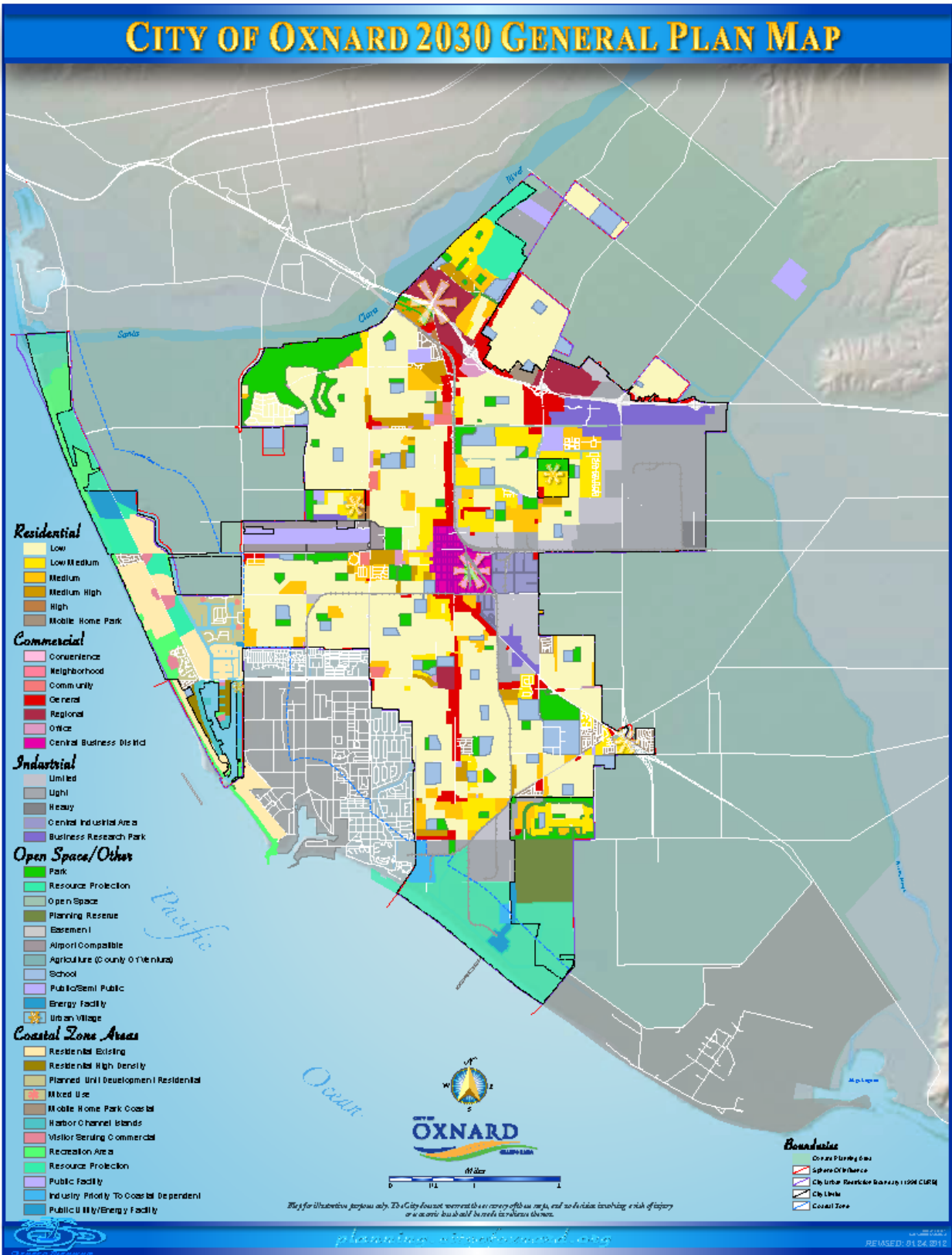


Figure 3-2: Oxnard Land Use Map

3.1.1.3 Oxnard City Code

The City of Oxnard has ordinances related to bicycling and walking, including regulation of behavior and facility provisions.

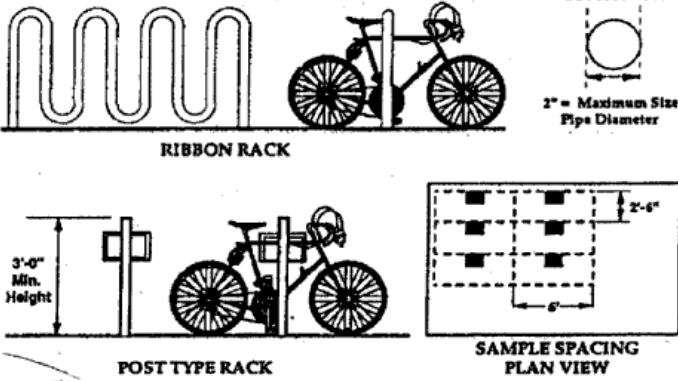
Bicycling-Related City Ordinances

The Oxnard City Code includes restrictions on where bicycling is permitted, requirements for provision of bicycle paths in the subdivision process, and specific guidelines for the provision of bicycle parking. It also designates bicycling as an alternative travel mode that can be used for trip reduction measures. No changes to the Oxnard City Code are proposed as part of this Plan. Existing City of Oxnard ordinances related to bicycling are presented in Table 3-1 below.

Table 3-1:Oxnard City Ordinances Related to Bicycling

City Code Number	Summary
Sec. 7-132.(D) Bicycling on Sidewalks	Except for an on-duty peace officer, as defined in Cal. Penal Code, Section 830, no person 12 years of age or older shall ride a bicycle on a public sidewalk in the city.
Sec. 7-144. (A)(1) & (B)(1) Bicycling in Public Parking Lots and Private Property	No person shall ride, propel or in any manner operate a bicycle on or over any public parking lot upon which the city has posted signs informing such person that such uses are prohibited, nor on or over any privately owned property upon which the owner, manager, or person in charge of such private property has posted signs prohibiting such use.
Sec. 15-88. Bicycle Path Subdivision Provision	As a condition of approval of any map, the subdivider may be required to dedicate or offer to dedicate land for bicycle paths subject to the requirements of the Subdivision Map Act.
Sec. 16-616. Off-street Bicycle Parking Provision	Off-street bicycle parking facilities shall be provided for any new building constructed, for any new use established, and for any change in use in an existing building that would result in additional parking spaces being required.

City Code Number	Summary																																						
Sec. 16-623. Minimum Bicycle Parking Requirements by Specific Use	<p>The following sub-table lists the minimum bicycle parking requirements. Only those uses listed in this table are required to install bicycle parking.</p> <table border="1" data-bbox="500 352 1445 1591"> <thead> <tr> <th data-bbox="503 357 1031 399">Use</th> <th data-bbox="1031 357 1442 399">Requirements</th> </tr> </thead> <tbody> <tr> <td colspan="2" data-bbox="503 403 1442 441">Shopping Centers:</td> </tr> <tr> <td data-bbox="503 445 1031 483">Regional shopping center</td> <td data-bbox="1031 445 1442 483">Five spaces at each mall entrance</td> </tr> <tr> <td data-bbox="503 487 1031 562">Shopping center with more than 50,000 square feet of gross floor area</td> <td data-bbox="1031 487 1442 562">One space per 33 automobile parking spaces</td> </tr> <tr> <td colspan="2" data-bbox="503 567 1442 604">Restaurants:</td> </tr> <tr> <td data-bbox="503 609 1031 646">Fast-food or coffee shop</td> <td data-bbox="1031 609 1442 646">Five spaces</td> </tr> <tr> <td data-bbox="503 651 1031 688">Pizza parlor</td> <td data-bbox="1031 651 1442 688">Five spaces</td> </tr> <tr> <td colspan="2" data-bbox="503 693 1442 730">Commercial recreation:</td> </tr> <tr> <td data-bbox="503 735 1031 856">Arcades, games or videos</td> <td data-bbox="1031 735 1442 856">One space per one game or amusement device (Need not exceed 30 spaces)</td> </tr> <tr> <td data-bbox="503 861 1031 1012">Bowling alleys, miniature golf, skating rinks, movie theaters and similar commercial recreation activities as determined by the director of planning and building services</td> <td data-bbox="1031 861 1442 1012">One space per 33 automobile spaces required</td> </tr> <tr> <td colspan="2" data-bbox="503 1016 1442 1054">Community facilities:</td> </tr> <tr> <td data-bbox="503 1058 1031 1218">Swim clubs, racquet and tennis clubs, community centers and similar uses as determined by the director of planning and building services</td> <td data-bbox="1031 1058 1442 1218">One space per 33 automobile spaces required</td> </tr> <tr> <td data-bbox="503 1222 1031 1302">Libraries</td> <td data-bbox="1031 1222 1442 1302">One space per each 1,000 square feet of floor area</td> </tr> <tr> <td data-bbox="503 1306 1031 1386">Office developments, over 100,000 square feet of floor area</td> <td data-bbox="1031 1306 1442 1386">Five spaces</td> </tr> <tr> <td data-bbox="503 1390 1031 1428">Banks, savings and loans</td> <td data-bbox="1031 1390 1442 1428">Two spaces</td> </tr> <tr> <td data-bbox="503 1432 1031 1470">Hospitals</td> <td data-bbox="1031 1432 1442 1470">Four spaces</td> </tr> <tr> <td data-bbox="503 1474 1031 1512">Medical and dental buildings</td> <td data-bbox="1031 1474 1442 1512">Two spaces</td> </tr> <tr> <td data-bbox="503 1516 1031 1554">Industrial</td> <td data-bbox="1031 1516 1442 1554">Five spaces</td> </tr> <tr> <td data-bbox="503 1558 1031 1596">Churches</td> <td data-bbox="1031 1558 1442 1596">Four spaces</td> </tr> </tbody> </table>	Use	Requirements	Shopping Centers:		Regional shopping center	Five spaces at each mall entrance	Shopping center with more than 50,000 square feet of gross floor area	One space per 33 automobile parking spaces	Restaurants:		Fast-food or coffee shop	Five spaces	Pizza parlor	Five spaces	Commercial recreation:		Arcades, games or videos	One space per one game or amusement device (Need not exceed 30 spaces)	Bowling alleys, miniature golf, skating rinks, movie theaters and similar commercial recreation activities as determined by the director of planning and building services	One space per 33 automobile spaces required	Community facilities:		Swim clubs, racquet and tennis clubs, community centers and similar uses as determined by the director of planning and building services	One space per 33 automobile spaces required	Libraries	One space per each 1,000 square feet of floor area	Office developments, over 100,000 square feet of floor area	Five spaces	Banks, savings and loans	Two spaces	Hospitals	Four spaces	Medical and dental buildings	Two spaces	Industrial	Five spaces	Churches	Four spaces
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Sec. 16-631.(B) Trip Reduction Measures	Commercial and industrial developments shall provide bicycle racks or other secure bicycle parking in accordance with the provisions of sections 16-623 and 16-637.																																						

City Code Number	Summary
<p>Sec. 16-637. (A)-(D) Design Standards for Bicycle Parking</p>	<ul style="list-style-type: none"> • Bicycle racks shall be located to be highly visible from the street or building entrance where bicyclists approach. • No bicycle rack shall be installed in an isolated location but rather near the main entrance of the building for which they are intended or in a comparably convenient location. • Bicycle racks are intended for use by the general public as well as employees. • Development shall provide safe and convenient access for bicyclists from the external circulation system to on-site buildings or internal streets and bicycle parking areas must be separated from motor vehicle parking areas by at least a curb barrier which would prevent vehicles from damaging bicycles. • Bicycle racks shall be constructed to allow a bicycle to be locked to the rack and to support the bicycle in an upright position when either a "U" type bike lock or a "Cable I Chain" type bike lock is used. • Bicycle racks shall be securely anchored to a supporting surface. • Bicycle racks shall be installed in conformance with the requirements of the bicycle rack manufacturer and shall be installed in a rectangular space no less than 2½ feet wide by 6 feet long per bicycle, unless a locker or a permanent device to stand the bicycle on end is provided. • Bicycle racks shall be readily visible to pedestrians, and the rack must be at least three feet high, unless the bicycle parking area is surrounded by railing, hedge or chain at least three feet in height. • Bicycle racks shall be installed with adequate space (12 inches minimum) beside the parked bicycle so that a bicyclist will be able to reach and operate the locking mechanism. • Bicycle lockers and racks shall be located near the primary building entrance, but not in the main walkway area. • A hard-surfaced parking area is required. • A ramp, at least two feet wide, shall connect all bicycle parking areas to the nearest roadway in order to provide safe and convenient access from the external circulation system to on-site buildings and internal streets and sidewalks. <p>The following image is included to help guide bicycle parking design.</p>  <p>The diagrams illustrate three types of bicycle racks and their spacing requirements:</p> <ul style="list-style-type: none"> RIBBON RACK: A continuous metal ribbon forming a series of U-shapes. A bicycle is shown parked in one of the loops. A note indicates a "2" = Maximum Size Pipe Diameter" for the ribbon. POST TYPE RACK: A vertical post with a horizontal bar. A bicycle is shown parked against the bar. A vertical dimension line indicates a "3'-0" Min. Height". SAMPLE SPACING PLAN VIEW: A top-down view of a rectangular area divided into a grid of spaces. Each space is 6 feet long and 2 feet wide. A bicycle is shown parked in one of the spaces. A vertical dimension line indicates a "2'-6" spacing between the centers of the racks.

City Code Number	Summary
Sec. 16-643. Parking Area Paving and Construction Standards	All bicycle parking areas shall be surfaced with asphalt-concrete or concrete so as to keep the area in a dust-free condition.
<i>Source: City of Oxnard City Code</i>	

Pedestrian-Related City Ordinances

Table 3-2 presents ordinances that regulate walking facilities in Oxnard. The City Code includes requirements for the provision of walkways and crosswalks, designation of the Central Business District as a pedestrian-oriented area, and regulation of encroachments upon walkways.

Table 3-2: Oxnard City Ordinances Related to Walking

City Code Number	Summary
Sec. 16-98. (A) Walkways	Pedestrian circulation shall be provided by a system of walkways. A walkway shall originate near an individual mobile home lot, service area, parking bay or storage area and shall lead to a common recreation area or service facility.
Sec. 16-145. (A) Purpose and Intent of the Central Business District for Pedestrians	This zone shall integrate residential, commercial, cultural and recreational land uses; encourage conservation of land resources and minimize auto travel; encourage a lively pedestrian-oriented commercial district; and provide for the location of employment and retail centers in close proximity to residential development of varying densities.
Sec. 16-152. (C)(7) Providing Pedestrian-Oriented Storefronts	At least one new pedestrian-oriented storefront element shall be incorporated into all commercial buildings or sites, including but not limited to special entryway architecture, recessed main entry, bulkheads, transom windows, special building design details (e.g., tile, wood or stone trim), special door design, pedestrian hanging signs, awnings, balconies, terraces, fountains, sculpture, outdoor seating, decorative paving and public plaza.
Sec. 16-152. (H)(1)(a-b) Sidewalk Café Locations and Encroachments on Walkways	<p>A sidewalk café, where permitted, may be located on the public right-of-way adjacent to the restaurant serving the café. A business license for a sidewalk café may be granted after review of the application by appropriate city departments, and issuance of an encroachment permit or license agreement.</p> <p>All sidewalk cafés shall leave clear space for pedestrian movement between the outer edge of the café and the curb line. Sidewalk cafés located at street intersections shall provide a 15-foot clear space radial to the corner. If pedestrian traffic is especially heavy, the manager may require additional clear space to ensure adequate room for pedestrian movements.</p>

City Code Number	Summary
Sec. 16-636. (E) Pedestrian Access to Parking Areas	All properties shall provide attractive, direct and safe pedestrian access to parking. The layout of the parking areas shall relate to building entrances or important architectural elements.
Sec. 8-76. Crosswalks	The traffic engineer may establish crosswalks at and between intersections as necessary to minimize hazards to pedestrians crossing the streets.
Sec. 7-1. (C) Nuisances	The city council declares that any structure, grass, dirt, or thing which in any manner interferes with, obstructs or endangers the free passage of pedestrians or vehicles upon, along or in public sidewalks, alleys, thoroughfares, buildings, parks or places are nuisances and authorizes the city manager to abate any such nuisance in accordance with the standard procedures.

Source: City of Oxnard City Code

3.1.2 Neighboring Cities and Regional Plans

Neighboring communities that have adopted bicycle plans include the cities of Camarillo, Port Hueneme, and San Buenaventura. Additionally, the Ventura Countywide Bicycle Master Plan addresses regional and unincorporated bicycling connections. The Santa Clara River Trail Enhancement and Management Plan provide policies and programs to promote public access and recreation along the reaches of the Santa Clara River. The McGrath State Beach has a master plan than emphasizes bicycle access from Oxnard to the park.

3.1.2.1 Camarillo Bikeway Master Plan (2003)

The city of Camarillo, located east of Oxnard, has a bicycle network consisting primarily of bike lanes on major arterials and bike routes on residential connectors. The 2003 Bikeway Master Plan proposes enhancement of facilities at their western border, in the direction of Oxnard, on Ventura Boulevard, Pasadena Drive, and Central Avenue. Although the cities are not contiguous, these routes feed into areas of unincorporated county between the two jurisdictions and provide important connections.



A Class I facility in the City of Camarillo.

3.1.2.2 Port Hueneme Bicycle Transportation Plan (2007)

The bicycle plan for Port Hueneme, which is located south of Oxnard, was developed as part of the Ventura Countywide Bicycle Master Plan process. Existing facilities connect to Oxnard along Channel Islands Boulevard, Victoria Avenue, and Bard Road. Proposed facilities would make connections to Oxnard along Hueneme Road, Channel Islands Boulevard, Patterson Road, Pleasant Valley Drive, and Ventura Road.

3.1.2.3 City of Ventura Bicycle Master Plan (2011)

The City of San Buenaventura (Ventura) is located along the Pacific Ocean coast directly north of Oxnard. The City's Bicycle Master Plan, adopted in May 2011, sets forth a complete bikeway network to provide bikeways along all major cross-town thoroughfares. Ventura's bikeway network provides existing on-road connections to Oxnard along Harbor Boulevard and Victoria Avenue, as well as a separated path along the east side of the Victoria Avenue river crossing. The plan proposes constructing a trail along the north bank of the Santa Clara River with an alignment connecting to Harbor Avenue bike lanes, the Omer Rains Bike Trail at Surfer's Point, the Ventura River Trail, and the Ojai Valley Trail.

3.1.2.4 Ventura Countywide Bicycle Master Plan (2007)

The Ventura County Transportation Commission (VCTC) adopted the Ventura Countywide Bicycle Master Plan in 2007. This document provides a blueprint for bicycle transportation and recreation at the regional level. The plan makes recommendations to enhance and expand the existing countywide bikeway network, connect gaps, address constrained areas, provide for greater regional connectivity, and encourage more residents to bicycle. The primary importance of this planning document is its identification of funding sources from inside and outside of Ventura County. The countywide plan defers to the 2002 Oxnard Bicycle and Pedestrian Facilities Master Plan. Priority projects recommended for the countywide system in Oxnard include bike lanes on Victoria Avenue between Gonzales Road and 5th Street.

3.1.2.5 County of Ventura Board of Supervisors Bicycle Vision (2005)

The Ventura County Board of Supervisors adopted a Transportation Vision to emphasize alternative transportation modes and to be incorporated in the Ventura Countywide Bicycle Master Plan. The Board created the vision with the intent to move the County toward increasing access to mobility, relieving congestion, and reducing dependence on single occupancy vehicles. The Bicycle Vision portion of the Transportation Vision is presented below. This plan supports the vision of the Board of Supervisors.

- Establish a system of bicycle lanes/trails linking all county cities
- Establish bicycle trail connections to California State University Channel Islands (CSUCI)
- Establish adequate bicycle lanes on well-used bicycle routes
- Provide adequate bicycle carrying capacity on public transit vehicles
- Encourage provision of adequate bicycle racks and lockers

3.1.2.6 Santa Clara River Enhancement and Management Plan (SCREMP, 2005)

The Santa Clara River stretches from south of the Palmdale area in Los Angeles County, through Ventura County to the Pacific Ocean. The river is the northern boundary of the City of Oxnard. The Ventura County Watershed Protection District, Los Angeles County Department of Public Works, and the SCREMP Project Steering Committee partnered to create the SCREMP, which provides a guidance document for the

preservation, enhancement, and sustainability of the physical, biological, and economic resources that occur within the river’s mainstem floodplain limits to benefit stakeholders when planning and implementing projects and activities.

Two developments are proposed along the riverfront in Oxnard. The 323-acre Northwest Golf Course Community adds a substantial number of residential units, an elementary school site, and a new golf course to the area abutting the existing River Ridge Golf Course. Further east where Highway 101 crosses the Santa Clara River, the proposed 702-acre Riverpark community consists of 2,805 single-family and multi-family dwelling units and up to 2,485,000 square feet of retail, hotel/convention, and office uses.

The SCREMP recognizes that the south side of the river in this area has flood control levees, groins, and access roads that are used by the public as de facto trails. However, these facilities are not designed for pedestrian use. Due to the high residential densities proposed nearby, the SCREMP recommends pedestrian and bicycle facilities in this area.

3.1.2.7 Channel Islands Harbor Public Areas Plan (2008)

The purpose of the County of Ventura’s Channel Islands Harbor Public Areas Plan is to improve the public areas of the Harbor so they are attractive to a wide range of residents and visitors, and to tie all three areas of the Harbor together as one common destination with an updated visual identity. The plan includes uniform design standards for future development and redevelopment projects.

Figure 3-3: Existing Pedestrian Conditions in the Channel Islands Harbor



The plan presents a review of existing conditions for pedestrians and bicyclists in the harbor area, which can be seen in **Figure 3-3**. Some of the key concerns are non-uniform sidewalks, the lack of pedestrian and bicycle access to the water's edge, facilities that are not ADA³ compliant, and a discontinuous promenade with restricted access due to private development. A public meeting held during the planning process gathered input regarding bicycle and pedestrian safety. Participants said they felt Victoria Avenue was dangerous for pedestrians, and that the current condition of shared paths created potential for bicycle-pedestrian conflicts.

For solutions, the plan recommends improving pedestrian access to the water's edge and creating a continuous promenade around the Harbor. It also suggests considering alternative routes in parking lots to reduce possible vehicular collisions with pedestrians.

The plan is accompanied with design guidelines that provide implementation details for pedestrian and bicycle improvements. These include guidelines for public walkways, landscaping, bicycle racks, wayfinding, lighting, and refuge islands.

3.2 Existing Bicycle and Pedestrian Facilities

This section reviews existing bicycling and pedestrian facilities in Oxnard. For bicycling, this includes on-road and off-road bikeways along with support facilities. For pedestrians, this includes a review of major pedestrian areas and popular walking destinations.

3.2.1 Bikeways

The Plan refers to bikeways using California Department of Transportation (Caltrans) standard classifications. The three types of bikeways identified by Caltrans in Chapter 1000 of the Highway Design Manual are described below. **Figure 3-4** displays typical cross-sections of each bikeway type.

Class I Bikeway: Typically called a “bike path” or “multi-use path,” a Class I Bikeway provides for bicycle and other non-motorized travel on a paved right-of-way completely separated from any street or highway.

Class II Bikeway: “Bike lane,” a striped and stenciled lane for one-way travel on a street or highway.

Class III Bikeway: “Bike route,” shared use of a motor vehicle travel lane identified only by signage.

³ The Americans with Disabilities Act (ADA) of 1990 prohibits discrimination of persons with disabilities. Titles II and III of the ADA require persons with disabilities be provided access to public entities, public transportation, and public accommodations.

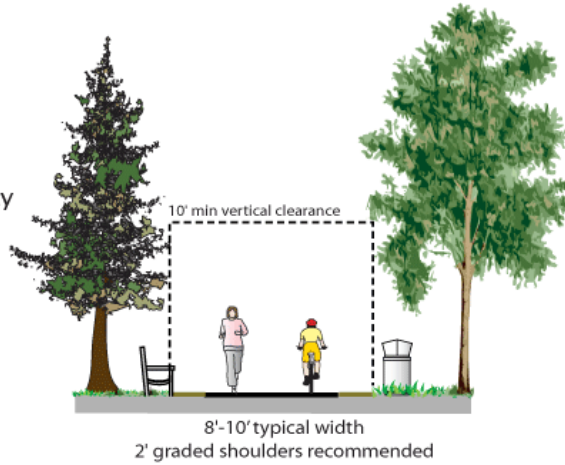


Clockwise from top left: Class I path on Vineyard Avenue, Class II bike lane on Gonzales Street, Intersection of A Street and 3rd Street, Class III bike route along Mandalay Beach Road.

CLASS I SHARED USE PATH



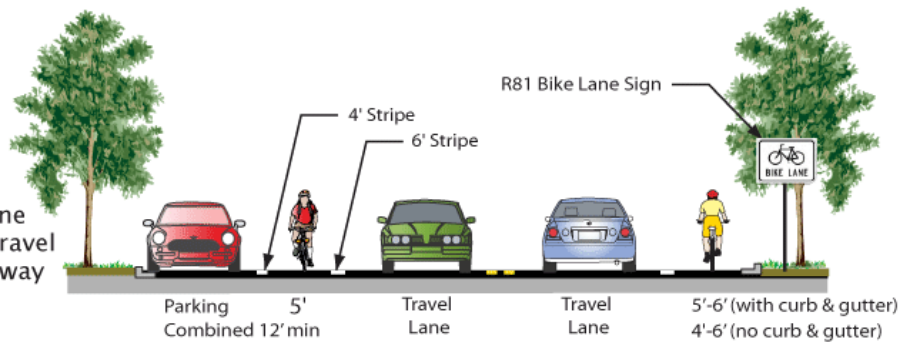
Provides completely separated right-of-way for exclusive use by bicycles and pedestrians with cross-flow minimized



CLASS II BIKE LANE



Provides striped lane for one-way bike travel on a street or highway



CLASS III BIKE ROUTE



Provides for shared-use with pedestrians or motor vehicles, typically on lower volume roadways

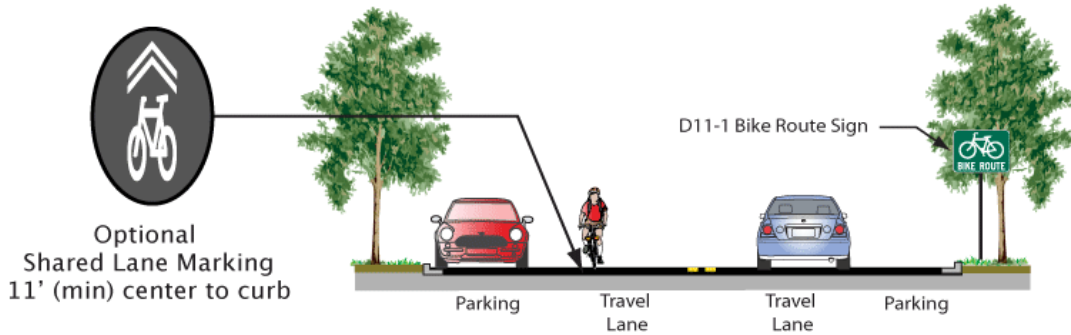
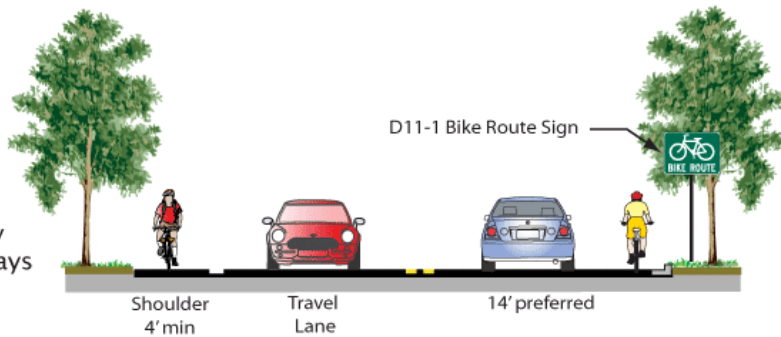


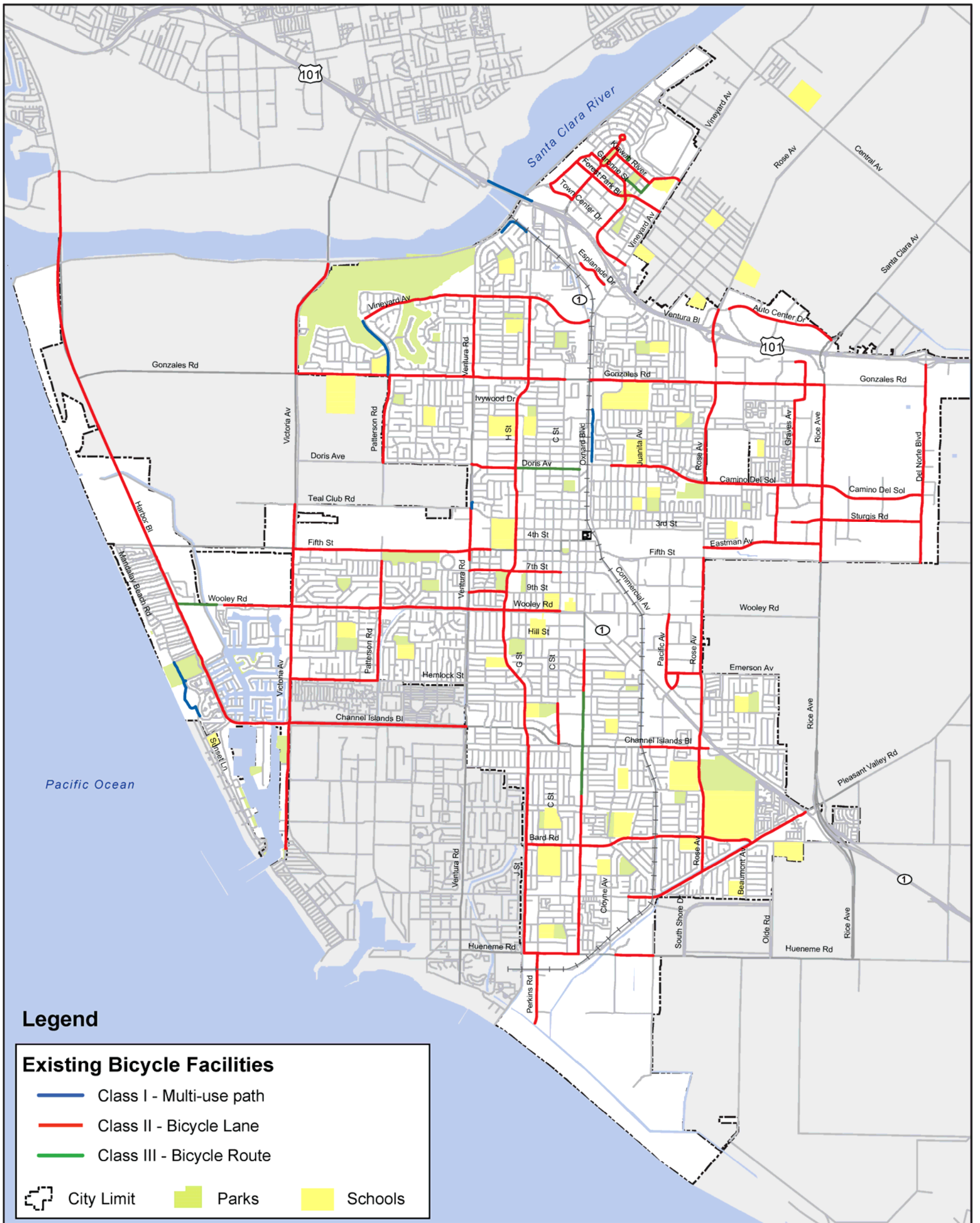
Figure 3-4: Caltrans Bikeway Classifications

Oxnard contains approximately 66.0 miles of designated bikeways, including 3.3 miles of off-street bicycle paths, and 62.7 miles of bike lanes and routes. Table 3-3 details the existing bicycle facilities that are illustrated on Map 3-1. Existing mileage is based on total mileage of roadway and therefore does not reflect mileage of facilities on both sides of the road.

