IMPLEMENTATION

The following project description sheets include those projects designated as top priority projects listed in Table 6.2 of this Plan. All of the projects in this chapter are top priority projects, and there is no further ranking among them here.

Project 1: Bicycle Parking Program

- **Existing Problem: Lack of bicycle parking in some commercial districts, at some schools, parks and civic locations**
- **Estimated Cost: $500,000 for ten years**

With nearly all utilitarian and many recreational bicycle trips, users need secure, well-located bicycle parking. The lack of parking is a major obstacle to using a bicycle. A large number of locations in the City of San Diego have adequate bicycle parking, however there are still many locations where parking is either insufficient or lacking. A comprehensive bicycle parking program is one of the most important strategies that jurisdictions can apply to enhance the bicycling environment. The program can improve the bicycling environment and increase the visibility of bicycling in a relatively short time. Within one or two years bike parking can be placed throughout communities.

The City should apply for funds to retrofit existing establishments with bike parking and expand existing parking accommodations. A public bike parking program typically purchases large numbers of racks and bike lockers and places them in public locations such as:

- On sidewalks in front of stores
- At schools
- In parks
- In front of libraries, city offices, and other civic locations
- At pools and recreation areas
- Establishment of a bike station at the International Border crossing at San Ysidro. Please see Project 2 for more detailed information on this proposal.

Public bicycle parking programs can also be coordinated with property owners of commercial buildings to supply parking for employees and visitors.

The cost of the program varies according to the number of parking devices desired. The City can start with a small program and expand over time, or attempt to implement a blanket program over a short period of time.

For proposed developments, bicycle parking shall be provided in accordance with Municipal Code Sections 142.0525, 142.0530, and 142.0560, and any other applicable regulations.

Project 2: San Ysidro Bike Station

- **Existing Problem: Lack of sufficient bicycle parking and other support facilities at the San Ysidro international border crossing**

- **Estimated Cost: $150,000**

The San Ysidro border crossing is one of the busiest ports of entry into the United States. Due to the long delays involved in crossing the border via private vehicle, an increasing number of commuters ride their bicycles into San Diego from Tijuana every day. An acute lack of bicycle parking at the border crossing has become a pressing issue at this location. Every day, bicycles can be seen parked against fences and posts by the dozens. Additional parking capacity needs to be provided in San Ysidro in order to make it easier and safer for commuters to park their bicycles and transfer to other modes of travel, namely the San Diego Trolley, buses, or other vehicles.

In addition to providing additional parking for bicycles at the San Ysidro crossing, a bike station is proposed to further serve the large number of commuters at this location. Establishment of a bike station would provide additional parking as well as other amenities that would help to support bicyclists as they commute and make connections to other modes of transportation. Attendants and other personnel managing the bike station should be fluent in both English and Spanish. A typical bike station would include the following amenities.

- Attended bicycle parking
- Bicycle rental establishment
- Accessory shop
- Bicycle repair shop
- Changing rooms
- Shower, and locker facilities

Project 3: Bicycle Safety Education Program

- **Existing Problem: Lack of knowledge of safe bicycle riding technique**
- **Estimated Cost: $150,000 per year for ten years**

Background

Many people don't ride bicycles because they believe it is not safe to ride. Respondents to bicycle surveys often cite safety as the top concern preventing people from riding more. Although physical improvements such as signage and adding more bikeway facilities can make a difference, it is also imperative that all bicyclists know how to ride safely. Knowing how to ride safely will encourage people to ride more confidently, more often, and along more routes. Safety education programs teach people of all ages and lifestyles how to ride safely and effectively on paths, streets, and in traffic.

The Program

Bicycle safety education programs teach bicycle safety to children, adults and other groups that encounter bicyclists, such as motorists. A specific curriculum geared for each audience, along with a handbook or other literature is recommended.

- Children – Bicycle safety education should be comprehensive enough to ensure that all children in public schools go through a bicycle safety program before they graduate. Educating children at the appropriate age is important to build life-long cycling skills that they can use in riding to school and riding for short trips later in life. In addition, bicycle safety should be taught to students who are taking drivers education classes to ensure that as new motorists, they respect bicyclists on the road.
- Adults – A safety education component can also be available to adults at employment sites, college campuses, and on selected weekends for the general public. Safety education for adults can encourage more people to ride bicycles rather than driving because education can build confidence in riding for people otherwise afraid to ride in traffic.
- Motorists – Bicycle safety education should reach anyone who would come into contact with bicyclists even if they are not cyclists themselves. This most certainly includes motorists on the roadways. Motorists as well as bicyclists need to be informed of the rules and laws of the road that pertain to bicycling in traffic. Motorist education will make motorists aware of cyclists' correct lane positioning and rights on the road to ensure the safe co-existence of bicyclists and motorists on streets and roadways.
- Other Groups – Safety education should be taught to other people who come in to contact with bicyclists or who are involved in bicycle programs. These groups of people may include San Diego Transit bus drivers, San Diego Police, and city staff who work with planning, public works and parks projects. Bicycle safety education can be incorporated into existing training or orientations.

Some items of instruction that should be conveyed to students in bicycle safety education sessions usually include:

- Choosing the right bike
- Proper bicycling clothing
- Helmet use

- How to deal with bad weather
- Basic bicycle maintenance and repair
- Using the gears
- Bicycle registration
- Rules, regulations and ordinances that govern bicyclists
- Proper mounting and dismounting techniques
- Recognition and avoidance of common bicycle collisions
- Selecting bike routes
- Consequences of unsafe bicycle use
- Proper braking techniques for hills, wet pavement, sand, rain gutters, debris, car doors
- Riding in traffic
- How to make left and right-hand turns
- Left hand shoulder check
- Avoiding hazards

The best training includes a mix of in-class and on-road instruction. After these topics have been taught in a classroom setting, it is important for cyclists to go out and practice proper riding technique under the observation of a trained instructor.

Bicycle safety education programs should be provided by certified instructors. They also could be performed by a number of organizations, including police and sheriff's departments, school districts, parks and recreation departments, and municipalities. Other programs exist which provide education programs to schools and communities across the country. Two of these specialized programs are Safe Moves and Effective Cycling. Safe Moves has conducted education programs in the City in recent years, but funding for an ongoing program has often been inconsistent. These programs have instructors and curricula that can be sent to schools and organizations in the City to teach different groups of people how to ride safely and responsibly.

Education programs are often sponsored by municipalities or school districts, and paid for by grants. The State Office of Traffic Safety has been one important source of grant money for such programs.

San Diego will seek funds for a bicycle safety education program. One option may be to pursue funds through the Office of Traffic Safety.

Project 4: Improvements to the Intersection of Pacific Highway and Barnett Avenue

- **Existing Problem: High-speed traffic; difficult to make turns**
- **Classification: Class I, II and III**
- **Cost Estimate: $151,500 to $175,500**

Some movements through the intersection of the Pacific Highway and Barnett Avenue pose challenges to bicyclists. One requires cyclists to ride through a narrow underpass. The most difficult movements are turning left from the Pacific Highway northbound to Barnett Avenue westbound, and continuing southbound on Pacific Highway from north of Barnett Avenue to south of Barnett Avenue.

Improving this intersection will require careful engineering. Each of the movements demands creative thinking. Below are some suggested options for consideration to make bicycling safer and more manageable through the intersection. They are presented for each particular movement.

Intersection recommendations for all movements

- Better signage for cyclists to follow
- Warning signs for motorists
- Enforcement of speed limit; (lower by 5 mph if feasible)
- Widen curb lanes where possible
- Add bike lanes where possible

Movement A: Turning from Barnett Avenue right onto Pacific Highway Southbound

- Consider constructing a one-way bike path parallel to an existing sidewalk along the south side of Barnett. This path would begin before the slope down to the underpass and would end past the underpass where Barnett joins Pacific Highway, and where the highway returns to an even grade. This will allow cyclists to avoid the narrow underpass. A ramp and signage at both ends could be designed for an easy transition.

Movement B: Turning right from southbound Pacific Highway onto westbound Barnett Avenue

<u>Option B1:</u>

- A bike lane exists on Pacific Highway north of the intersection. A frontage road also exists. Just north of the existing pedestrian bridge, cyclists could be directed onto the frontage road.
- They could follow new bike lanes on the frontage road and turn right at Barnett Avenue.

<u>Option B2.</u>

- Instead of following the frontage road to Barnett Avenue, cyclists could be routed along Enterprise Street to Jessop Lane. At Jessop Lane cyclists would turn left and then

turn right onto Barnett Avenue where Jessop Lane meets Barnett Avenue. This would be a Class III route.

Movement C: Going Southbound along Pacific Highway through the Intersection

Option C1:

- Use any of the options from Movement B to turn right onto Barnett Avenue.
- Cross Barnett Avenue at Jessop Lane. Appropriate signage warning motorists of bicycles crossing should be installed.
- From there, follow the recommendation in Movement A to continue southbound onto the Pacific Highway.

Option C2:

- Add a stop sign or a ramp meter to the merging lanes coming from Barnett Avenue.
- Consider narrowing the lanes from two to one on the Barnett merge. The feasibility of this would be determined by examining traffic volumes.

Movement D: Continuing Northbound on Pacific Highway through the Intersection

Option D1:

- Extend the bike lane where width exists, or widen the curb lane.
- Improve signage.

