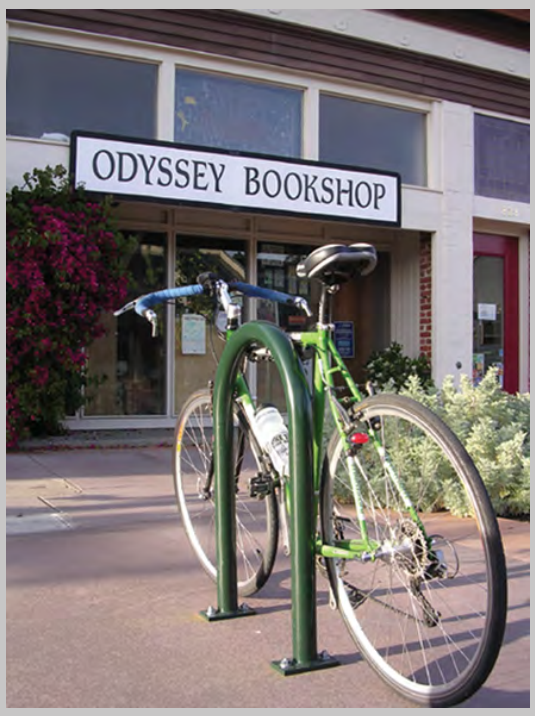
City of Novato

BICYCLE PLAN

September 2007



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1. INTRODUCTION

The 2007 Novato Bicycle Plan provides for a citywide network of bicycle paths, lanes and routes, along with bicycle-related programs and support facilities, intended to ensure bicycling becomes a viable transportation option for people who live, work and recreate in Novato. Current bikeway network information was gathered from meetings with the Novato Bicycle/Pedestrian Advisory Committee (BPAC) and City staff, combined with information on proposed routes from the previously adopted City of Novato Bicycle Plan (1995). Relevant bikeway information was also gathered from the Marin County Unincorporated Area Bicycle and Pedestrian Master Plan (2001). This report was reviewed and adopted by the Novato City Council on September 25, 2007.

The purpose of this Bicycle Plan is to improve bicycle transportation in Novato by providing direction for future bicycle planning and meeting the requirements of the California Bicycle-Transportation Act, which requirements are contained in Section 890 of the California Streets and Highways Code.

1.1. COMMUNITY PARTICIATION

The BPAC allocated time from six of their regularly scheduled meetings from June 2006 to March 2007 to discuss and complete updates to the 1995 Novato Bicycle Plan. Meetings were noticed through distribution to the interested parties list of the Novato Bicycle/Pedestrian Advisory Committee. The BPAC is an advisory committee to the Novato City Council. The meetings were agendized and properly noticed in accordance with the Brown Act and are open to the public. In addition, public input was received at two countywide public meetings, the Northern Marin Countywide Bicycle Plan Update Public Workshop (held Wednesday, November 8, 2006 at the Margaret Todd Senior Center, Novato) and the Nonmotorized Transportation Pilot Program Public Workshop (held Thursday November 29, 2006 at the Embassy Suites Hotel, San Rafael).

2. BICYCLE PLAN GOALS & POLICIES

2.1. GOALS & POLICIES

1. Provide for bicycling as an attractive, reasonable and safe alternative to motor vehicles for trips within the City and for commuting and recreational riding within Novato and to areas outside Novato.
2. Create and maintain a safe, convenient, and continuous, signed system of bicycle and pedestrian transportation routes that connect residential neighborhoods with employment and commercial centers, transit facilities, parks, schools, and regional transportation facilities.
3. Plan, provide, and encourage the construction of functionally adequate and secure bicycle parking facilities at new and existing employment centers, shopping and commercial areas, multifamily housing areas, downtown, schools, transit stops, park-and-ride lots, and park and

recreational facilities throughout the City. This goal recognizes that secure bicycle parking is essential to a successful bicycle transportation program.

4. Educate residents, businesses and officials of the City that bicycling and walking are healthful, viable and nonpolluting alternatives to automobiles, and that bicycle and pedestrian facilities are a legitimate and important component of both the City's and the region's transportation systems.

Goal 1.0 **Plan for the development of bicycle facilities and programs in Novato as a viable alternative to the automobile.**

Objectives:

1.1 Develop a viable comprehensive bicycle commuter network.
1.2 Link work, schools and shopping with transit centers.
1.3 Integrate bicycles into other modes.

Goal 2.0 **Improve bicycle safety.**

Objectives:

2.1 Develop comprehensive education and safety programs.
2.2 Monitor bicycle accidents and target needed improvements to improve safety.
2.3 Manage the use of bicycles on sidewalks through appropriate measures.

Goal 3.0 **Maximize opportunities for bicycle use.**

Objectives:

3.1 Accommodate bicycling needs as identified in the Plan public workshop process.
3.2 Develop a user-friendly bicycle system for all levels of experience and abilities.
3.3 Develop a bicycle map for public use.
3.4 Integrate the local bikeway system into the regional bikeway system.
3.5 Overcome major barriers and gaps in the existing bikeway system.
3.6 Keep the bikeway system well-maintained.

Goal 4.0 **Design a feasible implementation plan.**

Objectives:

4.1 Use accepted design standards.
4.2 Maximize funding opportunities.
4.3 Retain existing bikeway system and utilize existing and future opportunities.
4.4 Phase and prioritize projects for orderly implementation, coordinated with the capital improvement plan.

2.2. COMPLIANCE WITH LOCAL PLANS

The 2007 Novato Bicycle Plan is consistent with the 1995 Novato General Plan – Transportation Element, the 2001 Marin County Unincorporated Bicycle and Pedestrian Master Plan, and the Metropolitan Transportation Commission's (MTC) 1994 Regional Transportation Plan for the San Francisco Bay Area.

2.3. BTA COMPLIANCE CHECKLIST

In order to meet the California Bicycle-Transportation Act requirements, the 2007 Novato Bicycle Plan must include the following provisions:

Table 2-1
Novato BTA Compliance Checklist

BTA 891.2	Required Plan Elements	Location Within the Plan
(a)	The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	Table 4-1; page 21. Table 4-2; page 23.
(b)	A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	Figure 4-1; page 19.
(c)	A map and description of existing and proposed bikeways.	Figure 3-1; page 5. Figure 5-1; page 27. Tables 3-1 through 3-4 pages 4-10. Tables 5-1, through 5-3; pages 25-26. Text, pages 7-12, 25-26
(d)	A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.	Figure 3-2; page 6. Text, pages 10-11 and 30-31.
(e)	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals.	Figure 3-2; page 6. Text, pages 11-12 and 34.
(f)	A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	Figure 3-2; page 6. Text, pages 10-11, and 30-31.
(g)	A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code.	Text, pages 14-16
(h)	A description of the extent of citizen and community involvement in development of the plan.	Text, page 1
(i)	A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans.	Text, page 2
(j)	A description of the projects proposed in the plan and a listing of their priorities for implementation.	Text, pages 25-39
(k)	A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	Table 3-5, page 13

3. EXISTING CONDITIONS

The bicycle map which accompanies this Plan designates Novato's bicycle routes and those in adjacent unincorporated areas by Class I, II, or III in accordance with Chapter 1000 of the California Department of Transportation, Highway Design Manual – Bikeway Planning and Design. Class I Bikeways serve the exclusive use of bicycles and pedestrians. Class II Bikeways serve the preferential use of bicycles on established lanes on paved streets. Class III Bikeways serve bicycles on streets connecting Class I or Class II bikeways.

3.1. DEFINITION OF BIKEWAYS

The three types of bikeways identified by Caltrans in Chapter 1000 of the Highway Design Manual are as follows.

Class I Bikeway. Typically called a "bike path," a Class I bikeway provides bicycle travel on a paved right-of-way completely separated from any street or highway.

Class II Bikeway. Often referred to as a "bike lane," a Class II bikeway provides a striped and stenciled lane for one-way travel on a street or highway. The City is to pursue a 13' minimum width for combined bicycle lane/parking areas where possible.

Class III Bikeway. Generally referred to as a "bike route," a Class III bikeway provides for shared use with motor vehicle traffic and is identified only by signing.

It is important to note that bicycles are permitted on *all* roads in the State of California and in Novato (with the exception of access-controlled freeways). As such, Novato's entire street network is effectively the city's bicycle network, regardless of whether or not a bikeway stripe, stencil, or sign is present on a given street. The designation of certain roads as Class II or III bicycle facilities is not intended to imply that these are the only roadways intended for bicycle use, or that bicyclists should not be riding on other streets. Rather, the designation of a network of Class II and III on-street bikeways recognizes that certain roadways are optimal bicycle routes, for reasons such as directness or access to significant destinations, and allows the City of Novato to then focus resources on building out this primary network. Novato's existing network of designated bikeways is shown in **Figure 3-1**. Specific facility segments are discussed in more detail below. Novato has a total of nearly 35 miles of bikeways.

Table 3-1
Existing Bikeway Mileage by Type

Class	Bikeway Type	Total Mileage
I	Multi-Use Path	4.96
II	Striped Bicycle Lanes	24.84
III	Signed Bicycle Routes	4.76
	All Bikeways	**34.56**

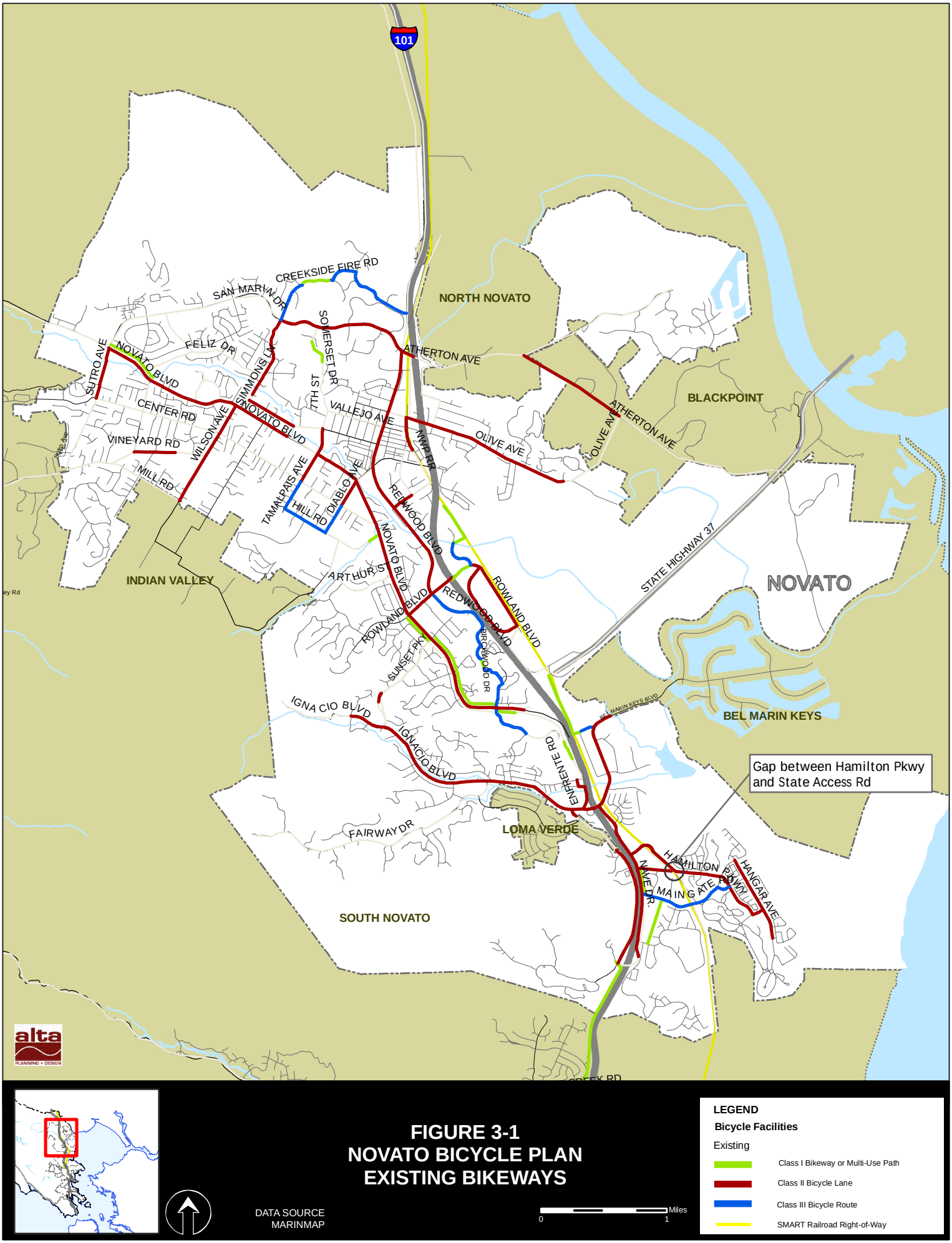


FIGURE 3-1
NOVATO BICYCLE PLAN
EXISTING BIKEWAYS

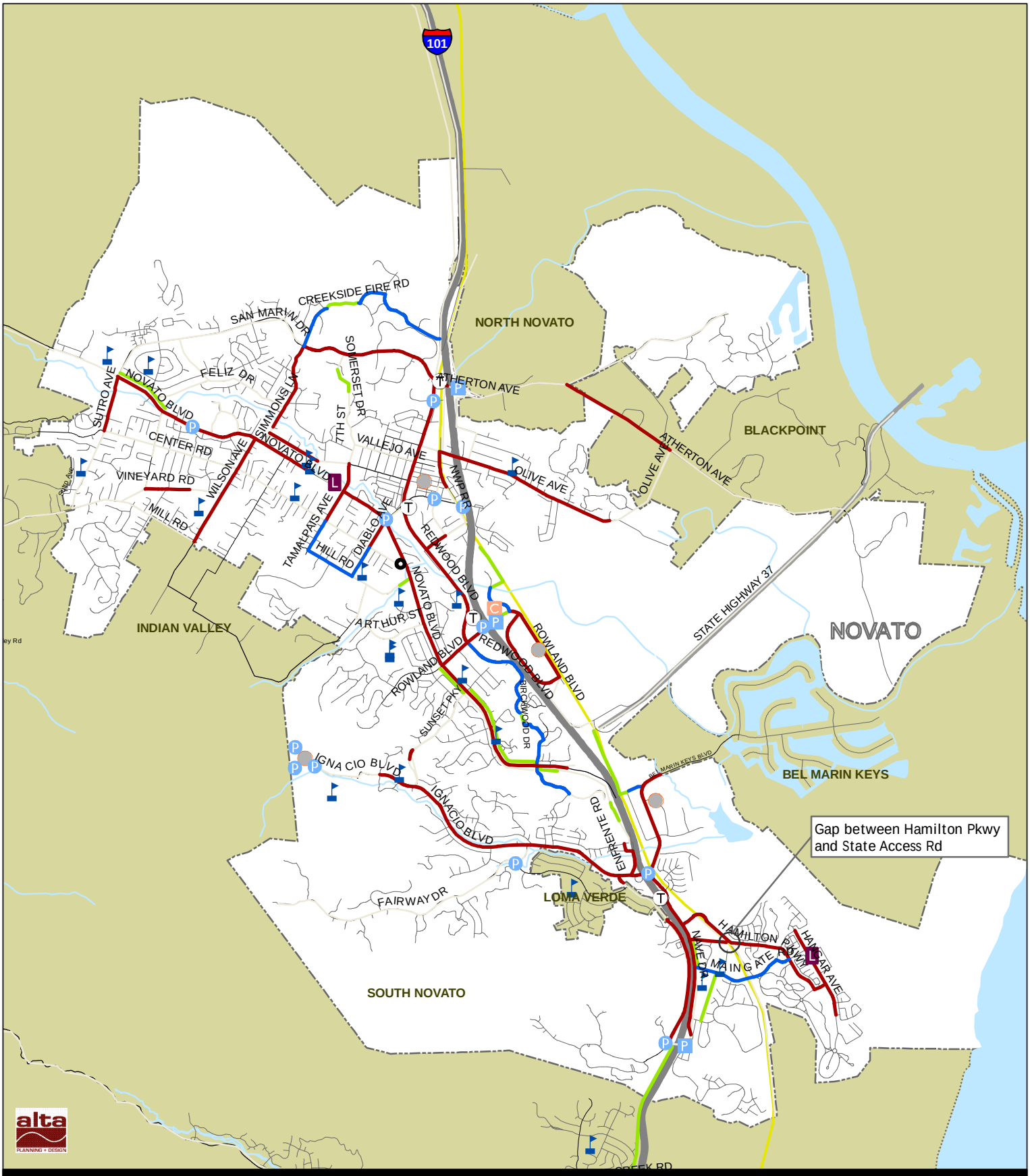


FIGURE 3-2
NOVATO BICYCLE PLAN
EXISTING BIKEWAYS AND SUPPORT FACILITIES

3.2. EXISTING OFF-STREET BIKEWAYS

There are a total of 4.96 miles of bike path segments located throughout the City of Novato. In the northwest quadrant there are short bike path connectors which connect areas with existing Class II bike lanes and Class III bike routes. These include a quarter mile segment along Creekside Fire Road between Simmons Lane and Butterfield Drive, a 0.14 mile segment connecting Somerset Drive and Seventh Street and a 0.43 mile segment parallel to Novato Boulevard Class I side path at the west end of the City just east of Sutro Avenue. It should be noted that the Creekside segment, while it is still considered an effective commuter pathway no longer meets Caltrans Class I standards and is in need of major surface maintenance due to long-term degradation of the pavement surface.