Table 3-3: Existing Bicycle Facilities

Name	Start	Finish	Class	Length
101 Freeway Bridge	East Bank, Santa Clara River	West Bank, Santa Clara River	I	0.4
Mandalay Beach Path	End of Mandalay Beach Rd.	Oxnard City Limit	I	0.6
Oxnard Blvd Multi-use path	South of Gonzales Rd.	North of Colonia Rd.	I	0.5
Patterson Rd. Bicycle Path	Gonzales Rd.	Vineyard Ave.	I	0.6
Ventura Rd. Bicycle Path	Wooley Rd.	Doris Ave.	I	1.2
5 th St.	Victoria Ave.	H St.	II	0.7
7 th St.	Ventura Rd.	C St.	II	0.8
9 th St.	Ventura Rd.	J St.	II	0.3
Auto Center Dr.	Rose Ave.	Santa Clara Ave.	II	1.1
Bard Rd.	J St.	Pleasant Valley Rd.	II	2.0
Camino del Sol	Garfield Ave.	Del Norte Blvd.	II	2.7
Channel Islands Blvd.	Ventura County Railroad Right of way	Oxnard Blvd.	II	4.2
Del Norte Blvd.	101 Freeway	5 th St.	II	1.4
Doris St.	Ventura Rd.	A St.	II	0.9
Eastman Ave.	Rose Ave.	Rice Ave.	II	1.0
Emerson Ave.	Pacific Ave.	Rose Ave.	II	0.3
Esplanade Dr.	Wagon Wheel Rd.	West of Vineyard Ave.	II	0.3
Garonne St.	Ventura Rd.	Oxnard Blvd.	II	0.1
Garonne St.	Oxnard Blvd.	Forest Park Blvd.	II	0.3
Gonzales Rd.	Victoria Ave.	C St.	II	2.3
Gonzales Rd.	Oxnard Blvd.	Rice Ave.	II	2.0
Graves Ave./Wankel Wy./Solar Dr.	Gonzales Rd.	Camino del Sol	II	0.9
Harbor Blvd	City of Ventura	5 th St.	II	3.4
Harbor Blvd/Channel Islands Blvd.	5 th St.	Victoria Ave.	II	3.7
Hemlock St.	Victoria Ave.	Patterson Rd.	II	0.8
Hueneme Rd.	J St.	Saviers Rd.	II	0.5
J St./Hobson Wy./ H St.	Hueneme Rd.	Vineyard Ave.	II	5.7
Kiawah River Dr.	Oxnard Blvd	Thames River Dr.	II	0.4
Lombard St.	Camino del Sol	Eastman Ave.	II	0.5
Moss Landing Blvd.	Kiawah River Dr.	Lakeview Ct.	II	0.1
Myrtle St.	Vineyard Ave.	River Park Blvd	II	0.3

Name	Start	Finish	Class	Length
Oxnard Blvd.	101 Freeway	Oxnard Cir.	II	0.9
Oxnard Cir.	Oxnard Blvd.	Oxnard Blvd.	II	0.1
Pacific Ave.	Oxnard Blvd	Wooley Rd.	II	0.7
Patterson Rd.	Channel Islands Blvd.	Wooley Rd.	II	1.0
Patterson Rd.	Doris Ave.	Gonzales Rd.	II	0.8
Perkins Rd.	Hueneme Rd	Pacific Ocean	II	0.6
Pleasant Valley Rd.	Squires Dr.	Oxnard Blvd.	II	1.2
Rice Ave./Santa Clara Ave.	Auto Center Dr.	City Limit	II	1.9
River Park Blvd.	Myrtle St.	Forest Park Blvd	II	0.5
Rose Ave	Camino Del Sol	Gonzales Rd.	II	1.5
Rose Ave	Auto Center Dr.	Gonzales Rd.	II	0.4
Rose Ave.	Pleasant Valley Rd.	5th St.	II	1.7
Saviers Rd.	Birch St.	Iris St.	II	0.4
Saviers Rd.	South of Bryce Canyon Ave	Hueneme Rd.	II	1.4
Sturgis Rd.	Lombard St.	Del Norte Blvd.	II	1.3
Thames River Dr.	Kiawah River Dr.	Vineyard Ave.	II	0.3
Town Center Dr.	Ventura Rd.	Oxnard Blvd.	II	0.2
Ventura Rd.	Gonzales Rd.	Vineyard Ave.	II	0.7
Ventura Rd.	101 Freeway	Garonne St.	II	0.5
Victoria Ave.	Teal Club Rd.	Port Hueneme County Limit	II	2.7
Victoria Ave.	Santa Clara River	Gonzales Rd	II	1.1
Vineyard Ave.	Patterson Rd.	Oxnard Blvd.	II	2.1
Wooley Rd.	Harbor Blvd	J St.	II	2.8
Indus Pl.	Orleans Ln.	Thames River Dr.	III	0.2
Orleans Ln.	Garonne St.	Indus Pl.	III	0.0
Saviers Rd.	Iris St.	South of Bryce Canyon Ave	III	0.9
Thames River Dr.	Indus Pl.	Kiawah River Dr.	III	0.1
			TOTAL	66.0



Oxnard Existing Bicycle Facilities

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Date: 2/3/11



Map 3-1: Oxnard Existing Bicycle Facilities

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3.2.2 Bicycle Parking Facilities

Bicycle parking can range from a sidewalk bicycle rack to storage in a fully enclosed bicycle locker. Bicycle racks are generally intended for short-term use, while bicycle lockers afford weather protection, vandalism protection, and gear storage space for longer term bicycle storage needs. Oxnard has existing bicycle parking facilities at parks, schools, major employment centers, city hall, the civic center, and major commercial centers. The City does not currently have an existing inventory of mapped bicycle parking locations, see the Figure 3-2 Oxnard Land Use Map for land uses with existing bicycle parking facilities. The Oxnard City Code addresses bicycle parking requirements for new development in sections 16-616, 16-623, 16-631, 16-637, and 16-643. Section 16-637 includes design guidance for rack types (ribbon/wave racks and post racks) and rack placement (See Table 3-1).

3.2.2.1 Transit Connections

Improving the bicycle-transit link is important in making bicycling a part of daily life in Oxnard.



A Gold Coast Transit bus with bicycle racks.

Gold Coast Transit Bus Racks

Fixed route Gold Coast Transit buses are equipped with double and triple bike racks, available on a first-come, first-served basis.

Metrolink and Amtrak

Metrolink trains provide space for two bicycles per train car. The Amtrak Surfliner line features roll-on service with racks for three bicycles per car.

Greyhound Bus Service

Oxnard is also linked to regional and interstate bus service at the Oxnard Transportation Center. Each Greyhound passenger is allowed to bring one bicycle, provided that it is properly packaged; the cost for bringing a bicycle is based on distance to the destination.

Oxnard Transportation Center

The Oxnard Transportation Center has bicycle lockers that provide long-term storage for six bicycles and racks that provide short-term storage for six bicycles. The transit hub is served by Metrolink, Amtrak, Greyhound, and Gold Coast Transit.



Separated bike and pedestrian path on Ventura Road between 7th and 9th Streets.

3.2.3 Pedestrian Facilities

Elements of the pedestrian infrastructure network include paths and sidewalks, crosswalks, crossing signals, traffic calming measures, and streetscape enhancements.

3.2.3.1 Paths

Oxnard has four multi-use paths available for pedestrians. The Mandalay Beach Path connects the coastal neighborhoods from the south end of Mandalay Beach Road to the city limit along Oxnard State Beach and provides recreational opportunities along the Pacific Ocean. Paths along Oxnard Boulevard, Ventura Road, and Vineyard Avenue create pedestrian corridors along these busy arterials. The setback from the road and landscape plantings provide a buffer from traffic. The Ventura Road Path has separated facilities for pedestrians and bicyclists between 7th and 9th Streets.

3.2.3.2 Pedestrian Demand Areas

Downtown Oxnard

Downtown Oxnard has a rich pedestrian environment. Pedestrian-scale buildings oriented toward sidewalks, historic building façades, site furnishings, street trees, landscape plantings, and lighting all add to the quality of the pedestrian environment within the core downtown district. A comprehensive sidewalk network with marked crosswalks connects surrounding neighborhoods to the downtown core. However, gaps in the sidewalk network create obstacles to pedestrians, especially those with disabilities.

The city has installed traffic calming measures to slow traffic and make pedestrians more visible. Curb extensions on 5th Street at B and C Street intersections narrow the traffic lane by extending the curb into the street, reducing the distance to walk across the intersection.

Mandalay Bay Development

The Mandalay Bay area occupies the marina areas north of the Channel Islands Harbor and the Channel Island Boulevard bridge. The area is comprised of three peninsulas, designated for marina-oriented residential land uses. The Seabridge, Harbour Island, and Westport developments include extensive bicycle accessible pathways that connect to street bike lanes Victoria Avenue and Wooley Road.



A pedestrian-friendly plaza in downtown Oxnard at 5th and B Street.



Pedestrian bridge on West Channel Islands Boulevard.

Channel Islands Harbor Marina Village

The Channel Islands Harbor Marina Village is a regional tourist destination. Enhanced pedestrian connections from the residential areas north of Channel Islands Boulevard to the recreational areas south of Channel Islands Boulevard are important along this busy arterial road. A separated pedestrian walkway on the south side of the Channel Islands Boulevard Bridge is a popular route connecting the harbor to the beach. Additionally, marked crosswalks at signalized intersections are provided at Channel Island Boulevard at Victoria Avenue, Peninsula Road, and Harbor Boulevard; Harbor Boulevard at Costa de Oro; and Victoria Avenue at Curlew Way. The Channel Islands Harbor experiences an abundance of visitors; wayfinding signage is minimal.

Oxnard Transportation Center

The Oxnard Transportation Center (OTC) is located on 4th Street east of Oxnard Boulevard. One transit center parking lot is located on the south side of 4th Street, requiring pedestrians to cross at a pair of midblock crosswalks in order to access transit options. Sidewalks along 4th Street and Oxnard Boulevard, as well as marked crosswalks at the intersection, allow for pedestrian access from the downtown core to the west, and to the adjacent north and south areas. A public parking lot, east of Meta Street and north of 5th Street, was completed in 2009 to further serve the Transportation Center, but railroad tracks obstruct convenient pedestrian access. One sidewalk exists on the north side of the 3rd Street Bridge, with a stairway leading to Oxnard Boulevard, providing the only direct pedestrian connection from the east. This sidewalk is not physically separated from fast-moving traffic by railings.



Midblock crosswalk connects parking to the bus and train stations across 4th Street.

Schools

Oxnard has sixteen public elementary schools, three public intermediate schools, six public high schools, and one community college. Oxnard schools have high levels of pedestrian activity. One identified concern is frequent jaywalking across Oxnard Boulevard south of Gonzales Road by high school students. Providing schools with strong non-motorized access and encouraging walking and bicycling as a viable means of transportation is important for many reasons: it can create a lifelong habit that can potentially reduce rates of obesity-related health problems; traffic congestion; and greenhouse gas emissions.



Intersection of Gonzalez Road at Oxnard Boulevard.

3.2.4 Educational and Support Programs

The Oxnard Police Department previously offered Bicycle Rodeo events as safety curriculum in elementary schools. However, the City does not currently sponsor educational or enforcement programs specifically targeting the needs of bicyclists and pedestrians.

The Public Works Department Call Center is a general program that bicyclists and pedestrians can utilize for some of their needs regarding road maintenance, right-of-way clearance, and management of street trees and medians. Additionally, the recently passed Measure O allocates funding for city services, including road rehabilitation and sidewalk repair. Updates on roadway conditions and detours are posted on the City's website under the link "Road Construction Projects" on the home page: www.ci.oxnard.ca.us.

4 Needs Analysis

This chapter describes the needs of bicyclists and pedestrians in Oxnard. It provides estimates of existing and future bicyclists and pedestrians in the city, as well as the results of the bicycle and pedestrian demand model.

4.1 Existing Bicycling and Walking Activity

This section presents current and estimated future levels of bicycling and walking, as well as the associated air quality benefits. These results were obtained using census data and standard EPA emissions rates for cars. The estimates are a required element of this Plan in order for Oxnard to be eligible for funding from the California Bicycle Transportation Account.

Elements from census data used in the estimates include journey-to-work information, the number of children age 6-14, and the number of college students. These are combined with studies that provide national averages for bike-to-school mode share, or bike-to-college mode share. *Appendix B: Trip and Emission Reduction Estimates* presents a detailed discussion of estimate calculations.

4.1.1 Bicycling and Walking Activity, Vehicle Trips and Emissions Reductions

Table 4-1 and Table 4-2 present estimates for the existing and future (2020) number of bicycling and walking commuters, total daily existing and future trips, and the projected reduction in vehicle trips, miles and hydrocarbon (HC), carbon monoxide (CO), nitrogen oxide (NOX), and carbon dioxide (CO₂) emissions.

Table 4-1: Estimated Existing and Projected Bicycling Activity

Existing Bicycling Commuter Statistics	
Existing total number of bike commuters	2,623
Total daily bicycling trips	5,247
Future Commuting Statistics 2020	
Future total number of bicycle commuters	7,086
Future total daily bicycling trips	14,172
Future Vehicle Trips and Mileage Reduction 2020	
Reduced Vehicle Trips per Year	1,232,379
Reduced Vehicle Miles per Year	8,154,614
Air Quality Benefits	
Reduced HC (tons/year)	25
Reduced CO (tons/year)	188
Reduced NOX (tons/year)	12
Reduced CO ₂ (tons/year)	3,735

Table 4-2: Estimated Existing and Projected Walking Activity

Existing Walking Commuter Statistics	
Existing total number of walk commuters	5,863
Total daily walking trips	11,727
Future Commuting Statistics 2020	
Future total number of walk commuters	23,251
Future total daily walking trips	46,501
Future Vehicle Trips and Miles Reduction 2020	
Reduced Vehicle Trips per Year	3,966,085
Reduced Vehicle Miles per Year	4,056,229
Air Quality Benefits	
Reduced HC (tons/year)	13
Reduced CO (tons/year)	93
Reduced NOX (tons/year)	6
Reduced CO2 (tons/year)	1,858

In summary, walking and bicycling improvements can have a significant impact on air quality benefits. Upon plan implementation, with the estimate assumptions, total HC emissions could be reduced by 25 tons per year. CO emissions could be reduced by 181 tons per year. NOX could be reduced by 18 tons per year, and CO2 emissions could be reduced by 5,593 tons per year.

The Ventura County Air Pollution Control District (APCD) developed thresholds at which Reactive Organic Compounds (ROC)⁴ and Nitrous Oxides (NOX) have a significant impact on the environment. The threshold of significance for these air pollutants is 25 pounds per day (4.6 tons per year)⁵. ROCs and NOXs are associated with the combustion of fossil fuels, thus increased walking and bicycling has the potential to keep air pollutants below these APCD defined levels.

4.2 Bicycle and Pedestrian Demand Model

While the census-based bicycle and pedestrian commute forecasts above are useful for identifying overall citywide vehicle miles traveled (VMT) and air quality benefits from non-motorized improvements, a spatial model is necessary in order to identify specific geographic areas for prioritization. This section describes the Bicycle and Pedestrian Demand Model, which identifies and prioritizes key locations likely to generate non-motorized trips in Oxnard, along with detractors requiring improvement. Additionally, the needs analysis includes a detailed review of collision data, major barriers to walking and bicycling, and new development.

The Demand Model is based on a Geographic Information Systems (GIS) database, developed by Alta Planning + Design with data provided by the City and census-based demographic information. The Demand Model identifies and prioritizes areas that need bicycling and walking improvements. The model utilizes three main components: trip attractors, trip generators, and trip detractors. The first two components help

⁴ ROCs are comprised of many types of hydrocarbons.

⁵ <http://www.vcapcd.org/pubs/Planning/VCAQGuidelines.pdf>

determine likely origins and destinations for bicyclists and pedestrians in Oxnard. The model uses detractor data to identify and prioritize target areas.

4.2.1 Model Description

The Demand Model divides the city into a grid of cells. Each grid represents an area on the ground that is 10,000 square feet (100 feet x 100 feet cell size). This cell size was chosen to capture the best detail possible in relation to the overall scale of the datasets and the geographic size of Oxnard. The model identifies the attractors, trip-generators, and detractor characteristics of each particular geographic area and assigns a numeric value for each of these characteristics. The score per area is then added to create a ranking for that geographic area.

4.2.1.1 Bicycle and Pedestrian Attractors

The Demand Model uses major destinations to identify popular activity areas. Specific examples of major destinations are listed in Table 4-3.

Table 4-3: Oxnard Major Destinations

Attractors by Category	Examples
Downtown Destinations	Carnegie Art Museum, Children’s Museum (Gull Wings), Civic Center/Public Safety Bldg, Heritage Square/Tourism Office, Library, Plaza Park, Post Office, Farmers Market, Transportation Center/Transit Center, Centennial Plaza
City-wide Destinations	College Park, Harbor/Beach Areas, Channel Islands Harbor, McGrath State Beach, Oxnard State Beach Park, Seabridge/Westport, Oxnard College, Performing Arts Center/Community Center Park, South Oxford Library
Other Attractors	Esplanade, The Village, Riverpark, The Palms, Shopping @ the Rose I & II, the Department of Motor Vehicles (DMV), Saint John’s Regional Medical Center

Certain destinations, referred to as attractors in the model, are more likely to attract bicyclists and pedestrians, therefore, the model assigns these destinations a higher rank or starting score. These scores have been tuned to accurately reflect Oxnard’s travel patterns and use of attractors.

After an initial rank is assigned to the attractor, buffers are drawn around each destination at increasing distances. Table 4-4: Weighted Values Based on Distance shows the weighted values assigned to each buffer based on their proximity to the feature. For example, a ¼-mile radius buffer is assigned a higher value than 1/2-mile radius buffer because people will more likely bicycle or walk 1/4 of a mile versus one mile.

Table 4-4: Weighted Values Based on Distance

Miles	Multiplier
0.25	1.5
0.5	1
0.75	0.75
1	0.5

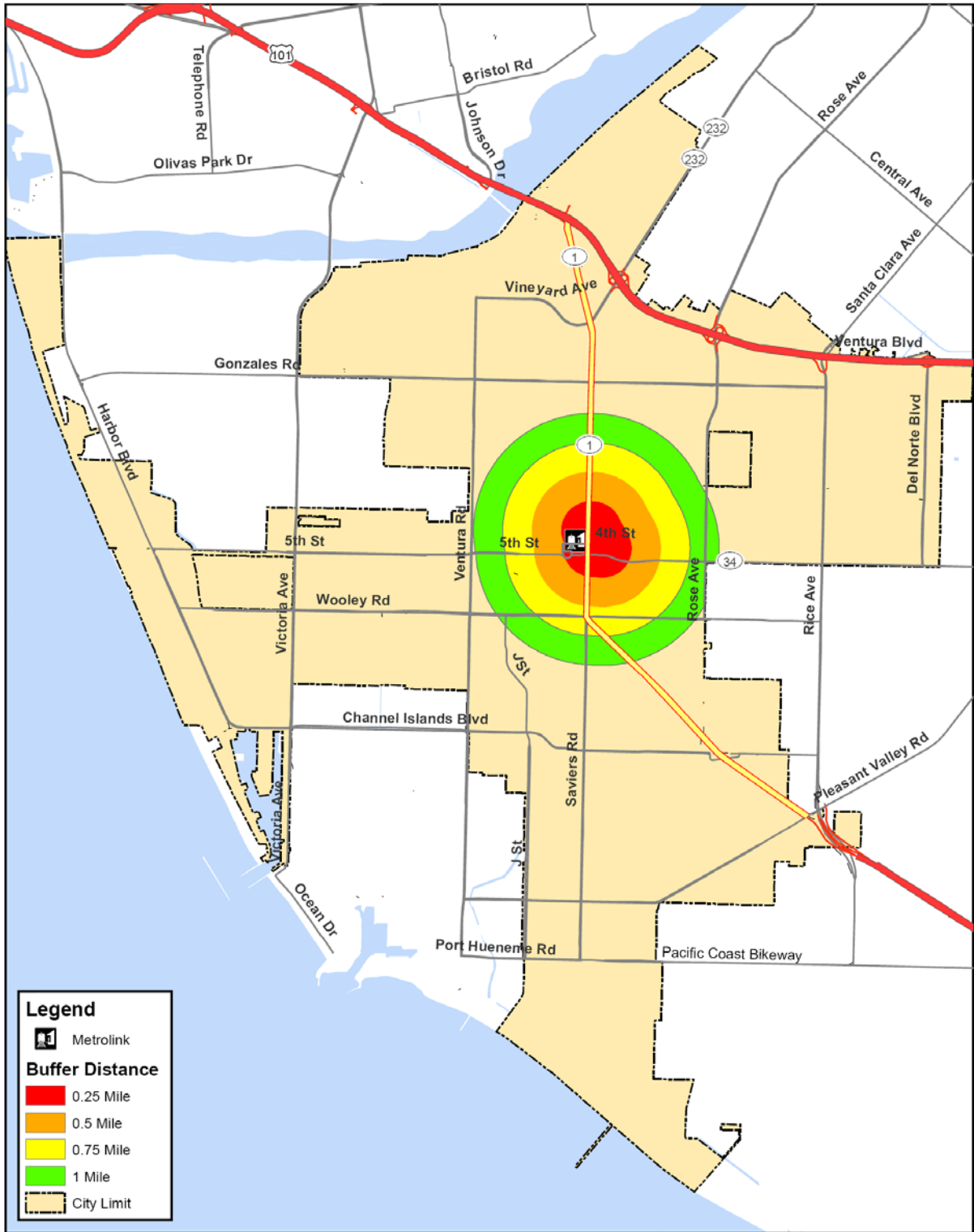
The values assigned to each attractor are multiplied by the weighted distance values for each distance buffer. For example, libraries are given a rank value of four and hospitals a rank value of two, ¼-mile distance value of 1.5, and ¾-mile distance value of 0.75. Thus, a library with a ¾-mile radius buffer would have the same weighted value (3.0) as a hospital with a ¼-mile radius buffer.

Table 4-5: shows the classification of attractors and their scoring. Maps 4-1 to 4-6 show the individual buffers maps.

Table 4-5: Trip Attractor Factors and Scoring

Bike/Pedestrian Attractor	Rank	Multiplier (0.25M)	Multiplier (0.50M)	Multiplier (0.75M)	Multiplier (1M)	Final Score
Bike/Ped Routes	9	13.5	9	6.75	4.5	33.75
Metrolink	7	10.5	7	5.25	3.5	26.25
Parks, Beaches & Recreation	7	10.5	7	5.25	3.5	26.25
Shopping	5	7.5	5	3.75	2.5	18.75
Commercial/Industrial	5	7.5	5	3.75	2.5	18.75
Schools	5	7.5	5	3.75	2.5	18.75
Government/Libraries	4	6	4	3	2	15
Hospitals	2	3	2	1.5	1	7.5

Each individual buffered attractor type is overlaid on the citywide cell grid with their weighted values. Each cell is assigned a total attractor value based on the sum of weighted values of the nearby features. Areas with a concentration of cells with high values are more likely to attract bicyclists and pedestrians. Map 4-7 shows the combined overlay maps.