Option D2:

- Route cyclists along the frontage road through the intersection.
- Add bike lanes where feasible.

Movement E: Turning left from northbound Pacific Highway onto westbound Barnett Avenue

Option E1:

- Remove the southernmost pylons adjacent to the left-exit lane to allow for cyclists to cross over to this exit lane earlier.
- Add a bike lane on the left-exit lane immediately after its separation with Pacific Highway.
- Add signage.

Option E2:

- Route cyclists onto the frontage road.
- Direct cyclists to the pedestrian bridge north of Barnett Avenue.
- Add wheel gutters to the stairways going up the pedestrian bridge.
- Route cyclists along Enterprise Street and left onto Jessop Lane on a Class III route. Turn right from Jessop Lane onto Barnett Avenue.

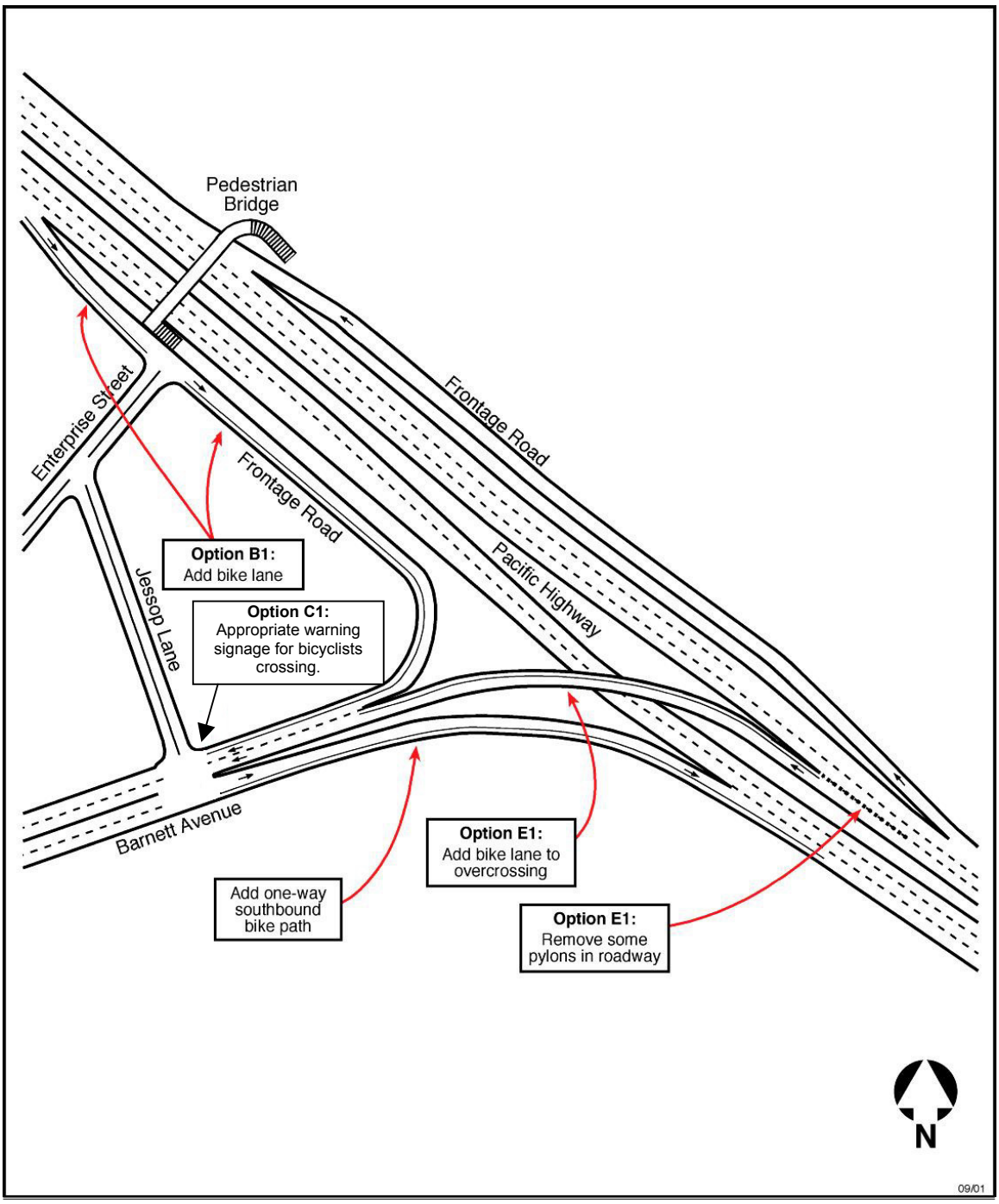


Figure 7.1
Pacific Highway and Barnett Avenue Street Modifications

Project 5: Centre City Bikeway Network

- **Existing Problem: Bicyclists must negotiate traffic while cycling through traffic to downtown's many destinations**
- **Classification: Classes II and III**
- **Length: to be determined at a later date**
- **Cost Estimate: to be determined at a later date**

With its many offices, stores, restaurants and other establishments, Centre City is a major destination for bicyclists. Within Centre City, the dense concentration of buildings and attractions makes every block filed with destinations. Bicyclists need to be able to travel throughout Centre City with a reasonable perception of safety and comfort.

The Centre City Community Plan is currently being updated. As part of this update, the current bicycle element will also be updated. Once this update is complete and adopted by the San Diego City Council, the Bicycle Master Plan will be updated to include the bicycle element for Centre City as proposed in the updated Centre City Community Plan.

It is recommended that downtown streets be restriped where possible to create Class III bike routes in accordance with the section shown in Figure 7.2. It is also recommended to restripe major north-south and east-west corridors in downtown to create Class II bike lanes to connect downtown areas with neighboring communities. Figure 7.2 also shows the recommended section to accommodate Class II bike lanes.

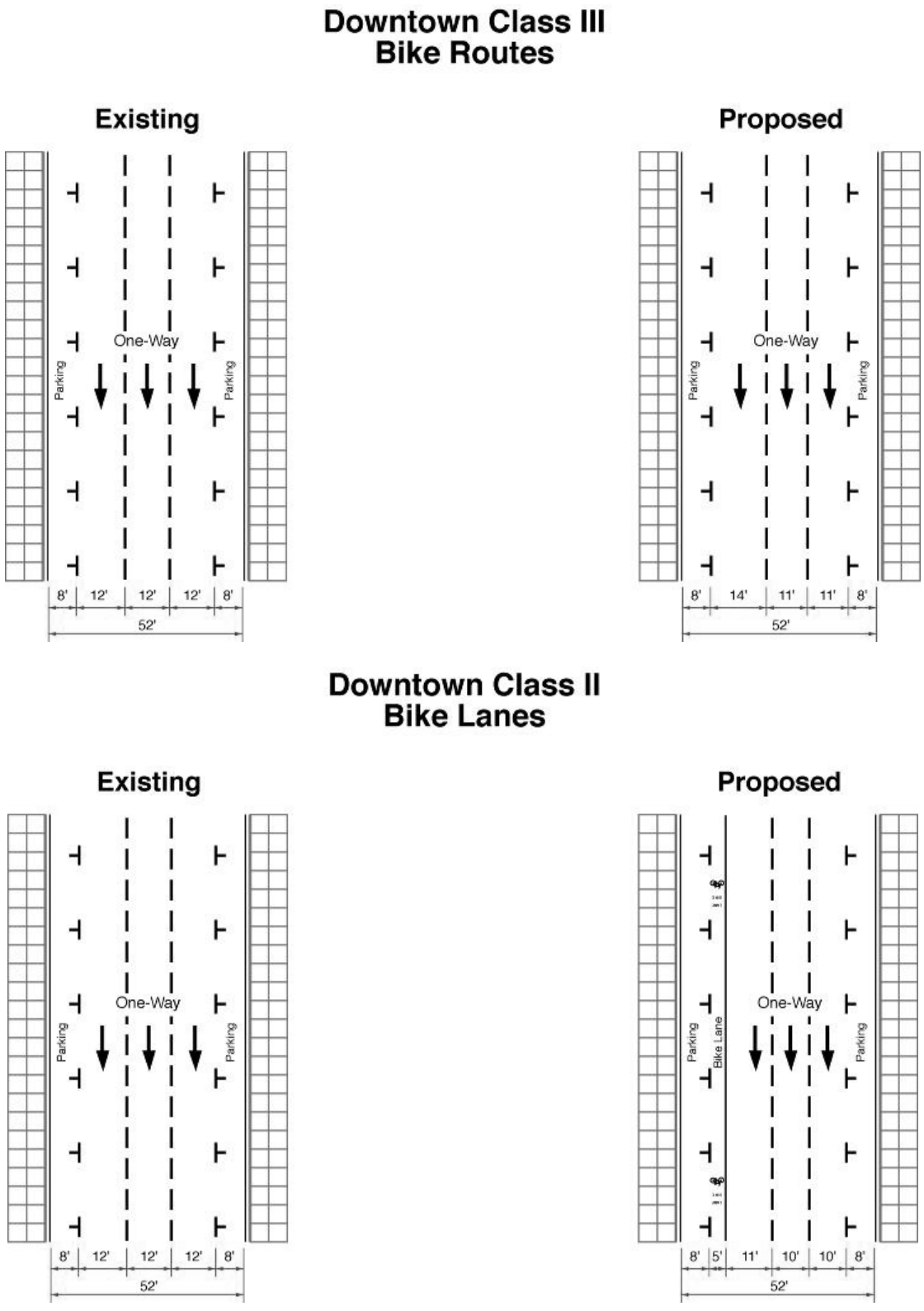


Figure 7.2
Downtown Bike Lane Classes

Project 6: Improvements to the Intersection of Fairmount Avenue and Camino del Rio North

- **Existing Problem: High-speed traffic entering and exiting I-8; difficult to cross traffic to make turns**
- **Classification: Class II**
- **Cost Estimate: $16,000 to $118,000**

The intersection of Fairmount Avenue and Camino del Rio North presents special problems for cyclists turning from northbound Fairmount Avenue onto westbound Camino del Rio North. They must cross two lanes of traffic in the vicinity of freeway ramps to turn left. Cyclists also face difficulty in turning onto southbound Fairmount Avenue from eastbound Camino del Rio North. They must contend with traffic crossing them turning right onto the I-8 Freeway on-ramp. Improving this will require creative engineering. Suggestions for consideration for improving each of these movements are made separately below.