Just south of the downtown area is a just over one half mile long bike path following the Northwestern Pacific Railroad Right-of-Way (NWPRR) between Franklin Avenue and Rowland Boulevard which also provides a Highway 101 under-crossing. Also just south of the downtown is a short bike path along Arroyo Avichi Creek connecting the east end of Hill Road to Novato Boulevard.

The City's longest bike path travels approximately 1.24 miles parallel to South Novato Boulevard between Rowland Boulevard to just east of Redwood Boulevard at Gateway Court. This path is on the west side of the street between Rowland Boulevard and Sunset Parkway and changes to the east side of the street south of Sunset Parkway. East of Redwood Boulevard the South Novato Boulevard Pathway continues for a short segment on the south side of the street. This segment will connect to the future Enfrente Road pathway project. There is one other short connector bike path which connects a Class III bike route that generally goes from Redwood Boulevard, near Cedarwood Lane, to Briarwood Court.

To the east of Highway 101 just south of Highway 37 along the NWPRR is an approximately half mile segment. The remaining segments are in the very southern end of the city. There is an 0.17 mile segment along Nave Drive between State Access Road and Main Gate Road and another 0.37 mile segment just a tenth of a mile east through the Meadowpark subdivision. The bike path providing a regional connection to the south is the Marinwood – Novato bike path, located west of Highway 101. It is a 1.3 mile in total length with the northern most 0.47 miles within Novato.

Table 3-2
Novato Existing Bicycle Paths Inventory

Existing Class 1 Bikeways - Multi-Use Paths				
Route	**Begin**	**End**	**Class**	**Length**
Creekside Fire Rd. Connector	Simmons Ln.	Butterfield Dr.	I	0.25
Somerset Dr. Connector	Hampshire Way	Seventh St.	I	0.14
Arroyo Avichi Creek	Hill Rd.	South Novato Blvd.	I	0.01
Franklin Ave./NWPRR	Lamont Ave.	Rowland Way	I	0.62
South Novato Blvd.	Rowland Blvd.	Gateway Ct.	I	1.24
Redwood Blvd. Connector	Birchwood Dr.	Sequoia Glen Ln.	I	0.08
Rowland Blvd.	Hwy 101	Vintage Way	I	0.2
NWPRR	Hwy 37	Frosty Ln.	I	0.65
Nave Dr.	State Access Rd.	Main Gate Rd.	I	0.17
Hamilton Pathway	Main Gate Rd.	Bolling Dr.	I	0.48
Enfrente Rd. Connector	Enfrente Rd.	Redwood Blvd.	I	0.22
Novato Blvd. Sidepath	Sutro Ave.	Eucalyptus Ave.	I	0.43
Marinwood - Novato	Nave Dr./Alameda Del Prado Intersection	South City Limit	I	0.47
		Total Mileage		**4.96**

3.3. EXISTING ON-STREET BIKE LANES AND BIKE ROUTES

The majority of the City's bikeway system is comprised of Class II Bicycle Lanes. Most of the City's streets are oriented on a northwest to southeast axis, with bikeways resulting in a similar orientation. The primary north-south bikeway corridor is along Novato Boulevard between San Marin Drive to just east of Redwood Boulevard. This bikeway is a major regional connector frequently used by recreational cyclists traveling west towards West Marin. Bike lanes along Redwood Boulevard continue directly north towards Petaluma. The southern portion of Redwood Boulevard changes to a bike route south of Rowland Boulevard. Shorter north-south segments include lanes along Alameda Del Prado, Enfrente Drive and Nave Drive which are parallel to Highway 101 on the west and east sides. The bike lanes connecting to the Redwood Connector pathway on Enfrente end at Alameda Del Prado. Those on Alameda del Prado go from the southern end of the Loma Verde unincorporated segment of the street near Posada Del Sol to Clay Court.

Primary east-west bikeways are provided along San Marin Drive, Atherton Avenue, Olive Avenue, Rowland Boulevard, Ignacio Boulevard, Bel Marin Keys Boulevard and Hamilton Parkway. The San Marin Drive bike lanes start at Simmons Lane on the west side of the City and extends eastward to Highway 101. Continuing on Atherton Avenue, the bike lanes run from Highway 101 east to School Road within unincorporated county, with a gap between Bay Tree Hollow and Bugeia Lane. Olive Avenue has continuous bike lanes starting just west of Highway 101 and the Northwestern Pacific Railroad and ending at Rose Court, about a quarter mile west of the City limits. Rowland Boulevard has bike lanes connecting Novato Boulevard and Redwood Boulevard bikeways in addition to providing a Highway 101 crossing, access to a regional shopping center and a park-and-ride lot. Together with the bicycle lanes on Vintage Way, the Rowland Boulevard Bicycle Lanes form a loop around the Vintage Oaks Shopping Center. The Ignacio Boulevard bike lanes run from Indian Hills

Drive to Nave Drive. Connecting to Ignacio Boulevard on the east side of Highway 101 is Bel Marin Keys Boulevard, which has bike lanes along the length of the road within City limits. The southern most east-west bikeway is along Hamilton Parkway, which provides access to the redeveloped Hamilton Air Force Base.

The remaining bike lane and bike route segments are shorter off shoots from the longer bikeway corridors. The detailed beginning and end streets are listed in **Tables 3-3 and 3-4** below.

Table 3-3
Existing Bicycle Lanes Inventory

Existing Class 2 Bikeways - Striped Bicycle Lanes				
Route	**Begin**	**End**	**Class**	**Length**
Sutro Ave.	Center Rd.	Novato Blvd.	II	0.41
Vineyard Rd.	Eucalyptus Ave.	Williamson Ct.	II	0.33
Novato Blvd.	San Marin Dr./Sutro Ave.	Grant Ave.	II	1.65
Novato Blvd.	Seventh St.	East of Redwood Blvd.	II	2.9
Redwood Blvd.	North City Limit	North end of Cutlass Dr.	II	2.38
Wilson Ave.	Mill Rd.	Novato Blvd.	II	0.87
Simmons Ln.	Kristin Ln.	San Marin Dr.	II	0.65
San Marin Dr.	Simmons Ln.	Hwy 101	II	0.68
Atherton Ave.	Hwy 101	Bay Tree Hollow	II	0.39
Atherton Ave.	Bugeia Ln.	School Rd.	II	1.14
Virginia Ave.	Simmons Ln.	Grant Ave.	II	0.41
Tamalpais Ave.	Center Rd.	Novato Blvd.	II	0.21
Seventh St.	Novato Blvd.	Grant Ave.	II	0.21
Diablo Ave.	Center Rd.	Novato Blvd.	II	0.23
Olive Ave.	Railroad Ave.	Rose Ct.	II	1.37
Railroad Ave.	Olive Ave.	Grant Ave.	II	0.27
Lamont Ave.	Redwood Blvd.	Reichert Ave.	II	0.17
Rowland Blvd.	Novato Blvd.	Hwy 101	II	0.44
Rowland Blvd.	Vintage Way north end	Vintage Way south end	II	0.61
Vintage Way	Rowland Blvd.	Rowland Blvd.	II	0.77
Sunset Pkwy.	Shon Dr.	0.11 mi west of Shon Dr.	II	0.11
Ignacio Blvd.	Indian Hills Dr.	Nave Dr.	II	2.23
Enfrente Rd.	Entrada Dr.	Ignacio Blvd.	II	0.28
Bel Marin Keys Blvd.	Hwy 101	East City Limit	II	0.84
Nave Dr.	Bel Marin Keys Blvd.	Hwy 101 N Ramp Near Nave Dr./Hwy 101 Overpass	II	1.29
Alameda Del Prado	100 ft. before Posada Del Sol	Clay Ct.	II	0.94
Hamilton Pkwy.	Nave Dr.	San Pablo Ave.	II	1.21
San Pablo Ave.	Hamilton Pkwy.	Hangar Ave.	II	0.9
Hangar Ave.	Palm Dr.	Stern Dr.	II	0.7
State Access Rd.	Hwy 101	C St.	II	0.25
			Total Mileage	**24.84**

Table 3-4
Existing Bicycle Routes Inventory

Existing Class 3 Bikeways - Signed Bicycle Routes				
Route	**Begin**	**End**	**Class**	**Length**
Simmons Ln.	San Marin Dr.	Creekside Fire Rd.	III	0.34
Fieldstone Dr.	Creekside Fire Rd.	Wood Hollow Dr.	III	0.57
Wood Hollow Dr.	Fieldstone Dr.	Redwood Blvd.	III	0.24
Tamalpais Ave.	Hill Rd.	Center Rd.	III	0.25
Hill Rd.	Tamalpais Ave.	Diablo Ave.	III	0.37
Diablo Ave.	Hill Rd.	Center Rd.	III	0.26
Rowland Way	Novato Creek	Rowland Blvd.	III	0.26
Redwood Blvd.	Rowland Way	Birchwood Dr.	III	0.66
Birchwood Dr.	Redwood Blvd.	Redwood Blvd. Connector	III	0.13
Sequoia Glen Ln.	Redwood Blvd. Connector	Redwood Blvd.	III	0.19
Redwood Blvd.	Sequoia Glen Ln.	Palmer Dr.	III	0.56
Frosty Ln./Hamilton Dr.	NWPRR Pathway	Bel Marin Keys Blvd.	III	0.19
Main Gate Rd.	Nave Dr.	NWPRR Pathway	III	0.37
Palm Dr.	NWPRR Pathway	Hamilton Pkwy.	III	0.37
		Total Mileage		**4.76**

3.4. SIGNAGE

The County of Marin has developed and is in the process of implementing a countywide route signage program. The City is committed to developing a link in the north/south bikeway route through Marin County. The goal of the project is to encourage commuting by bicycle through Marin and make recreational biking more attractive to the public.

The County of Marin received $189,000 in grant funding for the program. This will enable cyclists to know destinations at key intersections, so that residents and visitors will be able to navigate more easily. The Marin Public Works Directors Association has selected a uniform sign for the County which will have a logo of Mount Tamalpais in the background. This will compliment the county's Share the Road signage program.

3.5. BIKEWAY SUPPORT FACILITIES

Bicycle support facilities include bicycle parking racks, lockers and changing facilities. Any facility that assists commuting or recreational cyclists to complete their journey is also considered a support facility.

Parks can also serve as bicycle support facilities. Novato has an extensive system of parks and open space areas. Most parks are equipped with water and restrooms, however only two parks have bicycle parking racks. A partial list of parks and open space areas are provided below.

- Miwok Park and Marin Museum of the American Indian - One bike rack for five bicycles
- Pioneer Park
- Stafford Lake Park (County)
- Slade Park
- Arroyo Avichi Park
- Joseph Hoog Community Park – One bike rack for seven bicycles
- Pacheco Valley/Loma Verde/Ignacio Valley Open Space Preserves
- Indian Valley Open Space Preserve
- Mount Burdell Open Space Preserve

Bicycle lockers can be leased from Caltrans at the park-and-ride lots at the Atherton Avenue and Nave Drive interchanges for long-term bicycle parking. The park-and-ride lot at Rowland Boulevard has bike lockers available to bicyclists on a first-come first-served basis to riders who bring their own locks. Figure 3-2 shows locations of bicycle support facilities.

As a part of the recently-completed Grant Avenue Improvement Project, bicycle parking was included as an integral part of the design. Racks were placed at various locations for access to retail destinations. New space created by reconfiguring curb lines and constructing bulbouts was used to install racks outside the pedestrian travel zone.

The City of Novato has adopted official design standards for sidewalk bicycle parking and an ordinance requiring showers, lockers and change facilities in newly developed employment centers. More details on these standards and requirements are provided in Appendix B and C.

3.6. MULTI-MODAL CONNECTIONS

Providing bicycle access to transit allows bicyclists to extend the distance they are able to travel. Novato residents have access to one transit service, Golden Gate Transit, which provides access to San Francisco, Southern and Central Marin, Marin County Ferry Terminals and north towards Sonoma County. Most Golden Gate Transit bus stops within the City of Novato have bicycle racks located at the stops. In addition, up to two bicycles can fit on racks mounted to the front of all Golden Gate Transit buses less than 60 ft. long. "MCI" type buses longer than 60 ft. were recently outfitted with luggage bay racks that allow two bicycles to ride in the underfloor luggage area. In addition, the Marin County Transit District has included an element in their long-range transit plan to upgrade all bus-mounted front bicycle racks from two to three capacity fixtures.

The following Golden Gate Transit stops in Novato have bicycle racks that hold up to five bicycles:

- South Novato Boulevard at Diablo Avenue
- Novato Boulevard at Eucalyptus Avenue
- Highway 101 Southbound Ramp at Atherton Avenue
- Highway 101 Southbound Ramp at Rowland Boulevard
- Highway 101 Southbound Ramp at De Long Avenue
- Alameda de La Loma at Fairway Drive
- Highway 101 Southbound Ramp at Ignacio Boulevard
- Highway 101 Southbound Ramp at Alameda del Prado

The Sonoma Marin Area Rail Transit (SMART) has proposed rail service along an approximately 70-mile long corridor spanning Marin and Sonoma Counties from Cloverdale to Larkspur. The system proposes at least two stops in Novato. The potential stop locations are included in the bicycle

facility maps in order to plan for future inter-modal connections. SMART proposes to include a continuous bicycle facility paralleling the rail line, composed of a combination of Class I and Class II bikeways which make use of existing off and on-street facilities in Novato.

3.7. BICYCLE LOOP DETECTORS

The City of Novato has no official policy regarding bicycle signal detection. The City's current practice is to use the more sensitive type D loops as head loops at all new installations or as existing loops are replaced during maintenance activities. At intersections with video detection systems, separate video detection zones for bicycles are created, particularly on side streets where bike lanes intersect major streets that rest on the green phase (i.e. creating a rest on red condition for the bike lane user). This is less of an issue for bike lanes on these primary streets where the signals are programmed to rest in green but separate video detection zones for bicycles are usually provided on these roads as well. In other areas where loops are utilized, special dipole or other sensitive loop designs are used where bikes in bike lanes would not be detected by the vehicle loop systems.