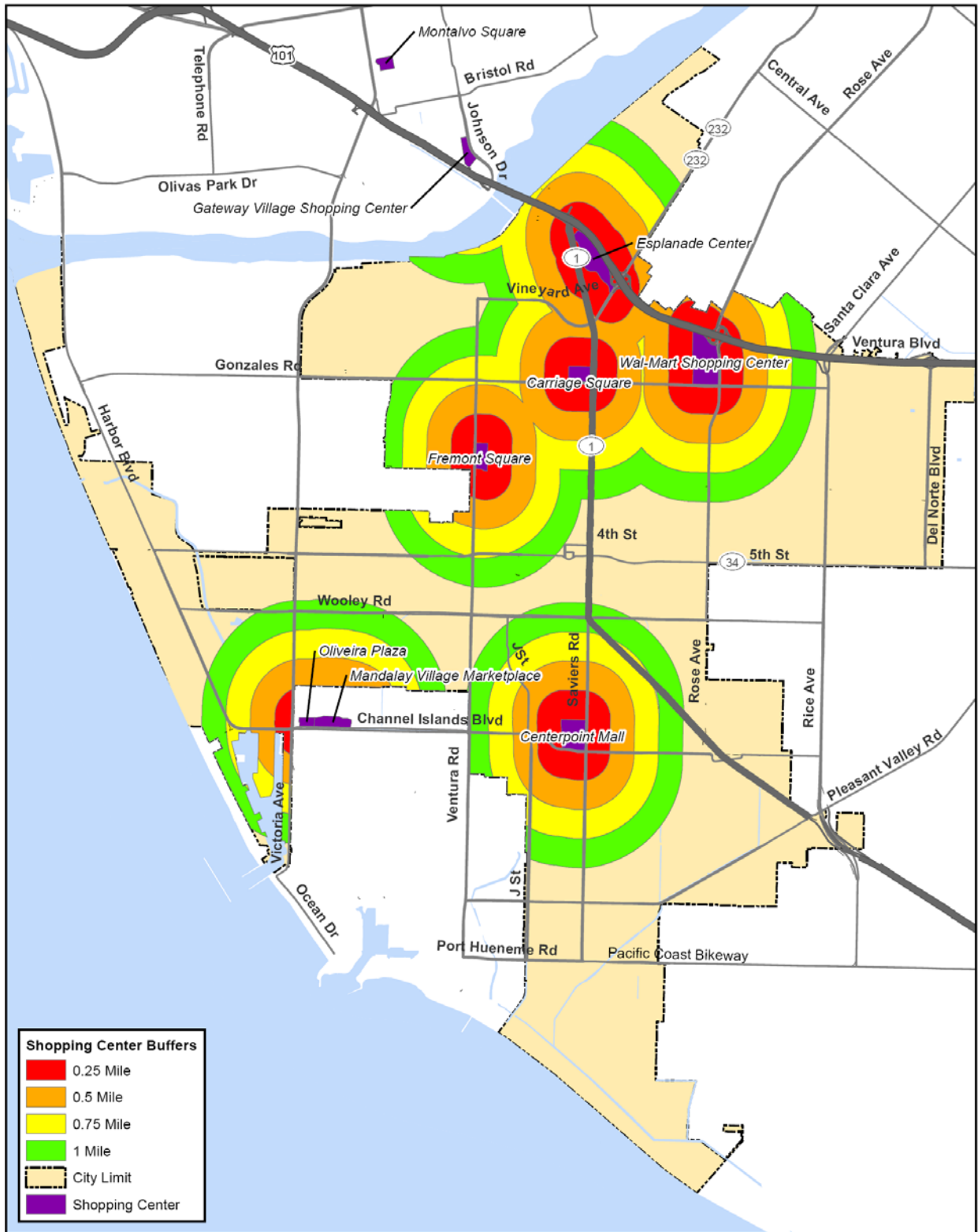
Oxnard Metrolink Buffer

Oxnard, CA
 Bicycle & Pedestrian Master Plan

Source: City of Oxnard
 Author: Roy Harju
 Date: 4/02/2009



Map 4-1: Oxnard Airport and Metrolink Buffers

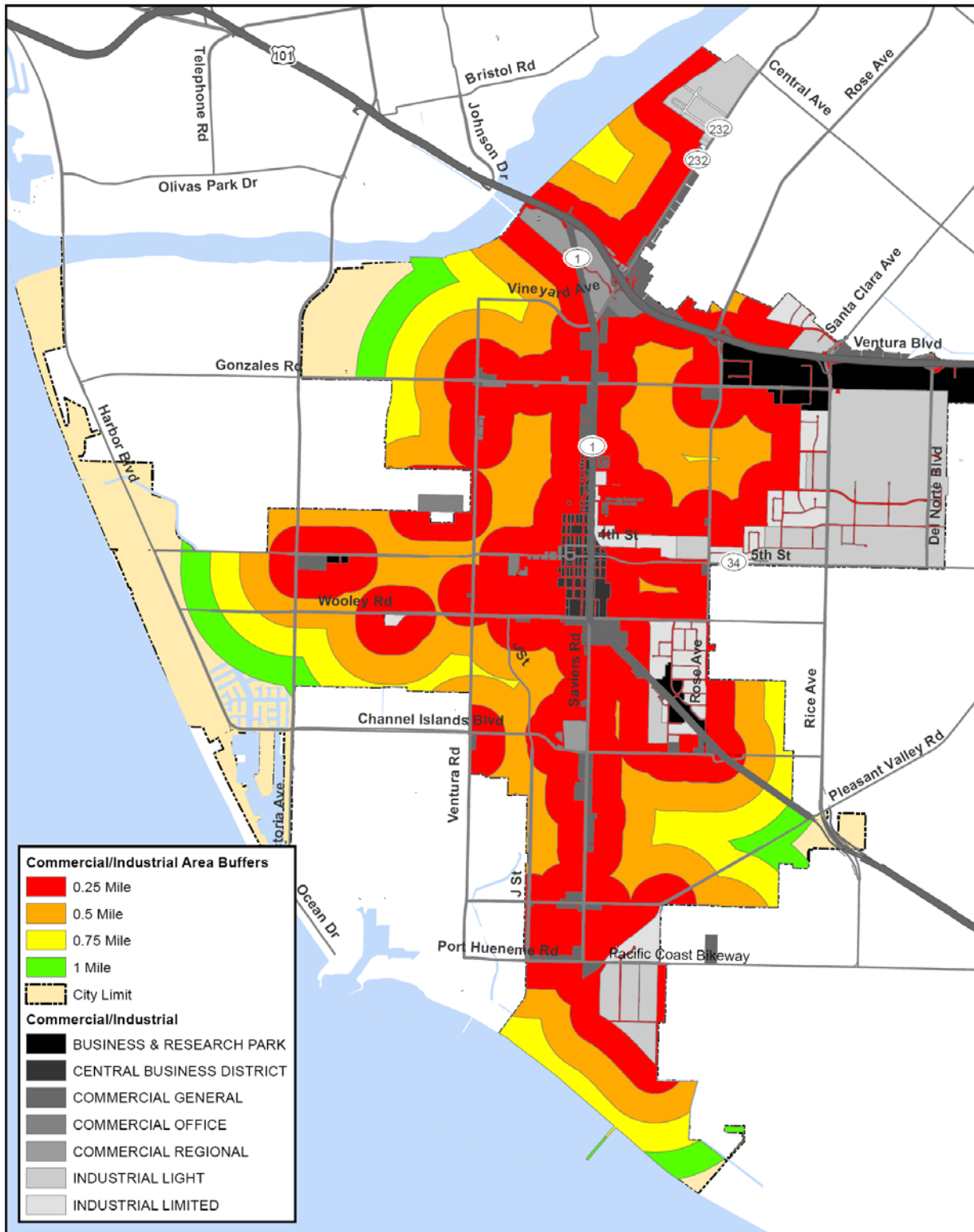


Shopping Center Buffers

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: Roy Harju
 Date: 11/03/2009



Map 4-2: Shopping Center Buffers

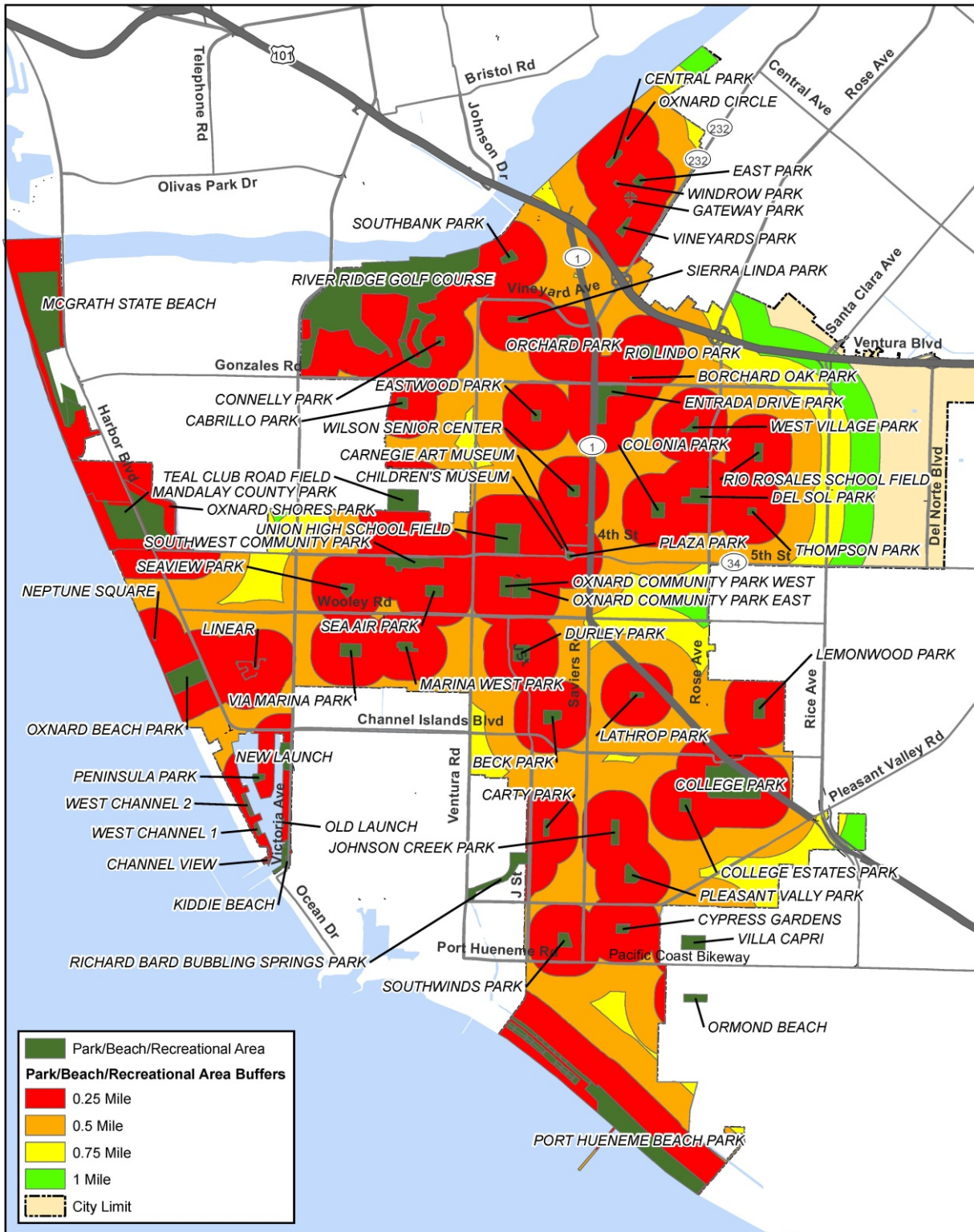


Commercial/Industrial Area Buffers

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: Roy Harju
 Date: 11/03/2009

0 0.5 1 2 Miles

Map 4-3: Commercial/Industrial Area Buffers

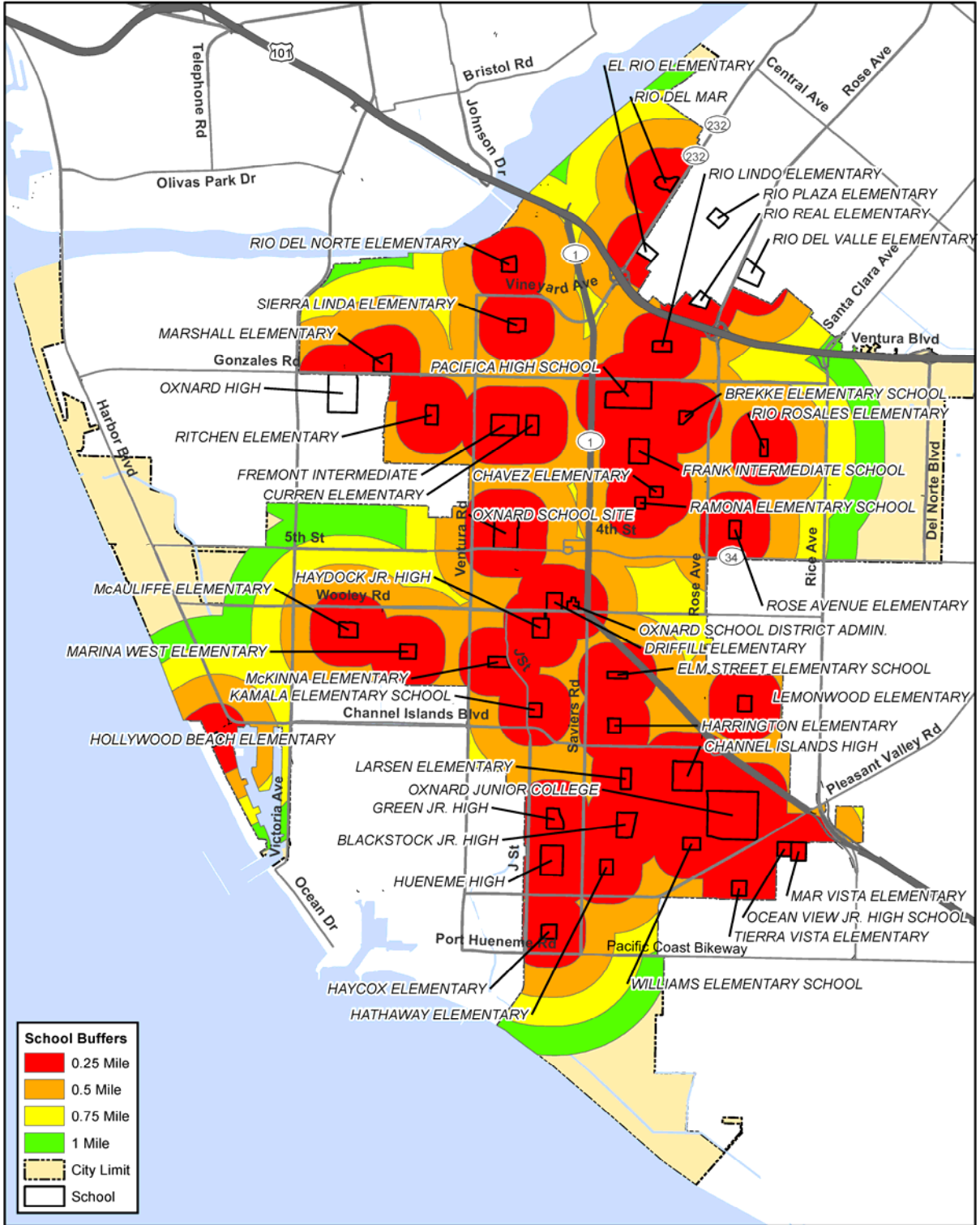


Park/Beach/Recreational Area Buffers

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: Roy Harju
 Date: 11/12/2009



Map 4-4: Park/Beach/Recreational Area Buffers

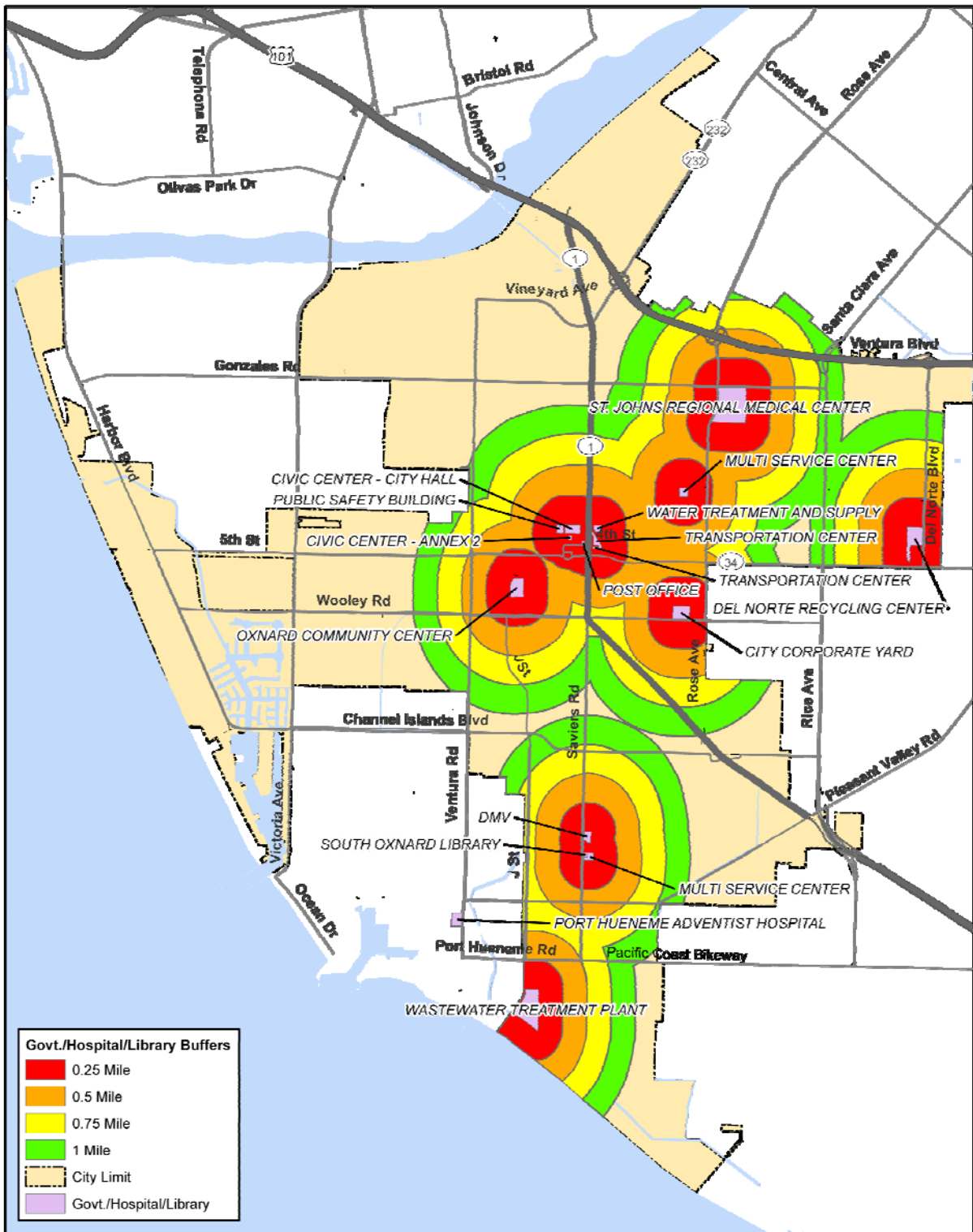


School Buffers

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: Roy Harju
 Date: 11/03/2009



Map 4-5: School Buffers

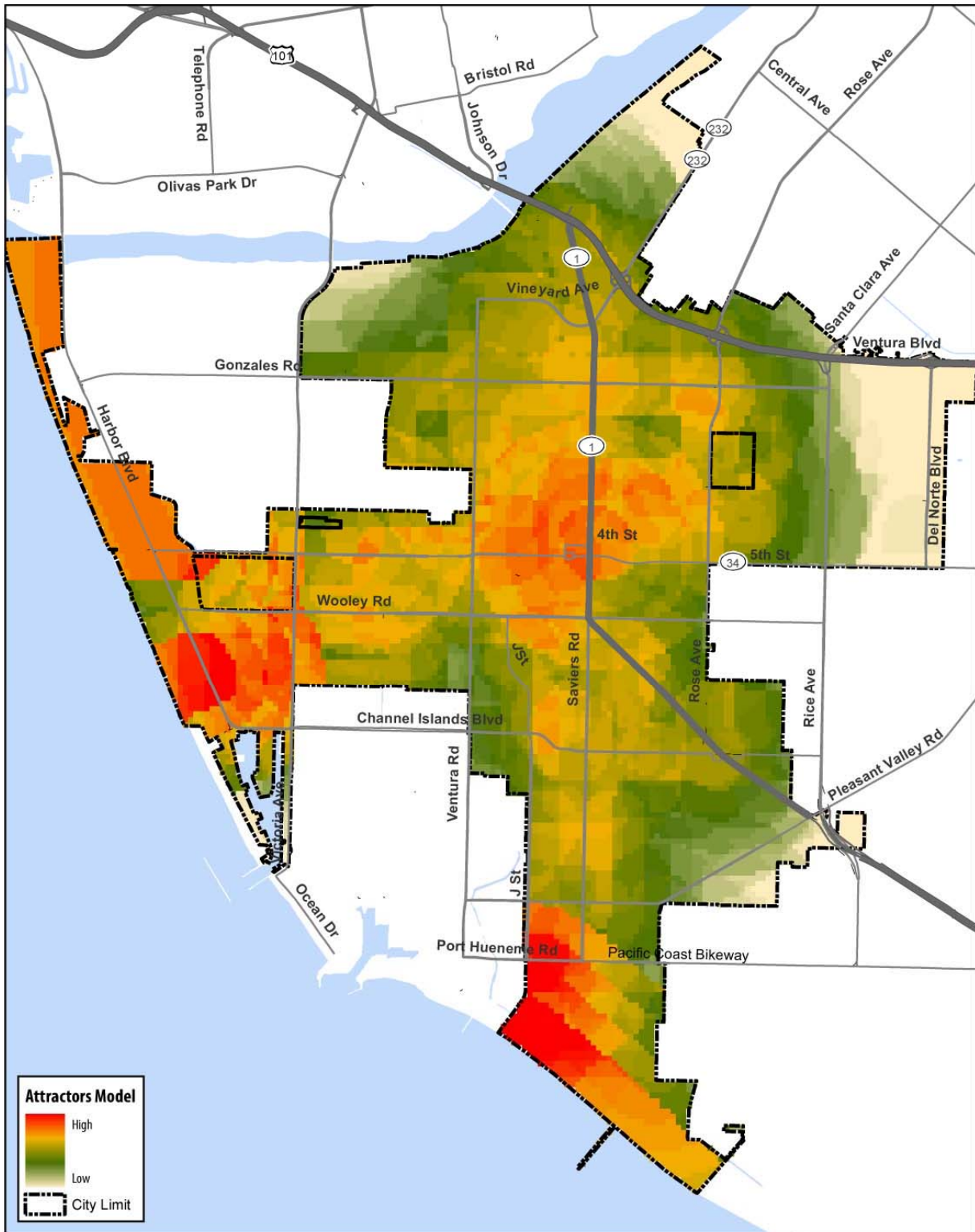


Govt./Hospital/Library Buffers

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: Roy Hoag



Map 4-6: Government/Hospital/Library Buffers



Bike and Pedestrian Attractions Model

Oxnard, CA
Bicycle & Pedestrian Master Plan
Source: City of Oxnard
Author: Roy Harju
Date: 5/07/2010



Map 4-7: Bike and Pedestrian Attractions Model

4.2.2 Bicycle and Pedestrian Trip Generation

The Demand Model uses 2000 Census population data to gauge the potential volume of bicyclists and pedestrians, based on how many people live or work within the activity areas identified in the first step of the model. Activity areas, with a greater number of people living or working, are more likely to have people walking and bicycling. Since census data are not collected in accordance to the model’s grid, each cell is scored according to the population density of the census tract in which it is contained. Table 4-6 shows the scoring attached to population density. Map 4-8 shows population distribution within Oxnard.

Table 4-6: Population Density and Scoring

Population Density (Pop per Sq. Mile)	Rank	Score with Weighted Multiplier
>16,000	very high	4
12,001 – 16,000	high	3
7,000 – 12,000	medium	2
<7,000	low	1

4.2.2.1 Bicycle and Pedestrian Detractors

Detractors are features that are likely to discourage or detract people from walking or bicycling. The Demand Model includes the following detractors: places where collisions occur, road traffic volume (measured in Average Daily Trips—ADT), and roadway speed limits.

For the Demand Model, detractors are scored similarly to attractors. They are assigned a value; then they are weighted based on their frequency with a cell. Table 4-7 shows the scoring for various detractor types. Map 4-9 shows the resulting detractor map.

Table 4-7: Scoring Bicycle and Pedestrian Detractors by Detractor Type

Ranges	Points	Multiplier	Final Score
Collisions per Location			
12 - 15	4	3	12
9 - 11	3	3	9
5 - 8	2	3	6
1 - 4	1	3	3
0	0	3	0
Traffic Volume (ADT in 1000s of trips)			
55	6	1	6
45-54	5	1	5
35-44	4	1	4
20-34	3	1	3
5-20	2	1	2
1-4	1	1	1

Ranges	Points	Multiplier	Final Score
Speed by road type (MPH)			
55 -65	3	1	3
35-45	2	1	2
1-25	1	1	1

4.3 Collision Analysis

The Oxnard Police Department keeps a database of collision data for motor vehicle collisions with bicyclists and pedestrians. The collision data employed in the model include all reported incidents for a five-year period. In total, between early 2004 and early 2009, Oxnard experienced 426 bicycle collisions and 432 pedestrian collisions.

4.3.1 Bicycle Collisions

The majority of collisions happen at intersections during automobile turning movements. In Oxnard, 97% of bicycle collisions with motor vehicles occurred at intersections.

4.3.1.1 Arterials

Over 64% of the recorded bicycle collisions occurred on arterials or highways, including Channel Islands Boulevard, 5th Street, Gonzales Road, H Street, J Street, Oxnard Boulevard, Pleasant Valley Road, Rose Avenue, Saviers Road, Ventura Road, Vineyard Avenue, and Wooley Road. These roads tend to have higher speed limits and larger volumes of traffic. Improvements may involve providing dedicated right of way to bicyclists, removal of travel lanes for streets wider than necessary given existing traffic volumes, provision of bicycle lanes to the left of right-turn pockets for through bicycle traffic, or installation of shared lane markings.

4.3.1.2 Minor Roads

A notable number of bicycle collisions in Oxnard occurred on smaller residential and collector roads, including Bard Road, C Street, Camino Del Sol, Cooper Street, and Hemlock Street. Although these streets are smaller and less busy than arterials and highways, they are feeder streets that provide routes connecting through neighborhoods, which may explain why they might host more bicycle-automobile conflicts.

4.3.1.3 Bicycling Safety Rating

The collision rate in Oxnard is 0.43 per 1,000 people per year. Table 4-8 shows that this is above the average California State collision rate.

Table 4-8: Oxnard Bicycle Collisions

Parameter	Number/Rate
Total number of bicycle collisions for 5 years	426
Average # of bicycle collisions per year	85.2
Average Bicycle Collision Rate per 1,000/year	0.43
Index (relative to statewide average of 0.32 /1000)	1.35

4.3.2 Pedestrian Collisions

Compared to bicycle collision data, pedestrian collisions were five times more likely to occur at mid-block locations. Still, the vast majority of pedestrian collisions (83%) occurred at, or near, intersections.

4.3.2.1 Mid-Block Collisions

Closer examination reveals that the majority of mid-block incidents tend to be located on major roads, suggesting that they may result from pedestrians attempting to cross outside of designated crosswalks. Facility enhancements to prevent dangerous crossings include limiting mobility options—for example, median barriers to inhibit pedestrians from attempting to cross—and facilitating mobility options—adding pedestrian controlled stop-lights and crosswalks that create safe crossing conditions.

4.3.2.2 Intersection Collisions

A host of improvements can create safer pedestrian environments. Signal-timing can be lengthened to appropriately accommodate user needs. Proper assessment of traffic flow and road geometry may also be useful in identifying conditions that may encourage speeding; subsequent improvements like curb extensions, signage, and modified traffic control can collectively affect existing hazards.

4.3.2.3 Walking Safety Rating

The collision rate in Oxnard is 0.44 per 1,000 people per year. Table 4-9 shows that this is below the average California State collision rate.