Turning from Northbound Fairmount Avenue to Westbound Camino del Rio North

Option 1:

- Add a bicycle signal at the signalized intersection south of Interstate 8 that allows eastbound existing traffic from the freeway to cross. This signal would allow bicyclists to go through the intersection a few seconds ahead of the other traffic in order to more easily move over two lanes to make the left turn.

Option 1a:

- In conjunction with the bicycle signal, add a European-style "bicycle box" that allows cyclists to advance further into the intersection than motor vehicles. This would allow cyclists to move over to the left to make the left turn before going through this first intersection.

Option 2:

- Add crosswalks across the westbound freeway exit (south of the freeway), and across Fairmount Avenue, south of Camino del Rio North. This would assist cyclists to turn left using crosswalks.

Turning from Eastbound Camino del Rio North to Southbound Fairmount Avenue

- Add a bike lane to the left of travel lanes turning right onto eastbound freeway on ramps.
- Improve signage.

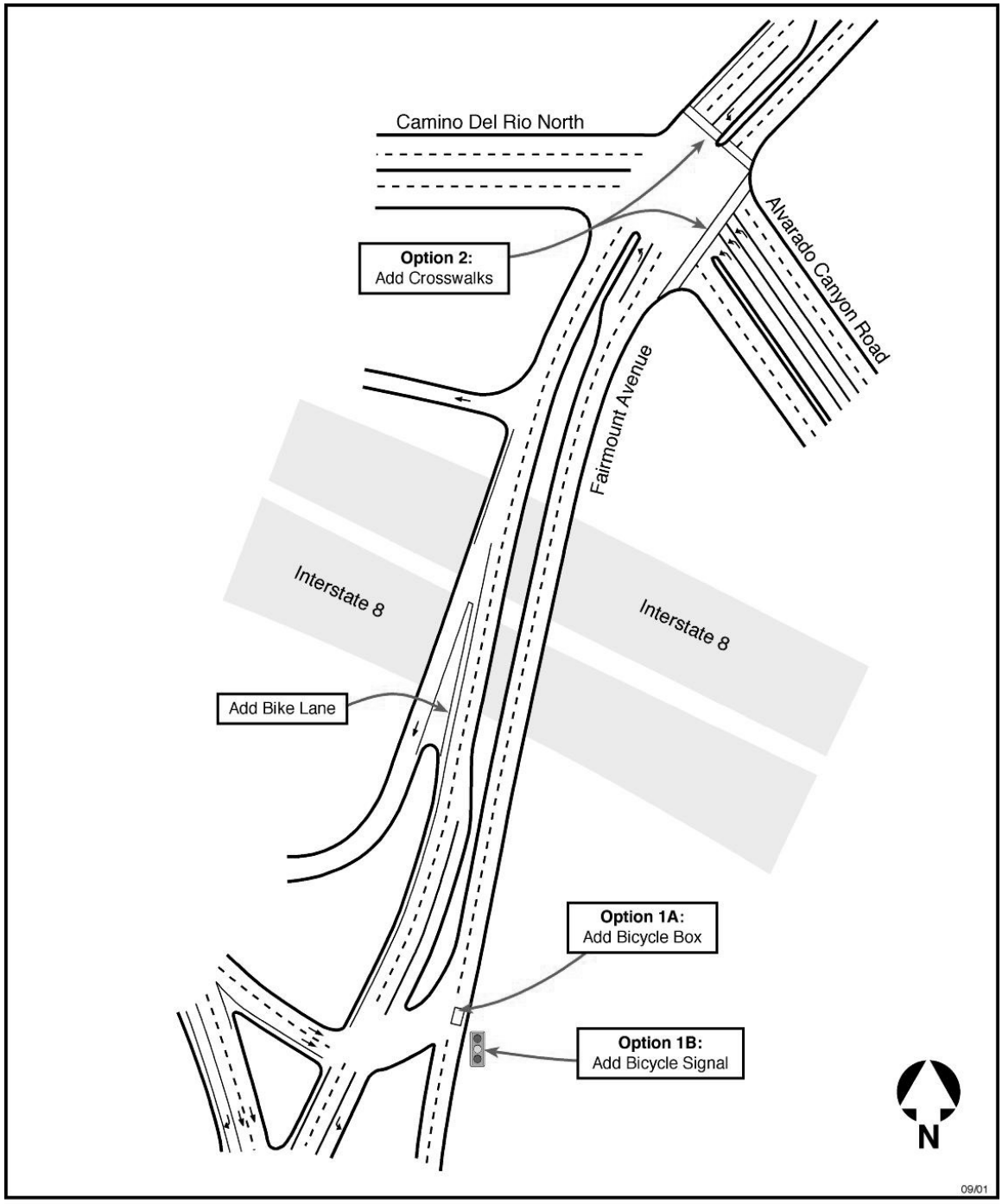


Figure 7.3
Fairmount Avenue and Camino del Rio North Intersection Improvement

Project 7: Improvements to Friars Road Over the SR-163 Interchange

- **Project Limits – Ulric Street to east side of SR-163**
- **Existing Problem: High-speed traffic merging onto and exiting from Friars Road**
- **Classification: Class II**
- **Cost Estimate: $12,500**

Friars Road has bike lanes along most of its length. Traffic moves fast as it merges on Friars Road and as it exits Friars Road over the interchange of the SR-163 Freeway. The exiting and merging lanes are to the right of bicyclists placing cyclists between these merging lanes and fast-moving through traffic. Cyclists must move to the left of existing traffic and cross over merging traffic to return to the right side of the road.

Currently the bike lanes along Friars Road end at the location of this interchange. They need to be continued through where possible. This project seeks to add visibility to bicyclists.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Friars Road.

- Add bike lanes where feasible
- Add signage

Project 8: Grand Avenue Bikeway Project

- **Project Limits – Beach Boardwalk to Noyes Street**
- **Existing Problem: Existing bike lanes don't extend to the beach**
- **Classification: Class III**
- **Length: Approximately 1.5 miles**
- **Cost Estimate: $15,000**

The beach area attracts significant bicycle traffic. The beach boardwalk bike path and the Mission Bay bike path serve cyclists well. Accessing these facilities can be better facilitated with greater visibility for bicyclists. Few east-west streets traverse the area. Grand Avenue is a primary link to the beach and bay bikeways. An enhanced Class III bikeway along this street would make this a better connection for bicyclists.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Grand Avenue.

- Provide Class III bikeway and destination signage and pavement markings on Noyes Street to the Beach Boardwalk
- Restripe the travelway to include one 11-foot travel lane and one 14-foot travel lane plus existing parking lanes.

Project 9: Balboa Avenue, Tierrasanta Boulevard Bikeway Project

- **Project Limits – Morena Boulevard to Santo Road**
- **Existing Problem – No east-west bikeway currently exists to connect Pacific Beach, Clairemont, Kearny Mesa, and Tierrasanta.**
- **Classification – Classes II and/or III**
- **Length – Approximately 6.75 miles**
- **Cost Estimate - $67,500 (all Class III) to $337,500 (all Class II)**

This proposed project would provide a Class II and/or III bikeway route along a major east-west corridor in north central San Diego. The Balboa/Tierrasanta Bikeway would serve the Tierrasanta residential community, the Kearny Mesa industrial and employment area, the Clairemont residential community, as well as major commercial retail centers located near Santo Road, Convoy Street, and Genesee Avenue. The Balboa Avenue Master Plan should be consulted prior to implementation of projects along this corridor.

This proposed bikeway project would intersect several existing bikeway facilities, including Santo Road, Murphy Canyon Road, Kearny Villa Road, the I-805 Path, Ruffin Road, and Genesee Avenue. It would connect with one proposed top project, Ruffin Road. It would also intersect second and third priority projects, such as Convoy Street, Charger Boulevard, Clairemont Drive, Moraga Drive, and Morena Boulevard.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Balboa Avenue or Tierrasanta Boulevard.