3.8. DESCRIPTION OF PAST EXPENDITURES

The following is a summary of bicycle facility projects constructed since the 1995 Bicycle Plan.

Table 3-5
Novato Past Expenditures 1995-2007

Facility	Description	Cost
Diablo Ave. Pavement Rehabilitation	Pavement rehabilitation and installation of bike lanes. Total project cost $901,000. Cost given at right is directly related to bike lanes.	$55,600
Grant Ave. Improvements	Installation of bike racks and replacement of bicycle sensitive loop detector at signal	$5,300
Redwood Boulevard - Rehab	Gap closure and resurfacing / remarking of bike lanes	$ 8,000
South Novato Boulevard Enfrente Commuter Connection	Bike path. Project partially constructed. Further segments under development. Total project cost estimated at $1.5M	$163,652
Simmons Lane Bridge	Replacement and rehabilitation to provide on-street bike lanes. Ongoing construction. Total project cost estimated at $1.3 million.	$540,547
South Novato Boulevard Improvements from Highway 101 to Rowland Boulevard	Bike lane and bike path construction.	$700,000
Bike Lanes on Atherton Avenue in Novato:	The County of Marin constructed Class 2 bicycle lanes on Atherton Avenue between Bugeia Lane and School Road	$566,200
Ignacio Boulevard Interchange Modification	Modify interchange to accommodate bicycles, including bike lanes.	$450,000
Pedestrian and Bicycle Path on San Marin Drive, Somerset Drive to Tanbark Court	Construction of multi-use path. Includes revision to existing bike lanes.	$75,000

3.9. BICYCLE SAFETY EDUCATION PROGRAMS

3.9.1. PARKS AND RECREATION

The Novato Parks and Recreation Department holds various summer week long bike camps for children ages 8 to 12 years. These camps emphasize bicycle safety and participants travel the bike paths from schools to parks for instruction and fun.

3.9.2. NOVATO POLICE/PUBLIC SAFETY

The Novato Police Department publishes a free brochure available at the police station entitled Bicycle Laws. This pamphlet explains the rules of the road including parking a bicycle, driving on public grounds and sidewalks, bicycle lanes and paths, necessary bicycle equipment and procedures for locking a bike properly. Also covered in the brochure is information on how to license a bicycle and the applicable fee that is required. Safety tips and a bicycle safety quiz are offered.

The Novato Police issue citations to juvenile offenders who have violated traffic safety laws either on a bicycle, in-line skates, or on a skateboard. First time offenders receive a letter sent home to the parents explaining the violation along with a bicycle safety pamphlet. A second-time offender will be sent to traffic court. This program has existed continuously since 1995. In 2004, the Police Department issued a memo encouraging officers to continue enforcing traffic safety laws for cyclists.

In May of 2004, the Novato Police Department began enforcing bicycle and pedestrian related violations in selected areas. Initial enforcement involved educational warnings, unless the violation was so flagrant it warranted a citation. Enforcement actions continued for several weeks and were documented in a weekly report. A total of 73 warnings and 3 citations were issued over the course of 28.5 hours of enforcement. Three months later, in July 2004, another enforcement campaign produced significantly lower violations: in 17.5 hours of enforcement, 17 warnings and 14 citations were issued.

Since 2005 the Novato Police Department has partnered with the Marin County Bicycle Coalition to conduct Share the Road Checkpoints on an annual basis at selected locations in Novato. More information on the Share the Road program is below.

3.9.3. SCHOOL BIKE ROUTES

One goal of the 2007 Novato Bicycle Plan is to designate bicycle lanes on streets near schools that currently have (or are projected to have) high levels of bicycle use. These streets are main routes that are or could be used by students to commute to schools by bicycle and would supplement the local Safe Routes to Schools plans being developed at each school. The proposed bikeway system described in *Chapter 5: Proposed System* incorporates this school routes concept. Novato Unified School District has 14 schools of which 8 are elementary (K-5), 3 are middle (6-8), and 3 are high schools (9-12). There are also a growing number of Charter Schools in Novato, which are also considered for school bike routes. A number of these schools participate in the Transportation Authority of Marin's (TAM) Safe Routes to Schools Program, detailed in the following section.

3.9.4. SCHOOL SAFETY INITIATIVES

In addition to TAM's Safe Routes to Schools program, a number of different school safety initiatives have been undertaken in Novato. Various schools have sponsored bicycle rodeos to educate the students on bicycle safety. Since 1993, the Novato Police Department has sponsored Bicycle Rodeos emphasizing proper procedures at intersections, hand signaling, riding in traffic, and the importance of wearing a helmet.

The Parent Teacher Associations have strongly advocated for bicycle safety including endorsing the California helmet law which went into effect January 1994. As a result all school children are now required to wear a helmet when riding a bicycle to school. A bicycle safety program was implemented at all Elementary schools in the fall of 2004. This program involves community service officers, traffic officers, school personnel and parents in educating students about safe bicycling.

3.9.5. SAFE ROUTES TO SCHOOLS

The countywide Safe Routes to Schools program began in 2000 as an effort to reduce congestion and encourage healthy exercise and transportation habits among school aged children in Marin County. The program has since expanded to its current level, with 45 schools and over 18,470 students participating countywide. Each year, the program has successfully decreased the percentage of drive-alone students at participating schools through innovative classroom activities, contests and events, and initiation of engineering improvements.

The program consists of five key components – education, engineering, encouragement, enforcement, and evaluation – which are described below.

- Education - Classroom lessons teach children the skills necessary to navigate through busy streets and show them how to be active participants in the program. **Table 3-6** shows education programs completed in Novato Schools.
- Engineering - The Program's licensed traffic engineer works with schools and the City in developing a plan to provide a safer environment for children to walk and bike to school. The focus is on creating physical improvements to the infrastructure surrounding the school, reducing speeds and establishing safer crosswalks and pathways.
- Encouragement - Events, contests and promotional materials are incentives that encourage children and parents to try walking and biking. **Table 3-6** shows encouragement programs completed in Novato Schools.
- Enforcement – Police officers, crossing guards and law enforcement officials participate throughout the Safe Routes process to encourage safe travel through the community. Targeted enforcement of speed limits and other traffic laws around schools make the trip to school more predictable for students. This plan also includes enforcement enhancements and outreach to drivers through driver safety campaigns.
- Evaluation – Program participation is regularly monitored to determine the growth in student and parent participation.

As detailed in **Table 3-6**, seven Elementary Schools and one Middle School have participated in the project. A Safe Routes to Schools Task Force has been formed for the Novato Unified School District to create Safe Routes to Schools Travel Plans which include engineering recommendations,

enforcement, driver education programs and encouragement programs. Chapter 5 includes proposals for growing participation in the Safe Routes to Schools Program in Novato.

3.9.6. OTHER SAFETY PROGRAMS

The Novato Police Department participates in the Marin County Bicycle Coalition's Share the Road Campaign. The campaign includes three components: checkpoints, basic street skills classes, and public presentations.

At checkpoints, uniformed police, highway patrol officers and volunteers from the bicycle coalition stop vehicles, cyclists and pedestrians and provide them with share the road flyers. Flyers contain California Vehicle Code information, codes of conduct for bicyclists and motorists, and additional safety tips to prevent road rage. Novato hosted checkpoints in 2005 and 2006.

Basic Street Skills Classes are provided free of charge by the Marin County Bicycle Coalition. Classes provide information on how to avoid collisions and citations, how to ride safely, improve visibility and the legal rights of cyclists. Cyclists who have received a bicycle violation may attend this class to reduce their fine to $50.

The Marin County Bicycle Coalition also provides a Share the Road presentation for the public. The presentation is available by request, and includes information on the rights and responsibilities of cyclists and drivers and focuses on ways each group can behave courteously to avoid collisions.

Table 3-6
Novato Safe Routes to School Education and Encouragement Programs

Participants			Education											Encouragement						
2005-06	**Grades**	**Enroll.**	SL&L	WB	HS	JEOP	Rodeo	OTB	Clubs	S.Art	Yikes	Earth	Fam M	IWALK	W2SD	SP	W&BA	FRM	WA	TF
Novato																				
Hamilton	K-5	368	**X**	**X**	**X**	**X**					**X**			**X**						**X**
Lu Sutton	K-5	420												**X**	**X**			**X**	**X**	**X**
Lynwood	K-5	405	**X**	**X**	**X**	**X**	**X**				**X**			**X**				**X**	**X**	**X**
Pleasant Valley	K-5	378	**X**	**X**	**X**	**X**								**X**	**X**			**X**		**X**
Rancho	K-5	385	**X**	**X**	**X**	**X**	**X**							**X**	**X**			**X**		**X**
Hill	Middle	589						**X**				**X**								**X**
San Ramon	K-5	468	**X**	**X**	**X**	**X**	**X**				**X**							**X**		
Olive	K-5	379	**X**	**X**	**X**	**X**								**X**				**X**	**X**	**X**

X - Previously Completed

Education:

SL&L - Stop Look and Listen; WB - Walk Around the Block; HS - Helmet Safety; Jeop - Jeopardy; Rodeo - Bicycle Rodeo; OTB - On the Bike (Middle School), Clubs - EcoVelocity Clubs; S. Art - Safety Art; Yikes - Assembly; W2SD - Parade Prep; Earth - Earth Day Classes; Fam M - Family Management; NR - Neighborhood Rides

Encouragement:

Iwalk - International Walk to School Day, W2SD - Ongoing Walk to School Days; SP - SchoolPool; W&BA - Walk and Bike Across America; FRM - Frequent Rider Miles Contest

4. NEEDS ANALYSIS

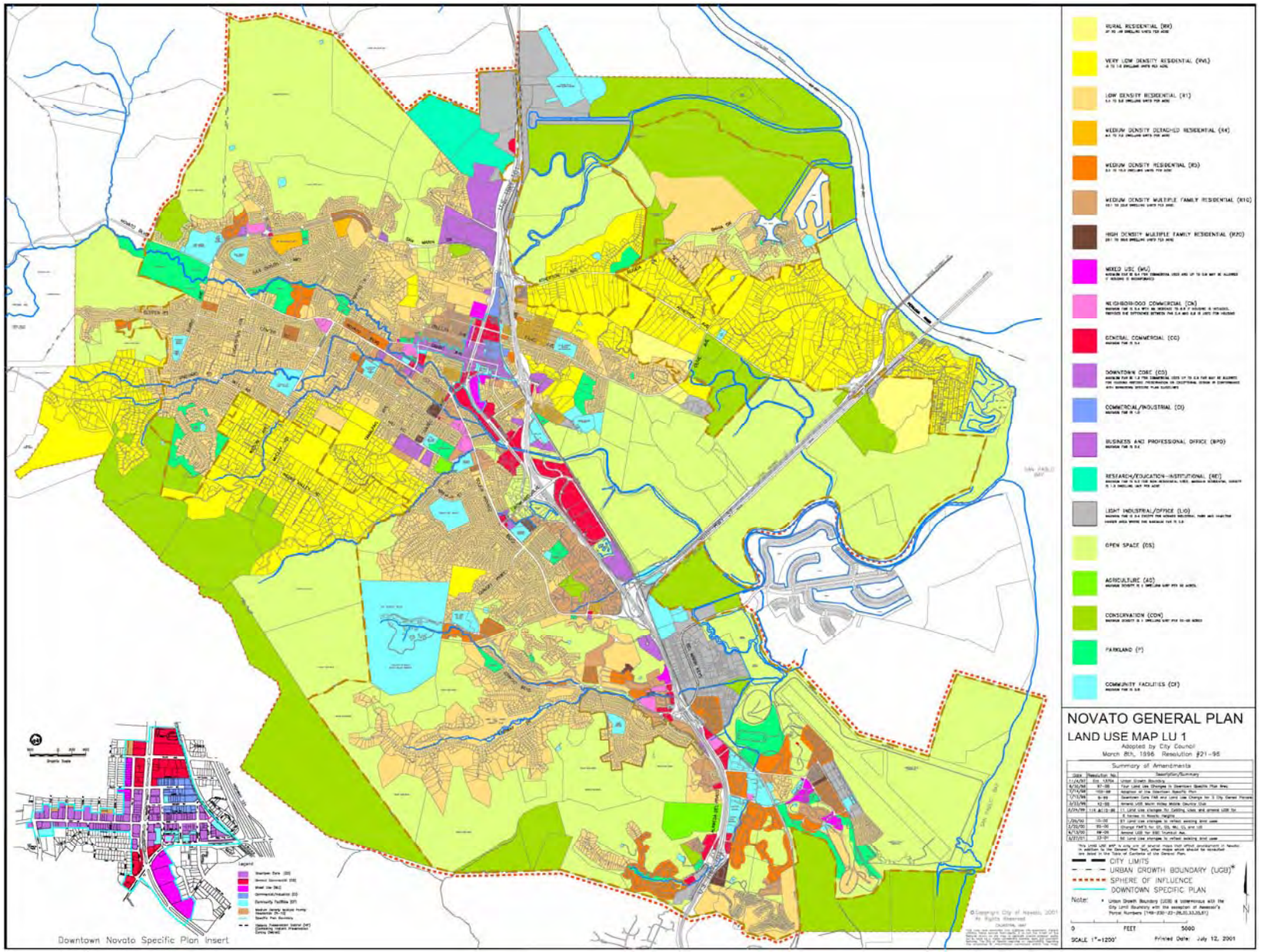
4.1. LAND USE DEMAND

The "demand" for bicycle facilities can be difficult to predict. Unlike automobile use, where historical trip generation studies and traffic counts allow one to estimate future "demand" for travel, bicycle trip generation methods are less advanced and standardized. Land use patterns can help predict demand and are important to bikeways planning because changes in land use (and particularly employment areas) will affect average commute distance, which in turn affects the attractiveness of bicycling as a commute mode. **Figure 4-1**, the land use map from the Novato General Plan, is included on the next page.

The Novato bikeways network will connect the neighborhoods where people live to the places they work, shop, engage in recreation, or go to school. An emphasis will be placed on regional bikeways and transit connections centered on the major activity centers in Novato, including:

- Downtown commercial district
- Civic buildings such as the community centers, senior centers and libraries
- Schools
- Transit Hubs
- Neighborhood parks and regional recreational areas
- Shopping Centers
- Major Employers

Figure 4-1 – Novato General Plan Land Use Map



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4.2. COMMUTE PATTERNS

A central focus of presenting commute information is to identify the current "mode split" of people that live and work in Novato. Mode split refers to the choice of transportation a person selects to move to destinations, be it walking, bicycling, taking a bus, or driving. One major objective of any bicycle facility improvement is to increase the percentage of people who choose to bike rather than drive or be driven. Every saved vehicle trip or vehicle mile represents quantifiable reductions in air pollution and can help in lessening automobile traffic congestion.

Journey to work and travel time to work data were obtained from the 2000 US Census for Novato, Marin County, California, and the United States. Primary mode of journey to work data is shown in **Table 4-1**.

Table 4-1
Novato Commute Mode Split Compared to the State and Nation

Mode	Nationwide	Statewide	Marin County	Novato
Bicycle	0.4%	0.9%	1.1%	0.4%
Walk	3.0%	3.0%	3.3%	1.7%
Public Transit	4.9%	5.3%	11.1%	8.9%
Drove Alone	78.2%	74.7%	71.8%	74.5%
Carpool	12.6%	15.1%	11.8%	13.6%
Other	0.5%	1.1%	0.6%	0.5%
Data from US Census 2000				

As shown, about 0.4% of all employed Novato residents commute primarily by bicycle. Census data do not include the number of people who bicycle for recreation or for utilitarian purposes, students who bicycle to school, and bicycle commuters who travel from outside Novato, and are therefore likely to undercount true cycling rates. Recreational cycling is especially popular in Novato, with its easy access to popular recreational routes in West Marin and other areas.