Table 4-9: Oxnard Pedestrian Collisions

Parameter	Number/Rate
Total number of pedestrian collisions for 5 years	432
Average # of pedestrian collisions per year	86.4
Average Pedestrian Collision Rate per 1000/year	0.44
Index (relative to statewide average of 0.499 /1000)	0.87

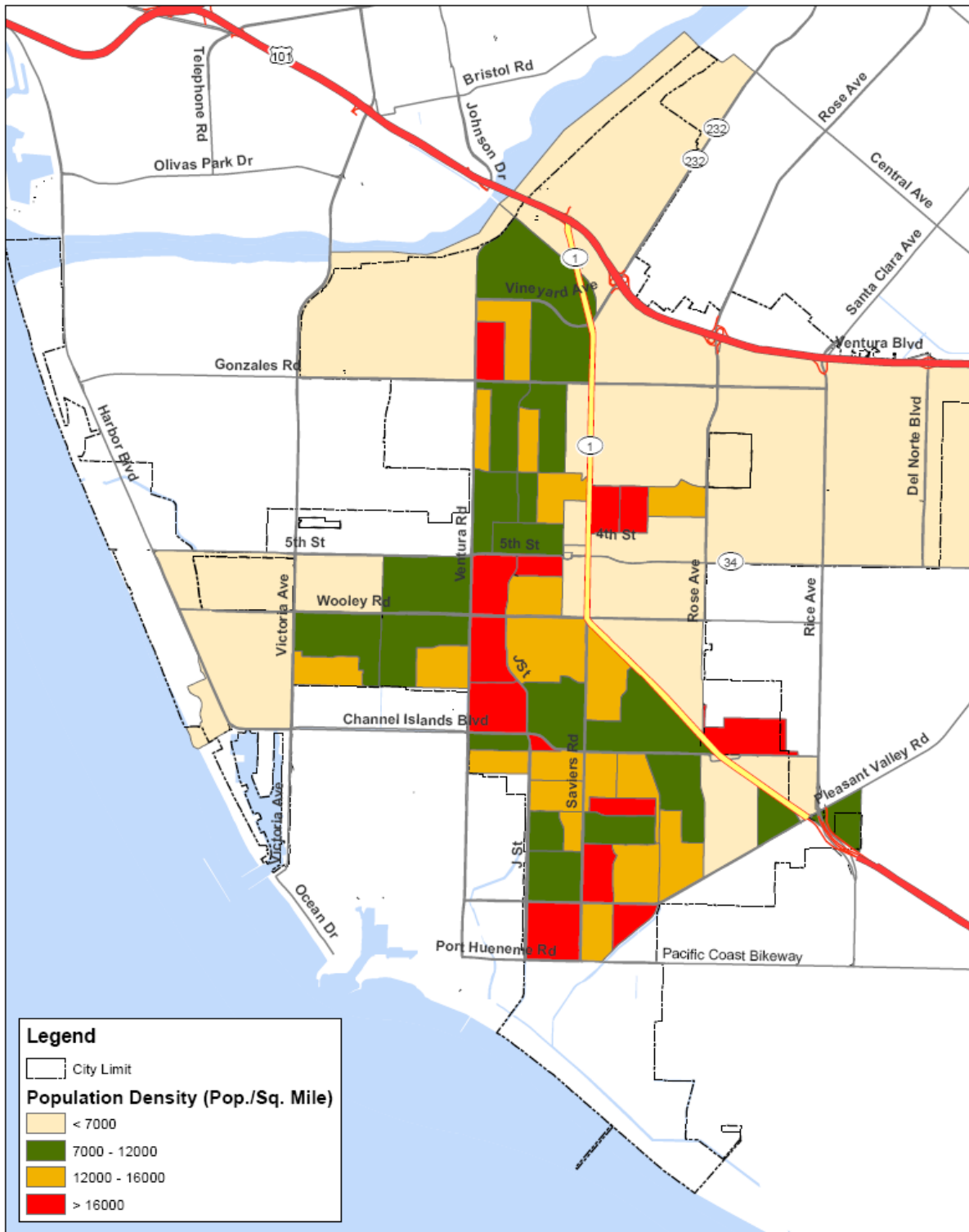
4.3.3 Other Barriers

Network gaps can stem directly from other identifiable barriers, like the lack of through streets from highway, freeway, or railroad right of way; water bodies; topography; street network configurations, and disjointed jurisdictional control.

In Oxnard, notable barriers include the following:

- US 101 separates the Riverpark & El Rio neighborhoods from the Financial Plaza, Esplanade, The Village and southwestern portions of town.
- State Route (SR)-1/Oxnard Boulevard presents numerous difficulties; the adjacent active railroad impedes crossings and through traffic, and it is currently outside the city’s jurisdiction.
- The flood control channel running parallel between Saviers Road and Rose Avenue, south of Oxnard Boulevard, creates a natural east-west division—to the east, College Estates and Terrace Estates, and to the west, the Blackstock neighborhoods and Pleasant Valley Estates; channel crossings only occur at major arterials, which are less accommodating to bicyclists and pedestrians.

- A number of neighborhoods have closed street systems; while this is helpful for reducing through auto-traffic, lack of easements and throughways for pedestrians and bicyclists force them to use collector streets with automobiles.
- Some streets in Oxnard, that may require bicycle or pedestrian facility improvements, may be under state or county jurisdiction.

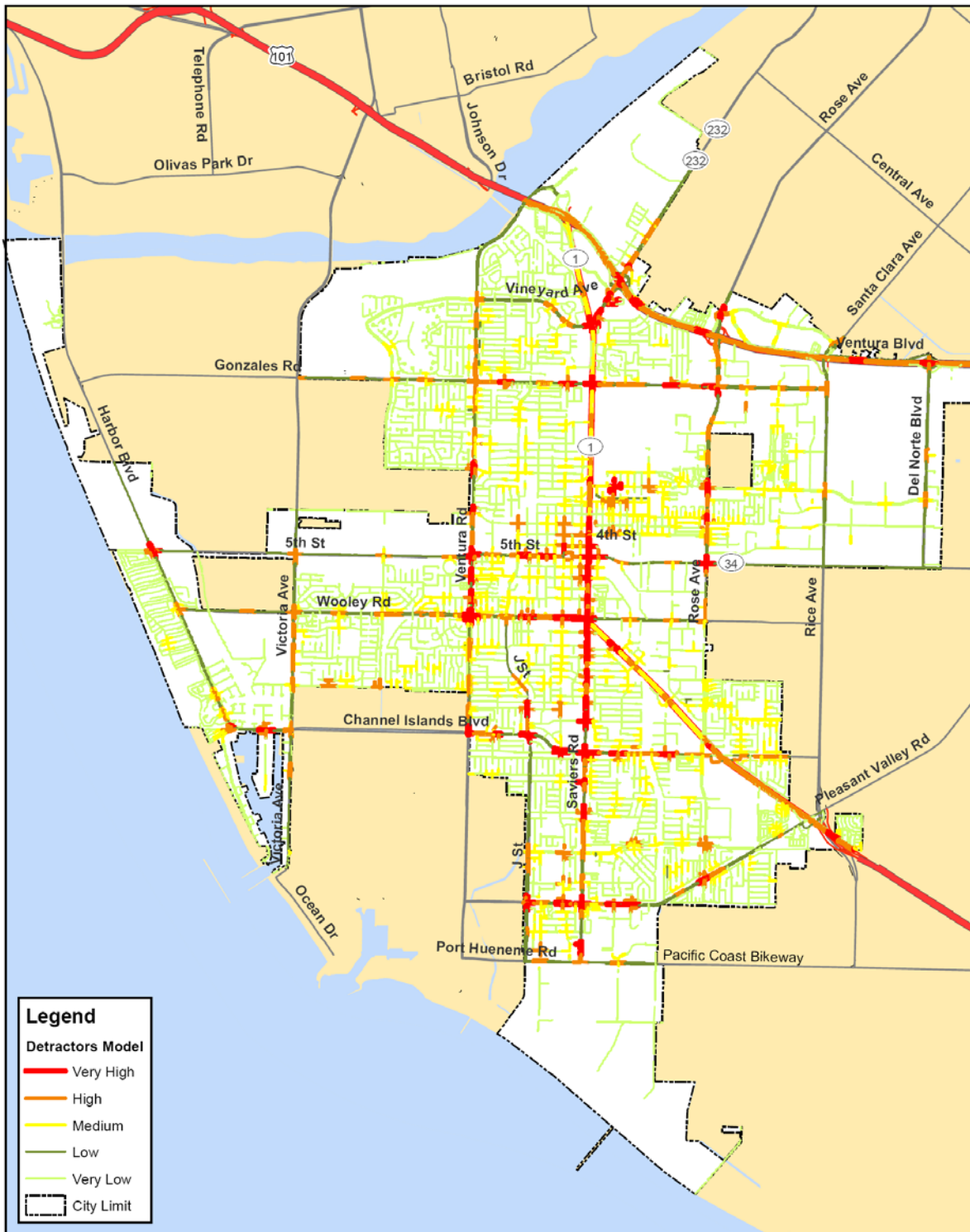


Bike and Pedestrian Generators Model

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: Roy Harju
 Date: 4/02/2009



Map 4-8: Bike and Pedestrian Generators Model



Bike and Pedestrian Detractors Model

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: Roy Harju
 Date: 4/02/2009

0 0.5 1 2 Miles

Map 4-9: Bike and Pedestrian Detractors Model

4.3.4 Composite Value Conclusion

Finally, the attractor, generator, and detractor grid cell points are overlaid on top of each into a single map. The cells contain each level of analysis to provide a total composite value. This value identifies areas that have both high potential for non-motorized activity, along with high detractors. The ranking of each cell is lumped into block groups and normalized by dividing the total composite score by the geographical area. This allows the comparison of communities based on a common denominator and identifies the communities with high densities of potential pedestrian and bicycling activity. Map 4-10 shows the final output of the Bicycle and Pedestrian Demand Model.

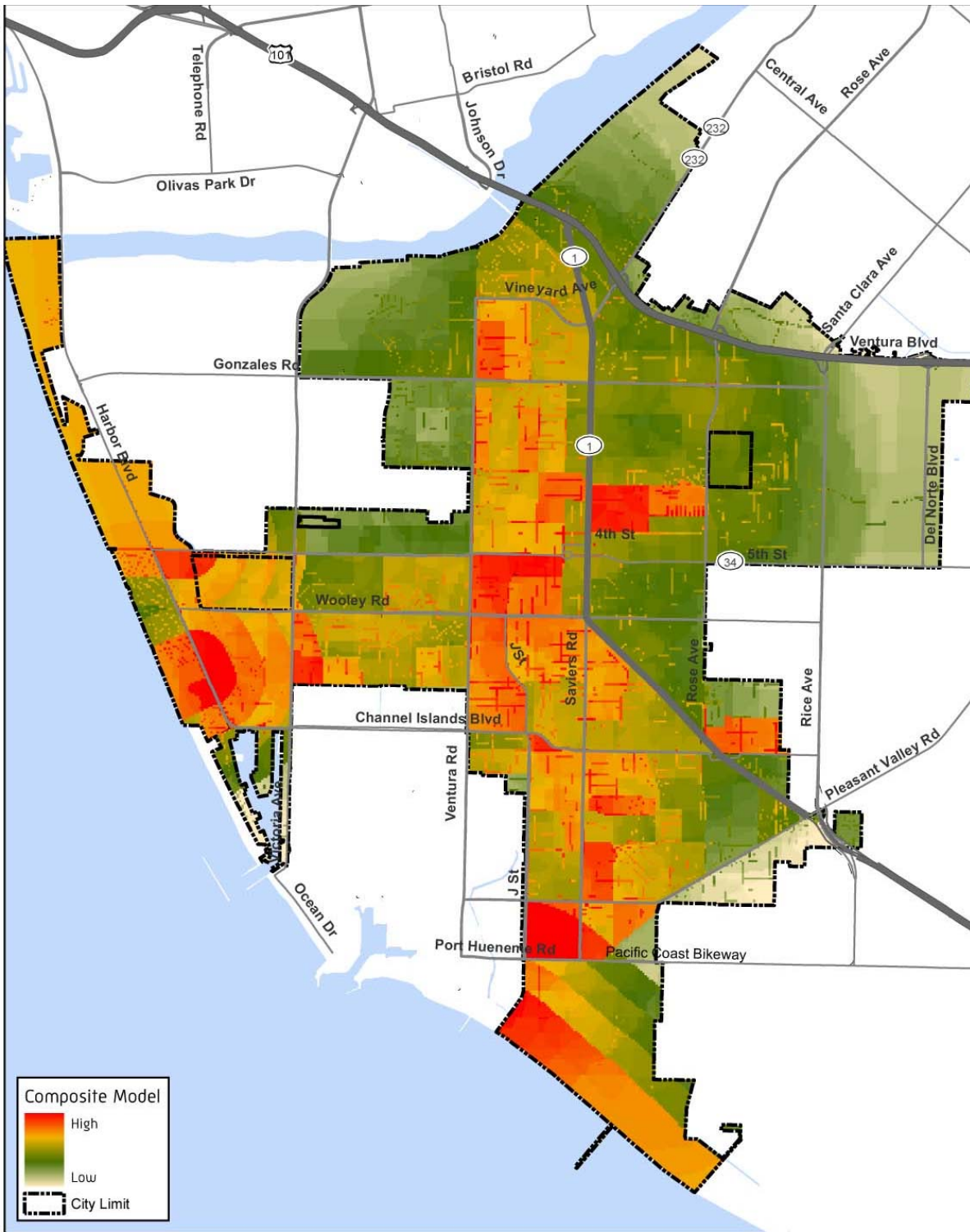
4.4 Additional Generator Considerations

4.4.1 Community Involvement

As part of the community involvement process, the consultant team reported to the City of Oxnard Planning Commission. In addition, the City's project manager met with residents, neighborhood councils and community bicycle advocates. Feedback from the public during these meetings was incorporated into the plan through city comments. Finally, the draft plan was open for public comment from September 22, 2011 through October 21, 2011. Comments were received and addressed from surrounding public agencies including: County of Ventura and Ventura County Watershed Protection District as well as residents.

4.4.2 New Developments in Specific Planning Areas

The City of Oxnard has a number of planned residential, commercial, and industrial developments. Some are located in already built-out portions of the city; others are sited in previously undeveloped areas. In addition to solutions for barriers in the existing built environment, comprehensive bicycle and pedestrian networks must also accommodate projects in these areas. These specific planning areas include RiverPark, The Village, SouthShore, Sakioka, Teal Club, South Ormond Beach, and Las Brisas.



Bike and Pedestrian Composite Model

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: Roy Harju
 Date: 5/07/2010



Map 4-10: Bike and Pedestrian Composite Model

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5 Recommended Improvements

The City requires solutions for both bicycling and walking. For bicycling, this primarily includes a one-half mile grid of bicycle facilities, targeting gaps, barriers and new developments. For walking, this includes identification of intersections and road segments that require improvement, ranging from the installation of sidewalks, signal re-timing or crosswalk implementation, to pedestrian bridges or traffic calming measures. This chapter presents the recommended improvements to Oxnard's bicycle and pedestrian networks. Recommended facilities connect to proposed facilities in the County of Ventura where possible. This Plan does not recommend any changes to the Oxnard City Code.

5.1 Bicycling Facilities

The proposed bicycle network includes Class I, II and III improvements (i.e. multi-use paths, bike lanes, and bicycle boulevards and routes). City of Oxnard design standards for bicycle facility types is detailed in the plan's design guidelines located in *Appendix A: Design Guidelines*. The 2011 plan contains 30.5 miles of proposed Class I facilities, 40.7 miles of proposed Class II facilities, and 52.0 miles of proposed Class III facilities, which includes 13.9 miles of proposed bicycle routes and 38.1 miles of proposed bicycle boulevards. See **Map 5-1** for a map of the proposed bicycle network.

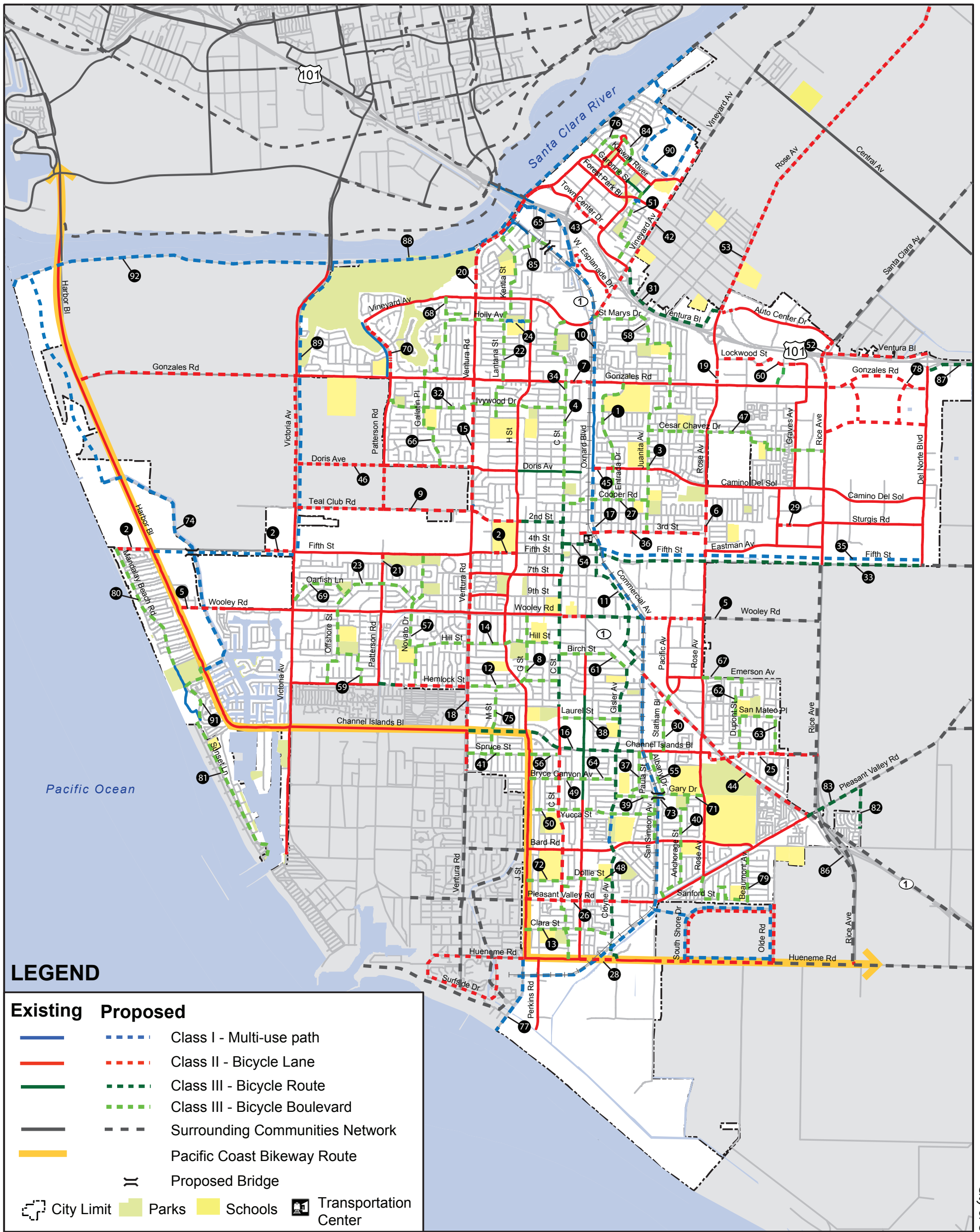
5.1.1 Multi-Use Paths (Class I)

Table 5-1 summarizes the proposed bicycle path improvements. Paths can offer connections where roads fail to connect. This is especially useful for Oxnard where neighborhood roads exhibit a closed network for auto traffic. Bicycle paths can also act as major arterials of connectivity. For example, four of the proposed paths combine to form a continuous north-south route through the city from the Santa Clara River in the north to the Pacific Ocean in the south. These four trails are (1) N. Ventura Rd-Wagon Wheel Rd path (2) Rail with Trail North path, (3) Rail with Trail South path, and (4) J Street Drain Path. City of Oxnard standards for bicycle lanes can be found in *Appendix A: 1.2 Design of Multi-use Paths (Class I)*.

A number of the proposed paths already exist for pedestrians. Further enhancement to accommodate bicyclists may involve right of way widening or striping for mode-separation. Additional proposed Class I facilities include bicycle and pedestrian bridges that will provide access across major barriers. For example, the Gary Drive Flood Channel Bridge will provide an improved direct connection for neighborhood residents to parks and schools across the flood control channel.

Table 5-1: Proposed Multi-Use Paths

Full Name	From	To	Class	Mileage
5th Street	Harbor Blvd	Victoria Ave	I	1.2
5th Street	Oxnard Blvd	Del Norte Blvd	I	2.7
Detroit Dr Connection	Detroit Dr	Forest Park Blvd	I	0.1
Edison Canal*	West of Harbor Blvd (at North City Limit)	Harbor Blvd via Eastbourne Bay	I	4.1
Holly Ave	Rhonda St.	N. H St.	I	0.2
J Street Drain Path	Hueneme Rd	South City Limits	I	0.6
N. Ventura Rd-Wagon Wheel Rd	Existing Class I (on N. Ventura Rd)	Oxnard Blvd at Esplanade Dr	I	1.1
River Park Loops	Santa Clara River Trail	Santa Clara River Trail	I	2.2
I-C1 (UPRR/Oxnard Blvd)	Camino Del Sol	Perkins Rd/J Street Canal	I	5.3
I-C2 (UPRR/Oxnard Blvd)	Village Development	Martin Luther King Jr Dr	I	1.5
Santa Clara River Trail East	Victoria Ave	Central Ave	I	4.0
Santa Clara River Trail West*	Harbor Blvd/Pacific Ocean	Victoria Ave	I	2.3
South Shore Extension**	Rail With Trail – South	Rail with Trail – South (loop via South Shore Dr and Olde Rd)	I	2.7
Victoria Ave*	Santa Clara River	5th Street	I	2.5
			TOTAL	30.5
*Includes facility outside of City limits				
**Provided the South Shore Specific Plan is adopted by City Council.				



LEGEND

Existing	Proposed	
		Class I - Multi-use path
		Class II - Bicycle Lane
		Class III - Bicycle Route
		Class III - Bicycle Boulevard
		Surrounding Communities Network
		Pacific Coast Bikeway Route
		Proposed Bridge
		Parks
		Schools
		Transportation Center

Oxnard Existing and Proposed Bicycle Facilities

Oxnard, CA

Bicycle & Pedestrian Master Plan

Source: City of Oxnard
Date: February 2012



0 0.5 1 2 Miles



Map 5-1: Oxnard Existing and Proposed Bicycle Facilities

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5.1.2 Bicycle Lanes (Class II)

The bicycle lanes listed in Table 5-2 have been proposed to complete the existing bicycle lane network within Oxnard. They are mostly located on arterials and collectors. City of Oxnard standards for bicycle lanes can be found in *Appendix A: 1.3 Design of Bicycle Lanes (Class II)*.

Table 5-2: Proposed Bicycle Lanes

Full Name	From	To	Class	Mileage
2nd St	Ventura Rd	H St	II	0.4
3rd St	A St	Rose Ave	II	1.1
5th St	K St	H St	II	0.2
5th St	Mandalay Beach Rd.	Harbor Blvd	II	0.3
5th St	Victoria Ave	West to City Limit (ab. 1300' west of Victoria Ave)	II	0.3
Auto Center Dr	Rose Ave	Ventura Blvd	II	0.1
C Street	Channel Islands Blvd	Pleasant Valley Rd	II	1.3
Camino Del Sol	Existing Bike Lanes (east of Oxnard Blvd)	Oxnard Blvd	II	0.2
Doris Ave	Victoria Ave	Ventura Rd	II	1.5
Esplanade Dr	Oxnard Blvd	Vineyard Ave	II	0.2
Gonzales Rd (east)	N. C St	Oxnard Blvd	II	0.2
Gonzalez Rd*	Victoria Ave	Harbor Bl	II	1.2
Gonzales-Rd (Sakioka Extension - Street A-Street B-Street C)**	Rice Ave	Del Norte Blvd	II	2.7
Hemlock St	Elsinore Ave	Ventura Rd	II	0.6
Hueneme Rd – Surfside Dr*	J St	Hueneme Rd	II	1.9
Hueneme Rd*	Existing Bike Lanes (east of Southshore Dr)	Olde Rd	II	1
Hueneme Rd	Existing Bike Lanes (east)	Existing Bike Lanes (east of Arcturus Ave)	II	0.3
Lockwood St	Existing Bike Lanes (east of Rose)	Rose Ave	II	0.8
Olde Rd*	Hueneme Rd	Sanford St	II	0.5
Oxnard Blvd	Train tracks (north)	Pleasant Valley Rd	II	1.9
Oxnard Blvd Access-E. Channel Islands Blvd*	E. Channel Island Blvd	Rice Ave	II	1
Patterson Rd	5th St	Dunkirk Dr	II	0.1
Patterson Rd*	Doris Ave	Teal Club Rd	II	0.4
Patterson Rd	W. Vineyard Ave	Gonzales Rd	II	0.6
Pleasant Valley Rd	J St.	Squires Dr	II	0.9
Rice Ave	Auto Center Dr	Gonzales Rd	II	0.4
Rice Ave*	5th St	Hueneme Rd	II	3.5

Full Name	From	To	Class	Mileage
Rose Ave	Camino Del Sol	E 5th St.	II	0.6
Rose Ave	Bike lanes on Rose Ave (end of)	Gonzales Rd	II	0.2
Rose Ave*	Auto Center Dr	Los Angeles Ave	II	3.3
Southshore Dr Loop*	Hueneme Rd	Olde Rd	II	1.1
Sturgis Rd	Lombard St	650 ft. West of Candelaria Rd	II	0.1
Teal Club Rd	Victoria Ave	Ventura Rd	II	1.5
Town Center Dr	Oxnard Blvd	RiverPark Blvd	II	0.4
Ventura Blvd	Santa Clara Ave	Del Norte Blvd	II	0.9
Ventura Rd	Highway 101	Vineyard Ave	II	1.0
Ventura Rd.	Gonzales Rd	Teal Club Rd/2nd Street	II	1.1
Ventura Rd	5th St	Teakwood St	II	1.9
Victoria Ave*	Gonzalez Rd	Teal Club Rd	II	1.1
Vineyard Ave	City Limits north	Oxnard Blvd	II	1.8
Wooley Rd	C St	Saviers Rd	II	0.2
Wooley Rd*	Richmond Ave	Rice Ave	II	1.5
Wooley Rd	Existing Bike Lanes east	Harbor Blvd	II	0.4
			TOTAL	40.7
<i>*Includes facility outside of City limits</i>				
<i>**Pending approval of the Sakioka Farms Specific Plan</i>				

5.1.3 Bicycle Routes (Class III)

Bicycle Routes are defined as facilities shared with motor vehicles. They are typically used on roads with low speeds and traffic volumes, however can be used on higher volume roads with wide outside lanes or with shoulders. Bicycle routes can employ a large variety of treatments from simple signage to complex treatments involving various types of traffic calming and/or pavement stenciling. Table 5-3 lists the proposed bicycle routes. The proposed bicycle route facilities would feature wide outside lanes, signage and/or pavement markings. City of Oxnard standards for bicycle lanes can be found in *Appendix A: 1.4 Design of Bicycle Routes (Class III)*.

Table 5-3: Proposed Bicycle Routes

Full Name	From	To	Class	Mileage
2nd St	H St	C St	III	0.4
5th St	Meta St	Del Norte Blvd	III	2.9
4th St	Meta St	C Street	III	0.3
Arcturus Ave-Cypress Rd-Cloyne St (through Johnson Creek Park)-Gisler Ave- Date St-Pine St-Commercial Ave- Meta St	Hueneme Rd	4th St	III	3.9
C St	Magnolia	Kamala St	III	1.8

Full Name	From	To	Class	Mileage
Camino Ave	Del Norte Blvd	City Limits (east)	III	0.4
Channel Islands Blvd	Ventura Rd	Existing Bike Lanes (east of Paula St)	III	1.5
Dodge Road*	Pleasant Valley Rd	Rainbow Dr	III	0.4
Hemlock St	Patterson Ave	Elsinore Ave	III	0.1
Pleasant Valley Rd*	Oxnard Blvd	Dodge Rd	III	0.5
Ventura Blvd	E Vineyard	N. Rose Ave	III	1.2
Wooley Rd	Saviers Rd	Richmond Ave	III	0.5
TOTAL				13.9

5.1.4 Bicycle Boulevards (Class III)

Table 5-4 lists the proposed bicycle boulevards. Bicycle boulevards are generally installed on minor or local roadways and feature both lane markings and traffic calming measures. The alignment for bicycle boulevards is meant to facilitate bicycling on roads with slower and or fewer cars, and on connections through residential areas. City of Oxnard standards for bicycle lanes can be found in *Appendix A: 1.4.4 Bicycle Boulevards*.