- Restripe to include Class II bike lanes and/or provide signage and pavement markings for a Class III bikeway on Balboa Avenue and Tierrasanta Boulevard between Morena Boulevard and Santo Road
- Add bikeway and destination signage

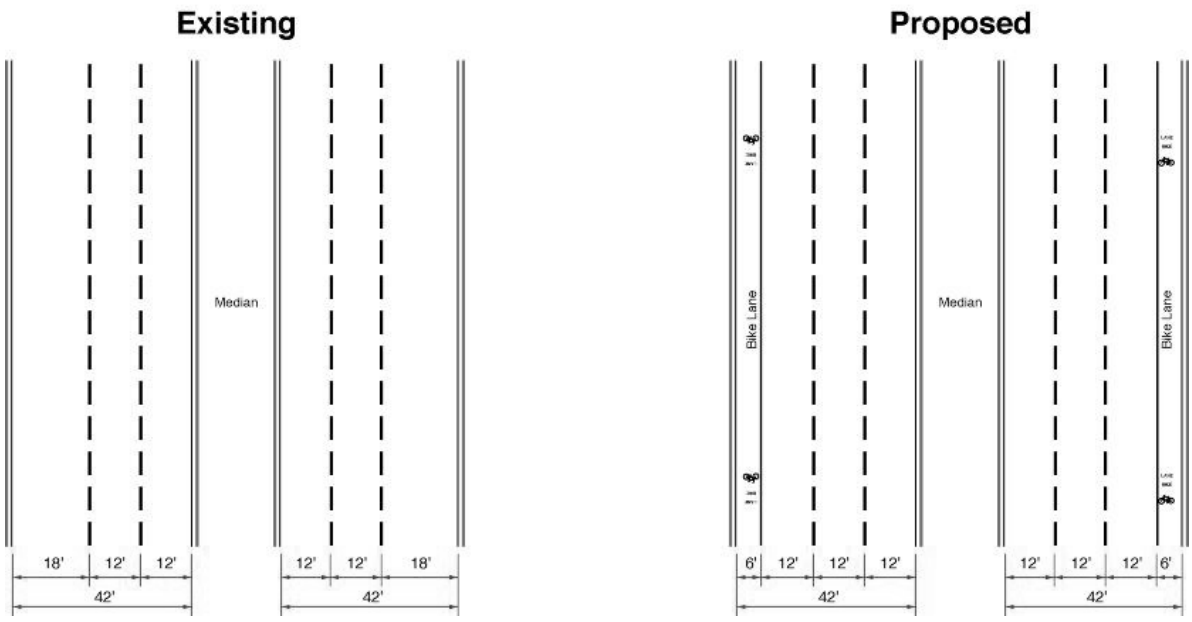


Figure 7.4
Balboa Avenue Typical Cross Section

Project 10: Park Boulevard, Adams Avenue, Aldine Drive, Monroe Avenue, El Cajon Boulevard Bikeway Project

- **Project Limits – I-5 Freeway to La Mesa city limit**
- **Existing Problem – Lack of a continuous bikeway facility to connect Downtown with Balboa Park and the communities northeast of Downtown.**
- **Classification – Classes II and III**
- **Length – Approximately 8.75 miles (1.25 miles of Class II and 7.5 miles of Class III)**
- **Cost Estimate - $137,500**

This proposed project would provide a combination Class II and III bikeway facility that would serve the communities of Hillcrest, University Heights, Normal Heights, Kensington, Talmadge, and the College Area, as well as the attractions of Balboa Park and the San Diego Zoo. Class II lanes would be implemented along Park Boulevard between the I-5 Freeway and Upas Street. Class III facilities would be implemented along Park Boulevard between Upas Street and Adams Avenue, along Adams between Park Boulevard and Van Dyke Avenue/Aldine Drive, along Aldine Drive between Adams and Monroe Avenues, and along Monroe Avenue between Aldine Drive and Collwood Boulevard. The project would then continue along El Cajon Boulevard between 54th Street and Montezuma Road and between 70th Street and the La Mesa city limit. This project would provide continuity with the City of La Mesa to the east.

This bikeway project would intersect three existing bikeway facilities, including Class II lanes on Fairmount Avenue and 70th Street and a Class III route on Collwood Boulevard. It would also intersect three proposed top priority projects. These are Class II lanes on Utah and 35th Streets and a Class III route along College Avenue. This project would intersect other second and third priority projects, including Robinson Avenue, Washington Street, Euclid Avenue, and Rolando Boulevard.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. Along Park Boulevard where Class II bike lanes are proposed, it is proposed that a transit-only lane be established. As part of the Class II bikeway project, parking was to be removed from the street. Therefore, no conflict should exist between establishing both a transit-only lane and a bike lane on Park Boulevard between Upas Street and I-5. In this case, the bike lane would be best placed to the left of the transit-only bus lane. At this time there are no proposals to include other transit-only lanes along this bikeway project.

- Restripe to include Class II bike lanes on the following segments:
    - Park Boulevard between I-5 and Upas Street
- Provide signage and pavement markings for a Class III bikeway along the following segments:
    - Park Boulevard between Upas Street and Adams Avenue
    - Adams Avenue between Park Boulevard and Van Dyke Avenue/Aldine Drive
    - Aldine Drive between Adams Avenue and Monroe Avenue
    - Monroe Avenue between Aldine Drive and Collwood Boulevard
    - El Cajon Boulevard between 54th Street and Montezuma Road
    - El Cajon Boulevard between 70th Street and La Mesa city limit
- Add bikeway and destination signage

Project 11: Utah Street Bike Lane Project

- **Project Limits – Collier Avenue to Upas Street**
- **Existing Problem – Lack of an adequate north-south bikeway facility through North Park.**
- **Classification – Class II**
- **Length – Approximately 1.75 miles**
- **Cost Estimate - $87,500**

This proposed project would provide for a Class II north-south connection through the North Park community between Adams Avenue and Upas Street. It would connect with the existing Pershing Drive bike lanes that lead into Downtown San Diego. This proposed bikeway would intersect the proposed top priority projects of Adams Avenue, Landis Street, and Upas Street.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Utah Street.

- Restripe to include Class II bike lanes on Utah Street between Collier Avenue and Upas Street
- Add bikeway and destination signage

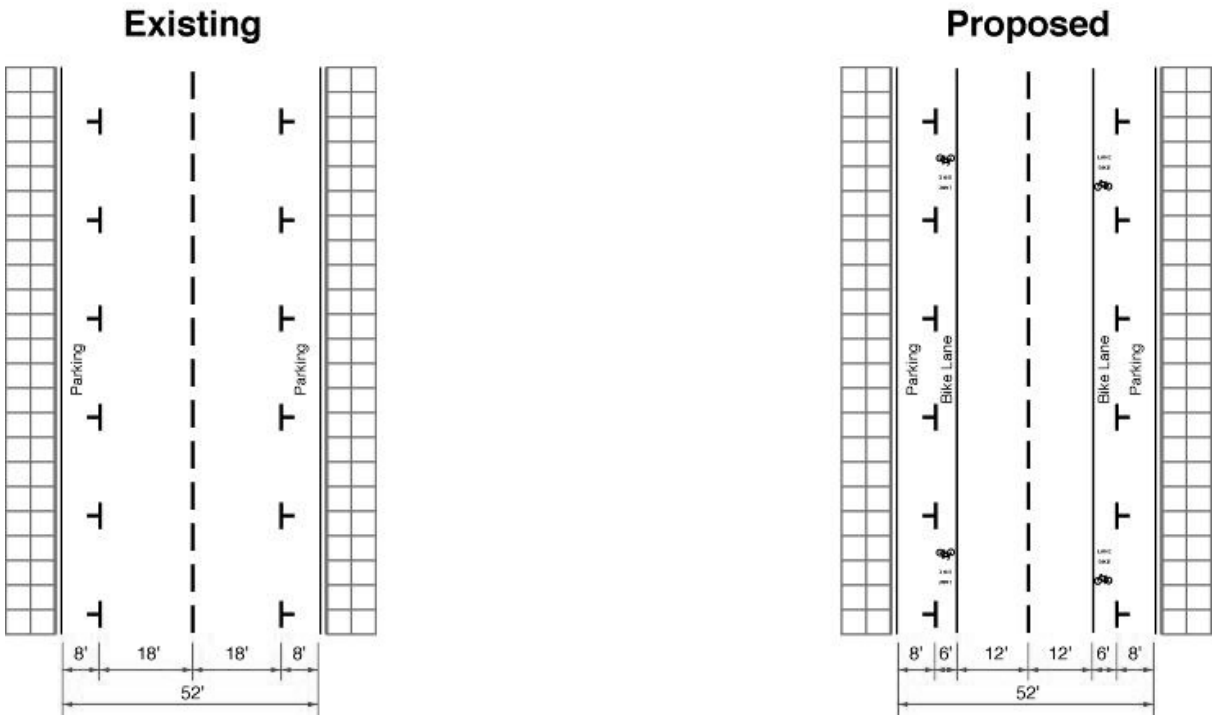


Figure 7.5
Utah Street Typical Cross Section

Project 12: 35th Street Bike Lane Project

- **Project Limits – Adams Avenue to Wightman Street**
- **Existing Problem – Lack of an adequate north-south bikeway facility through Normal Heights and City Heights.**
- **Classification – Classes II and III**
- **Length – Approximately 1 mile**
- **Cost Estimate - $50,000**

This proposed project would provide for a Class II north-south connection through the communities of Normal Heights and City Heights between Adams Avenue and Wightman Street. It would connect with the existing Class III facility along Wightman Street. This proposed bikeway would intersect the proposed top priority project to upgrade the Class III facility along Wightman to a Class II facility. 35th Street would connect many destinations within the community, including an elementary school near University Avenue and Adams Avenue Park. Although this project is proposed as Class II, one block of Class III must be implemented between University Avenue and Polk Avenue due to street width and parking considerations.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on 35th Street.