Though Novato's rate of commute cycling is low—about half that of Marin County—there are many possibilities for improving it. Novato has a very high percentage of commuters who take public transit to work—almost nine percent, compared with 5.3% for the state. Two percent of Golden Gate Transit riders arrive at bus stops by bicycle.[1] If bicycle connections to Golden Gate Transit stops are improved, and especially if these connections are coupled with improved bicycle storage, it would be possible to shift some vehicle trips to the bus stops into bicycle trips. Improving connections to future proposed SMART stations would also encourage those who are arriving in Novato by SMART to bicycle from the station, if and when SMART is approved by the voters of Marin and Sonoma Counties.

[1] Marin County Transit District. "Marin County Transit Short Range Transit Plan". March 2006.

4.3. POTENTIAL FUTURE AIR QUALITY IMPROVEMENTS

Novato lies within the San Francisco Bay Area Basin, which is regulated by the Bay Area Air Quality Management District (BAAQMD). According to the California Air Resources Board, as of July 2005, the air quality in the San Francisco Bay Area Basin did not meet the minimum State health-based standards for one-hour concentrations ground-level ozone and the State standards for Particulate Matter (PM10) and Fine Particulate Matter (PM2.5).[2] Currently, the Basin is classified as marginal non-attainment area for the Federal 8-hour ozone standard.

According to the BAAQMD, motor vehicles are responsible for approximately 75 percent of the smog in the Bay Area. Reducing vehicle miles traveled (VMTs) is a key goal of the BAAQMD, and fully implementing Novato's bicycle network will help achieve this goal by providing residents safe and functional ways to get to work, school, or shopping without relying on motor vehicles. Based on data from the 2000 Census and estimates of bicycle mode share for students, the current number of daily bicycle commuters in Novato is estimated to be 89 riders, making 952 daily trips and saving an estimated 1,144 VMTs per weekday.

Table 4-2 quantifies the estimated reduction in VMTs in Novato following an increase in the bicycle mode share to 1.0%, and the estimated reduction in air pollutants based on the best available local and national data. It is estimated that the total number of work and school commuters could increase from the current estimate of 476 to 715. This would result in an estimated decrease of 13 kg/day of HC, 100 kg/day of CO, and 7 kg/day of NOX.

This improvement in air quality could be greater assuming that if conditions for bicyclists improve and attract new Novato-based riders, the same conditions may attract bicyclists to the City whose trips originate outside of Novato. Novato's mild climate and rising fuel costs will also encourage additional cycling as more attractive routes and gap closures are accomplished.

[2] BAAQMD. Ambient Air Quality Standards & Bay Area Attainment Status. Last updated July 15, 2005. <www.baaqmd.gov/pln/air_quality/ambient_air_quality.htm>

Table 4-2
Bicycle Commute and Air Quality Projections

Current Commuting Statistics		Source
Novato Population	47,630	*2000 US Census*
Number of Commuters	23,213	*2000 US Census (Employed persons minus those working at home)*
Number of Bicycle-to-Work Commuters	89	*2000 US Census*
Bicycle-to-Work Mode Share	0.38%	*Mode share percentage of Bicycle to Work Commuters*
School Children Grades K-8	6,358	*2000 US Census, population ages 5-14*
Estimated School Bicycle Commuters	318	*Lamorinda School Commute Study (Fehr & Peers Associates, 1995) and San Diego County School Commute Study (1990). (5%)*
Number of College Students	1,182	*2000 US Census*
Estimated College Bicycle Commuters	59	*National Bicycling & Walking Study, FHWA, Case Study No. 1, 1995. Review of bicycle commute share in seven university communities (5%)*
Average Weekday Golden Gate Ridership	698	*Average of weekday system wide Golden Gate Transit boardings divided by Total Novato Stops*
Number of Daily Bike-Golden Gate Transit Users	10	*RTD (Denver) Bike-n-Ride Survey, December 1999 (1.4% of total boardings)*
Estimated Total Number of Bicycle Commuters and Utilitarian Riders	476	*Total of bike-to-work, transit, school, college and utilitarian bicycle commuters Does not include recreation.*
Estimated Adjusted Mode Share	1.0%	*Estimated Bicycle Commuters diveded by population*
Estimated Current Bicycle Trips		
Total Daily Bicycle Trips	952	*Total bicycle commuters x 2 (for round trips) plus total number of utilitarian bicycle trips*
Reduced Vehicle Trips per Weekday	399	*Assumes 73% of bicycle trips replace vehicle trips for adults/college students and 53% for school children*
Reduced Vehicle Miles per Weekday	1144	*Assumes average one-way trip travel length of 4.6 miles for adults/college students and 0.5 mile for schoolchildren*
Potential Future Bicycle Commuters		
Number of workers with commutes nine minutes or less	2,880	*US Census 2000*
Number of workers who already bicycle or walk to work	490	*US Census 2000*
Number of potential bicycle commuters	2390	*Calculated by subtracting number of workers who already bicycle or walk from the number of workers who have commutes 9 minutes or less*
Future number of new bicycle commuters	239	*Based on capture rate goal of 10% of potential bicycle riders*
Total Future Daily Bicycle Commuters	715	*Current daily bicycle commuters plus future bicycle commuters*
Future Total Daily Bicycle Trips	1430	*Total bicycle commuters x 2 (for round trips)*
Future Reduced Vehicle Trips per Weekday	1,044	*Assumes 73% of bicycle trips replace vehicle trips*
Future Reduced Vehicle Miles per Weekday	4,800	*Assumes average one-way trip travel length of 4.6 miles for adults. Assumes 12 mph average bicycle speed; 23 minute average travel time. Travel time data from NHTS 2001 Trends, Table 26.*
Future Reduced Vehicle Miles per Year	1272096	*256 weekdays per year*
Future Air Quality Benefits		
Reduced HC (kg/weekday)	13	*(0.0028 kg/mile)*
Reduced CO (kg/weekday)	100	*(0.0209 kg/mile)*
Reduced NOX (kg/weekday)	7	*(0.00139 kg/mile)*
Reduced CO2 (kg/weekday)	528,556	*(.4155 kg/mile)*
Reduced HC (metric tons/year)	3	*1000 kg per metric ton; 256 weekdays/year*
Reduced CO (metric tons/year)	26	*1000 kg per metric ton; 256 weekdays/year*
Reduced NOX (metric tons/year)	2	*1000 kg per metric ton; 256 weekdays/year*
Reduced CO2 (metric tons/year)	135,310	*1000 kg per metric ton; 256 weekdays/year*

Emissions rates from EPA report 420-F-00-013 "Emission Facts: Average Annual Emisisons and Fuel Consumption for Passenger Cars and Light Trucks." 2000.

4.4. BICYCLE COLLISIONS

Novato has the potential to be particularly good place to ride a bicycle. Unfortunately, more bicycle riders on busy streets means a higher probability of bicycle accidents. The following tables summarize the number, type and location of collisions from January 1, 2000 – December 31, 2005 in comparison to 1991-1992 data included in the 1995 Novato Bicycle Plan. No fatalities were reported during this period from 2000-2005.

Table 4-3
Bicycle – Automobile Collisions 2000-2005

	91-92	2000	2001	2002	2003	2004	2005
Total Collisions	83	25	19	21	12	9	13
Parties w/ Injuries	N/A	20	13	19	12	9	10
*N/A - Information Not Available							

Assuming there was an even split between collisions in 1991 and 1992, the number of automobile and bicycle collisions decreased from 41.5 to 13 collisions in 2005. Between 1991 and 2005 there is evidence of a decreasing trend in the number of collisions.

Table 4-4
Bicycle Collisions – Time of Day Comparison

Time of Day Comparison	2000	2001	2002	2003	2004	2005	Total
Daylight (9AM - 5PM)	10	7	13	8	6	6	50
Dawn & Dusk (6-9AM & 5-8PM)	14	9	7	3	3	6	42
Night Time (8PM - 6AM)	1	3	1	1	0	1	7

Between the years 2000 and 2005, the most accidents occurred during the daylight and dusk hours. These are the times when the most traffic is traveling on the streets both in cars and on bicycles. The higher numbers of collisions that occurred specifically during dawn and dusk periods could indicate a need for various countermeasures such as bicycle safety education concerning visibility and lights, motorist education regarding watching for bicycles and infrastructure improvements such as lighting or other means to improve visibility of cyclists to motorists (i.e. bike lanes, Share the Road signs, etc.).

Reduction in the numbers of accidents is a goal of the Bicycle Plan. Research shows that bicycle accident rates decrease with traffic riding skills education. The most experienced cyclists have the lowest accident rates, despite many more miles traveled. Bike safety education is an ongoing program of the Novato Police Department. The Novato BPAC has expressed support for the continuation of that education. The continual addition of bike lanes to the Novato streets, and in particular the addition of bike lanes in and around the schools of Novato, should help to reduce bicycle accidents.

5. PROPOSED SYSTEM

As shown in the preceding Existing Conditions chapter, Novato's current bikeway system provides some opportunities for safe travel both on-street and off-street. However, significant gaps remain in the system which are critical to providing good connectivity for cyclists riding both within the City of Novato and attempting to travel to neighboring communities. Priorities are listed in Chapter 6. Details on project alignments can be found in **Figure 5-1**.

5.1. PROPOSED CLASS I – MULTI USE PATHS

Table 5-1
Proposed Class I Facilities

Class I Facilities - Multi-Use Paths (Off-Street)				
Route	**Begin**	**End**	**Class**	**Length**
NWPRR	De Long Ave.	Lamont Ave.	I	0.16
NWPRR	Olive Ave.	San Marin Dr.	I	0.50
Novato Blvd. Sidepath	Sutro Ave.	West City Limit	I	0.52
Vineyard Rd. Sidepath	Vivian Ct.	Sutro Ave.	I	0.13
Enfrente Rd. Connector	Enfrente Rd.	Redwood Blvd.	I	0.66
		Total Class I Mileage		**1.97**

Class I pathways recommended in the bike plan focus on filling critical gaps in the off-street network and providing access to key destinations. The Enfrente Connector is a project regularly requested by commuter and transportation cyclists which fills an important north-south link. Another, on the NWP right of way between Lamont Ave and downtown Novato, provides a valuable connection from an existing pathway to downtown, enabling shopping and safe family excursions by bicycle. While implementation of Class I pathways can be challenging in developed areas such as Novato all four of the projects described here take advantage of existing public right of way, alleviating the need for costly property purchase or controversial easements. Details of the proposed segments can be found in **Table 5-1**.

5.2. PROPOSED CLASS II – STRIPED BICYCLE LANES

As noted in the Existing Conditions, Novato's current bikeway system is composed primarily of Class II bicycle lanes. Similar to the Class I facilities proposed above, many of the projects described here are gap closures, including lanes on Diablo Avenue, Novato Boulevard, Simmons Lane and Grant Avenue. The Hill Road/Indian Valley Road/Arthur Street series of bike lanes completes a school and residential access route as well as connecting to the Margaret Todd Community Center. Other Class II facilities that provide school access connections include Vineyard Road and Sunset Parkway. New bike lane projects include access along the future Hanna Ranch development access road, which will provide crucial north-south access as well as access to shopping and residential

areas and Sunset Parkway, which is an important citywide as well as school access facility. Details of the bike lane proposals can be found in **Table 5-2**.

Table 5-2
Proposed Class II Facilities

Class II Facilities - Striped Bicycle Lanes (On-Street)				
Route	**Begin**	**End**	**Class**	**Length**
Lamont Ave.	Reichert Ave.	NWPRR	II	0.17
Simmons Ln.	Novato Blvd.	Kristin Ln.	II	0.1
Olive Ave.	Redwood Blvd.	Railroad Ave.	II	0.16
Diablo Ave.	Novato Blvd.	Redwood Blvd.	II	0.18
Hill Rd.	Diablo Ave.	Indian Valley Rd.	II	0.12
Indian Valley Rd.	Hill Rd.	Arthur St.	II	0.25
Arthur St.	Indian Valley Rd.	Taft Ct.	II	0.1
Vineyard Rd.	Vivian Ct.	Eucalyptus Ave.	II	0.44
Vineyard Rd.	Williamson Ct.	Wilson Ave.	II	0.25
Sutro Ave.	Vineyard Rd.	Center Rd.	II	0.62
Olive Ave.	Rose Ct.	East City Limit	II	0.23
Hanna Ranch Access Rd. (future)	Hwy 37	Rowland Way	II	0.62
Redwood Blvd.	San Marin Dr.	Buck Center Dr.	II	0.75
Grant Ave.	Novato Blvd.	Virginia Ave.	II	0.1
Novato Blvd.	Grant Ave.	Tamalpais Ave.	II	0.28
Novato Blvd.	San Marin Dr.	West City Limit	II	0.55
Railroad Ave.	Grant Ave.	De Long Ave.	II	0.14
Sunset Pkwy.	Novato Blvd.	Ignacio Blvd.	II	0.92
		Total Class II Mileage		**5.98**

5.3. PROPOSED CLASS III – SIGNED BICYCLE ROUTES

San Marin Drive is an important neighborhood and recreational route that has been identified by many sport cyclists as an important connection. Redwood Boulevard is a gap closure that connects to an existing pathway connection along Highway 101. One obstacle to implementation of the latter route that should be noted is the possible need for an easement or right of way agreement with the private property owner at the south end of Redwood Boulevard east of Palmer Drive. Entrada Drive provides an important connection between existing bicycle lanes on Enfrente Road and the existing and proposed Enfrente Connector Pathway.