Table 5-4: Proposed Bicycle Boulevards

Full Name	From	To	Class	Mileage
Albany Dr	E. Channel Island Blvd	Gary Pl	III	0.4
Birch St-California St	C St	Date St.	III	0.6
Boston Dr-Jason Pl-Anchorage St-Berkshire St-Terrace Ave	Gary Dr.	Pleasant Valley Rd.	III	1.0
Bryce Canyon Ave	J St.	Saviers Rd	III	0.5
Bryce Canyon Ave-Thomas Ave	Saviers Rd	Cloyne St.	III	0.3
C Street	Gonzales Rd	Magnolia Ave	III	1.0
C Street	Pleasant Valley Rd	Hueneme Rd	III	0.5
Cesar Chavez Dr.-Gilbralter St -Milagro Pl-Kohala St-Latigo Ave	Juanita Ave	N. Rice Ave	III	1.6
Clara St.	J St.	Cypress Rd.	III	0.8
Colonia Ave-Sycamore St-Detroit Dr (through parkway/Class I) - Thames River Rd	RiverPark Blvd	Indus Pl	III	0.7
Dupont St-Ives Pl-Carnegie Ct-San Mateo Pl-Dupont St	Emerson Ave	Oxnard Blvd Access/Channel Islands Blvd	III	0.7
Edelweiss Ave-through Orchard Park- Ilex	W. Vineyard Ave	Gonzales Rd	III	0.7

Chapter Five | Recommended Improvements

Full Name	From	To	Class	Mileage
Dr- Carnation-Fauna Dr-C St.				
Emerson Ave	Rose Ave	Dupont St	III	0.3
Entrada Dr-Garfield Ave	E. Gonzales Rd	Cooper Rd	III	1.2
Falkirk Ave (via S Harbor Service Bl) - Mandalay Beach Rd	Harbor Blvd/Eastbourne Bay	Sunset Lane	III	0.7
G St/Hemlock St	W. Wooley Rd	Ventura Rd	III	1.0
Gary Dr	Albany Dr	N. Rose Ave	III	0.4
Guava Street	G St	C St	III	0.3
Harbor Blvd	Sunset Ln	Ocean Dr	III	0.2
Hill St	Novato Dr	C St	III	1.4
Holly Ave	Ironbark Dr.	N. H St.	III	0.1
Holly Ave.	Rhonda St.	Lantana St.	III	0.5
Keel Ave-Kelp St-Jacktar Ave-Jetty St	Offshore St.	W. Hemlock St	III	0.5
La Canada Ave - Sam Simeon Ave	Cloyne St.	Bard Rd.	III	0.7
Laurel St	C St	Gisler Ave	III	0.5
M St.	Hemlock St	Spruce St.	III	0.6
Magnolia Ave-A St-Cooper Rd	N. C St.	S. Juanita Ave.	III	0.8
Mandalay Beach Rd	W. 5th St.	Beach Way	III	1.2
Moss Landing Blvd	Garonne St	Oxnard Blvd	III	0.3
N. Vineyard Ave-St Marys Dr-Princeton Ave-Rio Lindo St	W Vineyard Ave	Snow Ave	III	0.9
Novato Dr-Hill St-McLoughlin Ave	Kite Dr	Hemlock St	III	1.1
Oarfish Ln (via Peir Walk & Pilot Way)	Victoria Ave	OffShore St	III	0.6
Oarfish Ln-Stern Ln	Offshore St	Novato	III	0.6
Offshore St- Ketch Av- Capstan Dr.	Oarfish Ln	Hemlock St	III	1.0
Outlet Center Dr	Lockwood St	Gonzales Rd	III	0.2
Paula St-Tamarac St-Fournier St	Channel Islands Blvd	La Canada Ave	III	0.4
Rhonda St-Bevra Ave-Spyglass Trail East- Gallatin Pl-Oneida Pl-Coronado Pl	Holly Ave	Doris Ave	III	1.5
River Ridge Rd-Kapalua Dr-Princeville Ln	W. Vineyard Ave	Holly Ave	III	0.3
Rosa St – B St- Dollie St.	C St.	Cloyne St.	III	0.5
Rose Ave-Sanford St-Peoria Av -Tulsa Dr- Sanford St-Beaumont Ave	Pleasant Valley Rd.	Pleasant Valley Rd.	III	1.2
San Mateo Pl-El Dorado Ave	Carnegie St	E. Channel Island Blvd	III	0.6
Snow Ave-Torero Dr-Limonero Pl-Martin Luther King Jr Dr-Juanita	Rio Lindo St.	E. 3rd St.	III	1.8
Spruce St.(east)	J St.	S. C St.	III	0.3
Spruce St.(west)	N. Ventura Rd.	J St.	III	0.5
Statham Blvd	Pacific Ave	Channel Islands Blvd	III	0.5
Sunset Ln	Mandalay Beach Rd.	Harbor Blvd	III	1.0

Full Name	From	To	Class	Mileage
Talus St-Ebony Dr-Cabrillo Way-Gina Dr-Ivywood Dr	N. Patterson Rd.	N. C St	III	1.6
Upper Bay Dr-Huneysuckle Dr-H St-Violet Way	Kentia St	Grapevine Dr	III	0.3
Van Ness Ave	J St.	C St	III	0.3
Ventura Rd-Kiawah River Dr	Garonne St	Oxnard Blvd	III	0.4
Yearling Pl-Kentia St-Indigo Pl-Lantana St-Lodgewood Way-Lakehurst	Honeysuckle Dr	Glenwood Dr	III	1.9
Yucca St	San Simeon Ave	J St	III	1.1
			TOTAL	38.1

5.1.5 Bicycle Parking

Support facilities are essential components of a bicycle system because they enhance safety and convenience for bicyclists at the end of every trip. With nearly all utilitarian and many recreational bike trips, bicyclists need secure and well-located bicycle parking. A comprehensive bicycle parking strategy is one of the most important things that a jurisdiction can apply to immediately enhance the bicycling environment.

The City of Oxnard should continue to provide short-term bicycle parking in the form of bicycle racks at all major trip attractors, including commercial and civic activity centers and transit hubs, and ensure that an adequate supply is available. The City should prioritize the installation of bicycle parking throughout the city, with particular attention directed at the following locations:

- Parks
- Schools
- Commercial/office areas
- Civic/government buildings
- Public transit stations

High-activity locations such as transit stations, offices, and major commercial districts should consider providing more secure, long-term bicycle parking options, such as bicycle lockers. Any future transit hubs and intermodal facilities could include secure bicycle parking areas as part of their design. Secure bicycle parking areas that provide services, such as bicycle rentals and repair, could be considered at major transit stations and commuter destinations.

Oxnard should also consider providing facilities for changing and storing clothes and bicycle equipment. Amenities such as lockers and showers can increase bicycle facility use, especially among active professionals.

5.1.6 Bridges

Bridges provide improvements for increased bicycle access across barriers. The proposed bridges would accommodate all non-motorized transportation modes, diverting them from busy arterials and providing safe and convenient connections. Bridges proposed as part of this plan are the Gary Place bridge, the 5th Street bridge, and the bridge from the South Bank Neighborhood over the railroad to the proposed Transit Village

Center. Widening 5th Street to accommodate travel lanes, sidewalks, and bike lanes could be an alternative to a pedestrian bridge.

5.2 Pedestrian Facilities

Pedestrian-oriented improvements were identified through a two-step process. The needs analysis model provided a high level survey of city-wide pedestrian activity. City staff worked closely with the consultant team to determine pedestrian areas that lacked facilities such as sidewalks or posed safety concerns. Improvements were categorized into corridors, intersections, and pedestrian bridges. **Map 5-2** illustrates where these improvements are located and **Table 5-5** defines in detail the specific location of recommended improvements.

5.2.1 Corridor Improvements

Corridor improvements are important because they enhance mobility and aid in a city’s compliance with the American Disabilities Act (ADA). City-level policies can also mandate the implementation of corridor facilities in new development that exceed ADA compliance. Mobility enhancements on corridors include installing new sidewalks, replacing or upgrading older sidewalks, and putting in crossings to help pedestrians reach their destinations.

5.2.2 Intersection Improvements

Intersection improvements are also necessary to enhance mobility and comply with ADA. Upgrading intersections increases the connectivity of the pedestrian network by linking corridors. Intersection enhancements include truncated domes at intersection crosswalks, audible crossing signals, countdown timer signals, pedestrian refuge islands, and curb ramps for wheelchair access.

5.2.3 Bridges

Bridges provide improvements for increased pedestrian access across specific barriers such as railroads. The proposed bridges would accommodate all non-motorized transportation modes, diverting them from busy arterials and providing safe and convenient connections.

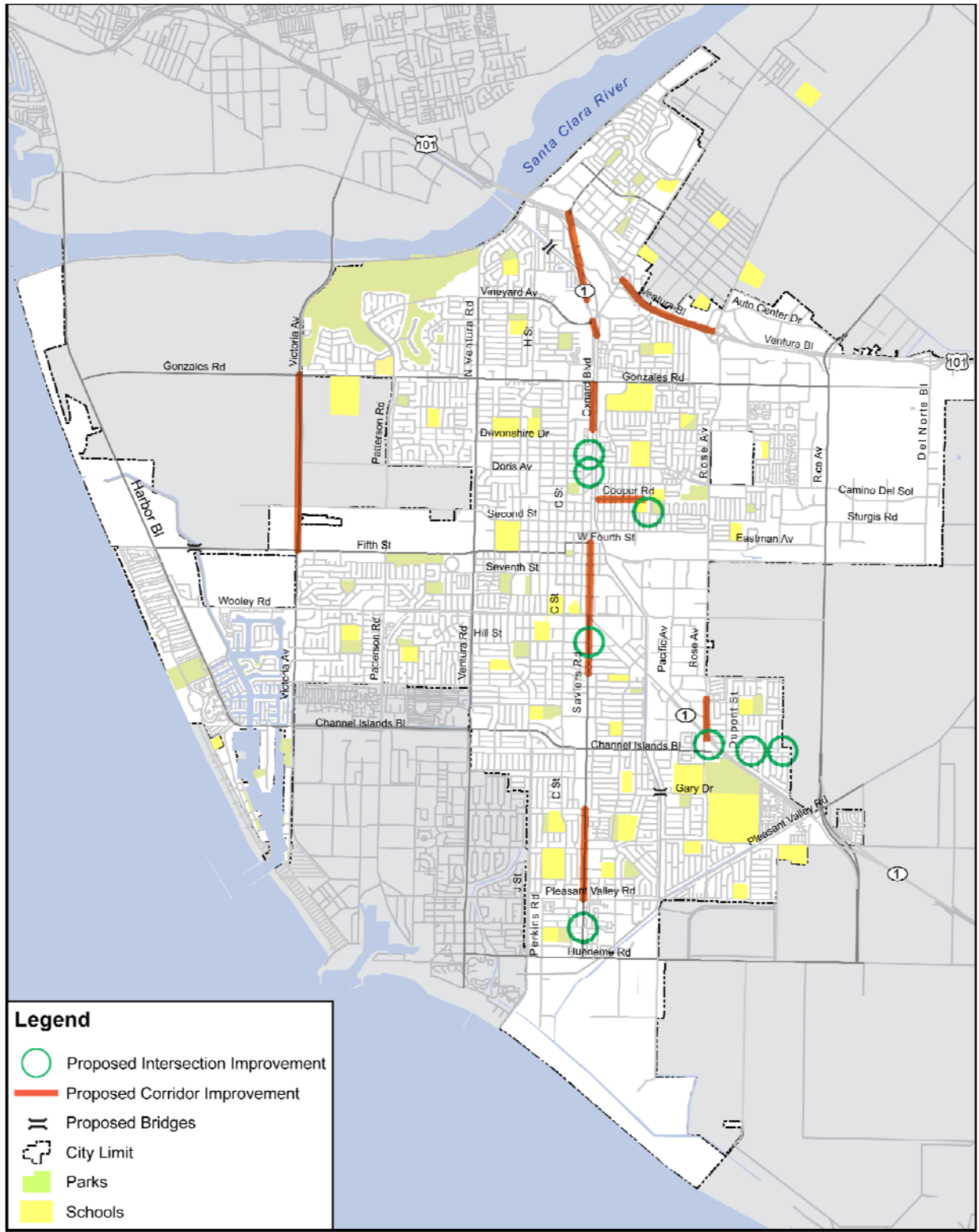
Table 5-5: List of Proposed Pedestrian Facilities

Corridors			
Full Name	From	To	Mileage
Cooper Rd	Hayes Ave	Juanita Ave	0.33
Oxnard Blvd	South of Vineyard	Oxnard Service Rd.	0.07
Oxnard Blvd	Gonzales Rd	A St	0.40
Oxnard Blvd	Orchard Pl	101 Overpass	0.65
Rose Ave	Oxnard Blvd	Ives Blvd	0.24
Saviers Rd	Bard Rd	Yucca	0.34
Saviers Rd	Bard Rd	Pleasant Valley Rd	0.4
Saviers Rd	Elm Street	4th Street	1.1
Ventura Blvd	Vineyard Ave	Rose Ave	1.0
Victoria Ave	Gonzalez Rd	5th St	0.9

Corridors			
Full Name	From	To	Mileage
TOTAL			5.43

Intersections		
Street 1	Street 2	Street 3
A St	Deodar	
A St	Roderick	
Channel Islands Blvd	Merced	El Dorado
Channel Islands Blvd	Olds	
Juanita Ave	1st St	
Oxnard Blvd	Channel Islands Blvd	Rose Ave
Saviers Rd	Hill (north)	
Saviers Rd	Clara	

Bridges
Gary Pl Bridge
5 th St Bridge over Channel
South Bank Neighborhood over railroad to Proposed Village Transit Center.
<i>*Widening 5th Street to accommodate travel lanes, sidewalks, and bike lanes is an alternative to a pedestrian bridge</i>



Oxnard Proposed Pedestrian Improvement Areas

Oxnard, CA
 Bicycle & Pedestrian Master Plan

Sources: City of Oxnard
 Author: EMD/JH
 Date: 3/14/11



Map 5-2: Oxnard Proposed Pedestrian Improvement Areas

5.3 Existing Bicycle Lane Enhancements

As part of the scope of work of this plan, MNS Engineers conducted a review of existing bike lanes in the City of Oxnard to identify areas where facility upgrades could be made to enhance the safety or functionality of the facility. In addition, staff from the City of Oxnard participated in bike audits of the existing bike lanes and made recommendations based on the proposed bike lane standards.

5.3.1 Methodology

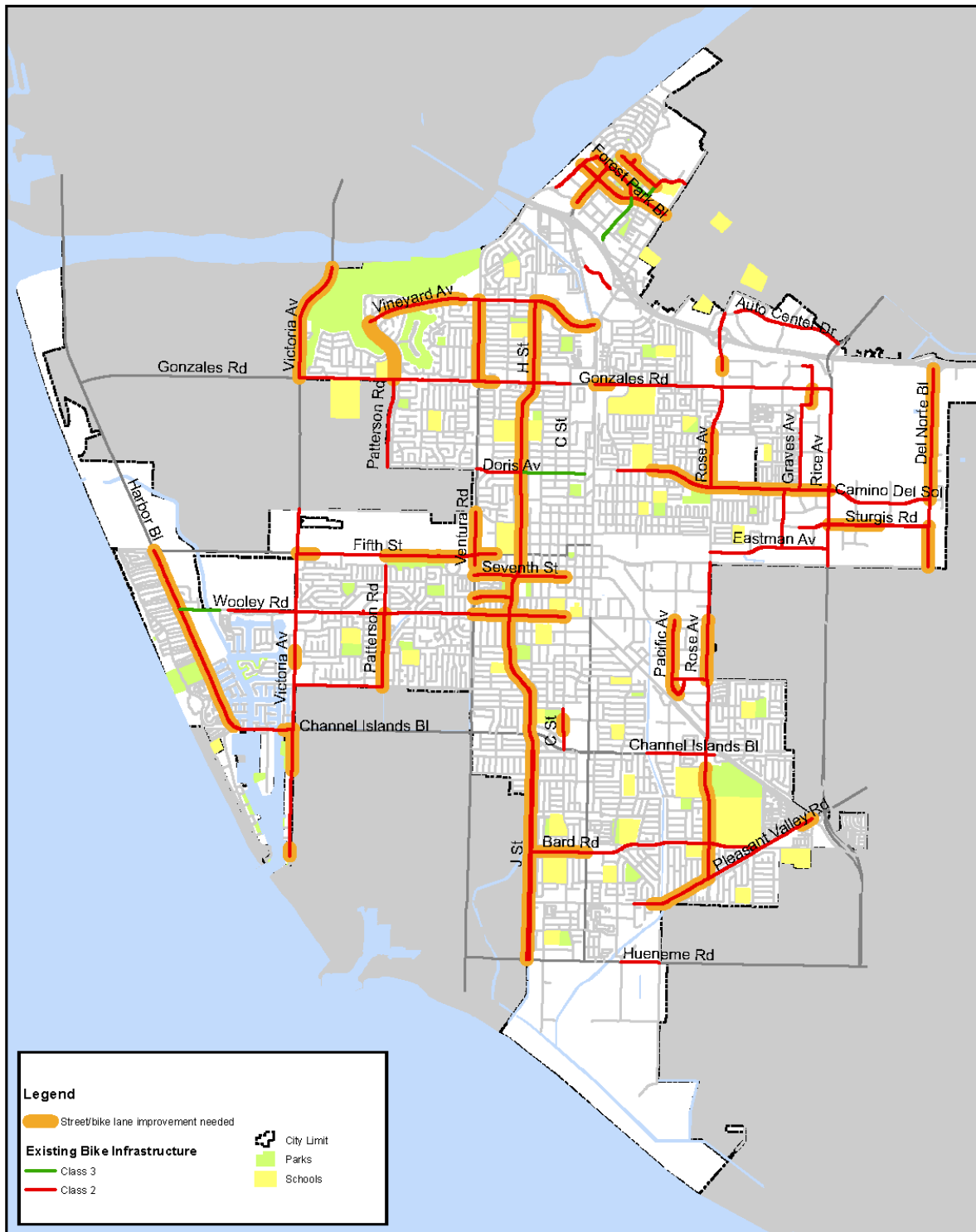
The safety review conducted included the following elements:

- A review of all of the existing bike lanes for compliance with the proposed bike lane standards outlined in *Appendix C*;
- Recommend modifications with generalized cross sections (if any are required);
- Discussion of bike lane options at intersections;
- Planning level cost estimates for any recommended changes.

5.3.2 Results

MNS Engineers recorded 106 miles of bike lanes and intersection enhancement recommendations. The estimated cost for the improvements is approximately \$4.2 million. Enhancements identified include striping bike lanes to close gaps, delineating parking areas, adding 'Bike Lane' stencils, removing on-street parking, and widening bike lanes.

Map 5-3 depicts the areas in need of improvement. See *Appendix C: Safety Review* for the detailed list of improvements needed and itemized cost estimates.



Oxnard Areas of Improvement Needed to Existing Facilities

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: EMD
 Date: 2/24/12



Map 5-3: Existing Bike Lane Enhancement Corridors

5.4 Recommended Policies and Programs

This section contains recommended enforcement, education and awareness policies and programs for Oxnard. Creating a city that supports and encourages its residents to bicycle and walk involves more than just infrastructure and amenity improvements.

5.4.1 Enforcement Policies and Programs

Motorists, pedestrians and bicyclists alike can be unaware of each other’s rights as they travel. Educating the public through enforcement policies will supplement the physical improvements made in Oxnard.

Targeted enforcement action should be focused in areas with high bicycle and pedestrian volumes or where non-motorized traffic is particularly high (e.g., Downtown Oxnard, Mandalay Beach Path, and Oxnard Transportation Center). Law enforcement efforts should be targeted at locations where motorists and the general public will become aware of bicycle/pedestrian laws and their penalties. It is recommended that such targeted enforcement occur at least four times per year and last one week. Focused enforcement should also take place at the start of the school year at selected schools near their primary access points by walking and bicycling children.



Police visibility encourages safe behavior.

Coordination between the Oxnard Police Department and City staff will ensure that enforcement activities are conducted at strategic locations and where public feedback warrants focused efforts. The Oxnard Police Department should also be surveyed for input on appropriate educational material, advisory and warning signs, and other tools to help them accomplish their mission.

Pedestrians and bicyclists are protected in the public right-of-way by the California Vehicle Code, as enforced by the Oxnard Police Department. For a review of Oxnard City Ordinances affecting bicyclists and pedestrians, please refer to Table 3-1.

5.4.1.1 Bicycle Patrol Unit

Oxnard may want to work with its Police Department and with local businesses and neighborhood groups to establish additional local Bicycle Patrol Units. The city’s size and topography make many parts of it highly accessible by bicycle. A Bicycle Patrol Unit may be an official law enforcement unit, a private security guard patrol, or a volunteer network. Bicycles are an excellent community-policing tool, as officers on bikes are often viewed as more approachable, thus improving trust and relations between the citizens and police.



Bicycle Patrol Units police areas of the community accessible by bicycle.

Bicycle patrol units can work closely with citizens to address concerns before they become problems. Bicycle patrol units can have a direct impact on bicycle and pedestrian safety by enforcing bicycle traffic laws (e.g., wrong-way riding, sidewalk riding, obeying traffic controls, children wearing helmets etc.), enforcing pedestrian laws (e.g. use of crosswalks, obeying pedestrian countdown signals, etc.) and providing bicycle and pedestrian safety education. Additional resources for a police education course can be found at:

- www.bicyclinginfo.org/enforcement/training.cfm
- www.massbike.org/police

5.4.1.2 Speed Limit Enforcement

City staff can work with police to enforce speed limits on designated bikeways near schools and in response to cyclist/pedestrian complaints. This increases safety and reduces crashes, which decreases barriers to walking and bicycling.

5.4.1.3 Speed Radar Trailer

Speed radar trailers can be used to reduce speeds and enforce speed limit violations in areas with speeding problems. In these areas, police set up an unmanned trailer that displays the speed of approaching motorists along with a speed limit sign. Speed trailers may be effective on busier arterial roads where bikeway facilities currently do not exist or near schools where speeding has been reported.



Speed trailer in use.

Speed trailers may be used as both an educational and an enforcement tool. By itself, the unmanned trailer serves as effective education to motorists about their current speed in relation to the speed limit. As an alternative enforcement measure, the Oxnard Police Department may choose to station an officer near the trailer to issue citations to motorists exceeding the speed limit. Because they can be easily moved, radar trailers are often brought to streets where local residents have complained about speeding problems. If frequently left in the same location without officer presence, motorists may learn that speeding in that location will not result in a citation and increase their speeds.

City staff may provide the management role for this program to work with the public and determine which locations are in most need. Because of the portability of speed trailers, this program can be used at random, cyclically, or as demand/public opinion necessitates.

5.4.2 Education Policies and Programs

City staff can complement bicycle and pedestrian facilities with effective education programs and policies to promote biking and walking. Education programs ensure that bicyclists, pedestrians and motorists know how to travel safely and understand the regulations that govern these modes of transportation. They also increase the public awareness of bicycling and walking as means of transportation and increase public support for policies that promote safe walking and biking.

5.4.2.1 Share the Road Campaign

A Share the Road campaign is intended to educate motorists, bicyclists and pedestrians about their legal rights and responsibilities on the road, and the need to increase courtesy and cooperation to improve safety. The campaign targets not just youth, but all residents and visitors to a community. The Oxnard Police Department, the Ventura County Bicycle Coalition and other partners should work together to develop a Share the Road Campaign. To establish a Share the Road campaign, the city should:

- Develop Share the Road flyers, one targeting bicyclists and pedestrians and one targeting motorists, which outline safe and courteous behavior, collision reporting procedures and local bicycling resources and hotlines.
- Hold periodic traffic checkpoints during months with high bicycling and walking rates. At checkpoints, motorists, bicyclists and pedestrians are stopped, given a Share the Road flyer and have the opportunity to provide feedback to officers regarding the campaign ideas. Checkpoints could be held along local bikeways such as the Ventura Rd Bicycle Path.
- Create public service announcements on radio and TV to promote the Share the Road campaign, including publicity about the Share the Road checkpoints. Promote the campaign on the City's website.
- Develop public PowerPoint presentations with the Share the Road message for presentation to the public.
- Develop adult bicycle safety classes to teach how to properly share the road and hold them at regular intervals.
- Develop driver education classes to teach motorists how to share the road with bicyclists and hold them at regular intervals



Bicycle Safety Class.

5.4.2.2 Continue and Expand Bicycle and Pedestrian Education Programs

The City should continue and expand bicycle and pedestrian education programs through the existing Safe Routes to School program. The City's role in the Safe Routes to School process is to provide resources to support school-based Safe Routes to School stakeholder teams and to provide assistance in funding, construction, and program implementation. An effective Safe Routes to School will require technical support and implementation assistance from Oxnard's Public Works Department, Planning Department, and Police Department. Public Works and Planning personnel trained in engineering, traffic management and innovative bicycle and pedestrian treatments and programs can work with schools to determine the best way to improve school area bicycle and pedestrian safety.

To help identify locations to improve bicycling and walking around schools and determine where to implement educational programs, the City should work with each school to collect the information presented in Table 5-6.

Table 5-6: Safe Routes to School Information Gathering

Information	Ways to Gather
Walking and biking conditions around school	Mapping Walkabouts with parents, teachers, bicycle and pedestrian engineers
Traffic conditions around school	Traffic counts Speed monitoring
Drop-off/pick-up conditions	Observations during drop-off and pickup
High-priority issues	Public stakeholder meetings Parent surveys
School signage and pavement marking conditions	Sign inventory conducted with the assistance of a traffic engineer to ensure signage meets state MUTCD standards
Number of children who walk or bike to school	Student surveys Parent surveys In-classroom surveys/ hand counts
Attitudes toward biking and walking to school	Student surveys Parent surveys In-classroom surveys
Barriers to biking and walking to school	Student surveys Parent surveys Walkabouts
School policies that encourage or hinder biking and walking to school	Meetings with teachers, school officials and school district officials

To complement the City’s current Safe Routes to School programs, Oxnard should consider developing an educational program for bicyclists and pedestrians and working with the school districts to incorporate this type of safety class into the school curriculum. Typical school-based bicycle and pedestrian education programs educate students about the rules of the road, proper use of bicycle equipment, biking skills, street crossing skills, and the benefits of biking and walking. These types of education programs are usually sponsored by a joint City/school district committee that includes appointed parents, teachers, student representatives, administrators, police, active bicyclists and engineering department staff.

Classroom educational materials should be presented in a variety of formats (safety videos, printed materials, and classroom activities), and should continually be updated to make use of the most recent educational tools available. Classroom education programs should also be expanded to promote the health and environmental benefits of bicycling and walking. Outside schools, educational materials should be developed for different audiences, including elected officials (describing the benefits of and need for a SR2S program), parents (proper school drop-off procedures, obeying speed limits near school, yielding to bicyclists and pedestrians and safety for their children) and neighbors (keeping pedestrian ways clear, obeying speed limits, yielding to

bicyclists and pedestrians). Educational programs should be linked with events and incentive programs when appropriate, and students should be included in task force activities, such as mapping locations for improvements. The City may want to consider working with local bicycle advocacy groups, as well as the School Districts, to develop a standard safety handbook and make it available to each school in a digital format for customization.

Education need not be limited to younger children. Oxnard should also offer bicycle safety classes for adults, such as those that teach how to share the road as mentioned above. The City may consider working with the Oxnard Police Department to utilize adult bicycle and pedestrian education programs such as a “bicycle/pedestrian traffic school” in lieu of fines for bicycle or pedestrian-related traffic violations. These courses could be geared toward motorists as well, for drivers involved in collisions with bicyclists or pedestrians.

5.4.2.3 Provide Safety Handbook

Safety handbooks are generally developed as part of a school-based bicycle and pedestrian safety program. Handbooks and educational programs for adults are also available from the League of American Bicyclists, and bicycle coalitions around the country. Handbooks may include a circulation map of the campus and immediate neighborhood showing the preferred circulation and parking patterns, suggested routes to school, locations of crosswalks, crossing guards and signalized intersections, instructions for bicycle maintenance and use, instructions for fitting and wearing a helmet, instructions for crossing the street, use of hand signals, rules of the road, city ordinances regulating bicycling, and lists of emergency and school numbers. A general handbook can be published by the City and used by each school in conjunction with the school-specific map.

5.4.2.4 Educate Motorists, City Staff, Maintenance and Construction Crews

Bicycle and pedestrian related education should be targeted towards motorists, City staff, developers and others who directly or indirectly affect the biking and walking environment. Information regarding the rights of bicyclists and pedestrians and the rules of the road are especially important. As an example of a common misconception due to lack of education, many motorists mistakenly believe that bicyclists do not have a right to ride in travel lanes or that bicyclists should only ride on sidewalks. This is something that can be prevented or remedied with education about the rights and responsibilities of pedestrians and bicyclists. This education may include:

- Incorporating bicycle and pedestrian safety into traffic school curriculum;
- Producing a brochure on bicycle and pedestrian safety and laws for public distribution;
- Enforcing traffic laws for bicyclists;
- Providing training in bicycle and pedestrian planning for all City planners;
- Working with contractors, subcontractors, and City maintenance and utility crews to ensure they understand the needs of bicyclists and pedestrians and follow standard procedures when working on or adjacent to roadways and walkways.

5.4.2.5 Create a Multi-Modal Access Guide

A multi-modal access guide provides concise customized information on how to access specific destinations with emphasis on biking, walking, and public transit. Access guides can be as simple as a map printed on the

back of a business card or as complex as a multi-page packet distributed to employees. Some items commonly included in access guides are:

- A map of the area with rail and bus stops, recommended walking and biking routes, nearby landmarks, facilities such as restrooms and drinking fountains, locations of bicycle and vehicle parking and major roads.
- Information on transit service including: frequency, fares, accepted methods of payment, first and last runs, schedules, phone numbers and websites of transit service providers and taxis.
- Information on how long it takes to walk or bike from a transit station to a destination.
- Accessibility information for people with disabilities.