- Restripe to include Class II bike lanes on 35th Street between Adams and Polk Avenues and between University Avenue and Wightman Street
- Provide for Class III signage and pavement markings on 35th Street between Polk and University Avenues
- Add bikeway and destination signage

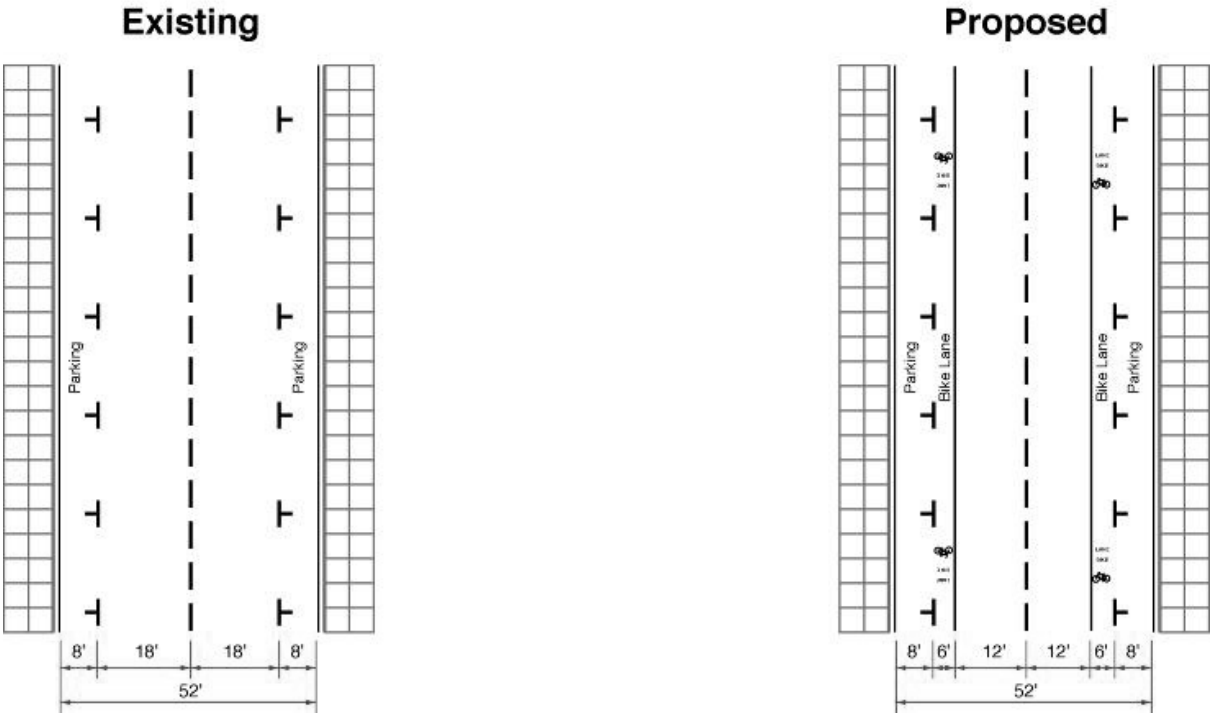


Figure 7.6
35th Street Typical Cross Section

Project 13: Landis-Wightman Bikeway Project

- **Project Limits – Utah Street to 30th Street and Swift Avenue to Euclid Avenue**
- **Existing Problem – Provide east-west connectivity and upgrade an existing Class III facility where there is room to do so.**
- **Classification – Classes II and III**
- **Length – Approximately 2.5 miles (1.5 miles of Class II and 1 mile of Class III)**
- **Cost Estimate - $85,000**

This proposed project would create a continuous combination Class II and III east-west bikeway through the communities of North Park and City Heights. The existing Landis Street Class III facility will be extended west from 30th Street to the proposed top priority Class II project along Utah Street to provide for connectivity. The existing Class III facility along Wightman Street will be upgraded to a Class II facility between Swift and Euclid Avenues. Installation of Class II bike lanes along Wightman Street would require the removal of an existing two-way left turn lane. The impact of the proposed removal of the two-way left turn lane must be evaluated and input from the community will be considered prior to implementation of this project.

The Landis-Wightman bikeway project would intersect proposed top priority bikeway projects along Utah Street, 35th Street, Central Avenue, and 43rd Street/Fairmount Avenue. A second priority project would be intersected at Euclid Avenue.

- Restripe to include Class II bike lanes along Wightman Street between Swift and Euclid Avenues
- Provide signage and pavement markings for a proposed Class III bikeway on Landis Street between Utah and 30th Streets
- Improve signage on the existing Class III route on Landis Street between 30th Street and the link to Wightman

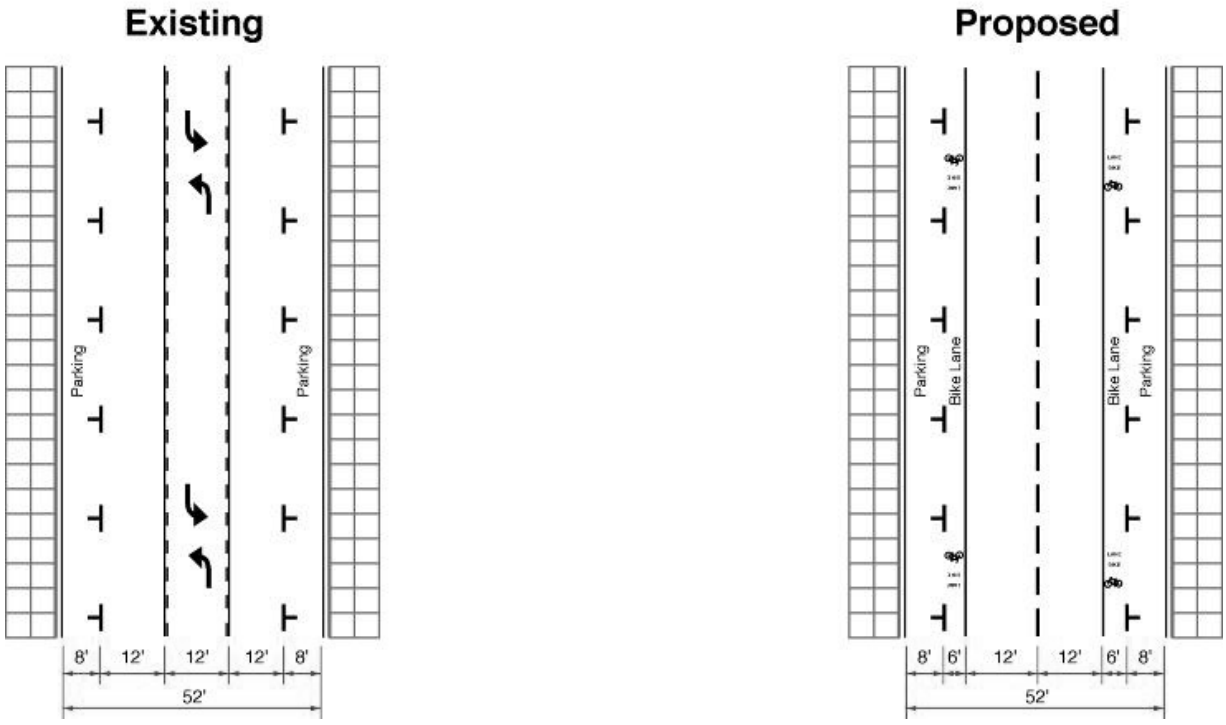


Figure 7.7
Wightman Street Typical Cross Section

Project 14: Upas Street, Morley Field Bike Route Project

- **Project Limits – Vermont Avenue to Boundary Street**
- **Existing Problem – Lack of an east-west connector through North Park adjacent to Balboa Park.**
- **Classification – Class III**
- **Length – Approximately 2 miles**
- **Cost Estimate - $20,000**

This proposed project would provide for east-west access and continuity through the North Park community adjacent to Balboa Park. This project would include Class III facilities along Upas Street from Vermont Avenue to Park Boulevard and from Alabama Street to Boundary Street and along Morley Field Drive between Park Boulevard and Alabama Street/Upas Street. To the west, this bikeway would connect to the existing Upas Street Bridge Class I facility, which bridges the SR-163 Freeway to the western side of Balboa Park and provides a southern link across the freeway in Hillcrest. This project would also connect with the existing Pershing Drive Class II lanes that lead into Downtown San Diego. It would also intersect the Florida Street Class III bikeway, which may become a Class I facility with the planned closure of Florida Street through Balboa Park.