Table 5-3
Proposed Class III Facilities

Class III Facilities - Signed Bicycle Routes (On-Street)				
Route	**Begin**	**End**	**Class**	**Length**
San Marin Dr.	Novato Blvd.	Simmons Ln.	III	2.79
Redwood Blvd.	Palmer Dr.	Enfrente Connector	III	0.36
Entrada Dr.	Enfrente Rd.	Enfrente Connector Pathway	III	0.2
		Total Class III		**3.35**

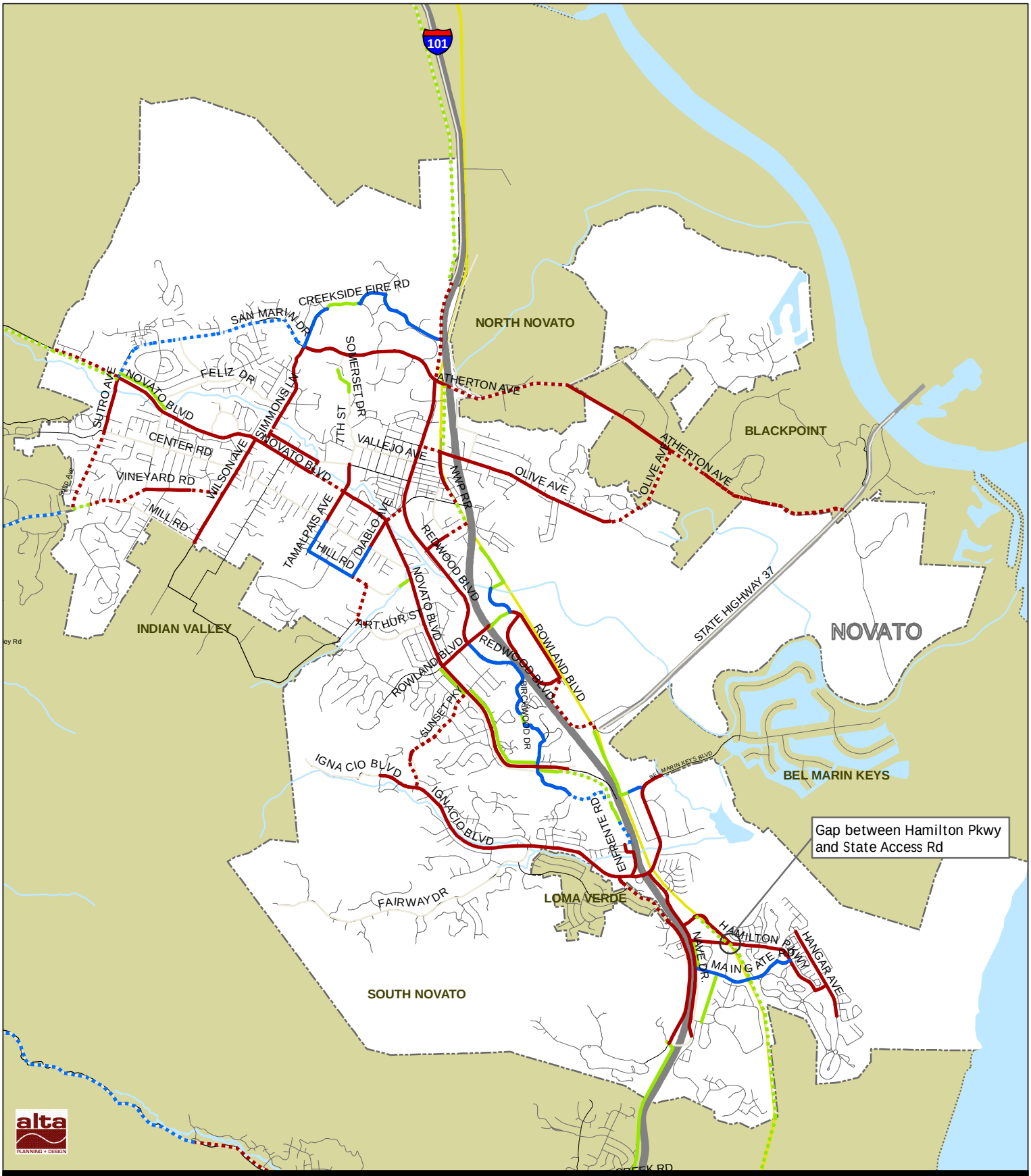

FIGURE 5-1
NOVATO BICYCLE PLAN
PROPOSED BIKEWAYS

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5.4. OTHER REGIONAL AND COUNTYWIDE CONNECTIONS

During the development of this plan update, the Novato BPAC expressed support for a number of projects that provide countywide or regional connections for residents of the City of Novato but are outside the jurisdiction of the City. These statements reflect the position of the Novato BPAC and its members and is not necessarily the position of the City of Novato or its staff.

- SMART Rail with Trail: The BPAC recognizes that the proposed SMART rail with pathway could provide benefits to Novato cyclists. In general the BPAC have identified the following issues with the proposed SMART project:
    - The BPAC's stated preference is for the bikeway to be on the NWPRR, on the west side of the existing tracks, whenever possible
    - The number of at-grade crossings should be minimized
    - SMART should work with the City of Novato to implement the relevant portions of the City's bicycle plan and help achieve it's objectives with regard to encouraging bicycling
- Marin-Sonoma Narrows Bikeway Element: The BPAC expressed strong support for a more direct, safer connection between Marin and Sonoma Counties along the Highway 101 corridor. Currently the only access through this corridor involves riding on narrow shoulders near high speed traffic along Highway 101 or taking a circuitous route along rural roads. The committee expressed general support for the bikeway element of the Caltrans Marin-Sonoma Narrows Project, including the San Antonio Creek crossing segment. It did not make specific comments on the proposal other than to encourage the City of Novato to support the effort to improve the connection between the two counties.
- Highway 37 bikeway and Bay pathway segment: The committee also recognized the need for an improved connection to Sonoma County to the east along the Highway 37 corridor. The BPAC expressed support for the proposal to develop a bikeway along this segment, either on Highway 37, as feasible, or as a part of a separate Bay pathway alignment, or both.
- Alameda del Prado Class II Bicycle Lanes in County of Marin jurisdiction.

5.5. COUNTYWIDE BICYCLE ROUTE GUIDE SIGNAGE PROJECT

As described in the preceding Existing Conditions chapter, the Marin County Department of Public Works has initiated a project to install bicycle route signs throughout the County to allow users to travel safely within and between jurisdictions. Although it is not an infrastructure project of this plan or of the City of Novato, the City and the BPAC are committed to working with the Marin County Department of Public Works to ensure implementation of this project within Novato. Because the County project focuses primarily on decision points to provide wayfinding, this project may be supplemented by Class III Bike Route signage as described elsewhere this plan. In addition, Class III signage may be found on designated Novato bike routes which are not a part of the County's project.

5.6. RECOMMENDED SUPPORT FACILITIES AND PROGRAMS

Support programs and facilities are an important component of a bicycle transportation system. Bikeway facilities alone are not sufficient to increase cycling. The cycling environment needs to be improved by providing cyclists places to store their bicycles at work locations, to shower and to change clothes. In addition, bicycle racks on buses, directional signage intended for cyclists, route maps, and educational and encouragement programs would be a great help to cyclists. Programs such as bikeway management and maintenance, and promotional and educational programs make it more convenient and safer for cyclists, and help create the cultural shift that is necessary to increase bicycling as a mode of transportation. The following section includes both general and specific recommendations for support facilities and programs.

5.6.1. BICYCLE PARKING AND END-OF-TRIP FACILITIES

Bicycle parking includes standard bike racks, covered lockers, and corrals. Other end-of-trip facilities include showers and changing facilities.

5.6.1.1. RECOMMENDATIONS

Increase Public Bicycle Parking Facilities and Encourage Provision of Shower and Changing Facilities

The City of Novato has adopted basic bicycle rack specifications including installation guidelines and City ordinance requirements for racks, lockers and showers. In implementing these adopted standards and regulations, the City should seek to provide bike racks and lockers at public destinations, including park-and-ride lots, major bus stops, community centers, libraries, parks, schools and shopping centers. All bicycle parking should be in a safe, secure, covered area (if possible). Large employers should be encouraged to provide secure indoor parking, covered bicycle corrals, or bicycle lockers.

The City of Novato should work with employers to implement the requirements for providing bicycle parking, shower and changing facilities for employees as called for in City ordinance and as a component of all commute and traffic demand management programs.

The City of Novato BPAC should periodically review the effectiveness of the existing standards and ordinances and update them with best practices as needed.

Provide Valet Bike Parking at Public Events

A formal program to provide closed-in secure bicycle corrals at all large public events to encourage residents and visitors to bicycle rather than drive should be instituted. The bicycle coalitions in Marin County and San Francisco have been providing free bicycle parking at events. The valet parking works much like a coat check: the cyclist gives their bicycle to the attendant, who tags the bicycle with a number and gives the cyclist a claim stub. When the cyclist returns to get her or his bicycle, she or he presents the claim stub and the attendant retrieves her or his bicycle for them. Locks are not needed. The Bicycle Coalition will also park strollers, rollerblades, electric scooters and other human- or electric-powered transportation devices. Valet parking could be sponsored by the City in partnership with the Marin County Bicycle Coalition and /or other providers or sponsors. Volunteers are critical to the success of such a program as they are typically used to staff

the corral during the events. Examples of events which could benefit from such a program include: the downtown farmer's market, the 4th of July parade, the art and wine festival, the Rockinblues by the lake event, Labor Day at the Lake, and the classic car parade.

5.6.2. BIKEWAYS AND DEVELOPMENT POLICIES

5.6.2.1. RECOMMENDATON

Private development presents an excellent opportunity to integrate nonmotorized transportation into newly constructed or redeveloped environments. Similar to the bicycle parking and end of trip facilities requirements described above, a policy should be developed concerning bikeway construction as a part of redevelopment or new construction. Based on specific criteria, bikeways could be required for development permits or bicycle facilities can be incorporated into the City's traffic mitigation strategies. Bikeways to be constructed should be from the adopted City of Novato Bicycle Plan and be reviewed by staff with the involvement of the BPAC. End of trip facilities should be integrated according to national and international best practices.

5.6.3. SAFE ROUTES TO SCHOOL

Identifying and improving routes for children to walk or bicycle to school is an effective means of reducing morning traffic congestion and addressing safety problems around schools. Most effective school commute programs are joint efforts of the school district and City or County, with parent organizations adding an important element. The traffic calming, route maps and infrastructure improvements that result from an extensive Safe Routes to School plan benefit not only students walking and biking to school, but also other cyclists and pedestrians that are using routes near schools.

5.6.3.1. RECOMMENDATION

The City of Novato should continue its support of the Safe Routes to Schools program within the Novato Unified School District and charter schools. Safe Routes improvements at local schools should be coordinated with citywide bicycle infrastructure improvements to create a seamless network by which school-aged children can travel safely by bicycle and on foot.

5.6.4. TRAFFIC CALMING

Traffic calming programs are beneficial for cyclists, especially if programs succeed in reducing the speed differential between automobile and cyclist travel speeds. However, if not appropriately designed, some physical traffic calming devices can present hazards for cyclists. For example, "chokers" or traffic islands narrow the space between bicycles and cars, compromising a cyclist's safety.

5.6.4.1. RECOMMENDATION

Physical traffic calming solutions should take into account cyclists' needs; incorporate design features and signage that ensure that cyclists and motorists have enough room to share the lane; and clearly establish right-of-way priorities.

5.6.5. MAINTENANCE

Maintenance is often identified as one of the chief obstacles in the implementation of local bike plans in Marin County. Novato's bikeways should be well-maintained. Some tasks, such as repairing damaged and potholed roadway surfaces, clearing plant overgrowth and regular sweeping are associated with routine roadway maintenance. Additional care and attention should be taken to ensure bikeways are included in the maintenance. For example, street sweeping activities should include the bike lane and not transfer debris out of the roadway and into the bicycle lane. Other maintenance activities are bikeway specific, and could include restriping lanes, repainting stencils and replacing signs.

5.6.5.1. RECOMMENDATION

Develop a Funding Source for the Bicycle Maintenance Program

Bikeways are an integral part of Novato's transportation network, and maintenance of the bikeway network should be part of the ongoing maintenance program for all City transportation facilities. As such, bikeway network maintenance should be adequately funded. In addition to maintenance funds from general revenue, the City may also want to consider pursuing other methods of securing funding for bikeway and pathway maintenance. Examples of alternative funding include "Adopt-a-Trail" programs, implementing recreational fees on the purchase of recreational equipment in the city, project-specific fundraising, and the sale of city-developed bicycle maps. The Transportation Authority of Marin has undertaken development of maintenance strategies for countywide pathways which may provide insights into development of a similar program for bikeways in Novato.

5.6.6. INTERSECTION AND BIKEWAY SPOT IMPROVEMENT PROGRAM

The City should ensure that a mechanism exists to evaluate the bikeway network, to alleviate potential hazards and to improve conditions for bicyclists at specific intersections and locations. Training should be provided if necessary to ensure that public works employees recognize bicycle hazards such as:

- Improperly designed or placed drainage grates
- Cracks or seams in the pavement
- Overhanging tree limbs or other obstacles located along bikeways
- Areas where lane changes are difficult (e.g., bike lane to left turn pocket)
- Signal timing problems (e.g. green phase too short)
- Locations where vehicular traffic congestion blocks bike facilities on a regular basis.

5.6.6.1. RECOMMENDATIONS

Integrate Bicycle Maintenance into DPW Maintenance Requests

In the future, all printed and online bicycle education materials and maps should include the Department of Public Works maintenance request website and phone number.

Periodically Analyze Bicycle Accident Data

The City should evaluate bicycle accident data on an annual basis to determine if any specific intersection locations appear to have higher accident rates that could be due to design problems.

5.6.7. BICYCLE SIGNAL DETECTION

As described in Chapter 3, the City of Novato has no official policy regarding bicycle signal detection. The City's current practice is to use type D loops and video detection to allow cyclists to trip signals and cross intersections. The following recommendations are intended to expand the City's existing bicycle signal detection efforts to include bicycles along all designated lanes/routes and at key intersections.

5.6.7.1. RECOMMENDATONS

Calibrate Loop Detectors and Video Detection Devices

While detector loops and video detection facilitate faster and more convenient motorist trips, if they aren't calibrated properly or stop functioning, they can frustrate cyclists waiting for signals to change, unaware that their bicycle is not being detected. Where appropriate, the City should ensure that all existing loops and video detection devices are calibrated and operable for bicycle users.

Develop Policy of Installing Bicycle-Calibrated Loop Detectors or Video Detection with Bicycle Zones at Signalized Intersections

The City should develop a policy of installing bicycle-calibrated loop detectors at intersections along designated bike routes as they are repaved. For new installations it is recommended that the City continue to use Type D for lead loops in all regular travel lanes shared with bicycles. Within bike lanes it is recommended that the City install Bicycle Loop Detectors (BLDs) using narrow Type C loops.

Where video detection is currently or planned to be in use, it is recommended that the City continue and expand its practice of incorporating additional detection zones for bicycles, especially for intersections with sidepath, wide curb lane or Class II bicycle lane facilities. Video image detection should sense bicycles in all approach lanes and also on the left side of right-turn channelization islands. Some video systems can estimate approach speed, and this capability could be used to extend the green time for slow objects assumed to be bicycles.

Apply Pavement Stenciling to Indicate Detection Areas

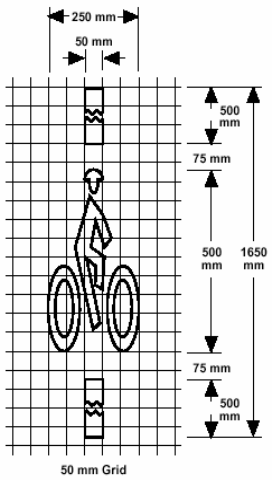
Since most cyclists, as well as motorists, do not know how loop detectors or video detection work, all detector loops and video detection areas expected to be used by cyclists should be marked by a pavement stencil such as the Caltrans Standard Plan A24C bicycle detection marking that shows cyclists where to stop to activate the loop or video detection. Educational materials distributed by the City should describe how to activate bicycle detectors. Stencils should be repainted as needed along with other roadway markings.

Potential Locations for Bicycle Detection

The following signalized intersections are potential locations for improved bicycle detection, subject to further feasibility analysis and traffic studies:

- Alameda del Prado and Ignacio Boulevard

- Rowland Boulevard and Redwood Boulevard
- Redwood Boulevard and Diablo Avenue/De Long Avenue
- Redwood Boulevard and Grant Avenue
- Redwood Boulevard and Atherton Avenue
- Novato Boulevard and Diablo Avenue
- Novato Boulevard and Tamalpais Avenue
- Novato Boulevard and Wilson Avenue/Simmons Lane
- Highway 101 interchanges at:
    - Atherton Avenue
    - De Long Avenue
    - Rowland Boulevard



Caltrans Standard Plan A24C bicycle detection marking

5.6.8. PROTECT BICYCLE FACILITIES FROM REMOVAL

5.6.8.1. RECOMMENDATON

The City should implement a practice that existing bikeway facilities will not be removed. For example, Class II bike lane facilities should not be removed at a future date to increase motor vehicle capacity without a thorough study analyzing the alternatives and unless the bicycle accommodation is replaced by another facility of equal or greater utility to cyclists.

5.6.9. MULTI-MODAL CONNECTIONS

5.6.9.1. RECOMMENDATON

The City of Novato should work with the Marin County Transit District and Golden Gate Transit to continue to expand bicycle access to buses. Bicycle travel to transit stops and stations should be enhanced in order to make the transfer between bicycle and transit travel as convenient as possible. Key components to enhancing transit-bike connections include: providing bicycle parking at transit stops, including bike racks at key bus stops and transfer points; providing educational materials regarding transit and bikes-on-transit, including maps to and from stations and stops. Improvements to bicycle rack capacity on buses will benefit Novato cyclists who use the 70/80 line.