Best practices include using graphics, providing specific step-by-step travel directions, providing parking locations and pricing information, and providing information about the benefits of walking and biking. High-quality access guides should be concise, accurate, and incorporate input from key stakeholders, including public transportation operators, public officials, employees, staff who will be distributing the access guide, and those with disabilities. Access guides are usually developed by facility managers, employers, or Transportation Management Associations.

5.4.2.6 System Identification (Wayfinding)

System identification creates greater awareness of the bicycle and pedestrian network and provides wayfinding assistance for cyclists and walkers. System identification usually begins with the identification of a series of bicycle and pedestrian routes, development of a unique logo and facility signage, and development of a network map. Signage may also include informational kiosks, directional signage pointing out destinations, and mileage indicators. System identification plans are usually implemented and maintained by the City.

The City should begin its system identification on its high priority projects (see Chapter 6). Development of a user map can be an excellent way to identify and publicize key routes throughout the City.



Example trailhead marker on the Santa Clara River Trail in the City of Santa Clarita.

5.4.2.7 Bike Light Campaign

California Vehicle Code (CVC 21201) requires bicycles to be mounted with a front white light and red rear reflectors. Bicycle lights are more visible than reflectors, enhancing the visibility of bicyclists while riding at night. To promote cooperation with the CVC and increase safe riding habits, a Bike Light campaign could be conducted in Oxnard.

Portland, Oregon developed a “See and Be Seen” public safety campaign to encourage bicyclists to use lights and to remind motorists to watch for bikes. Campaign elements included coupons for bike lights and other reflective gear and a parade to celebrate bright bikes. More information on Portland’s program is available at: www.portlandonline.com/transportation/index.cfm?&c=deibb&a=bebfjh.

5.4.3 Encouragement Programs

Strategies for community involvement in bicycle and pedestrian improvements will be important to ensure broad-based support to help secure financial resources. Involvement by the private sector in raising awareness of the benefits of bicycling can range from small incremental activities by non-profit groups, to efforts by the largest employers in the City. Specific programs are described below.

5.4.3.1 Facilitate the Development of Employer Incentive Programs

Facilitate employer incentive programs to encourage employees to try bicycling and walking to work by including such strategies as supplying bicycle lockers and shower facilities, educate employers about California parking cash out program, offering more flexible arrival & departure times, and providing fun incentives such as entry into monthly raffle contests. The City may offer incentives to employers to institute these improvements through air quality credits, lowered parking requirements, reduced traffic mitigation fees, or other means.

5.4.3.2 Event Bicycle Parking

Providing safe and secure bicycle parking helps encourage individuals to bicycle. The City of Oxnard may consider temporary bicycle parking or bike valet for events with expected large attendance and at regularly occurring events like a farmers market. Oxnard could partner with the Ventura County Bicycle Coalition to offer secure, professional, and attended bike valet services at City and private events.

5.4.3.3 Community Bikeway/Walkway Adoption

Community Bikeway/Walkway Adoption programs are similar to the widely instituted Adopt-a-Highway programs throughout the country. These programs identify local individuals, organizations, or businesses that would be interested in “adopting” a bikeway/walkway. Adopting a bikeway/walkway would mean that person or group would be responsible for maintenance of the bikeway/walkway either through direct action or as the source of funding for the City’s maintenance of that bikeway/walkway. For example, members of a local recreation group may volunteer every other weekend to sweep a bikeway/walkway and identify and address larger maintenance needs. Alternatively, a local bike shop may adopt a bikeway by providing funding for the maintenance costs. The managers of an adopted bikeway/walkway may be allowed to post their name on bikeway/walkway signs throughout the bikeway/walkway in order to display their commitment to bicycling and/or walking in Oxnard.

5.4.3.4 Work with Businesses to Develop Incentives for Biking and Walking

Incentive programs to encourage biking and walking to local businesses can be developed in coordination with individual businesses, the Chamber of Commerce, the Ventura County Bicycle Coalition and Channel Islands Bicycle Club. Such efforts may include:

- Creating promotional events such as “Bicycle to the Grocery Store” days, when bicyclists get vouchers for, or discounts on items in the store, or “Bicycle to the Video Store” days, when bicyclists receive free popcorn or a discount on a movie rental.
- Holding an annual community event to encourage residents to replace one car trip a week with a bicycle trip.

- Developing, promoting and publicizing bicycle commuter services, such as bike shops selling commute gear, bike-on-transit policies, and regular escorted commute rides.
- Creating an annual commuter challenge for area businesses.
- Encouraging and facilitating the development of small satellite business services near bicycle trailheads such as mobile cafes and stands that sell amenities such as snacks, sunscreen, Band-Aids, and trail maps. Potential locations include the Santa Clara River Trail and the trail along the Edison Canal.
- Encouraging and facilitating the development of lunchtime amenities, such as outdoor lunch areas and satellite or mobile food stations in the Industrial Center.

5.4.3.5 Commit to Becoming a Recognized Bicycle Friendly Community

The League of American Bicyclists sponsors an awards program that recognizes cities and counties that actively support bicycling. According to the League, a Bicycle Friendly Community is one that “provides safe accommodation for cycling and encourages its residents to bike for transportation and recreation.” The League recognizes four tiers of bicycle friendly communities: bronze, silver, gold and platinum. The City of Oxnard should develop an action plan to meet the League of American Cyclist’s requirements to become a Bicycle Friendly Community. The application process for being considered as a Bicycle Friendly Community involves an audit of the engineering, education, encouragement, enforcement, evaluation and planning efforts for bicycling. The League reviews the application and solicits feedback from bicyclists in the community to determine if Bicycle Friendly Status should be awarded. The League provides technical assistance and other information for cities working toward Bicycle Friendly Community status at: www.bicyclefriendlycommunity.org.



Oxnard is eligible to apply for the national Bicycle Friendly Community award program.

5.4.3.6 Develop “Walking/Biking School Bus”

If parents are uncomfortable allowing their children to walk or bicycle alone to or from school, parent or neighborhood volunteers can escort a group of children walking or bicycling to school together in a “Walking School Bus” or “Bike Train.” Children can be picked up at home along the route, or at designated staging areas. The parents offer a level of supervision and protection and the larger numbers allow the children to be more visible to traffic. Usually, one parent acts as the organizer, recruiting other parents, neighbors, seniors or community volunteers to walk or bicycle with the children. As in a carpool, the participants need to work out schedules and meeting places. Adults and children can wear safety vests or use other means to enhance visibility. Sometimes the adult pulls a wagon to carry the children’s books and projects.



Children participating in a walking/biking school bus.

5.4.3.7 Bike-to-Health Campaign

The City of Oxnard aims to support healthier lifestyles by encouraging and enabling bicycling and walking. Obesity and sedentary lifestyles are on the rise for both adults and children in America, and one way to combat this is to integrate daily exercise into American lifestyles.

A Bike-to-Health marketing campaign may include the following:

- A website used as a central location for information on getting started, events, advice from health professionals, and safety information for adults and children;
- Print ads in community newspapers to increase the exposure of the campaign;
- Promotion of the campaign through community events and rides. These rides occur during the summer and early fall months. Participants earn prizes and attain better health through reaching mileage goals. Families are encouraged to participate and bike to better health together.

5.4.3.8 Ciclovias/"Sunday Streets"

First implemented in Bogota, Colombia, the Ciclovía is a community event based around a temporary street closure. Ciclovías provide local recreational and business opportunities for the community and are increasingly popular citywide events. Ciclovías can combine with other popular community events to promote walking and bicycling as a form of viable transportation. Ideally, Ciclovías should provide access to civic, cultural, or commercial destinations.

The City of Los Angeles has hosted three ciclovias, called "CicLAvia," since October 2010. At all CicLAvia events, routes went through downtown Los Angeles. The City could develop a ciclovía in Oxnard as an opportunity to highlight some of the new bikeways once constructed.⁶

⁶ More information is available at www.ciclavía.org

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6 Prioritization Strategy

This section provides the methodology for prioritizing bicycle and pedestrian projects in the City of Oxnard. Prioritizing these projects will allow Oxnard to identify high priority projects and provide a foundation for implementation phasing. The prioritization framework builds upon the outcomes of the Needs Analysis Model from the Need Analysis in Chapter 4. Though project prioritization is meant to be a guideline for the City in the implementation phase of this plan, Oxnard can implement proposed projects outside of the prioritized ordering when appropriate. For example, striping lower priority bike lanes may be combined with street resurfacing projects to reduce costs.

6.1 Project Selection Criteria and Ranking

The criteria used to rank the bicycle and pedestrian projects are discussed below.

System Gaps and Connectivity to Existing Facilities

Facilities that fill gaps among existing facilities (especially gaps that discourage walking/biking because they limit route continuity) qualify for this priority criterion.

Attractors Model Results

The attractors model identifies popular activity areas in Oxnard. Areas of activity such as transit centers, shopping centers, commercial and industrial centers, recreation areas, schools, libraries, hospitals and government buildings are the major trip-driving destinations within Oxnard. By increasing bicycle and pedestrian accessibility to major Activity Centers, the City of Oxnard Bicycle & Pedestrian Master Plan can reduce traffic congestion and support Oxnard residents and visitors who choose to bicycle or walk for transportation. Projects located within the most popular activity areas qualify for this prioritization criterion.

Generators Model Results

Population density is used to gauge the potential volume of bicyclists and pedestrians. Projects located within the most dense activity areas fit this priority criterion.

Detractors Model Results

The detractors model identifies the areas in Oxnard that are likely to discourage or detract people from walking or bicycling. Proposed facilities that can reduce the frequency of bicycle/pedestrian and vehicle collisions by serving areas with high volumes of such occurrences fit this priority criterion.

City Input

Projects with City input are those that have been previously considered by the City as desirable. Per the scope of this project, the Plan did not include an existing sidewalk survey, and therefore was more difficult to model. To address this, the City provided input based on project readiness and synergy of development in the vicinity. This criterion applies only to pedestrian projects.

Each of the five criteria contains elements of a project's value to the bicycle and pedestrian network. Ranking the criteria establishes which factors have greater influence over prioritization. Each criterion was ranked and then given a weight according to the rank. Table 6-1 defines the rank and weight for each criterion.

Table 6-1: Criteria Rank and Weight

Rank	Criteria	Weight
1	System Gaps & Connectivity to Existing Facilities	3
2	Attractors	3
3	Generators	2
4	Detractors	2
5	City Input (Pedestrian Only)	1

Each pedestrian and bicycle facility was grouped into a project area and analyzed under the five criteria and scored based upon their compliance with the ranking priorities. The following pages contain a breakdown of the scoring weights, as well as the complete pedestrian and bicycle project prioritization, sorted from highest scoring projects to the lowest.

Table 6-2: Bicycle Criteria Scoring Description

Criteria	Score	Multiplier	Total Possible Score	Description
Connectivity	2	3.0	6	Directly connects to more than one existing bicycle facility
	1	3.0	3	Directly connects to at least one existing bicycle facility
	0	3.0	0	Does not connect any existing bicycle facility
Attractors: -Transit -Shopping Centers -Commercial Centers -Recreation -Schools, Libraries, Hospitals & Government	2	3.0	6	Located in an area of high demand according to the attractors model
	1	3.0	3	Located in an area of medium demand according to the attractors model
	0	3.0	0	Located in an area of low demand according to the attractors model
Generators	2	2.0	4	Located in an area of very high demand according to the generators model
	1	2.0	2	Located in an area of high demand according to the generators model
	0	2.0	0	Located in an area of medium to low demand according to the generators model
Detractors: -Collisions -High Speeds -High Traffic Volume	2	2.0	4	Located in an area with many detractors to bicycle activity
	1	2.0	2	Located in an area with moderate detractors to bicycle activity
	0	2.0	0	Located in an area with few detractors to bicycle activity

Table 6-3: Pedestrian Criteria Scoring Description

Criteria	Score	Multiplier	Total Possible Score	Description
Connectivity	2	3.0	6	Closes a sidewalk gap by connecting to existing sidewalks on both sides
	1	3.0	3	Partially closes a sidewalk gap by connecting to an existing sidewalk on one side
	0	3.0	0	Does not close a sidewalk gap
Attractors: -Transit -Shopping Centers -Commercial Centers -Recreation -Schools, Libraries, Hospitals & Government	2	3.0	6	Located in an area of high demand according to the attractors model
	1	3.0	3	Located in an area of medium demand according to the attractors model
	0	3.0	0	Located in an area of low demand according to the attractors model
Generators	2	2.0	4	Located in an area of very high demand according to the generators model
	1	2.0	2	Located in an area of high demand according to the generators model
	0	2.0	0	Located in an area of medium to low demand according to the generators model
Detractors: -Collisions -High Speeds -High Traffic Volume	2	2.0	4	Located in an area with many detractors to pedestrian activity
	1	2.0	2	Located in an area with moderate detractors to pedestrian activity
	0	2.0	0	Located in an area with few detractors to pedestrian activity
City Input	1	1.0	1	City previously considered
	0	1.0	0	Not previously considered by City

6.2 Prioritization Tables

Table 6-4: Bicycle Project Prioritization and Table 6-5 present the proposed bicycle and pedestrian projects according to their scored ranking. It should be noted that proposed bicycle facilities outside city limits are not included in the prioritization table unless portions of the project lie within city limits and proposed bridge projects are included only in the bicycle project prioritization. The following acronyms are used in Table 6-4 to describe bikeway types:

- MUP= Class I Multi-use Path
- BL = Class II Bike Lane
- BR = Class III Bike Route
- BB= Class III Bike Boulevard.

The following acronyms are used in Table 6-5 to describe pedestrian facility types:

- I=Intersection
- C=Corridor

Map 6-1 and Map 6-2 display the proposed bicycle and pedestrian projects according to the Project ID numbers on the following tables.

Table 6-4: Bicycle Project Prioritization

Project ID	Bikeway Type	Project Name	From	To	Connectivity	Attractors	Detractors	Generators	TOTAL
				WEIGHT	3	3	2	2	
1	BB	Entrada Dr-Garfield Ave	E. Gonzales Rd	Cooper Rd	2	2	2	2	20
2	BL/MUP/ Bridge	5th St	Mandalay Beach Rd.	H St	2	2	2	2	20
3	BB	Snow Ave-Torero Dr-Limonero Pl- Martin Luther King Jr Dr-Juanita	Rio Lindo St.	E. 3rd St.	2	2	1	2	18
4	BL/BR/BB	C Street-Canterbury Way -Courtland St	Gonzales Rd	W. Hueneme Rd	2	2	1	2	18
5	BL/BR	Wooley Rd* **	Harbor Blvd	Rice Ave	2	2	2	1	18
6	BL	Rose Ave	Camino Del Sol	E 5th St.	2	2	2	0	16
7	BL	Gonzales Rd (east)*	N. C St.	Oxnard Blvd	2	2	2	0	16
8	BB	G St	W. Wooley Rd	Guava St.	2	2	1	1	16
9	BL/BR	Teal Club Rd-2nd St.	Victoria Ave	N. C St	2	2	1	1	16
10	MUP	I-C2 (UPRR/Oxnard Blvd)	Village Development	Martin Luther King Jr Dr	2	2	2	0	16
11	BB/MUP	Arcturus Ave-Cypress Rd-Cloyne St (through Johnson Creek Park)-Gisler Ave-Date St-Pine St-Commercial Ave-Meta St	Hueneme Rd	4th St	2	1	1	2	15
12	BL/BB/BR	Hemlock St-Guava St	Patterson Rd	C St	2	1	1	2	15
13	BB	Clara St.	J St.	Cypress Rd.	2	1	1	2	15

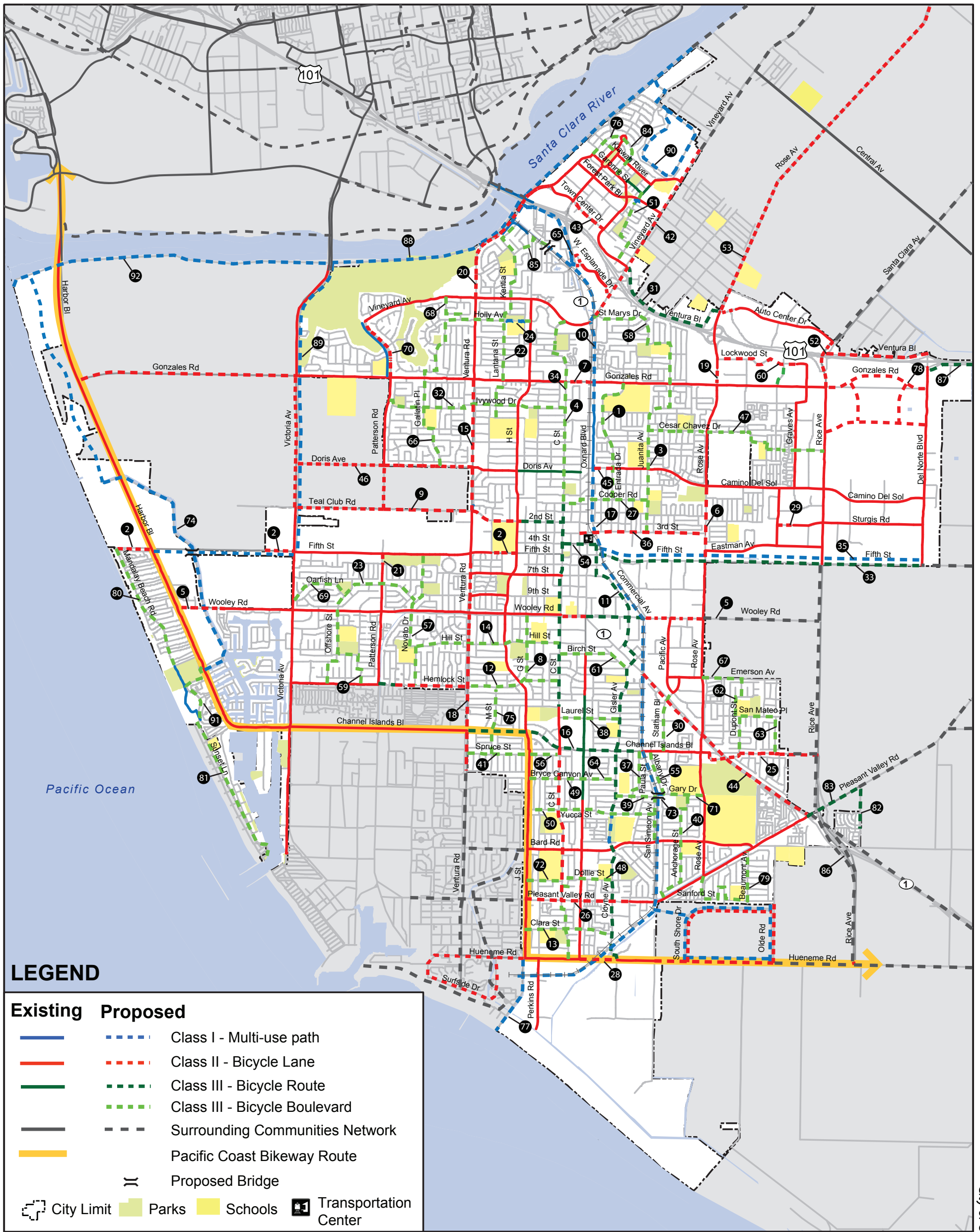
Project ID	Bikeway Type	Project Name	From	To	Connectivity	Attractors	Detractors	Generators	TOTAL
				WEIGHT	3	3	2	2	
14	BB	Hill St	Novato Dr	C St	1	2	1	2	15
15	BL	Ventura Rd	Gonzales Rd	Teal Club Rd/2nd St	2	1	1	2	15
16	BR	Channel Islands Blvd	Ventura Rd	Paula St	1	1	2	2	14
17	MUP	I-C1 (UPRR/Oxnard Blvd)	Camino Del Sol (south)	Perkins Rd/J Street Canal	0	2	2	2	14
18	BL	Ventura Rd	5th St	Teakwood St	1	1	2	2	14
19	BL	Rose Ave	Bike Lanes on Rose Ave (end of)	Gonzales Rd	2	1	2	0	13
20	BL	Ventura Rd.	Highway 101	W. Vineyard Ave	2	1	1	1	13
21	BL	Patterson Rd	5th St	Dunkirk Dr	2	1	2	0	13
22	BB	Yearling Pl-Kentia St-Indigo Pl-Lantana St-LodgeWood Way-Lakehurst	Honeysuckle Dr	Glenwood Dr	2	1	0	2	13
23	BB	Offshore St-Ketch Ave- Capstan Dr.-Oarfish Ln	Novato Dr	Hemlock St	2	1	1	1	13
24	BB/MUP	Holly Ave	Rhonda St.	N. H St.	2	1	1	1	13
25	BL	Oxnard Blvd Access-E. Channel Islands Blvd	E. Channel Island Blvd	Rice Ave	1	1	1	2	12
26	BL	Pleasant Valley Rd	J St.	Squires Dr	1	1	1	2	12
27	BB	Magnolia Ave-A St-Cooper Rd	N. C St.	S. Juanita Ave.	0	2	1	2	12
28	BL	Hueneme Rd	Saviers Rd	Arcturus Ave	2	1	1	0	11
29	BL	Sturgis Rd	Lombard St	Candelaria Rd	2	1	1	0	11

Project ID	Bikeway Type	Project Name	From	To	Connectivity	Attractors	Detractors	Generators	TOTAL
				WEIGHT	3	3	2	2	
30	BB	Statham Blvd	Pacific Ave	Channel Islands Blvd	2	1	1	0	11
31	BR	Ventura Blvd	E Vineyard	N. Rose Ave	2	1	1	0	11
32	BB	Talus St-Ebony Dr-Cabrillo Way-Gina Dr-Ivywood Dr	N. Patterson Rd.	N. C St	2	1	0	1	11
33	BR	5th Street	Meta St.	Del Norte Blvd	1	2	1	0	11
34	BB	Edelweiss Ave-through Orchard Park-Ilex Dr-Carnation-Fauna Dr-C St.	W. Vineyard Ave	Gonzales Rd	2	1	1	0	11
35	MUP	5th Street	Oxnard Blvd	Del Norte Blvd	0	2	2	0	10
36	BL	3rd St	A St	Rose Ave	0	2	0	2	10
37	BB	Paula St-Tamarac St-Fournier St	Channel Islands Blvd	La Canada Ave	1	1	1	1	10
38	BB	Laurel St	C St	Gisler Ave	1	1	1	1	10
39	BB	La Canada Ave - Sam Simeon Ave	Cloyne St.	Bard Rd.	1	1	1	1	10
40	BB	Boston Dr-Jason Pl-Anchorage St-Berkshire St-Terrace Ave	Gary Dr.	Pleasant Valley Rd.	2	0	1	1	10
41	BB	Spruce St.(west)	N. Ventura Rd.	J St.	1	1	1	1	10
42	BL	Vineyard Ave	Oxnard Blvd	North City limits	1	1	2	0	10
43	BL	Town Center Dr	Oxnard Blvd	River Park Blvd	2	1	0	0	9
44	BL	Oxnard Blvd	Train tracks	Pleasant Valley Rd	0	1	2	1	9
45	BL	Camino Del Sol	Existing Bike Lanes west	Oxnard Blvd	1	2	0	0	9
46	BL	Doris Ave	Ventura Rd	Victoria Ave	2	1	0	0	9

Project ID	Bikeway Type	Project Name	From	To	Connectivity	Attractors	Detractors	Generators	TOTAL
				WEIGHT	3	3	2	2	
47	BB	Cesar Chavez Dr.-Gibraltar St-Milagro Pl-Kohala St-Latigo Ave	Juanita Ave	N. Rice Ave	2	1	0	0	9
48	BB	Rosa St -B St-Dollie St.	C St.	Cloyne St.	0	1	1	2	9
49	BB	Bryce Canyon Ave	J St.	Saviers Rd	0	1	2	1	9
50	BB	Yucca St	J St.	San Simeon St	0	1	2	1	9
51	BB/MUP	Colonia Ave-Sycamore St-Detroit Dr-(through parkway/Class I)-Thames River Rd	Riverpark Blvd	Indus Pl	2	1	0	0	9
52	BL	Rice Ave-Ventura Blvd	Auto Center Dr	Gonzales Rd/Del Norte Blvd	2	0	1	0	8
53	BL	Rose Ave-Auto Center Dr	Los Angeles Ave	Ventura Blvd	1	1	1	0	8
54	BR	4th St	C. St	Meta St	0	2	1	0	8
55	BB	Albany Dr	E. Channel Island Blvd	Gary Pl	1	1	1	0	8
56	BB	Spruce St.(east)	J St.	S. C St.	1	1	0	1	8
57	BB	Novato Dr-Hill St-McLoughlin Ave	Kite Dr	Hemlock St	1	1	0	1	8
58	BB	N. Vineyard Ave-St Marys Dr-Princeton Ave-Rio Lindo St	W Vineyard Ave	Snow Ave	1	1	1	0	8
59	BB	Keel Ave-Kelp St-Jacktar Ave-Jetty St	Offshore St.	W. Hemlock St	1	1	0	1	8
60	BL/BR	Lockwood St-Outlet Center Dr	Existing Bike Lanes	Rose Ave	1	1	1	0	8
61	BB	Birch St-California St	C St	Date St.	0	1	1	1	7
62	BB	Dupont St-Ives Pl-Carnegie Ct-San Mateo Pl-Dupont St	Emerson Ave	Oxnard Blvd Access	0	1	0	2	7

Project ID	Bikeway Type	Project Name	From	To	Connectivity	Attractors	Detractors	Generators	TOTAL
				WEIGHT	3	3	2	2	
63	BB	San Mateo Pl-El Dorado Ave	Dupont St.	E. Channel Island Blvd	0	1	0	2	7
64	BB	Bryce Canyon Ave-Thomas Ave	Saviers Rd	Cloyne St.	0	1	1	1	7
65	MUP/BL	N. Ventura Rd-Wagon Wheel Rd-Esplanade Dr	Existing Class I (on N. Ventura Rd)	Vineyard Ave	1	1	0	0	6
66	BB	Rhonda St-Bevra Ave-Spyglass Trail-Gallatin Pl-Oneida Pl-Corona	Holly Ave	Doris Ave	1	1	0	0	6
67	BB	Emerson Ave	Rose Ave	Dupont St	1	1	0	0	6
68	BB	River Ridge Rd-Kapalua Dr-Princeville Ln	W. Vineyard Ave	Holly Ave	1	1	0	0	6
69	BB	Oarfish Ln (via Pier Walk and Pilot Way)	Victoria Ave	Offshore St	0	2	0	0	6
70	BL	Patterson Rd	Vineyard Ave	Gonzales Rd	0	1	1	0	5
71	BB	Gary Dr	Albany Dr	N. Rose Ave	1	0	1	0	5
72	BB	Van Ness Ave	J St.	C St	0	1	1	0	5
73	Bridge	Gary Pl Bridge	Channel Access Rd	Gary Pl	0	0	1	1	4
74	MUP	Edison Canal*	West of Harbor Blvd (at north city limit)	Harbor Blvd via Eastbourne Bay	0	0	2	0	4
75	BB	M St.	Hemlock St	Spruce St.	0	0	0	2	4
76	BB	Ventura Rd-Kiawah River Dr	Garonne St	Oxnard Blvd	0	0	2	0	4
77	MUP	J Street Drain Path	Hueneme Rd	South City Limits	0	1	0	0	3
78	BL	Gonzales Rd (Sakioka Specific Plan Extension)	Rice Ave	Del Norte Blvd	1	0	0	0	3

Project ID	Bikeway Type	Project Name	From	To	Connectivity	Attractors	Detractors	Generators	TOTAL
				WEIGHT	3	3	2	2	
79	BB	Rose Ave-Sanford St-Peoria Ave-Tulsa Dr-Stanford St-Beaumont Ave	Pleasant Valley Rd.	Pleasant Valley Rd.	1	0	0	0	3
80	BB	Mandalay Beach Rd	W. 5th St.	Beach Way	1	0	0	0	3
81	BB	Sunset Ln	Mandalay Beach Rd.	Harbor Blvd	1	0	0	0	3
82	BR	Dodge Rd*	Pleasant Valley Rd.	Rainbow Dr	1	0	0	0	3
83	BR	Pleasant Valley Rd*	Oxnard Blvd	Dodge Rd	1	0	0	0	3
84	BB	Moss Landing Blvd	Garonne St	Oxnard Blvd	1	0	0	0	3
85	BB	Upper Bay Dr-Huneysuckle Dr-H St-Violet Way	Kentia St	Grapevine Dr	0	1	0	0	3
86	BL	Rice Ave*	5th Street	Hueneme Rd	0	0	1	0	2
87	BR	Camino Ave	City limits west	Del Norte Blvd	0	0	1	0	2
88	MUP	Santa Clara River Trail East*	Victoria Ave	Central Ave	0	0	0	0	0
89	MUP	Victoria Ave	Santa Clara River	5th St	0	0	0	0	0
90	MUP	Northeast Town Center Connector to Santa Clara River	Santa Clara River Trail	Santa Clara River Trail	0	0	0	0	0
91	BB	Falkirk Ave (via S . Harbor Service Bl)-Mandalay Beach Rd	Harbor Blvd/Eastbourne Bay	Sunset Lane	0	0	0	0	0
92	MUP	Santa Clara River Trail West*	Harbor Blvd/Pacific Ocean	Victoria Ave	0	0	0	0	0
*Project extends outside city limits									
*Project is designed and/or underway									