This project would intersect proposed top priority projects including Utah Street and Park Boulevard. Other second and third priority projects that this project would intersect include 30th Street and Boundary Street. This project would serve the Morley Field recreation area of Balboa Park and would provide an east-west connection from other facilities to the Park.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Upas Street or Morley Field Drive.

- Provide Class III bikeway and destination signage and pavement markings on the following street segments:
    - Upas Street between Vermont Avenue and Park Boulevard
    - Morley Field Drive between Park Boulevard and Upas Street
    - Upas Street between Morley Field Drive and Boundary Street
- Add bikeway and destination signage

Project 15: 43rd Street, Fairmount Avenue Bikeway Project

- **Project Limits – Meade Avenue to Ridge View Drive**
- **Existing Problem – There is a gap in the north-south bikeway network through City Heights.**
- **Classification – Class III**
- **Length – Approximately 3.5 miles**
- **Cost Estimate - $35,000**

This proposed project would close a gap in the bikeway network and would provide continuity through the City Heights area of San Diego. North of Thorn Street, 43rd Street and Fairmount Avenue are a couplet with 43rd Street being one-way southbound and Fairmount being two-way with 2 travel lanes northbound and one southbound. South of Thorn Street, Fairmount is a balanced two-way facility. Except for two blocks on 43rd and Fairmount between Meade and Orange Avenues where a Class III is recommended, this project is for Class II bike lanes. The aforementioned section of the project is too narrow to accommodate bike lanes.

This project would extend the existing Fairmount Avenue bikeway south through City Heights and will connect to the existing bike lanes near the Chollas Canyon bridge. This project would serve as a major regional bikeway corridor through the eastern portion of the City. It would also provide enhanced bicycle access to the City Heights redevelopment areas along Fairmount Avenue.

This project would intersect three proposed top priority projects, including those along Aldine Drive and Wightman Street. It would also intersect other proposed bikeways, including those proposed along Polar Street, Home Avenue, and Chollas Canyon.

- Restripe to provide wide outside lanes for enhanced bicycle travel on 43rd Street and Fairmount Avenue.
- Provide bikeway and destination signage and pavement markings.

Project 16: 54th Street, Euclid Avenue Bikeway Project

- **Project Limits – Trojan Avenue to Market Street**
- **Existing Problem – No north-south bikeway currently exists in this area of the City to provide continuity and enhanced access for bicyclists.**
- **Classification – Classes II and III**
- **Length – Approximately 3.25 miles (2.25 miles of Class II and 1 mile of Class III)**
- **Cost Estimate - $122,500**

This proposed project would close a gap in the regional bikeway network and provide continuity in the southeastern part of the City. This project would connect the College Area with Southeastern San Diego and its neighborhoods. To its north, it would connect with the existing Class III route on 54th Street. To its south, the project would connect to existing Class II lanes on Euclid Avenue south of Market Street. This bikeway project would serve the Euclid Avenue Trolley Station as well as Villaview Community Hospital and Colina del Sol Community Park.

The 54th Street-Euclid bikeway would intersect two proposed top priority projects, including the Orange Avenue Class III route extension and the Class III route proposed along Market Street west of Euclid Avenue. The project also intersects other proposed bikeway projects, including University Avenue, Streamview Drive, College Grove Drive, and Federal Boulevard.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on 54th Street or Euclid Avenue.

- Restripe to include Class II bike lanes on 54th Street between Trojan and Euclid Avenues
- Provide Class III signage and pavement markings along Euclid Avenue between 54th and Market Streets
- Add bikeway and destination signage

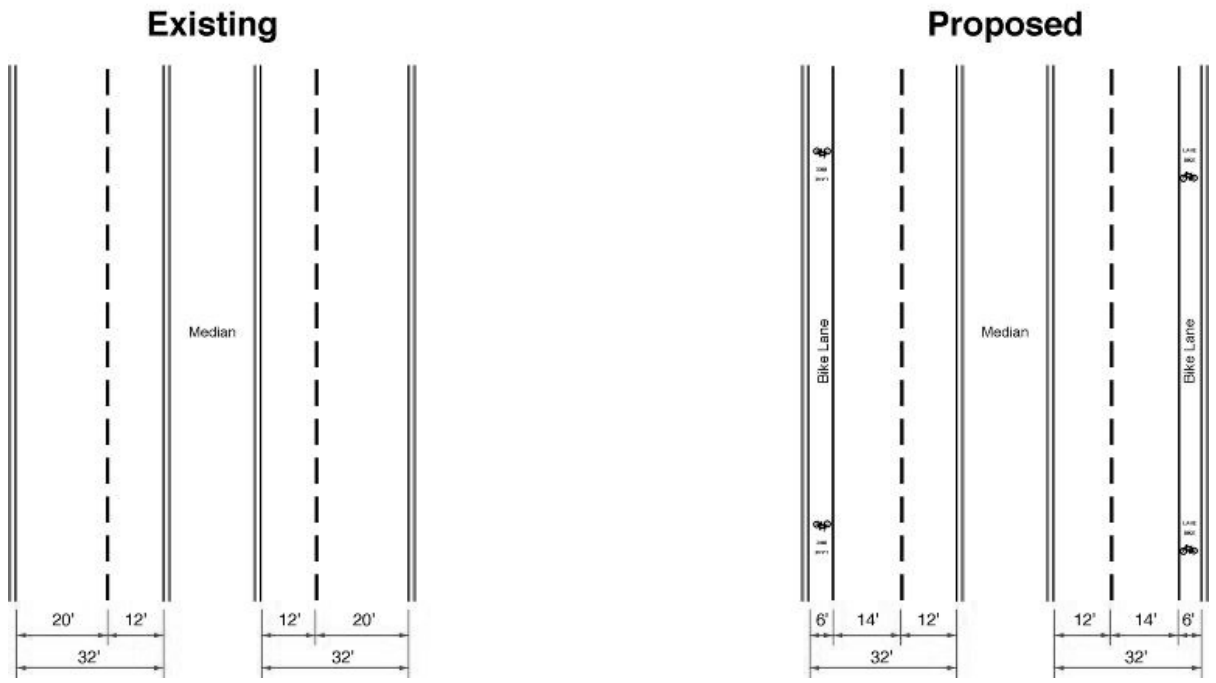


Figure 7.8
54th Street Typical Cross Section

Project 17: College Avenue Bikeway Project

- **Project Limits – Navajo Road to Lemon Grove city limit**
- **Existing Problem – Lack of north-south bikeway facilities through the College Area for local and regional connectivity.**
- **Classification – Classes II and III**
- **Length – Approximately 4.5 miles (1.25 miles of Class II and 3.25 miles of Class III)**
- **Cost Estimate - $95,000**

This proposed project would provide a regional bikeway facility in the Southeatern San Diego and College Area communities of San Diego. The Class II portion of this project would be along College Avenue between University Avenue and the Lemon Grove city limit. The Class III portion would be between University Avenue and Navajo Road. College Avenue is the primary route to access San Diego State University, and establishing a bikeway along this route would increase access to SDSU for students, faculty, and staff who choose to bicycle to the campus. Other destination that are served by this project include commercial areas near El Cajon Boulevard and University Avenue, and the College Grove Shopping Center located near SR-94.

This project would intersect two existing bikeways, Class II lanes on Navajo Road and Montezuma Road. It would link up with two proposed top priority projects including Class III routes on El Cajon Boulevard and Adelaide Avenue. The College Avenue project would also link up with other proposed projects, including Alvarado Road, Del Cerro Boulevard, University Avenue, Streamview Drive, College Grove Drive, and Racine Road.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on College Avenue.

- Restripe to include Class II bike lanes along College Avenue between University Avenue and Lemon Grove city limit
- Provide Class III signage and pavement markings along College Avenue between Navajo Road and University Avenue
- Add bikeway and destination signage