5.6.10. EDUCATION PROGRAMS

Statewide trends show that the lack of education for bicyclists, especially younger students, continues to be a leading cause of accidents. For example, the most common type of bicycle accident reported in California involves a younger person (between 8 and 16 years of age) riding on the wrong side of the road in the evening hours. Studies of accident locations around California consistently show the greatest concentration of accidents is directly adjacent to elementary, middle, and high schools.

Most education and encouragement programs and activities will likely be cooperative efforts between the City of Novato, the Novato Police Department, the Marin County Sheriff's office, the County of Marin, the Transportation Authority of Marin and local bicycle groups such as the Marin County Bicycle Coalition.

5.6.10.1. RECOMMENDATIONS

Continue and Expand Existing Education Programs

Existing school education programs should be continued. With the passage of Measure A funding for Safe Routes to Schools, the program will continue to be available to Novato schools and can be expanded to include non-participating schools. Measure A funding also provides Safe Pathways funding, which provides an incentive for Safe Routes programs to develop infrastructure improvement concepts. For adult education, the City should work with law enforcement and the Marin County Bicycle Coalition to publicize local adult bicycle education and safety programs, including Share the Road and Street Skills classes. Novato should continue to offer "bicycle traffic school" in the form of Street Skills classes in lieu of fines.

Educate Motorists

Motorist education on the rights of bicyclists and pedestrians is virtually non-existent. Many motorists mistakenly believe, for example, that bicyclists do not have a right to ride in travel lanes, or do not understand the concept of "sharing the road" with bicyclists. The City should enforce existing traffic laws for both motorists and bicycles.

5.6.11. ENCOURAGEMENT PROGRAMS

Encouragement programs are vital to the success of the Bike Plan. Encouragement programs work to get more people out of their cars and onto bicycles, which will help to reduce traffic congestion and air pollution, as well as improve the quality of life in Novato. In addition to government efforts, involvement by the private sector in raising awareness of the benefits of bicycling is important and can range from small incremental activities by non-profit groups, to efforts by the largest employers in the City. Specific programs are described below.

5.6.11.1. RECOMMENDATIONS

Facilitate the Development of Employer Incentive Programs

Facilitate the development of employer incentive programs to encourage employees to try bicycling to work. The City may offer incentives to employers to institute these improvements through lowered auto parking requirements, reduced traffic mitigation fees, or other means. Other efforts could include:

- 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.

Utilitarian and Recreational Trip Incentive Programs

The City may develop and implement encouragement programs for utilitarian and recreational purposes. Local businesses such as movie theaters and cafes should be involved to encourage customers to use bicycle for their trips. Such efforts may include:

- Creating events such as "Shop by Bike" days, when cyclists get vouchers for, or coupons off items in the store, or "bicycle to the movies" days, when cyclists receive free popcorn or a discount on a movie or refreshments.
- Holding a community event to encourage residents to replace one car trip a week with a bicycle trip.
- Supporting the planning and implementation of an annual bicycle ride in Novato to attract new riders, showcase the city, and demonstrate the benefits of bicycling.
- Develop and implement a public education campaign to encourage bicycling, such as ads on movie screens, City benches, bicycle locker and buses, and videos on cable access television.

Bike Fairs and Races

Hosting bike fairs and races in Novato can raise the profile of bicycling in the area and provide entertainment for all ages at the same time. Bike fairs and races, similar to bike-to-work day events and bike rodeos currently hosted by the City provide an opportunity to educate and encourage current and potential bicyclists. These events can also bring visitors to Novato that may contribute to the local economy.

Novato Bicycle Facilities Map

Producing a bicycle facilities map is the primary tool for showing bicyclists all the designated bikeways in Novato and is a high priority for the BPAC. The Novato Bicycle Map should clearly show the type of facility (path, lane, or route) as well as include basic safety information, significant destinations, the location of bicycle parking facilities, public bathrooms, water fountains, transit stops and bicycle facilities in the neighboring communities. Selling advertising space on the map to local restaurants, shops and bike stores could offset the cost of developing and printing. The map could also be sold for a nominal fee. Distribution points for the map include: City offices, the libraries, the community center, local schools, bike shops and other recreational retail outlets.

Bike-to-Work and Bike-to-School Days

The City of Novato should continue to participate in the annual Bike-to-Work day in May, in conjunction with the California bike-to-work week activities. City staff should be present at "energizer" stations along the route. The City may also consider implementing Bike-to-School days.

6. PLAN IMPLEMENTATION

This chapter identifies steps towards implementation of the proposed facilities and programs of this plan, the estimated costs for the proposed improvements and maintenance, and strategies on funding and financing.

6.1. IMPLEMENTATION PROCESS

The steps between the network improvements and concepts identified in this Plan and the final completion of the improvements will vary from project to project, but typically include:

1. Adoption of the 2007 Novato Bicycle Plan by the Novato City Council.
2. Preparation of a Feasibility Study involving a conceptual design (with consideration of possible alternatives and environmental issues) and cost estimate for individual projects as needed.
3. Secure, as necessary, outside funding and any applicable environmental approvals.
4. Consider the parking needs of businesses and residents in the development of new bicycle lanes through a thorough community engagement process
5. Approval of the project by the City Council, including the commitment by the latter to provide for any unfunded portions of project costs.
6. Completion of final plans, specifications and estimates, advertising for bids, receipt of bids and award of contract(s).
7. Construction of Project.

6.2. INFRASTRUCTURE PROJECT PRIORITIZATION

Once a bikeway system has been identified, the greatest challenge is to identify the top priority projects that will offer the greatest benefit to bicyclists if implemented. The project prioritization in the following section was developed through a qualitative analysis based on stated priorities of the BPAC and City staff, priorities communicated by the public at the Northern Marin Countywide Bicycle Plan Update Public Workshop held Wednesday, November 8, 2006 at the Margaret Todd Senior Center, priorities from the 1995 *Novato Bicycle Plan* and the criteria detailed below.

- Continuity – Does the project provide new or significantly improved connectivity on established corridors or between major activity areas that does not currently exist or is not currently usable by the general public?

- Gap Closure – Does the project provide a new connection between major activity centers or on a major corridor that currently either does not exist or has convenience/safety issues?

- Demand Patterns – Does the project serve a significant existing or potential demand, as evidenced by (a) counts or observed activity, (b) comments from the public, (c) connectivity and proximity to major generators, and/or (d) projections from an acceptable demand model?

- Safety – Does the project address a significant safety concern in a community as evidenced by collision data, field observations, and/or public perception and comments?

- Project Readiness – Are the key feasibility issues of the project (right-of-way, environmental impacts, engineering issues, cost issues, neighborhood support) understood and not expected to negatively affect or delay the project? Has any formal feasibility study, engineering or design been conducted?

- Multi-Modal Integration – Does the project provide enhanced connectivity to existing transit services?

- Cost/Benefit analysis – Will the project provide the greatest benefit to cyclists for the amount invested to build it?

It is important to remember that the lists of bikeway projects and programs are flexible concepts that serve as guidelines to those responsible for implementation. The Priority Projects list, and perhaps even the overall system and segments themselves, may change over time as a result of changing bicycling patterns and implementation constraints and opportunities. Project prioritization is not meant as an absolute value, rather as an indication of projects' relative importance only. These priorities should be considered a "living document". The Novato BPAC and City staff should review the Priority Projects list on an annual basis to ensure that it reflects the most current priorities, needs, and opportunities for implementing the bikeway network in a logical and efficient manner., and that in particular the list takes advantage of all available funding opportunities and grant cycles. As projects are implemented and taken off the list, new projects should be moved up into Priority Projects status.

6.2.1. CLASS I IMPLEMENTATION PRIORITIES:

1. Enfrente Road Connector
2. De Long Avenue to Lamont Avenue downtown connector
3. Novato Boulevard Sidepath

6.2.2. CLASS II IMPLEMENTATION PRIORITIES:

- Diablo Avenue - Novato Boulevard to Redwood Boulevard
- Hanna Ranch Access Road
- Sunset Parkway
- Hill Road/Indian Valley Road/Arthur Street
- Novato Boulvard gap closure – Grant Avenue to Tamalpais Avenue
- Simmons Lane gap closure
- Vineyard Road, Sutro Avenue to Eucalyptus Avenue and Williamson Court to Wilson Avenue

Note: Class II projects listed above are not in priority order; each should be given equal priority and implemented as opportunities arise either through stand-alone projects or as a part of larger roadway maintenance or reconstruction activities.

6.2.3. CLASS III IMPLEMENTATION PRIORITY:

1. San Marin Drive from Novato Boulevard to Simmons Lane

6.3. COST BREAKDOWN

A summary and breakdown of cost estimates for the recommended bicycle network detailed in this plan is presented in **Tables 6-1 through 6-4** below. The cost of the recommended projects is estimated to be about $1.3 million for Class I projects, $123,800 for Class II Bike Lane projects, and $9,500 for Class III Bike Route projects, combined for a total system buildout cost of about $1.45 million. It is important to note the three following assumptions about the cost estimates. First, all cost estimates are highly conceptual, since there is no feasibility or preliminary design completed, and second, the design and administration costs included in these estimates may not be sufficient to fund environmental clearance studies. Finally, costs estimates are a moving target over time as construction costs escalate quickly.

All the projects are recommended to be implemented over the next two to twenty years, or as funding is available. The more expensive projects may take longer to implement. In addition, many funding sources are highly competitive, and therefore impossible to determine exactly which projects will be funded by which funding sources. Timing of projects is also something difficult to pinpoint exactly, due to the dependence on competitive funding sources and, timing of roadway and development, and the overall economy.

The projects listed may be funded through various sources. The funding section in this chapter outlines some of the local, regional, State and federal funding methods and resources for non-motorized transportation projects.

Table 6-1
Recommended Bikeway System Cost Estimates – All Facilities

Class	Bikeway Type	Total Mileage	Total Cost
I	Multi-Use Path	1.97	$1,276,400
II	Striped Bicycle Lanes	5.98	$123,800
III	Signed Bicycle Routes	3.35	$9,500
	All Bikeways	**11.3**	**$1,409,700**

Table 6-2
Recommended Bikeway System Cost Estimates – Class I Facilities

Class I Facilities - Multi-Use Paths (Off-Street)					
Route	**Begin**	**End**	**Class**	**Length**	**Cost***
NWPRR	De Long Ave.	Lamont Ave.	I	0.16	$103,700
NWPRR	Olive Ave.	San Marin Dr.	I	0.50	$324,000
Novato Blvd. Sidepath	Sutro Ave.	West City Limit	I	0.52	$336,900
Vineyard Rd. Sidepath	Sutro Ave.	Vivian Ct.	I	0.13	$84,200
Enfrente Rd. Connector	Enfrente Rd.	Redwood Blvd.	I	0.66	$427,600
		Total Class I Mileage		**1.97**	**$1,276,400**

* Cost of Installing Class 1 Multi-Use Path (10 ft. paved surface, 1 ft. soft shoulder/side) approximately $647,900/mile

Table 6-3
Recommended Bikeway System Cost Estimates – Class II Facilities

Class II Facilities - Striped Bicycle Lanes (On-Street)					
Route	**Begin**	**End**	**Class**	**Length**	**Cost***
Lamont Ave.	Reichert Ave.	NWPRR	II	0.17	$3,500
Simmons Ln.	Novato Blvd.	Kristin Ln.	II	0.1	$2,100
Olive Ave.	Redwood Blvd.	Railroad Ave.	II	0.16	$3,300
Diablo Ave.	Novato Blvd.	Redwood Blvd.	II	0.18	$3,700
Hill Rd.	Diablo Ave.	Indian Valley Rd.	II	0.12	$2,500
Indian Valley Rd.	Hill Rd.	Arthur St.	II	0.25	$5,200
Arthur St.	Indian Valley Rd.	Taft Ct.	II	0.1	$2,100
Vineyard Rd.	Vivian Ct.	Eucalyptus Ave.	II	0.44	$9,100
Vineyard Rd.	Williamson Ct.	Wilson Ave.	II	0.25	$5,200
Sutro Ave.	Vineyard Rd.	Center Rd.	II	0.62	$12,800
Olive Ave.	Rose Ct.	East City Limit	II	0.23	$4,800
Hanna Ranch Access Rd. (future)	Hwy 37	Rowland Blvd.	II	0.62	$12,800
Redwood Blvd.	San Marin Dr.	Buck Center Dr.	II	0.75	$15,500
Grant Ave.	Novato Blvd.	Virginia Ave.	II	0.1	$2,100
Novato Blvd.	Grant Ave.	Tamalpais Ave.	II	0.28	$5,800
Novato Blvd.	San Marin Dr.	West City Limit	II	0.55	$11,400
Railroad Ave.	Grant Ave.	De Long Ave.	II	0.14	$2,900
Sunset Pkwy.	Novato Blvd.	Ignacio Blvd.	II	0.92	$19,000
		Total Class II Mileage		**5.98**	**$123,800**

* Cost of Installing Class 2 Striped Bicycle Lane approximately $20,700/mile

Table 6-4
Recommended Bikeway System Cost Estimates – Class III Facilities

Class III Facilities - Signed Bicycle Routes (On-Street)					
Route	**Begin**	**End**	**Class**	**Length**	**Cost***
San Marin Dr.	Novato Blvd.	Simmons Ln.	III	2.79	$8,400
Redwood Blvd.	Palmer Dr.	Enfrente Rd. Connector	III	0.36	$1,100
Entrada Dr.	Enfrente Rd.	Enfrente Rd. Connector	III	0.2	$600
			Total Class III	**3.35**	**$9,500**

* Cost of Installing Class 3 Bicycle Route Signage approximately $3,000/mile

6.4. MAINTENANCE

Maintenance costs for the bikeway network should be relatively low due to the limited number of long Class I path facilities. The existing and recommended bikeway network is predominately made up of on-street bike lanes and routes that will be treated as part of the normal roadway maintenance program. As part of the normal roadway maintenance program, extra emphasis should be put on keeping the bike lanes and roadway shoulders clear of debris and keeping vegetation overgrowth from blocking visibility or creeping into the roadway.

6.5. MARKETING THE BICYCLE PLAN

The success of the Novato Bicycle Plan depends largely on the community's acceptance and promotion of the Plan's contents. City departments and commissions should incorporate the policies, objectives and spirit of the Bicycle Plan into their respective projects and responsibilities. The following steps will help ensure the plan becomes a living document, helping shape Novato's future.

- Distribute copies of the Plan to members of the Planning and Circulation Commissions
- Distribute copies of the Plan to City of Novato's Engineering, Parks and Recreation, Planning, Police, and Public Works Departments.
- Provide copies of the City of Novato bicycle facilities map to local schools, bicycle and recreational groups, transit agencies, bicycle shops and major employers.
- Post the plan on the City's website.
- Publish a press release about the creation of the plan.
- Provide copy of Novato Bicycle Plan to public libraries.

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APPENDIX A: FUNDING SOURCES

FEDERAL FUNDING SOURCES

The primary federal source of surface transportation funding—including bicycle and pedestrian facilities—is SAFETEA-LU, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. SAFETEA-LU is the fourth iteration of the transportation vision established by Congress in 1991 with the Intermodal Surface Transportation Efficiency Act (ISTEA) and renewed in 1998 and 2003 through the Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003 (SAFETEA). Also known as the federal transportation bill, the $286.5 billion SAFETEA-LU bill was passed in 2005 and authorizes Federal surface transportation programs for the five-year period between 2005 and 2009.