Oxnard Existing and Proposed Bicycle Facilities

Oxnard, CA
Bicycle & Pedestrian Master Plan

Source: City of Oxnard
Date: February 2012



0 0.5 1 2 Miles



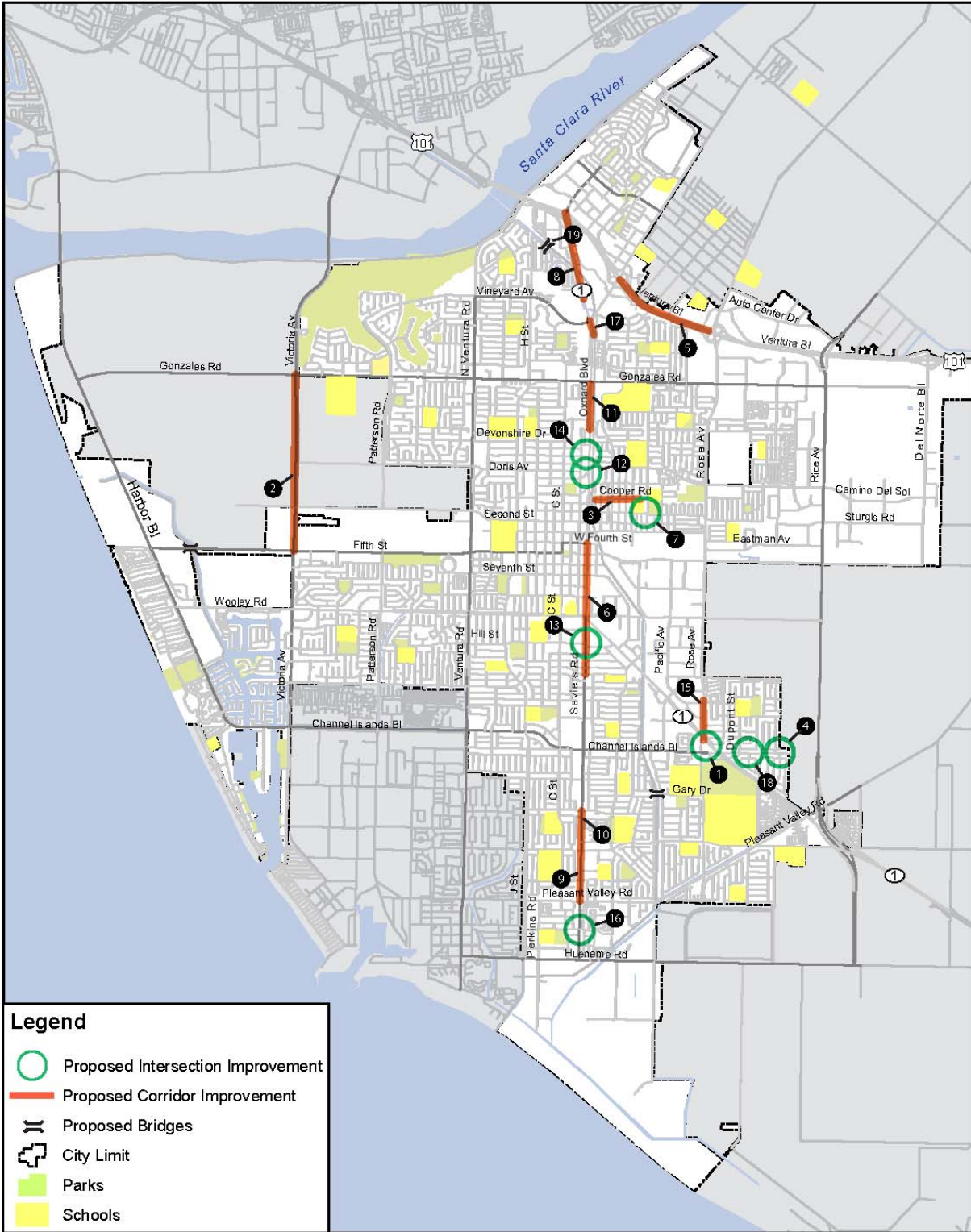
Map 6-1: Oxnard Existing and Proposed Bicycle Facilities

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Table 6-5: Pedestrian Project Prioritization

Project ID	Project Type	Location	Treatment	Mileage	Connectivity	Attractors	Generators	Detractors	City Input	TOTAL
				WEIGHT	3	3	2	2	1	
1	I	Oxnard Blvd / Channel Island Blvd / Rose Ave	Improve sidewalk on bridge and improve intersection of Rose / Oxnard	N/A	2	1	2	2	1	18
2	C	Victoria Ave - From Teal Club Road to Wooley Road	Class I path	0.9	2	2	0	2	1	17
3	C	Cooper from Hayes to Juanita	Stripe crosswalks across Cooper at uncontrolled intersections; consider RRFB	0.33	0	2	2	2	0	14
4	I	Channel Islands Blvd / Merced and El Dorado	Install missing sidewalk segment; stripe crosswalks across Channel Islands Boulevard	N/A	2	0	2	2	0	14
5	C	Ventura Boulevard - Between Vineyard and Rose	Install sidewalks	1.00	2	1	0	2	1	14
6	C	Saviers Road - Between Elm and 4th	Speed feedback signs; additional crosswalks across Saviers at intersections; consider RRFB / HAWK	1.1	0	2	1	2	0	12
7	I	Juanita / 1 st	Stripe high visibility crosswalks; consider RRFB		0	2	2	1	0	12
8	C	Oxnard Blvd - From Orchard Place to the 101 overpass	Install sidewalks on east side to connect with existing and on the 101 overpass.	0.65	2	1	0	1	1	12
9	C	Saviers Road - From Bard Road to Pleasant Valley Road	Speed feedback signs	0.43	0	1	2	2	1	12

Project ID	Project Type	Location	Treatment	Mileage	Connectivity	Attractors	Generators	Detractors	City Input	TOTAL
				WEIGHT	3	3	2	2	1	
10	C	Saviers Road - Between Bard Road and Yucca	Additional marked crosswalk with RRFB; enhanced median refuge; speed feedback signs	0.34	0	1	2	2	0	11
11	C	Oxnard Blvd - South of Gonzales Road at frontage road to Petunia Way	New sidewalk/ramp improvements to connect upper sidewalk with frontage road	0.40	1	1	0	2	0	10
12	I	A Street / Deodar	Install marked two crosswalks across A Street and two across Deodar; reconfigure intersection		0	2	1	1	0	10
13	I	Saviers / Hill (north)	Enhance with HAWK or RRFB; high visibility crosswalk		0	1	1	2	0	9
14	I	A Street / Roderick	Marked crosswalks		0	2	0	1	0	8
15	C	Rose Ave - Between Oxnard Blvd and Ives Ave	New sidewalk along sound wall on east side of Rose Ave; speed feedback signs	0.24	1	1	0	1	0	8
16	I	Saviers / Clara	New marked crosswalk; HAWK or RRFB		0	1	1	1	0	7
17	C	Oxnard Blvd (west side)- South of Vineyard Ave at frontage road	New sidewalk/ ramp improvements to connect upper sidewalk with frontage road	0.07	0	1	0	2	0	7
18	I	Channel Islands Blvd / Olds	Install RRFB and bulbouts		0	0	0	2	0	4
19	Bridge	Over railroad	Connect proposed transit center in coordination with future village development		2	1	1	0	0	4



Oxnard Prioritized Pedestrian Projects

Oxnard, CA
 Bicycle & Pedestrian Master Plan
 Source: City of Oxnard
 Author: EMD/JH
 Date: 3/14/11



Map 6-2: Oxnard Prioritized Pedestrian Projects

Pedestrian improvements are warranted for the east side of Oxnard Boulevard from Vineyard Avenue and St. Mary's to the Oxnard Transit Center. These improvements are not included in the above table because they are covered by the I-C1 (UPRR/Oxnard Blvd) and I-C2 (UPRR/Oxnard Blvd) projects in Table 5-1. The City of Oxnard has conceptual designs for these improvements.

6.3 Cost Assumptions

Planning level unit costs are provided for capital costs of bicycle facilities in Table 6-6 and for pedestrian facilities in Table 6-7.

Table 6-6: Bicycle Facility Cost Assumptions

Facility Type	Capital Cost
Bicycle Path (along flood control channel or rail corridor)	\$2,600,000 /mile
Bicycle Path (in park, short connector no crossings)	\$500,000 /mile
Bicycle Lanes (signage, striping, and pavement markings)	\$65,000 /mile
Bicycle Route (signage only)	\$5,000 /mile
Bicycle Boulevard (signage, pavement markings, some traffic calming)	\$30,000 /mile
Grade Separated Crossing (Flood Control Channel)	\$500,000 /each

Table 6-7: Pedestrian Facility Cost Assumptions

Facility Type	Capital Cost
Sidewalk (Assumes 5 feet wide)	\$8 /foot
Curb and Gutter	\$34 /foot
Curb and Gutter Removal	\$10 /foot
Ramp	\$6,500 /each
Multi Use Path	\$650,000 /mile
Crosswalk	\$260 /each
RRFB/HAWK	\$26,000 /each
Speed Feedback Signs	\$13,000 /each
Bulbout	\$65,000 /each
Intersection Geometry Modification	\$1,300,000 /each
Curb Ramp	\$6,500 /each
Median Refuge	\$130 /linear foot
Bridge over active rail	\$2,000,000 /each

Based on the cost assumptions of Table 6-6 and Table 6-7 above, the price of the total build out for the proposed bicycle network, which includes the cost of all new facilities, is \$52,376,500 and the cost of the proposed pedestrian improvements is \$10,203,400 in 2011 dollars. The cost for each proposed bicycle facility type is defined in Table 6-8. The cost for each proposed pedestrian improvement is displayed in Table 6-9.

The estimated cost for upgrading existing bike facilities is approximately \$4.2 million. Safety enhancements identified in Chapter 5.3 include striping bike lanes to close gaps, delineating parking areas, adding 'Bike Lane'

stencils, removing on-street parking, and widening bike lanes. See Appendix C: Safety Review for the detailed list of improvements needed and itemized cost estimates.

Table 6-8: Proposed Bicycle Facility Cost Estimates

Facility Type	Quantity	Project Cost
Bicycle Path (along flood control channel or rail corridor)	15.4	\$40,040,000
Bicycle Path (in park, short connector no crossings)	15.1 mi	\$7,550,000
Bicycle Lanes (may include signage, striping, and pavement markings)	40.7 mi	\$2,645,500
Bicycle Route (signage only)	13.9	\$69,500
Bicycle Boulevard	38.1	\$1,143,000
Grade Separated Crossing (Flood Control Channel)	2 ea	\$1,000,000
TOTAL	123.2	\$52,448,000

Table 6-9: Proposed Pedestrian Improvement Cost Estimates

Project Name	Treatment	Quantity	Units	Unit Cost	Estimated Cost
Intersections					
A St / Deodar	Crosswalk	4	EA	\$260 /each	\$1,040
	Intersection Geometry Modification	1	EA	\$1,300,000 /each	\$1,300,000
	Subtotal				\$1,301,040
A St / Roderick	Crosswalk	4	EA	\$260 /each	\$1,040
	Subtotal				\$1,040
Channel Islands Blvd / Merced / El Dorado	Sidewalk	100	FT	\$7.9 / foot	\$788
	Curb and Gutter	100	FT	\$33.8 / foot	\$3,380
	Crosswalk	4	EA	\$260 each	\$1,040
	Subtotal				\$5,208
Channel Islands Blvd / Olds	Bulbouts	2	EA	\$65,000 /each	\$130,000
	RRFB	1	EA	\$26,000 /each	\$26,000
	Subtotal				\$156,000
Juanita Ave / 1st St	Crosswalk	3	EA	\$260 /each	\$780
	RRFB	1	EA	\$26,000 /each	\$26,000
	Subtotal				\$26,780
Oxnard Blvd / Channel Islands Blvd / Rose Ave	Crosswalk	2	EA	\$260 /each	\$520
	Sidewalk	1,780	FT	\$7.9 / FT	\$14,024
	Intersection Geometry Modification	3	EA	\$1,300,000 /each	\$3,900,000
	Subtotal				\$3,914,544
Saviers Rd / Hill (north)	Crosswalk	1	EA	\$260 /each	\$260
	RRFB	1	EA	\$26,000 /each	\$26,000

Project Name	Treatment	Quantity	Units	Unit Cost	Estimated Cost
	Subtotal				\$26,260
Saviers Rd / Clara	Crosswalk	1	EA	\$260 /each	\$260
	RRFB	1	EA	\$26,000 /each	\$26,000
	Subtotal				\$26,260
TOTAL					\$5,457,100
Corridors					
Cooper Rd (Hayes Ave to Juanita Ave)	Crosswalk	8	EA	\$260 /each	\$2,080
	RRFB	1	EA	\$26,000 /each	\$26,000
	Subtotal				\$28,080
Oxnard Blvd (South of Vineyard to Oxnard Service Rd)	Sidewalk	370	FT	\$7.9 /foot	\$2,915
	Curb and Gutter	370	FT	\$33.8 /foot	\$12,506
	Curb Ramp	1	EA	\$6,500 /foot	\$6,500
	Subtotal				\$21,921
Oxnard Blvd (Gonzales Rd to A Street)	Sidewalk	1100	FT	\$7.9 /foot	\$8,667
	Curb and Gutter	1100	FT	\$33.8 /foot	\$37,180
	Crosswalk	1	EA	\$260 /each	\$260
	Subtotal				\$46,107
Oxnard Blvd (Orchard PI to 101 Overpass)	Sidewalk	1370	FT	\$7.9 /foot	\$10,794
	Curb and Gutter	1370	FT	\$33.8 /foot	\$46,306
	Curb and Gutter Removal	1370	FT	\$10 /foot	\$14,248
	Intersection Geometry Modification	1	EA	\$1,300,000 /each	\$1,300,000
	Crosswalk	1	EA	\$260 /each	\$260
	Subtotal				\$1,371,608
Rose Ave (Oxnard Blvd to Ives Blvd)	Sidewalk	1270	FT	\$7.9 /foot	\$10,006
	Curb and Gutter	1270	FT	\$33.8 /foot	\$42,926
	Speed Feedback Signs	2	EA	\$13,000 /each	\$26,000
	Subtotal				\$78,932
Saviers Rd (Bard Rd to Yucca)	Crosswalk	1	EA	\$260each	\$260
	RRFB	1	EA	\$26,000 /each	\$26,000
	Median Refuge	1565	LF	\$130 /linear foot	\$203,450
	Speed Feedback Signs	2	EA	\$13,000 /each	\$26,000
	Subtotal				\$255,710
Saviers Rd (Bard Rd to Pleasant Valley Rd)	Speed Feedback Signs	2	EA	\$13,000 /each	\$26,000
	Subtotal				\$26,000
Saviers Rd (Elm Street to 4th Street)	Speed Feedback Signs	2	EA	\$13,000 /each	\$26,000
	Crosswalk	10	EA	\$260 /each	\$2,600

Project Name	Treatment	Quantity	Units	Unit Cost	Estimated Cost
	RRFB	1	EA	\$26,000 /each	\$26,000
	Subtotal				\$54,600
Ventura Blvd (Vineyard Ave to Rose Ave)	Sidewalk	2000	FT	\$7.9 /foot	\$15,758
	Curb and Gutter	2000	FT	\$33.8 /foot	\$67,600
	Subtotal				\$83,358
Victoria Ave (Gonzales Rd to 5th Str)	Multi-Use Path	1.2	MI	\$500,000 /mile	\$780,000
	Subtotal				\$780,000
TOTAL					\$2,746,300
Pedestrian Bridges					
South Bank Neighborhood over railroad to Proposed Village Transit Center.		1	EA	\$2,000,000 / each	\$2,000,000
TOTAL					\$2,000,000

6.4 Past Expenditures

Past expenditures made by the City of Oxnard for bicycle and pedestrian projects are described in Table 6-8: Bicycle and Pedestrian Project Expenditures 2001-2012. As shown, the City spent \$1,379,315 on bicycle and pedestrian projects in that time period. Many of facilities were constructed through developer funded projects and are not reflected in Table 6-10.

Table 6-10: Bicycle and Pedestrian Project Expenditures 2001-2012

Project Name	Year of Construction	Total Amount
Oxnard Blvd Bicycle and Pedestrian Facility Design – ROW efforts. No construction.	2001-2010	\$255,626
Grant for bicycle racks, lockers from Ventura County Transportation Commission	2004	\$2,500
Oxnard Transportation Center – Bicycle parking racks	2006	\$2,750
Oxnard Blvd/Highway 101 Interchange	2006	\$528,192
Doris Ave Resurfacing	2008	\$5,881
Ormond Beach Resurfacing	2009	\$5,713
East Fourth Street Parking Lot – Bicycle parking racks	2009	\$2,963
Bartolo Sq. North Neighborhood – Resurfacing Phase I	2009	\$4,111
Gonzalez Road Resurfacing Project	2009-2010	\$14,339
Saviers Road Improvement	2009-2010	\$26,955
Bartolo Sq. South Neighborhood – Resurfacing Phase I	2010	\$1,364
Bartolo Sq. North Neighborhood – Resurfacing Phase II	2010-2011	\$730
Rice Ave/Highway 101 – Bicycle lanes on bridge	2012	\$528,191
TOTAL		\$1,379,315

6.5 Project Sheets

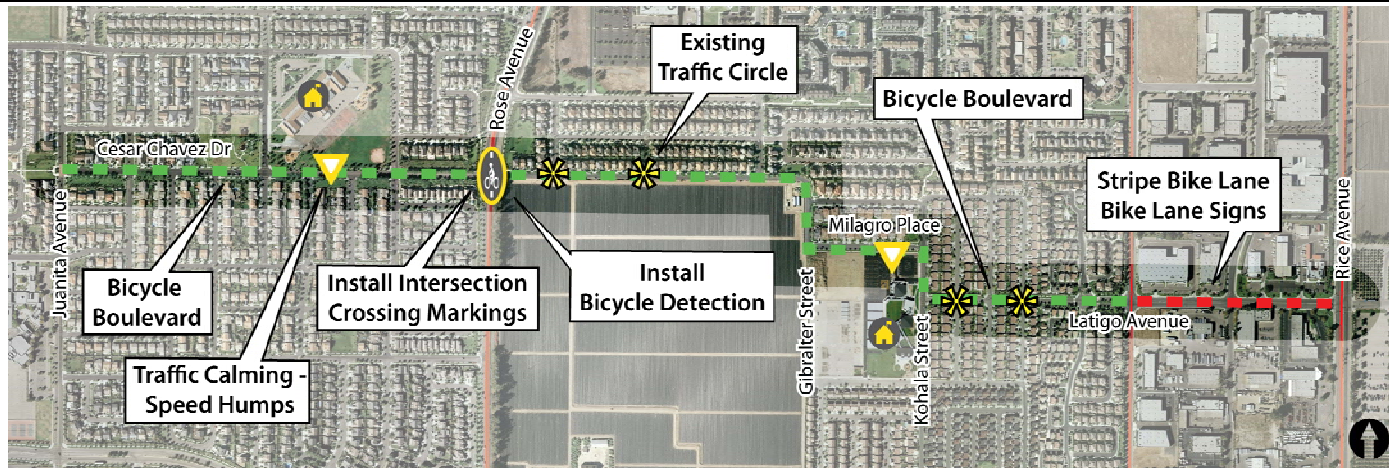
Concept designs were developed for five bicycle and five pedestrian projects selected by the City. The projects sheets include a description of the project area and issues; a listing of the specific improvement recommendations; a cost estimate; an overview map of the project area; and conceptual designs of each of the bicycle/pedestrian improvement recommendations.

Bicycle Project 1: Bicycle Route and Bicycle Boulevard on C Street from Gonzalez Road to Channel Islands Boulevard		
Description of Area and Issues		Improvement Recommendations
<p>C Street is a long, uninterrupted, mostly residential street that runs almost the entire length of Oxnard with a speed limit of 30 mph. This project corridor connects the downtown area with Oxnard’s northern and southern neighborhoods and is a city bus route. A bicycle boulevard on the northern segment of the project is recommended because this portion of C Street runs through primarily residential land uses with low traffic speeds and volumes, whereas the southern segment of the project runs through commercial land uses. This project will connect to existing bikeways on C Street, Wooley Rd, 7th St, Doris Ave, and Gonzales Road. Signs and pavement markings will help bicyclists’ interactions with motorists, and help increase bicyclist safety to ensure that bicyclists can use C Street as a through road.</p>		<ul style="list-style-type: none"> • Shared Lane Markings • Bicycle Route signage • Bicycle Signal Actuation • Bicycle Video Detection <p>Cost Estimate (excluding bike detection): \$125,000</p>
Site Photo: C Street Photo Simulation		Design Guidelines & Standards
	<p>C Street can be improved for bicyclists by installing shared lane markings and signage that identifies it as a bicycle route. The existing bike lanes on C Street do not meet new design guidelines and should be reconstructed to 7’ in width if right-of-way is available or to a minimum of 5’ as part of the project.</p> <p>The photo simulation at left shows C Street with shared lane markings.</p>	<p>Bicycle Route on Collector / Residential Street 1.4.2 Bicycle Boulevards 1.4.4- 1.4.8. Shared Lane Marking 1.4.3 Signalization (Video Detectors) 1.5</p>

Bicycle Project 2: Bicycle Boulevard on Snow Avenue – Juanita Avenue from Vineyard Avenue to 3rd Street		
Description of Area and Issues	Improvement Recommendations	
<p>Snow Avenue and Juanita Avenue are residential roads that run north-south through Oxnard with speed limits of 25 miles per hour. They connect the surrounding neighborhoods to five schools, several parks, and areas of employment to the south. The proposed bicycle boulevard on Snow Avenue – Juanita Ave will connect to existing bikeways on Gonzales Road and Camino del Sol. Wayfinding signs will direct bicyclists to and through the bicycle boulevard. Existing traffic circles and additional traffic calming around schools will keep vehicle speeds low to enhance the bicycling environment. Intersection crossing treatments will guide bicyclists through the intersection of Snow Avenue and Gonzales Road, minimizing potential conflicts with vehicles.</p>	<ul style="list-style-type: none"> • Wayfinding Signs • Bicycle Signal Detection • Intersection Crossing Treatment • Traffic Calming – Speed Humps <p>Cost Estimate (excluding bike detection): \$110,000</p>	
Site Photo: Juanita Avenue	Design Guidelines & Standards	
	<p>Wayfinding signage will help bicyclists navigate through the neighborhoods to access the bicycle boulevard.</p> <p>Bicycle Boulevards 1.4.4- 1.4.8 Signalization (Video Detectors) 1.5</p>	

Bicycle Project 3: Bicycle Boulevard on Cesar Chavez Drive – Latigo Avenue from Juanita Avenue to Rice Avenue

Description of Area and Issues	Improvement Recommendations
<p>Cesar Chavez Drive and Latigo Avenue are residential streets that run east-west through Oxnard, connecting residential neighborhoods to schools and parks, including the future East Village Park, as well as areas of employment on Rice Avenue. The bicycle boulevard and bike lanes on Cesar Chavez Drive – Latigo Avenue will connect to existing bikeways on Gonzales Road and Camino del Sol. A bicycle lane will separate bicyclists from motorists to help reduce conflicts between the two modes. Wayfinding signs will allow bicyclists to traverse the bicycle boulevard more easily. An intersection crossing treatment at the intersection of Cesar Chavez Drive and Rose Avenue will direct bicyclists across Rose and alert motorists of their presence.</p>	<ul style="list-style-type: none"> • Wayfinding Signs • Bicycle Lane Striping • Bicycle Lane Signs • Intersection Crossing Treatment • Traffic Calming – Speed Humps <p>Cost Estimate (excluding bike detection): \$75,000</p>



Site Photo: Cesar Chavez Drive at Rose Avenue | **Design Guidelines & Standards**




The photo at left displays an example of intersection crossing markings.



The intersection of Cesar Chavez and Rose has four travel lanes without existing bicycle facilities, making this a challenging intersection for bicyclists to cross. Intersection crossing markings will help bicyclists cross more easily.