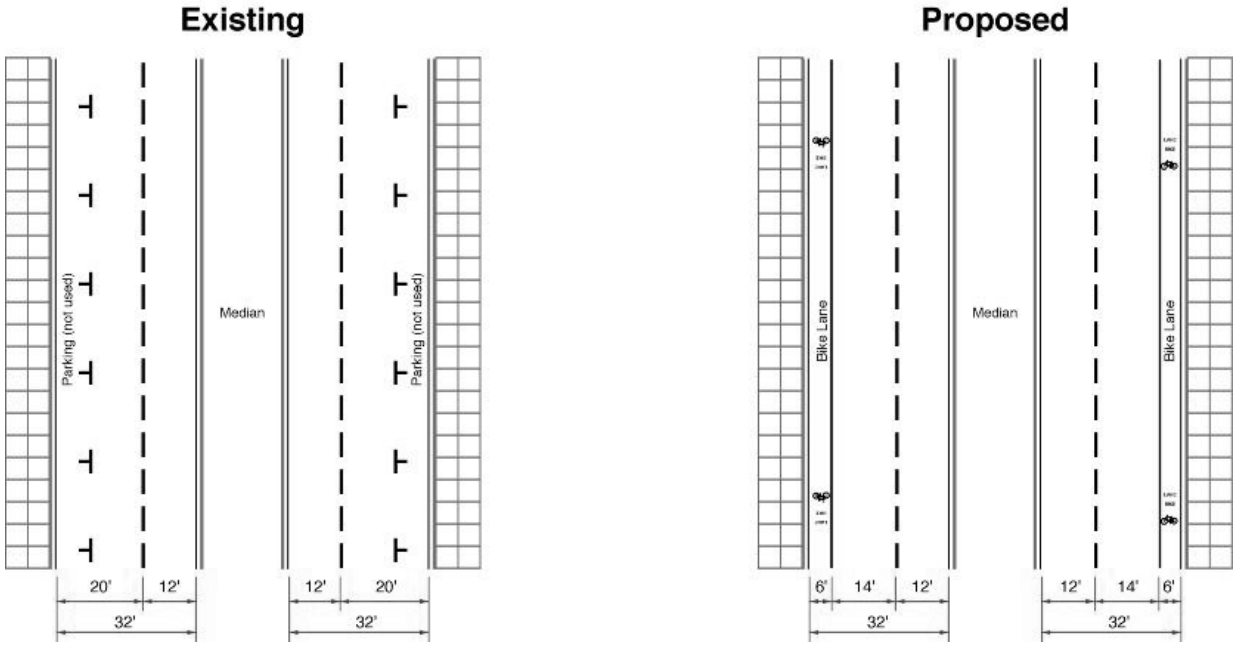


Figure 7.9
College Avenue Typical Cross Section for Class II Bike Lanes

Project 18: Island Avenue, Market Street Bikeway Project

- **Project Limits – I-5 Freeway to Euclid Avenue**
- **Existing Problem – Lack of an adequate east-west bikeway to link with Downtown San Diego from the eastern communities.**
- **Classification – Classes II and III**
- **Length – Approximately 3.50 miles (2 miles of Class II and 1.5 miles of Class III)**
- **Cost Estimate - $115,000**

This proposed project provides enhanced access into Centre City from the eastern neighborhoods and communities. It would utilize Island Avenue, which is a low-volume collector street, from the I-5 Freeway east into the Golden Hill neighborhood. At 32nd Street, this bikeway will go north and continue on Market Street to Euclid Avenue in Southeastern San Diego. Currently, one Class II segment exists between 40th Street and Toyne Street. This segment is not included in the mileage and cost estimate totals above. This project would have both Class II and Class III segments. Class II segments would include Island Avenue between the I-5 Freeway and 28th Street and Market Street from 32nd Street to 40th Street and from Toyne Street to the I-805 Freeway. Class III segments would be on Island Avenue from 28th Street to 32nd Street and on Market Street from the I-805 Freeway to Euclid Avenue. Destinations served by this project include the Gaslamp District in Downtown, the Market Street Trolley Station, Grant Hill Park, and the Euclid Avenue Trolley Station.

This project would intersect three existing bikeway facilities, including Class II lanes on Euclid Avenue south of Market Street and Class III routes along 22nd Street and 28th Street. Three other proposed top priority projects would be linked by this project, including Class III routes on Quail Street and Euclid Avenue north of Market Street. This project would also link with several other proposed bikeway projects, including 16th Street, 25th Street, 32nd Street, and 47th Street.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Island Avenue or Market Street.

- Restripe to include Class II bike lanes along the following segments:
    - Island Avenue between the I-5 Freeway and 28th Street
    - Market Street between 32nd street and 40th Street
    - Market Street between Toyne Street and I-805
- Provide Class III signage and pavement markings along the following segments:
    - Island Avenue between 28th and 32nd Streets
    - Market Street between I-805 and Euclid Avenue
- Add bikeway and destination signage

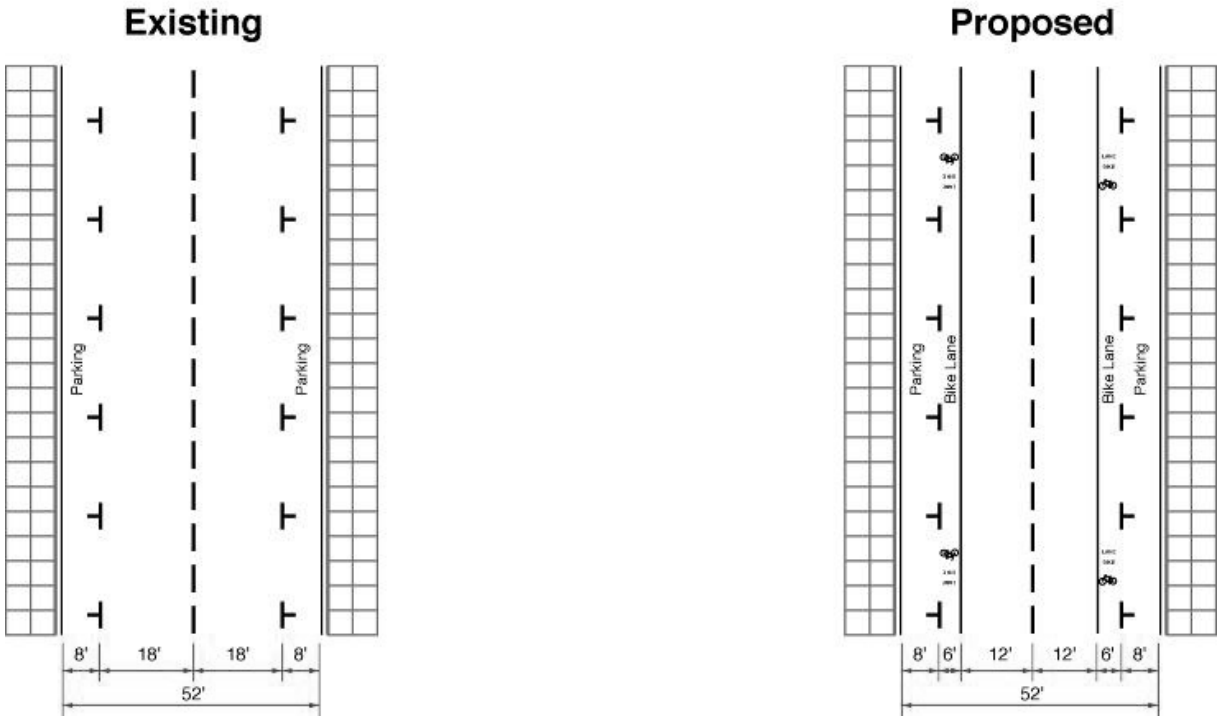


Figure 7.10
Island Avenue Typical Cross Section

Project 19: Kettner Boulevard, India Street Bikeway Project

- **Project Limits – Washington Street to Laurel Street/I-5 Freeway**
- **Existing Problem – Lack of an enhanced bikeway facility accessing Downtown from the northwest.**
- **Classification – Classes II or III**
- **Length – Approximately 2.0 miles**
- **Cost Estimate - $20,000 - $100,000**

This proposed project would enhance access into Downtown from the Middletown area of the City via a Class II or III bikeway. This project would install a Class II bike lane facility or a Class III bike route facility along these two streets.

This project would intersect the existing Laurel Street Class III bikeway. This project would connect with other proposed projects, including Washington Street and San Diego Avenue.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Kettner Boulevard or India Street.

- Restripe to include Class II bike lanes or provide Class III bikeway signage and pavement markings on the following segments:
    - Kettner Boulevard between Washington and Laurel Streets
    - India Street between Washington and the I-5 Freeway
- Add bikeway and destination signage

Project 20: Pacific Beach Drive Bikeway Project

- **Project Limits – Mission Boulevard to Programmed Rose Creek Bridge Project**
- **Existing Problem – Lack of an adequate east-west bikeway to link the Mission Beach Boardwalk through the Pacific Beach community.**
- **Classification – Class III**
- **Length – Approximately 1.5 miles**
- **Cost Estimate - $15,000**

This proposed project would provide an alternate east-west route to Grand Avenue for those who prefer a quieter route through the Pacific Beach community. A short segment of this project has already been designated a Class III bikeway between Crown Point Drive and Olney Street. This segment is not included in the mileage and cost estimate figures above. This project would link the eastern portion of Mission Bay with the Mission Beach Boardwalk and would connect with the programmed Rose Creek Bridge Class I bikeway project. Other destinations served would include The Promenade at Pacific Beach shopping area, Campland by the Bay, and the Northern Wildlife Preserve.

This project would link with the existing Class III facilities along Crown Point Drive, Olney Street, and Fanuel Street. It would also link with the aforementioned programmed Rose Creek Bridge project. It would also intersect other proposed projects, including Mission Boulevard, Cass Street, Ingraham Street, Jewell Street, and Lamont Street.

- Provide Class III bikeway and destination signage and pavement markings along Pacific Beach Drive between Mission Boulevard and the current eastern end of Pacific Beach Drive
- Add bikeway and destination signage

Project 21: C Street, Quail Street Bikeway Connector Project

- **Project Limits – Programmed Home Avenue/C Street Path to Market Street**
- **Existing Problem – Lack of continuity to provide access to the programmed Home Avenue/C Street Path connector.**
- **Classification – Class III**
- **Length – Approximately 0.5 miles**
- **Cost Estimate - $5,000**

This proposed project would close a gap in the regional bikeway network and provide access to the programmed Home Avenue/C Street Path project. This Class III project will guide bicyclists from Market Street to the C Street Path from the south. It would intersect the existing Market Street Class II bike lanes facility. This project would serve no destinations, but would provide a Class III link to provide regional connectivity and access for bicyclists in Southeastern San Diego.