SAFETEA-LU funding is administered through the state (Caltrans and the State Resources Agency) and regional planning agencies. Most, but not all, of these funding programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. SAFETEA programs require a local match of 11.47%. SAFETEA funding is intended for capital improvements and safety and education programs and projects must relate to the surface transportation system.

Specific funding programs under SAFETEA-LU include:

- Congestion Mitigation and Air Quality (CMAQ) – Funds projects that are likely to contribute to the attainment of national ambient air quality standards
- Recreational Trails Program—$370 million nationally through 2009 for non-motorized trail projects
- Safe Routes to School Program—$612 million nationally through 2009
- Transportation, Community and System Preservation Program—$270 million nationally over five years
- Federal Lands Highway Funds—Approximately $1 billion dollars are available nationally through 2009

FUNDING GLOSSARY

CTC *California Transportation Commission*

FHWA *Federal Highway Administration*

MPO *Metropolitan Planning Organization*

RTIP *Regional Transportation Improvement Program*

RTP *Regional Transportation Plan*

RTPA *Regional Transportation Planning Agency*

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

STIP *State Transportation Improvement Program*

Federal Lands Highway Funds

Federal Lands Highway Funds may be used to build bicycle and pedestrian facilities in conjunction with roads and parkways at the discretion of the department charged with administration of the

funds. The projects must be transportation-related and tied to a plan adopted by the State and MPO. Federal Lands Highway Funds may be used for planning and construction.

Transportation, Community and System Preservation Program

The Transportation, Community and System Preservation (TCSP) Program provides federal funding for transit oriented development, traffic calming and other projects that improve the efficiency of the transportation system, reduce the impact on the environment, and provide efficient access to jobs, services and trade centers. The program is intended to provide communities with the resources to explore the integration of their transportation system with community preservation and environmental activities. TCSP Program funds require a 20% match.

Regional Surface Transportation Program

The Regional Surface Transportation Program (RSTP) is a block grant program which provides funding for bicycle and pedestrian projects, among many other transportation projects. Under the RSTP, Metropolitan planning organizations, such as MTC, prioritize and approve projects which will receive RSTP funds. TAMC distributes the RSTP funds to local jurisdictions. Metropolitan planning organizations can transfer funding from other federal transportation sources to the RSTP program in order to gain more flexibility in the way the monies are allocated. In California, 62.5% of RSTP funds are allocated according to population. The remaining 37.5% is available statewide.

Regional Transportation Improvement Program

The Regional Transportation Improvement Program (RTIP) is a derivative of the STIP program and identifies projects which are needed to improve regional transportation. Such projects may include bicycle and pedestrian facilities, safety projects and grade separation, among many others. RTIP project planning, programming and monitoring may be funded up to .5% of total RTIP funds in urbanized regions and 2% of total RTIP funds in non-urbanized regions. Each RTPA prepares a RTIP, consisting of projects to be funded through STIP. The RTPA's Regional Transportation Plan helps prioritize projects for the RTIP. RTIPs must be approved by the CTC. Projects to be funded by RTIP funds must be identified in the current or next Regional Transportation Plan.

Recreational Trails Program

The Recreational Trails Program of SAFETEA-LU provides funds to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized as well as motorized uses. In California, the funds are administered by the California Department of Parks and Recreation. RTP projects must be ADA compliant. Recreational Trails Program funds may be used for:

- Maintenance and restoration of existing trails;
- Purchase and lease of trail construction and maintenance equipment;
- Construction of new trails; including unpaved trails;
- Acquisition of easements or property for trails;

- State administrative costs related to this program (limited to seven percent of a State's funds); and

- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds).

Land and Water Conservation Fund

Land and Water Conservation Fund is a federally funded program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The Fund is administered by the National Parks Service and the California Department of Parks and Recreation and has been reauthorized until 2015.

Cities, counties and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply. Applicants must fund the entire project, and will be reimbursed for 50% of costs. Property acquired or developed under the program must be retained in perpetuity for public recreational use. The grant process for local agencies is competitive, and 40% of grants are reserved for Northern California.

In 2006, approximately $480,000 is available for projects in Northern California.

Rivers, Trails and Conservation Assistance Program

The Rivers, Trails and Conservation Assistance Program (RTCA) is a National Parks Service program which provides technical assistance via direct staff involvement, to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance—there are no implementation monies available. Projects are prioritized for assistance based upon criteria which include conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation and focusing on lasting accomplishments.

STATEWIDE FUNDING SOURCES

The State of California uses both federal sources and its own budget to fund the following bicycle and pedestrian projects and programs.

Bicycle Transportation Account

The Bicycle Transportation Account (BTA) provides state funding for local projects that improve the safety and convenience of bicycling for transportation. Because of its focus on transportation, BTA projects, including trail, must provide a transportation link. Funds are available for both planning and construction. BTA funding is administered by Caltrans and cities and counties must have an adopted Bicycle Transportation Plan in order to be eligible. City Bicycle Transportation Plans must be approved by the local MPO prior to Caltrans approval. Out of $5 million available statewide, the maximum amount available for individual projects is $1.2 million.

Wildlife Conservation Board Public Access Program

Funding for the acquisition of lands or improvements that preserve wildlife habitat or provide recreational access for hunting, fishing or other wildlife-oriented activities. Up to $250,000 dollars

available per project, applications accepted quarterly. Projects eligible for funding include interpretive trails, river access, and trailhead parking areas. The State of California must have a proprietary interest in the project. Local agencies are generally responsible for the planning and engineering phases of each project.

California Conservation Corp

The California Conservation Corps (CCC) is a public service program which occasionally provides assistance on construction projects. The CCC may be written into grant applications as a project partner. In order to utilize CCC labor, project sites must be public land or be publicly accessible. CCC labor cannot be used to perform regular maintenance, however, they will perform annual maintenance, such as the opening of trails in the spring.

Safe Routes to School (SR2S)

In September 2004, with the passage of SB 1087 (Soto), the State extended Safe Routes to School legislation for three additional years. The bill is scheduled to sunset on January 1, 2008. This program is meant to improve the safety of walking and cycling to school and encourage students to walk and bicycle to school through identification of existing and new routes to school and construction of pedestrian and bicycle safety and traffic calming projects. Caltrans is currently evaluating California's SR2S funding, in light of the new federal SR2S Program. Recent SAFETEA-LU legislation which requires each state's Department of Transportation to designate a SR2S Coordinator, also contains a SR2S program, but as of this writing, whether or not these programs will be combined in California or will remain autonomous has not yet been determined.

Environmental Justice: Context Sensitive Planning Grants

The Caltrans-administered Environmental Justice: Context Sensitive Planning Grants promotes context sensitive planning in diverse communities and funds planning activities that assist low-income, minority and Native American communities to become active participants in transportation planning and project development. Grants are available to transit districts, cities, counties and tribal governments. This grant is funded by the State Highway Account at $1.5 million annually state-wide. Grants are capped at $250,000.

Office of Traffic Safety (OTS) Grants

The California Office of Traffic Safety distributes federal funding apportioned to California under the National Highway Safety Act and SAFETEA-LU. Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Bicycle and pedestrian safety are included in the list of traffic safety priority areas. Eligible grantees are: governmental agencies, state colleges, and state universities, local city and county government agencies, school districts, fire departments and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include: potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants. OTS expects to have $56 million in funding available statewide for FY 2006/07.

Community Based Transportation Planning Demonstration Grant Program

This fund, administered by Caltrans, provides funding for projects that exemplify livable community concepts including bicycle and pedestrian improvement projects. Eligible applicants include local governments, MPO's and RPTA's. A 20% local match is required and projects must demonstrate a transportation component or objective. There are $3 million dollars available annually statewide.

Coastal Conservancy Non-Profit Grants Program

The Coastal Conservancy provides grants to non-profit organizations for projects which provide access to the California coast and preserve coastal lands, including the construction of trails, public piers, urban waterfronts, and other public access facilities.

REGIONAL FUNDING SOURCES

Regional bicycle and pedestrian grant programs come from a variety of sources, including SAFETEA-LU, the State budget and vehicle registration fees.

AB 2766 motor vehicle emission reduction grant program

The Bay Area Air Quality Management District provides a grant program in accordance with Assembly Bill 2766 which authorized air districts in California to impose a two to four dollar motor vehicle registration fee to be used for the purpose of reducing motor vehicle emissions in order for air districts to meet their responsibilities under the California Clean Air Act. Projects include bicycle facility improvements, safety and enforcement. Proposals must demonstrate the relationship between reduced motor vehicle emissions and improved air quality.

Transportation for Livable Communities PROGRAM

The Transportation for Livable Communities Program (TLC) provides grant monies to public agencies to encourage land use decisions that support compact, pedestrian and bicycle friendly development near transit hubs. MTC administers the TLC program with funds from the Regional Surface Transportation Project. TLC grants are capped at $400,000 and are competitive.

Transportation Enhancement Program

The Transportation Enhancement Program provides funds for the construction of projects, beyond the scope of typical transportation projects, which enhance the transportation system. Transportation Enhancement Projects may include landscaping, bicycle facilities and streetscape improvements. Transportation Enhancement projects are programmed as part of the STIP. Annual apportionment averages around $800,000.

Transportation Fund for Clean Air Program (TFCA)

TFCA funds are generated by a four dollar surcharge on automobile registration fees in the nine-county Bay Area. Approximately $20 million is collected annually which funds two programs: 60 percent of the TFCA monies go to the Regional Fund and 40 percent go to the County Program Manager Fund.

The Regional Fund is administered by the Bay Area Air Quality Management District (BAAQMD). Pedestrian infrastructure improvements are eligible for TFCA funds through the Smart Growth funding category.

BAAQMD, TFCA Program: www.baaqmd.gov/pln/grants_and_incentives/tfca/

Regional Bicycle and Pedestrian Program (RBPP)

The RBPP was created in 2003 as part of the long range Transportation 2030 Plan developed by the Bay Area Metropolitan Transportation Commission. The program—currently funded with Congestion Mitigation and Air Quality funds—funds regionally significant pedestrian and bicycle projects, and bicycle and pedestrian projects serving schools or transit. $200 million dollars are committed to this program over the 25-year period. Seventy five percent of the total funds are allocated to the county congestion management agencies based on population. The remaining 25 percent of funds are regionally competitive, with the county CMAs recommending the projects to be submitted to MTC for funding consideration.

Metropolitan Transportation Commission, RBPP Program
www.mtc.ca.gov/planning/bicyclespedestrians/regional.htm#bikepedprog

Safe Routes to Transit (SR2T)

Regional Measure 2 (RM2), approved in March 2004, raised the toll on seven state-owned Bay Area bridges by one dollar for 20 years. This fee increase funds various operational improvements and capital projects which reduce congestion or improve travel in the toll bridge corridors.

Twenty million dollars of RM2 funding is allocated to the Safe Routes to Transit Program, which provides competitive grant funding for capital and planning projects that improve bicycle and pedestrian access to transit facilities. Eligible projects must be shown to reduce congestion on one or more of the Bay Area's toll bridges. The competitive grant process is administered by the Transportation and Land Use Coalition and the East Bay Bicycle Coalition. Competitive funding is awarded in five $4 million grant cycles. The first round of funding was awarded in December 2005. Future funding cycles will be in 2007, 2009, 2011 and 2013.

Transportation and Land Use Coalition, SR2T Program:
www.transcoalition.org/c/bikeped/bikeped_saferoutes.html

The Bay Trail Project

The Bay Trail Grant program offers competitive grants to local governments, special districts and qualified nonprofit groups to build or design new Bay Trail segments. The program is structured to: speed Bay Trail construction by targeting high-priority, ready to build sections and closing critical gaps; leverage state dollars with significant matching funds and in-kind contributions; foster partnership by encouraging cooperative partnerships and creative design solutions; and employ the California Conservation Corps for construction, landscaping and maintenance where possible. The amount of available funding varies, depending on State bonds and grants to the Bay Trail Project.

Bay Trail Project Grant Program: http://baytrail.abag.ca.gov/grants_2003.htm

LOCAL FUNDING SOURCES

TDA Article 3

Transportation Development Act (TDA) Article 3 funds are state block grants awarded annually to local jurisdictions for transit, bicycle and pedestrian projects in California. Funds for pedestrian projects originate from the Local Transportation Fund (LTF), which is derived from a ¼ cent of the general state sales tax. LTF funds are returned to each county based on sales tax revenues. Eligible pedestrian and bicycle projects include: construction and engineering for capital projects; maintenance of bikeways; bicycle safety education programs (up to 5% of funds); and development of comprehensive bicycle or pedestrian facilities plans. A city or county is allowed to apply for funding for bicycle or pedestrian plans not more than once every five years. These funds may be used to meet local match requirements for federal funding sources. 2% of the total TDA apportionment is available for bicycle and pedestrian funding.

Measure A – Local Roads

The funds (approximately $43.9 M) will be distributed on an annual basis to each city, town, and Marin County based on a combination of miles of roads to be maintained and population. Each project will be required to consider the needs of all roadway users. Where feasible, locally defined bicycle and pedestrian projects will be implemented at the time a roadway is improved. Improvements could include striping and signing for bicycle lanes and bikeways, sidewalk improvements, curb ramps, and other accessibility and safety improvements.

Measure A – Safe Pathways Funding

Safe Pathways to School is the capital improvement element of the Transportation Authority of Marin's Safe Routes to Schools program. Where the Safe Routes program identifies circulation improvements needed for safe access to schools, the Safe Pathways program will provide funding for the engineering, environmental clearance, and construction of pathway and sidewalk improvements in all Marin County communities, including safety improvements at street crossings.

Safe Pathway projects are expected to attract matching funds from other sources and may be used in combination with road funds to accelerate pathway improvements in school areas.

Safe Pathways Projects are selected based on performance criteria that focus on improving safety throughout the County. All projects will come from approved Safe Routes plans, supported by parents, school officials, and the local jurisdiction.

- Relieves an identified safety or congestion problem along a major school route
- Completes a "gap" in the bicycle and pedestrian system along a major school route
- Maximizes daily uses by students and others
- Attracts matching funds
- Respects geographic equity

Marin Nonmotorized Pilot Program

Marin County is one of four communities nationally that has been selected by Congress to participate in a Nonmotorized Transportation Pilot Program under Section 1807 of the 2005 federal transportation bill, SAFETEA-LU. Section 1807 provides for $25 million to each of the four communities for fiscal years 2006 through 2009. The legislation states that "The Secretary shall establish and carry out nonmotorized transportation pilot program to construct, in the following four communities selected by the Secretary, a network of nonmotorized transportation infrastructure facilities, including sidewalks, bicycle lanes, and pedestrian and bicycle trails, that connect directly with transit stations, schools, residences, businesses, recreation areas, and other community activity centers:

1. Columbia, Missouri
2. Marin County, California
3. Minneapolis-St. Paul, Minnesota
4. Sheboygan County, Wisconsin

The purpose of the program shall be to demonstrate the extent to which bicycling and walking can carry a significant part of the transportation load, and represent a major portion of the transportation solution, within selected communities."

As of this writing Marin County is determining the process by which funding will be distributed and local agencies will apply or submit projects for consideration.

NON-TRADITIONAL FUNDING SOURCES

Community Development Block Grants

The CDBG program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal Community Development Block Grant Grantees may "use CDBG funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities, paying for planning and administrative expenses, such as costs related to developing a consolidated Plan and managing CDBG funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs."

American Greenways Program

Administered by The Conservation Fund, the American Greenways Program provides funding for the planning and design of greenways. Applications for funds can be made by local regional or state-wide non-profit organizations and public agencies. The maximum award is $2,500, but most range from $500 to $1,500. American Greenways Program monies may be used to fund unpaved trail development.

California Center for Physical Activity Grant Program

The California Center for Physical Activity runs several programs related to walking and offers small grants to public health departments. Grants are in the amount of $4,999 dollars or less and are offered intermittently.