Design Guidelines & Standards



Bicycle Boulevards 1.4.4- 1.4.8
 Bicycle Lane Next to On-Street Parallel Parking 1.3.2
 Signalization (Video Detectors) 1.5

Bicycle Project 4: Bicycle Route and Bicycle Lanes on Hemlock Street – Guava Street from Patterson Road to C Street		
Description of Area and Issues		Improvement Recommendations
<p>Hemlock Street and Guava Street are residential streets that run east-west through Oxnard, connecting residential neighborhoods. The speed limit in this location is 35 miles per hour. This project will connect with existing bicycle lanes west of Patterson. A bicycle lane will provide bicyclists with a degree of protection from motorists and a bicycle boulevard will enhance the bicycling environment on Hemlock and Guava by keeping vehicle speeds and volumes low.</p>		<ul style="list-style-type: none"> • Bicycle Lane Striping • Bicycle Lane Signs • Add parking stripe along areas existing of on-street parking • Bicycle Route Signs <p>Cost Estimate (excluding bike detection): \$65,000</p>
Site Photo: Hemlock Street		Design Guidelines & Standards
	<p>The photo to the left shows the existing three lane cross section on Hemlock Street between Ventura Rd and Elsinore Avenue. In order to have sufficient width for a bicycle lane the street must be converted from three travel lanes to two or remove parking.</p>	<ul style="list-style-type: none"> Bicycle Route on Collector / Residential Street 1.4.2 Bicycle Lane Next to On-Street Parallel Parking 1.3.2 Shared Lane Marking 1.4.3 Signalization (Video Detectors) 1.5

Bicycle Project 5: Bicycle Boulevard on Cloyne Street – Cypress Road from Channel Islands Boulevard to Hueneme Road	
Description of Area and Issues	Improvement Recommendations
<p>Cloyne Street and Cypress Road are residential streets that run north-south through Oxnard, connecting residential neighborhoods to schools. The bicycle boulevard on Cloyne Street – Cypress Road will connect to existing bikeways on Bard Road and Hueneme Road. Enhancing the existing sidewalk through the park will provide a convenient connection to the bicycle boulevard from the north and the south. Rectangular Rapid Flashing Beacons (RRFB) crossing at Bard Road and Justin Way will help both bicyclists and pedestrians cross the street, which has five travel lanes without stops for vehicles.</p>	<ul style="list-style-type: none"> • Traffic Calming – Speed Humps • Class I Path – Widen sidewalk • RRFB Crossing <p>Cost Estimate (excluding bike detection): \$175,000</p>
Site Photo: Existing Sidewalk through Johnson Creek Park	Design Guidelines & Standards
 <p>The existing sidewalk will connect the proposed bicycle boulevard from the north and the south. It should be widened to 12' meet the minimum City standards for Multi-use Paths. Additional width to accommodate a separated pedestrian path may be necessary if there are high volumes of bicycle and pedestrian traffic in the park.</p>	<p>Design of Multi-Use Paths 1.2 Bicycle Route on Collector / Residential Street 1.4.2</p>

Pedestrian Project 1: Intersection Improvements at Oxnard Boulevard / Channel Islands Boulevard / Rose Avenue	
Description of Area and Issues	Improvement Recommendations
<p>Oxnard Boulevard is a major north-south arterial through Oxnard that is designated as California State Route 1. Oxnard Boulevard travels diagonally through the project site, and intersects both Channel Islands Boulevard and Rose Avenue at adjacent skewed intersections. The intersection of Oxnard Boulevard / Rose Avenue is a four-legged at-grade intersection. The intersection of Oxnard Boulevard / Channel Islands Boulevard is configured with a grade-separated overcrossing for through traffic on Channel Islands Boulevard, and on/off ramps for traffic accessing Oxnard Boulevard. These adjacent intersections are important crossing points for pedestrians traveling between residential neighborhoods on the east side of Oxnard Boulevard and commercial, recreational, institutional, and shopping destinations to the west. This project will improve sidewalk and crossing conditions at these intersections.</p>	<ul style="list-style-type: none"> • Sidewalk enhancements along Oxnard Boulevard • Access overcrossing • New crosswalk at west intersection of Channel Islands Blvd / Access overcrossing • Pedestrian connection from Oxnard Boulevard Access overcrossing sidewalk into new park site • Reduction of wide crossings at Oxnard Boulevard / Rose <p>Cost Estimate: \$4,100,000</p>
	
Site Photo: Oxnard Boulevard Access Overcrossing / Channel Islands Boulevard	Design Guidelines & Standards
 <p>The photo at left shows the view looking south at the intersection of Oxnard Boulevard Access at Channel Islands Boulevard.</p> <p>A new crosswalk at the west intersection of Oxnard Boulevard Access overcrossing and Channel Islands Boulevard will provide a direct pedestrian connection from the sidewalk to a variety of commercial uses in a shopping center on the north side of the street.</p>	<p>Sidewalk Zones – Residential 1.8.2 Sidewalk Zones – Industrial Zones 1.8.4 Sidewalk and Pathway Materials 1.8.5 Crosswalks 1.8.11 Pedestrian Refuge Islands 1.8.13</p>

Pedestrian Project 2: Extend Proposed Multi-Use Path on Victoria Avenue from Gonzales Road to 5th Street	
Description of Area and Issues	Improvement Recommendations
<p>Victoria Avenue is a major north-south arterial located in the western part of Oxnard. Victoria Avenue is also the western terminus of the Santa Clara River Trail (SCRT) Master Plan alignment along the river, three miles east of the Pacific Ocean. The SCRT Master Plan proposes a multi-use path along the east side of Victoria Avenue to Gonzales Road. This project proposes to extend the multi-use path on the east side of Victoria Avenue from Gonzales Road south to a proposed multi-use path on 5th Street which extends west toward the beach (see Map 5-1). This project will help connect residents to the SCRT as well as help to build a more comfortable pedestrian and bicycle connection to the ocean from the SCRT and surrounding neighborhoods.</p>	<ul style="list-style-type: none"> • Class I Multi-Use Path <p>Cost Estimate: \$800,000</p>
Site Photo: Victoria Avenue at Teal Club Road	Design Guidelines & Standards
<div data-bbox="134 1081 560 1354" data-label="Image"> </div> <p>The photo at left is looking south at the intersection of Victoria Avenue at Teal Club Road.</p> <p>Constraints south of Teal Club Road include drainage ditch along road, constrained right-of-way along the airport, and driveway crossings near 5th Street. A detailed feasibility study is needed to addresses these constraints.</p>	<p>Multi-use Paths in River & Utility Corridors 1.2.1</p>

Pedestrian Project 3: Sidewalks on Ventura Boulevard from Vineyard Avenue to Rose Avenue		
Description of Area and Issues		Improvement Recommendations
<p>Ventura Boulevard runs parallel to US-101 and provides a bus route and local access to commercial and residential areas along the east side of the freeway between Vineyard Avenue and Rose Avenue. The roadway has one travel lane in each direction, with businesses fronting only the east side of the road. A number of missing sidewalk segments exist along this segment. These areas lack curb and gutter, and the paved or unpaved shoulder areas are used as off-street parking by businesses. This project would complete the missing sidewalks along the east side of Ventura Boulevard between Vineyard and Rose, including curb and gutter to match to existing sidewalks along and at either end of this segment. All existing and proposed curb ramps would be designed with detectable warning strips per the Americans with Disabilities Act.</p>		<ul style="list-style-type: none"> Install sidewalk, curb and gutter to provide continuous sidewalk between Vineyard Avenue to Rose Avenue <p>Cost Estimate: \$265,000</p>
 <p>An aerial photograph of Ventura Boulevard between Vineyard Avenue and Rose Avenue. The road runs parallel to Highway 101. Orange dashed lines indicate the proposed sidewalk and curb locations along the east side of the road. Two callout boxes with white backgrounds and black text point to specific areas: one near the intersection with Highway 101 says 'Install curb, gutter, and sidewalks', and another further west says 'Install curb, gutter, and sidewalks'. Labels for 'Vineyard Ave', 'Ventura Blvd', 'Highway 101', and 'Rose Ave' are visible on the map. A north arrow is in the bottom right corner.</p>		
Site Photo: Ventura Boulevard		Design Guidelines & Standards
 <p>A ground-level photograph showing the north side of Ventura Boulevard south of Alvarado Street. The image shows a paved road, a concrete curb, and a sidewalk area with some trees and buildings in the background.</p>	<p>The photo at left displays the north side of Ventura Boulevard south of Alvarado Street.</p> <p>Installing a sidewalk on the north side of Ventura Boulevard will increase connectivity to the surrounding businesses and residences and increase pedestrian safety.</p>	<p>Sidewalk Zones – Residential 1.8.2 Sidewalk Zones – Industrial Zones 1.8.4 Sidewalk and Pathway Materials 1.8.5</p>

Pedestrian Project 4: Sidewalks on Oxnard Boulevard from Orchard Place to Esplanade Dr

Description of Area and Issues	Improvement Recommendations
<p>Oxnard Boulevard is a major north-south arterial through Oxnard that is designated as California State Route 1. Sidewalks are missing on the east side of Oxnard Boulevard between Orchard Place and Esplanade Drive, a segment that travels beneath overcrossings of the Union Pacific Railroad line and Wagon Wheel Road. Only a narrow striped shoulder is present on the east side through this segment. The nearest marked crossings across Oxnard Boulevard are at Vineyard Avenue and Cross Avenue, a distance of 0.6 miles, meaning that pedestrians may have a significant distance to travel if they wish to use the crosswalks to access the sidewalks on the west side rather than walking in the shoulder.</p>	<ul style="list-style-type: none"> • Shared lane markings • Bicycle Route signage] • Bicycle Signal Actuation • Bicycle Video Detection <p>Cost Estimate (excluding bike detection): \$125,000</p>



Site Photo: Intersection of Oxnard Boulevard and Esplanade Drive **Design Guidelines & Standards**

	<p>The photo at left displays the intersection of Oxnard Boulevard and Esplanade Drive.</p> <p>The intersection of Oxnard Boulevard and Esplanade Drive is wide and does not have a pedestrian crossing. Tightening the intersection to reduce the crossing distance and installing a crosswalk will enhance the safety of pedestrians.</p>	<p>Sidewalk Zones – Industrial Zones 1.8.4 Sidewalk and Pathway Materials 1.8.5 Crosswalks 1.8.11</p>
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Pedestrian Project 5: Sidewalks on Oxnard Service Boulevard from 0.12 mi south of Gonzales Road to A Street		
Description of Area and Issues		Improvement Recommendations
<p>Oxnard Boulevard is a major north-south arterial that is designated California State Route 1. Along this segment of Oxnard Boulevard a parallel frontage road (Oxnard Service Boulevard) is present that provides access to local commercial areas. The frontage road has free westbound vehicle access points and is separated from the main roadway by a landscaped median. Between Gonzales Road and Petunia Way Oxnard Service Boulevard has a number of sidewalk gaps. There is only sidewalk on the west side of this roadway. This project would provide curb, gutter, and sidewalk to provide a complete sidewalk network from the residential areas in the southern and western part of this segment to the commercial areas near the intersection of Oxnard Boulevard / Gonzales Road. Additionally, it would provide a sidewalk for Pacifica High School students to access Gonzales Road.</p>		<ul style="list-style-type: none"> Install curb, gutter and sidewalk to provide continuous sidewalk along west side of Oxnard Service Boulevard <p>Cost Estimate: \$1,500,000</p>
Site Photo: Missing Sidewalk on Oxnard Service Boulevard		Design Guidelines & Standards
	<p>The photo at left shows the Oxnard Service Boulevard north of Glenwood Drive and south of Gonzales Road.</p> <p>Installing sidewalks along the west side of the frontage road will allow pedestrians to walk free of conflict with vehicles to access the residences to the south.</p>	<p>Sidewalk Zones – Industrial Zones 1.8.4 Sidewalk and Pathway Materials 1.8.5 Crosswalks 1.8.11</p>

7 Funding

Funding opportunities for the recommended projects and programs are available through a variety of federal, state, and local sources. Table 7-1 presents the funding sources for which the proposed projects are eligible.

Table 7-1: Funding Sources

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Federally-Administered Funding									
Transportation, Community and System Preservation Program**	Varies, generally January or February.	Federal Transit Administration	\$204 million nationally in 2009	20%	States, MPOs, local governments and tribal agencies	X	X	X	Implementation grants provide financial resources to enact activities that address transportation efficiency, while meeting community preservation and environmental goals. Policy and program examples include spending policies that direct funds to high-growth regions; urban growth boundaries to guide metropolitan expansion; and "green corridor" programs that provide access to highway corridors in areas targeted for efficient and compact development. Program officials are not currently accepting applications for 2011. In most years, Congress has identified projects to be selected for funding through the TCSP program. Oxnard should track the program over the long term and apply if the program is extended.
Federal Lands Highway Programs**	Not available	Federal Highway Administration	\$1,019 million nationally in 2009		States	X	X		Grant funds are allocated for highways, roads, and parkways (which can include bicycle and pedestrian facilities) and transit facilities that provide access to or within public lands, national parks, and Indian reservations.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Rivers, Trails and Conservation Assistance Program	Aug 1 for the following fiscal year	National Parks Service	Program staff time is awarded.	Not applicable	Public agencies			X	RTCA staff provides technical assistance to communities to conserve rivers, preserve open space, and develop trails and greenways. The program provides only for planning assistance – there are no implementation monies available.
Paul S. Sarbanes Transit in Parks and Public Lands Program	Varies, Generally October.	Federal Transit Administration	\$27 million nationally in 2009	Not available	Federal, State, local and tribal agencies that manage federal lands	X	X		Grant funds transportation modes that reduce congestion in parks and public lands.
Partnership for Sustainable Communities	Not applicable	Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (USDOT)	Varies	Not applicable	Varies by grant	X	X	X	Though not a formal agency, the Partnership for Sustainable Communities is a joint project of the EPA, the HUD, and the USDOT. One goal of the project is to expand transportation options that improve air quality and public health, which has already resulted in several new grant opportunities (including TIGER I and TIGER II grants). Oxnard should track Partnership communications and be prepared to respond proactively to announcements of new grant programs.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
New Freedom Initiative**	Not available	U.S. Department of Health and Human Services (HHS)	Not available	Not applicable	Public agencies		X	X	Grant funds provide capital and operating costs to provide transportation services and facility improvements that exceed those required by the Americans with Disabilities Act. Pedestrian improvements include installing Accessible Pedestrian Signals (APS), enhancing transit stops to improve accessibility, and establishing a mobility coordinator position.
Surface Transportation Program**	Not available	Federal Highway Administration	\$6,577 million nationally in 2009	Not applicable	States and local governments	X	X	X	Grants fund projects on any federal-aid highway. Bicycle and pedestrian improvements include on-street facilities, off-street paths, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Non-construction projects, such as maps, bicycle/pedestrian coordinator positions, and encouragement programs are eligible. The modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Congestion Mitigation and Air Quality (CMAQ)**	Not available	Federal Highway Administration and Federal Transit Administration	\$1,777 million nationally in 2009	Not applicable	States and Metropolitan Planning Organizations in air quality non-attainment and maintenance areas	X	X	X	Funds are allocated by the Ventura County Transportation Commission for transportation projects that aim to reduce transportation related emissions. Funds can be used for construction of bicycle transportation facilities and pedestrian walkways or for non-construction projects related to safe bicycling and walking (i.e. maps and brochures).
Transportation Enhancements*	Not available	Federal Highway Administration	10 percent of State Transportation Program funds	Not applicable	States	X	X	X	Funds are a set-aside of Surface Transportation Program (STP) monies designated for Transportation Enhancement (TE) activities, which include the pedestrians and bicycles facilities, safety and educational activities for pedestrians and bicyclists, and the preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian and bicycle trails).
Highway Safety Improvement Program**	October	Federal Highway Administration	\$1,296 million nationally in 2009	Varies between 0% and 10%	City, county or federal land manager	X	X	X	Funds projects on publicly-owned roadways or bicycle/pedestrian pathways or trails that address a safety issue and may include education and enforcement programs. This program includes the Railroad-Highway Crossings and High Risk Rural Roads programs.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Community Development Block Grants	Varies between grants	U.S. Dept. of Housing and Urban Development (HUD)	\$42.8 m	Varies between grants	City, county	X	X	X	Funds local community development activities such as affordable housing, anti-poverty programs, and infrastructure development. Can be used to build sidewalks and recreational facilities.
Recreational Trails Program**	October	CA Dept. of Parks and Recreation	\$1.3 m in 2010	12%	Agencies and organizations that manage public lands	X	X	X	Provides funds to states for acquisition of easements for trails from willing sellers, maintenance and restoration of existing trails, construction of new paved or unpaved trails, and operation of educational programs to promote safety and environmental protection related to trails.
Federal Safe Routes to School**	Mid-July	Federal Highway Administration	Max. funding cap for infrastructure project: \$1 million. Max funding cap for non-infrastructure project: 500,000	none	State, city, county, MPOs, RTPAs and other organizations that partner with one of the above.	X	X	X	Grant funds for infrastructure and non-infrastructure projects. Infrastructure projects are engineering projects or capital improvements that will substantially improve safety and the ability of students to walk and bicycle to school. Non-infrastructure projects are education/encouragement/enforcement activities that are intended to change community behavior, attitudes, and social norms to make it safer for children in grades K-8 to walk and bicycle to school.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Petroleum Violation Escrow Account	Not applicable	Department of Energy	Varies annually	None	Local and regional agencies		X	X	PVEA funds come from fines paid by oil companies in the 70s for violating oil price caps set by the federal government. Funds are used for projects that save energy, such as public transportation, computerized bus routing and ride sharing, home weatherization, energy assistance and building energy audits, highway and bridge maintenance, and reducing airport user fees.
Community Transformation Grant	July	Centers for Disease Control and Prevention	\$50,000-10,000,000 per applicant	Not applicable	State and local governmental agencies, tribes and territories, and national and community-based organizations	X		X	Funding is available to support evidence and practice-based community and clinical prevention and wellness strategies that will lead to specific, measurable health outcomes to reduce chronic disease rates. Bicycle and pedestrian improvements are applicable as they encourage physical activity, which has been proven to reduce the risks of diseases associated with inactivity.
State-Administered Funding									
Bicycle Transportation Account	March	Caltrans	\$7.2 million	Minimum 10% local match on construction	Public agencies	X	X	X	Funds bicycle projects that improve safety and convenience of bicycle commuters. In addition to construction and planning, funds may be used for right of way acquisition.
California Safe Routes to School	Varies	Caltrans	\$24.5 million	10%	Cities and counties		X	X	SR2S is primarily a construction program to enhance safety of pedestrian and bicycle facilities near schools.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
State Transportation Improvement Program (STIP)	December	Caltrans	Varies	None	Cities	X	X	X	The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the Transportation Investment Fund and other funding sources. Oxnard should work with the Ventura County Transportation Commission to submit projects for the STIP.
State Coastal Conservancy	Rolling	State Coastal Conservancy	Varies	None	Public agencies, non-profit organizations	X	X	X	Projects must be in accordance with Division 21 and meet the goals and objectives of the Conservancy's strategic plan. More information can be found at http://scc.ca.gov/applying-for-grants-and-assistance/forms .
California Conservation Corps	On-going	California Conservation Corps	CCC donates labor hours	None	Federal and state agencies, city, county, school district, NPO, private industry		X	X	Funds projects that improve public access to and along the coast, natural resource protection and restoration in the coastal zone or affecting coastal areas, restoration of coastal urban waterfronts, protection of coastal agricultural land, and resolution of land use conflicts. CCC provides labor assistance on construction projects and annual maintenance.
Community Based Transportation Planning	March	Caltrans	\$3 million	20%	MPO, RPTA, city, county		X		Eligible projects that exemplify livable community concepts including enhancing bicycle and pedestrian access.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Land and Water Conservation Fund	March	NPS, CA Dept. of Parks and Recreation	\$2.3 million in CA in 2009	50% + 2-6% administration surcharge	Cities, counties and districts authorized to operate, acquire, develop and maintain park and recreation facilities	X		X	Fund provides matching grants to state and local governments for the acquisition and development of land for outdoor recreation areas. Lands acquired through program must be retained in perpetuity for public recreational use. Individual project awards are not available. The Department of Parks and Recreation levies a surcharge for administering the funds. The LCWF could fund the development of river-adjacent bicycle facilities.
Environmental Enhancement and Mitigation Program	October	California Natural Resources Agency	\$10 million	None	Federal, State, local agencies and NPO		X	X	Support projects that offset environmental impacts of modified or new public transportation facilities. These projects can include highway landscaping and urban forestry projects, roadside recreation projects, and projects to acquire or enhance resource lands. EEMP funds projects in California, at an annual project average of \$250,000. Funds may be used for land acquisition.
State Highway Operations and Protection Program (SHOPP)	Not Available	Caltrans	\$1.69 million statewide annually through FY 2013/14	Not Available	Local and regional agencies		X	X	Capital improvements and maintenance projects that relate to maintenance, safety and rehabilitation of state highways and bridges.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Office of Traffic Safety (OTS) Grants	January	Caltrans	Varies annually - \$82 million statewide in FY 2009/2010	None	Government agencies, state colleges, state universities, city, county, school district, fire department, public emergency service provider			X	Funds are used to establish new traffic safety programs, expand ongoing programs, or address deficiencies in current programs. Bicycle safety is included in the list of traffic safety priority areas. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Evaluation criteria to assess needs include potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants.
Transportation Development Act (TDA) Article 3 (SB 821)	Not applicable	State of California and Ventura County Transportation Commission	Varies	Not applicable	Cities and counties		X	X	Funds are a percentage of the state sales tax given annually to local jurisdictions for bicycle and pedestrian projects. Funds may be used for engineering expenses leading to construction, right-of-way acquisition, construction and reconstruction, retrofitting existing facilities, route improvements, and bicycle support facilities.
Habitat Conservation Fund	October	CA Department of Parks and Recreation	\$2 million	Requires a dollar-for-dollar match of grant funds	Cities, counties, and districts		X	X	Funds provide grants to protect fish, wildlife, and native plant resources, to acquire or develop wildlife corridors and trails, and to provide for nature interpretation programs and other programs which bring urban residents into park and wildlife areas.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Tire-Derived Product Grant Program	Varies	CA Department of Resources Recycling and Recovery (CalRecycle)	Varies	Not applicable	Public agencies and qualifying tribes			X	Promotes markets for recycled-content products derived from waste tires generated in California and decrease the adverse environmental impacts created by unlawful disposal and stockpiling of waste tires. Funds can be used to purchase materials for bicycle and pedestrian projects, including sidewalks/pathways, accessibility ramps, and traffic safety products.
Regional- and Local-Administered Funding									
Bicycle Endowment Fund	Not applicable	Ventura County Transportation Commission	\$17,000 in FY 2009/2010	Not applicable	Local governments				The Bicycle Endowment Fund is a special revenue fund that is legally restricted to expenditures for bicycle-specific purposes.
Developer Air Pollution Buy Down Fees	Not applicable	City of Oxnard	Varies	Not applicable	City of Oxnard	X	X	X	As an alternative to paying impact fees, a developer may reduce the number of trips made by motorized vehicles by paying for on- and off-street bikeway improvements to encourage trips by transit, bicycling, and walking. Eligible projects include bicycle and pedestrian planning, bicycle lane striping, sidewalks, bike and pedestrian path acquisition and construction, and bicycle signage.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Mello-Roos Community Facilities Act	Not applicable	Local governments	Varies	Not applicable	Local governments		X	X	A Mello-Roos Community Facilities District can be established to fund public services or improvements through a special tax on property owners in the area. Bicycle/ pedestrian paths and bicycle lanes can be funded as part of a local assessment or benefit district. Defining the boundaries of the benefit district may be difficult unless the facility is part of a larger parks and recreation or public infrastructure program with broad community benefits and support.
Measure O	Not applicable	City of Oxnard	Varies	Not applicable	City of Oxnard		X	X	Measure O is a City-voter adopted sales tax to protect, maintain, and enhance vital city services, such as by increasing street paving/pothole repair to improve traffic flow and acquiring property for parks/open space preservation. Measure O funds could be used to for the maintenance of bicycle and pedestrian facilities.
Adopt-A-Trail Programs	Not applicable	Local trail commission or non-profit	Varies	Not applicable	Local governments		X	X	These programs used to fund new construction, renovation, trail brochures, informational kiosks and other amenities. These programs can also be extended to include sponsorship of trail segments for maintenance needs.
AB 434	Not applicable	Ventura County Air Pollution Control District (VCAPCD)	Varies	Not applicable	Cities	X	X	X	AB 434 funds are generated from vehicle registration fees for clean air transportation projects, including bicycle and pedestrian projects.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Design Arts Program	Varies by grant	National Endowment for the Arts	Varies	A nonfederal match of at least 1 to 1	Counties, local governments, public entities, or nonprofits	X		X	Provides grants to states and local agencies, individuals and nonprofit organizations for projects that incorporate urban design, historic preservation, planning, architecture, landscape architecture and other community improvement activities, including greenway development. Grants to organizations and agencies must be matched by a 50% local contribution. Agencies can receive up to \$50,000.
Other Funding Sources									
Community Action for a Renewed Environment	March	US EPA	Varies	Not Available	Applicant must fall within the statutory terms of EPA's research and demonstration grant authorities	X		X	Grant program to help community organize and take action to reduce toxic pollution in its local environment
Bikes Belong Grant	Multiple dates throughout year.	Bikes Belong	Not Available	50% minimum	Organizations and agencies		X	X	Bikes Belong provides grants for up to \$10,000 with a 50% match that recipients may use towards paths, bridges and parks.

Funding Source	Due Date*	Administering Agency	Annual Total	Matching Requirement	Eligible Applicants	Planning	Construction	Other	Notes
Volunteer and Public-Private Partnerships	Not Applicable	City, county, joint powers authority	Varies	Not Applicable	Public agency, private industry, schools, community groups		X	X	Requires community-based initiative to implement improvements.
<p><i>* Due dates are subject to change due to pending authorization of a new federal transportation bill.</i></p> <p><i>** Program is one of many programs authorized under SAFETEA-LU and current funding has only been extended through September 30, 2011.</i></p>									

8 Monitoring and Maintenance

This chapter presents the guidelines for monitoring bicycle and pedestrian facilities once implemented, as well as how the City of Oxnard should monitor and evaluate the facilities' usage.

8.1 Maintenance Guidelines

While implementing bikeway and pedestrian facilities is critical, keeping them in good condition is equally as important. Ill-maintained bicycle facilities deter bicyclists from using them as they risk flat tires and a hazardous riding experience. When a bicycle lane becomes filled with debris, for example, cyclists are forced into the motor vehicle lane, which can create conflicts with vehicles and potentially result in collisions.

Table 8-1 illustrates the estimated cost for properly maintaining bikeway facilities. Activities included in the costs of maintenance of bikeways are outlined below. These activities should be undertaken as early as possible and constitute the majority of on-street bikeway maintenance.

- Class I paths: Sweeping and trash removal, replacing missing signage, filling in cracks in pavement, periodic slurry seal, AC overlay
- Class II Bike Lanes/Bike Boulevards: Replacing missing signage, refreshing worn striping or stenciling
- Class III Bike Routes: Replacing missing signage, refreshing worn stenciling (if present)

Table 8-1: Annual Maintenance Costs of Bicycle Facilities

Facility	Cost (Annual)
Class I Multi Use Path	\$8,500 / mile
Class II Bicycle Lanes / Bicycle Boulevards	\$3,500 / mile
Class III Bicycle Routes	\$2,500 / mile

New bicycle and pedestrian projects will increase costs of operations and maintenance for the City of Oxnard. Maintenance and operations for on-street bikeways can typically be rolled into existing street sweeping and repaving programs, but maintenance of sidewalks, pathways, bridges and undercrossings will require significant additional resources.

Ideally, funding for maintenance and operations should be secured before the City decides to construct new bicycle or pedestrian infrastructure. As grant funding is generally not available for on-going costs of maintenance and operations, the City will need to identify local revenues to fund these activities. Local funding mechanisms for maintenance include development of a local assessment district, business improvement district, community facilities district, and requiring property owners to maintain adjacent sidewalks and pathways. Any funding source should include an automatic increase linked to inflation and bring in enough revenue to support a reserve fund for larger maintenance needs, such as emergency repair, path resurfacing, or bridge replacement.

The City may also consider volunteer community-based maintenance and patrols for pathways, and adopt-a-trail programs. The costs of administering these programs should be weighed against the benefits of reduced maintenance and operations costs.

8.2 Monitoring and Evaluation

In order to track the progress of the Oxnard Bicycle and Pedestrian Master Plan, it is critical that the City monitor and evaluate changes in bicycling.

8.2.1 Bicycle and Pedestrian Counts

As a mechanism for tracking bicycling and walking trends over time and for evaluating the impact of bicycle and pedestrian projects, policies, and programs from the Oxnard Bicycle and Pedestrian Master Plan, the City of Oxnard may consider partnering with local advocacy groups and volunteers to conduct annual bicycle and pedestrian counts. The City's future mobility coordinator (see section 8.2.3) could analyze and report the change in bicycling levels after each count.

The City's future mobility coordinator could also conduct annual surveys to measure "attitudes" about bicycling and walking in Oxnard. These surveys could be either online surveys or intercept surveys. Surveys should determine if bicyclists and pedestrians are reacting positively or negatively to the facilities and programs implemented. Results of the counts and surveys can inform future bicycle and pedestrian planning efforts.

8.2.2 City-Wide Sidewalk Survey

To inform future pedestrian planning efforts in Oxnard, the City should conduct a city-wide sidewalk survey to evaluate locations for future improvements. The survey should collect information including gaps in existing sidewalks and level of sidewalk condition. Oxnard could consider partnering with advocacy and community groups to recruit volunteers to conduct the survey.

8.2.3 Mobility Coordinator Position

A number of cities around the country staff a part- or full-time Mobility Coordinator position. Cities with such a position usually experience relative success in plan implementation. To take full advantage of current bicycle and pedestrian planning and safety efforts and to assist with implementation of programs, Oxnard should explore options in creating and staffing an ongoing mobility coordinator position in the Development Services Department. In addition to supporting existing programs, such as bicycling parking provision and educational activities, job duties for this staff position may include the following:

- Monitoring facility planning, design, and construction that may impact bicycle and pedestrian facilities
- Staffing bicycle and pedestrian advisory committee meetings (section 8.2.4)
- Coordinating the implementation of the recommended projects and programs listed in this Plan
- Identifying new projects and programs that would improve the city's bicycling and walking environment and improve safety for bicyclists, pedestrians, and motorists
- Coordinating evaluation of projects and programs, such as bicycle and pedestrian counts
- Pursuing funding sources for project and program implementation

8.2.4 Bicycle and Pedestrian Advisory Committee

The City of Oxnard should appoint individuals to serve on a Bicycle and Pedestrian Advisory Committee. This committee could consist of approximately six participants and the City's Mobility Coordinator in order to represent the needs of the different neighborhoods and user groups in Oxnard. The purpose of the committee would be to implement the Oxnard Bicycle and Pedestrian Master Plan. The committee could meet quarterly in order to continuously prioritize and investigate funding as it becomes available. A committee chair would be appointed with the responsibility to report to the Planning Commission as necessary.

8.2.5 Coordination with Transit

The City of Oxnard should continue coordination with Gold Coast Transit and regional transit agencies to encourage combining transit trips with bicycling and walking. Oxnard should collaborate with Gold Coast Transit on the Transit Service Strategy and Plan by helping to develop policies for the plan. The City should work with transit providers to establish safe and secure bicycle parking at transit stops and stations and prioritize additional bicycle parking where ridership is highest. For example, Gold Coast Transit analyzes ridership data to determine which routes and stops have the highest numbers of bicycles boarding. The analysis found that Gold Coast Transit routes 6, 16, and 1 had the highest numbers of bicycle boarding during fiscal year 2010/2011 on both weekday and weekends. Therefore, stops along these routes could be appropriate locations for additional bicycle parking. To increase safety, transit stops should be equipped with lighting near bicycle parking. Additional design guidelines on bicycle parking at transit stops and stations can be found in Appendix A.6.

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