REQUIREMENTS FOR NEW DEVELOPMENTS

With the increasing support for "routine accommodation" and "complete streets," requirements for new development, road widening and new commercial development provide opportunities to efficiently construct pedestrian facilities.

Impact Fees

One potential local source of funding is developer impact fees, typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may attempt to reduce the number of trips (and hence impacts and cost) by paying for on- and off-site pedestrian improvements designed to encourage residents, employees and visitors to the new development to walk rather than drive. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical for avoiding a potential lawsuit.

Mello-Roos Community Facilities Act

The Mello-Roos Community Facilities Act was passed by the Legislature in 1982 in response to reduced funding opportunities brought about by the passage of Proposition 13. The Mello-Roos Act allows any county, city, special district, school district or joint powers of authority to establish a Community Facility Districts (CFD) for the purpose of selling tax-exempt bonds to fund public improvements within that district. CFDs must be approved by a two-thirds margin of qualified voters in the district. Property owners within the district are responsible for paying back the bonds. Pedestrian facilities are eligible for funding under CFD bonds.

FUNDING MATRIX

The matrix below in **Table A-1** provides detailed information for a selection of the most applicable funding sources listed in the preceding section. Beside each source is listed the corresponding application deadline, the allocating agency, the amount available (and for what time period and to whom), matching requirements, eligible applicants, eligible projects and comments, including agency contact information, where available.

Table A-1
Potential Funding Sources

Acronyms:	Jurisdictions for City of Novato, California:
AQMD - Air Quality Management District Caltrans - California Department of Transportation CMAQ - Congestion Management and Air Quality CTC - California Transportation Commission FHWA - Federal Highway Administration RTPA - Regional Transportation Planning Agency State DPR - California Department of Parks and Recreation (under the State Resources Agency) TEA-21 - Transportation Equity Act of the 21st Century	Caltrans - Caltrans District 4 ABAG—Association of Bay Area Governments MTC—Metropolitan Transportation Commission TAM—Transportation Authority of Marin Resources: Caltrans TEA-21 website - http://www.dot.ca.gov/hq/TransEnhAct/

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
Federal Funding									
Federal Lands Highway Funds	Varies	FHWA	$1 billion dollars total nationwide through 2009	None	State	X	X	X	Project must appear in STIP. Contact California Division, FHWA http://www.fhwa.dot.gov/cadiv/directory.htm
Recreational Trails Program (RTP)	Oct. 1	State DPR	$3.3 million statewide (FY 2006)	20% match	jurisdictions special districts, non profits with management responsabil-ities over the land		X		For recreational trails to benefit bicyclists, pedestrians, and other users; contact State Dept. of Parks & Rec. , Statewide Trails Coordinator, (916) 653-8803
Transportation and Community and System Preservation Program (TCSP)	Varies	FHWA	$61.25 million annually nationwide through 2008/09	20% local match	state, local, MPOs	--	--	--	Projects that improve system efficiency, reduce environmental impacts of transportation, etc. Contact Kenneth Petty TCSP Program Officer, Office of Planning phone: (202) 366-6654 http://www.fhwa.dot.gov/tcsp/pi_tcsp.htm

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
State Funding									
Bicycle Transportation Account (BTA)	December	Caltrans	$5M statewide; $1.2M for any individual project	None	Counties and local jurisdictions	X			Limited funding statewide makes this program very competitive.
Coastal Conservancy Non-Profit Grants Program	Ongoing	Coastal Conservancy	Grants range from $10,000 to several million	Not required but favored	California non-profit 501 (c) 3 organizations		X		Funds for trail planning and construction and restoration of coastal urban waterfronts. Contact Janet Diehl jdiehl@scc.ca.gov
Environmental Justice Grants: Context Sensitive Planning	October 14	Caltrans	$1.5 million statewide	10% local	MPA, RPTA, city, county, tribal govmts, transit districts	X	X	X	Funds activities that include low-income and minority communities in transportation planning and project development. Contact Norman Dong at norman_dong@dot.ca.gov or (916) 651-6889.
Office of Traffic Safety Grants	Jan. 31	Office of Traffic Safety	$56 million statewide (FY 2006/07)	None	Government agencies, state colleges, and state universities, local city and county government agencies, school districts, fire depts, and public emergency			X	Grants are used to mitigate traffic safety program deficiencies, expand ongoing activity, or develop a new program. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation, or construction. Contact OTS Regional Coordinator Lisa Dixon at, (916) 262-0978 or ldixon@ots.ca.gov

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
					services providers				
Safe Routes to School (AB 1475/SB1087)	May 31	Caltrans	Statewide amount unclear as of mid-2006	11.5% min.	city, county	X	X	X	Primarily construction program to enhance safety of pedestrian and bicycle facilities. Contact. Caltrans District 4, (510) 286-5598
Regional Funding									
The San Francisco Bay Trail Project	Varies	The San Francisco Bay Trail Project/ ABAG	Total available varies from year to year		Public Agencies, Land Trusts, Non-profits	x	x		Funds trail planning and construction projects to complete gaps in the Bay Trail. Contact Lee Huo leeh@abag.ca.gov
Regional Bicycle and Pedestrian Program (RBPP) – Local Pass-Through	Varies	TAM, MTC	$6 million annually region-wide	11.5%	Cities, school districts, transit districts	X		X	Constructing regionally significant pedestrian projects and bicycle/pedestrian projects serving schools or transit.
Regional Bicycle and Pedestrian Program (RBPP) – Regional Projects	Varies	TAM, MTC	$2 million annually region-wide	11.5%	Cities, school districts, transit districts	X		X	Constructing regionally significant pedestrian projects and bicycle/pedestrian projects serving schools or transit.
Safe Routes to Transit	Varies	MTC, Administered by TALC	$4 million annually region-wide	None required, but scoring preference given to projects with outside match	Public agencies in all 9 Bay Area counties. Non-profits must partner with a public agency to	X			Applications must demonstrate bridge congestion reduction on at least one state-owned Bay Area bridge. Contact the Transportation and Land Use Coalition or Dave Campbell (East Bay Bicycle Coalition) sr2t@transcoalition.org dcampbel@lmi.net

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
					apply.				
Transportation Fund for Clean Air (TFCA), Program Manager Fund	January in Alameda County, varies in other counties	TAM, BAAQMD	Approx. $8 million annually region-wide	None	Cities, counties, school districts, transit districts	X			Smart growth projects: Physical improvements that support development projects and/or calm traffic, resulting in the achievement of motor vehicle emission reductions.
Transportation Fund for Clean Air (TFCA), Regional Fund	May 1st	TAM, BAAQMD	Approx. $10 million annually region-wide	10% for requests greater than $150,000	Cities, county, school districts, transit districts	X			Smart growth projects: Physical improvements that support development projects and/or calm traffic, resulting in the achievement of motor vehicle emission reductions. www.baaqmd.gov/pln/grants_and_incentives/tfca/regional_fund.htm
Transportation for Livable Communities Program	June	MTC	$27 million annually region-wide	Local match of 11.5% is required	Public Agencies. Non-profits and other CBOs may partner with public agency to apply.	x		x	Funds for transportation projects that revitalize downtown areas, commercial cores, neighborhoods, and transit corridors. www.mtc.ca.gov/planning/smart_growth/tlc_grants.htm
Local Funding									
Measure A – Local Roads	Ongoing	Transportation Authority of Marin	$43.9 M for 20-year funding program	None	Marin County and local jurisdictions	X			Funding source for any local infrastructure improvement including roads, sidewalks, bikeways and pathways.
Measure A – Safe Pathways	Ongoing	Transportation Authority of Marin	Varies	Yes – improves competitiveness of	Marin County and local jurisdictions	X			Funding source for any local infrastructure improvement including roads, sidewalks, bikeways and pathways.

Grant Source	Application Deadline	Agency	Program Funds Available	Matching Requirement	Eligible Applicants	Commute	Recreation	Safety/ Education	Comments/Contact Information
				application					
Marin Nonmotorized Transportation Pilot Program	TBD	FHWA/County of Marin	$25M for 5-year program	None	Marin County and local jurisdictions	X		X	Funding source for nonmotorized improvements including sidewalks, bikeways and pathways that meet specific criteria related to demonstrable mode shift.
Transportation Development Act (TDA) Article 3	January	MTC/ Marin County DPW	$ million in MarinCounty (2006/07)	--	Marin County and local jurisdictions	X		X	Contact Jack Baker
Nontraditional Sources									
Community Development Block Grants	Varies	HUD	$526 million statewide (2004/05)	None, but may be used as evaluation criteria	Public entities and 501(c)(3) non-profits and tax-exempt faith-based religious orgs				Primarily for community revitalization, but may be used to fund streetscape improvements, to eliminate slum and blight in low- and moderate-income areas.
Mello-Roos Community Facilities Act	None	Various Public Agencies	Varies	None		X	X	X	Primarily used to fund public services such as libraries and fire depts., but may fund pedestrian infrastructure.

APPENDIX B: CITY OF NOVATO BICYCLE PARKING AND SUPPORT FACILITIES CODE

This appendix provides language taken from the City of Novato Municipal Code. The code provides detailed parking requirements per building square footage, and includes provisions such as employee shower requirements.

19.30.090 *Bicycle Parking and Support Facilities.*

Bicycle parking shall be provided for all multifamily projects and nonresidential uses in compliance with this section.

A. *Number of Bicycle Spaces Required*.

1. Multifamily projects shall provide bicycle parking spaces equal to a minimum of 10 percent of the required vehicle spaces, unless separate secured garage space is provided for each unit. The bicycle spaces shall be distributed throughout the project.
2. Retail commercial uses shall provide bicycle parking spaces equal to a minimum of five percent of the required vehicle spaces, distributed to serve customers and employees of the project.
3. Other nonresidential uses providing employment shall provide bicycle parking spaces equal to a minimum of 10 percent of the required vehicle spaces, distributed to serve employees and visitors to the project.
4. Places of public assembly shall provide bicycle parking spaces equal a minimum of 10 percent of the required vehicle spaces, distributed to serve customers, visitors and employees.

B. *Bicycle Parking Design and Devices*.

1. *Parking Equipment*. Each bicycle parking space shall include a stationary parking device to adequately secure the bicycle.
2. *Parking Layout*.
a. Aisles providing access to bicycle parking spaces shall be at least five feet in width.
b. Each bicycle space shall be a minimum of two feet in width and six feet in length, and have a minimum of seven feet of overhead clearance.
c. Bicycle spaces shall be conveniently located and generally within proximity to the main entrance of a structure.
d. Bicycle spaces shall be separated from motor vehicle parking spaces or aisles by a fence, wall, or curb, or by at least five feet of open area, marked to prohibit motor vehicle parking.
C. *Required Shower Facilities*. All new buildings and additions to existing buildings that result in a total floor area as shown in the following table shall be required to provide showers and dressing areas for each gender as shown in the following table.
D. *Required Locker Facilities*. Land uses required by this section to provide bicycle parking spaces shall also provide one locker for each required bicycle parking space. Required lockers shall be located in relation to required showers and dressing areas to permit access to locker areas by either gender.
E. *Required Bicycle/Pedestrian Paths*. Land uses required to provide bicycle parking spaces shall provide bicycle and pedestrian paths to and from the required parking and locker facilities; access across the site frontage; and provide connections through the interior of the site to any adjacent public open space, right of ways, park or community facilities.
(Ord. No. 1441 § 2(A))

Type of Land Use	Number of Showers Required for Specified Building Floor Area	
	1 Shower for Each Gender	1 Additional Shower for Each Gender
Office Uses (business, professional)	50,000 to 149,999 sf	Each 100,000 sf over 150,000
Retail Trade, Service Uses	100,000 to 299,999 sf	Each 200,000 sf over 300,000
Manufacturing and Industrial Uses	50,000 sf or more	N.A.

APPENDIX C: CITY OF NOVATO BICYCLE RACK SPECIFICATIONS

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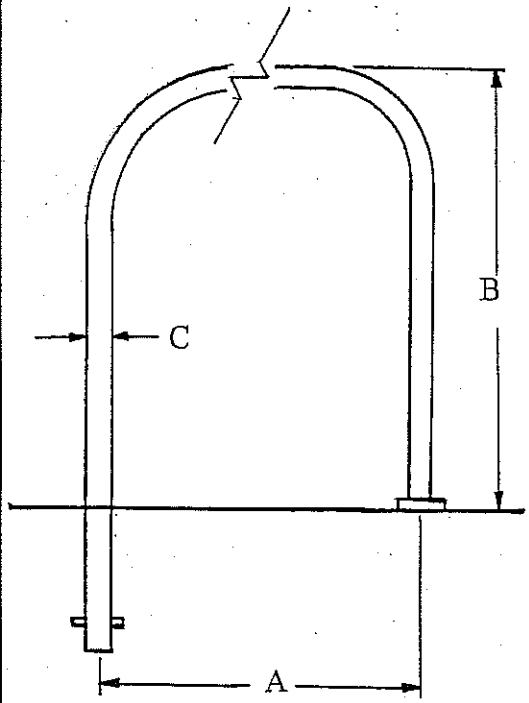
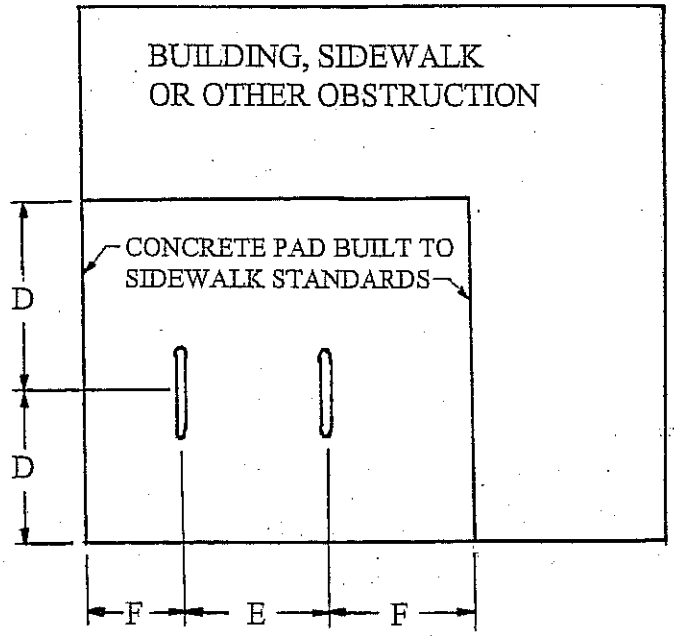


DIMENSION	MINIMUM	MAXIMUM	RECOMMENDED
A	20"	30"	24"
B	34"	38"	36"
C	2"	3"	2 ½"
D	48"	-	54"
E	36"	48"	36"
F	30"	-	36"



GENERAL NOTES

1. Bicycle racks are to be of the "inverted U" style with either a semi-circle or flat top, similar to the cycle-safe U/2™ model or the Dero hoop rack or approved equal.
2. Bicycle rack shall be a minimum of schedule 40 pipe.
3. Bicycle rack shall be mounted with an embedded anchor mount or flanged surface mount. Flange mounted installations must use vandal/theft resistant bolts.
4. Bicycle rack and rack clearances shall not interfere with ADA pedestrian clearances.
5. Bicycle rack may be color treated if desired, with color scheme subject to City approval to ensure color compatibility.
6. The City recommends the application of stickers or decals to the bike racks demonstrating proper use of the "inverted U" style bike rack.

THE CITY OF
NOVATO
CALIFORNIA
Public Works Department

STANDARD

BICYCLE RACK

SCALE NTS	DATE 12/22/05
APPROVED	
DRAWN BY D.A.B	PROJECT
CHK'D E. C.	DWG.NO. 989a

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