- Provide Class III bikeway and destination signage and pavement markings on the following street segments:
    - C Street between the end of the Home/C Street Path
    - Quail Street and on Quail Street between C and Market Streets

Project 22: Orange Avenue Bikeway Eastern Extension Project

- **Project Limits – Altadena Street to College Avenue**
- **Existing Problem – Lack of continuity east of the current terminus of the existing Orange Avenue Class III bikeway.**
- **Classification – Class III**
- **Length – Approximately 1.25 miles**
- **Cost Estimate - $12,500**

This proposed project would extend the Orange Avenue Class III bike route eastward to end at College Avenue. From the current eastern end of the Orange Class III facility, the project would establish a Class III route along Orange Avenue, Sharron Place, Trojan Avenue, 60th Street, and Adelaide Avenue to connect with College Avenue. This project would provide improved access to San Diego State University via College Avenue, and provides an alternative to busy El Cajon Boulevard. Other destinations served include Colina del Sol Community Park and Colina Park Golf Course.

This project would intersect the existing Class III route along 54th Street north of Orange Avenue. It would also intersect proposed top priority projects, including Class II lanes on 54th Street south of Orange Avenue and a Class III route along College Avenue.

- Provide Class III bikeway and destination signage and pavement markings along Orange Avenue, Sharron Place, Trojan Avenue, 60th Street, and Adelaide Avenue between Altadena Street and College Avenue

Project 23: Ruffin Road/Murphy Canyon Road Bikeway Project

- **Project Limits – Kearny Villa Road to Murphy Canyon Path**
- **Existing Problem – Lack of an enhanced bikeway and lack of connectivity in eastern Kearny Mesa and Murphy Canyon areas.**
- **Classification – Class II**
- **Length – Approximately 3.25 miles**
- **Cost Estimate - $162,500**

This proposed project would provide enhanced bikeway access and connectivity in the eastern portion of Kearny Mesa. It would establish a significant north-south bikeway connecting Kearny Villa Road and Qualcomm Stadium. Class II bike lanes are proposed along Ruffin Road between Kearny Villa Road and Aero Drive and would upgrade the existing Class III facility on Murphy Canyon Road between Aero Drive and the Murphy Canyon Path. This extension would provide improved access to employment centers, the Stonecrest Mall, and other commercial areas in the community of Kearny Mesa.

This project would intersect the existing Class II facilities on Kearny Villa Road, Aero Drive, Ruffin Road south of Aero Drive, the Class III facility on Clairemont Mesa Boulevard, and the Class I Murphy Canyon Path. It would intersect the proposed top priority project along Balboa Avenue.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Ruffin Road or Murphy Canyon Road.

- Restripe to include Class II bike lanes along the following street segments:
  - Aero Drive between Convoy Street and Kearny Villa Road
  - Murphy Canyon Road between Aero Drive and the beginning of the Murphy Canyon bike path
- Add bikeway and destination signage

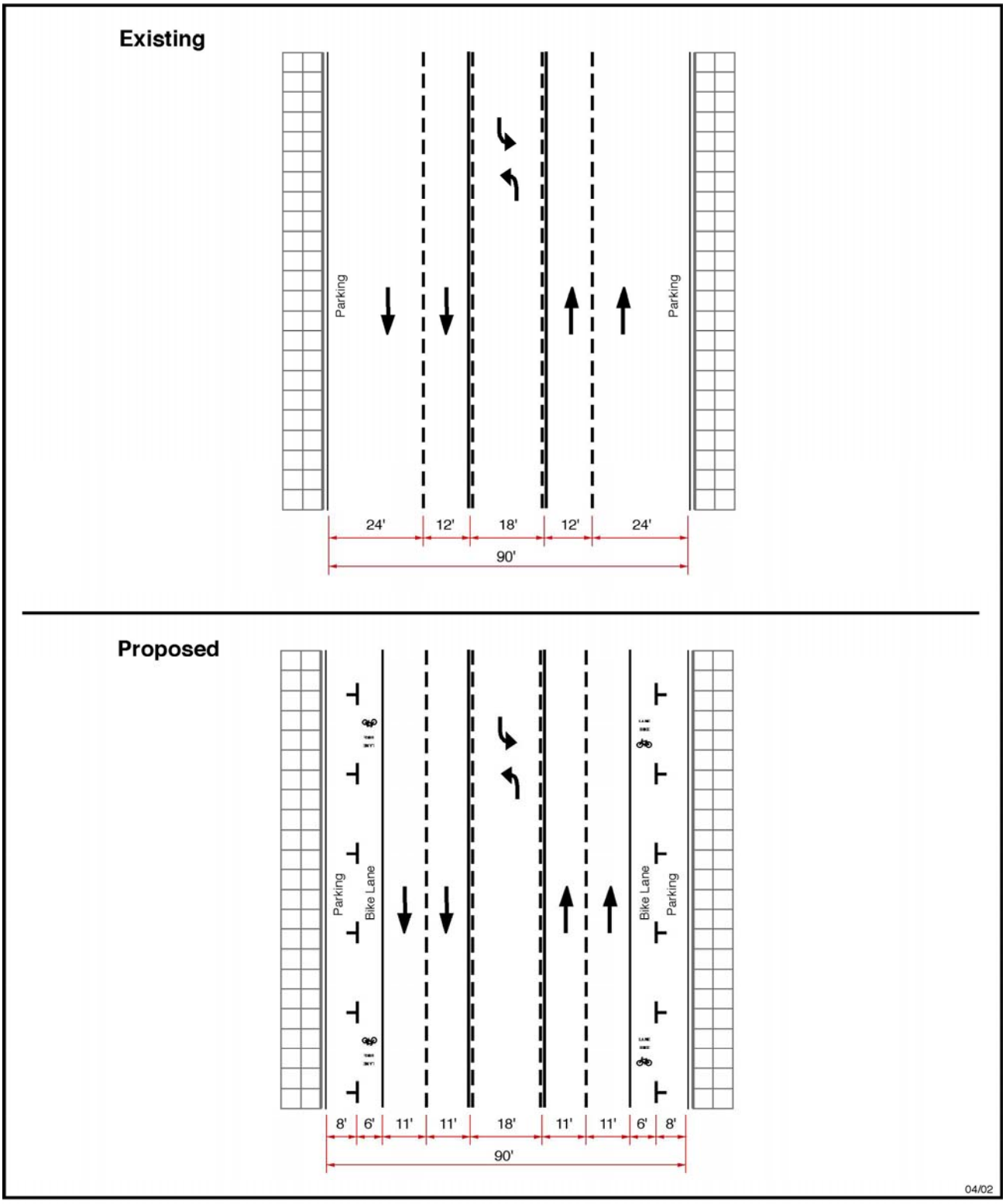


Figure 7.11
Ruffin Road Typical Cross Section

Project 24: Mira Mesa Boulevard Bikeway Project

- **Project Limits – Parkdale Avenue to Scripps Ranch Boulevard**
- **Existing Problem – Three gaps currently exists in the bikeway network along Mira Mesa Boulevard.**
- **Classification – Class II**
- **Length – Approximately 1.75 miles**
- **Cost Estimate - $87,500**

This proposed project would close three gaps in the regional bikeway network and create visibility and awareness of bicyclists through a very congested part of the street system in Mira Mesa. This project would provide continuity and connectivity through Mira Mesa and connect with Scripps Ranch. It would serve commercial centers near Camino Ruiz, Black Mountain Road, Westview Parkway, and Scripps Ranch Boulevard. It would also serve a park-and-ride lot located on Mira Mesa Boulevard west of the I-15 Freeway, Mira Mesa High School, and Mira Mesa Community Park.

This project would intersect with the existing Class II lanes on Camino Ruiz, Black Mountain Road, and Scripps Ranch Boulevard. Due to the atypical segments of Mira Mesa Boulevard at these locations, cross sections have not been developed. However, based on a preliminary feasibility assessment, this project may require median encroachment and/or widening. Preliminary evaluation and engineering analysis to determine the specifics of this project should be conducted prior to its implementation.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Mira Mesa Boulevard.

- Restripe to include Class II bike lanes on the following segments of Mira Mesa Boulevard:
    - Parkdale Avenue to Reagan Road
    - New Salem Street to Greenford Drive
    - Rickert Street to Scripps Ranch Boulevard
- Add bikeway and destination signage

Project 25: Rancho Bernardo Bikeway Project

- **Existing Problem: Existing bikeways have gaps**
- **Classification: Class II**
- **Length: Approximately 3 miles of Class II**
- **Cost Estimate: $150,000**

The Rancho Bernardo community has bike lanes and routes on some of its streets. However, the bikeway network is incomplete. These gaps can be closed. Along some portions of Bernardo Center Drive, parking exists on both sides and the street is too narrow for simple restriping to accommodate bicycle lanes without removing parking. Bike lanes could be implemented along Bernardo Center Drive and West Bernardo Drive as proposed in this project if parking were removed.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on Bernardo Center Drive or West Bernardo Drive.

- Restripe to add bike lanes on West Bernardo Drive from Rancho Bernardo Road to Duenda Road
- Restripe to add bike lanes to Bernardo Center Drive from the southern crossing of I-15 to West Bernardo Drive, or keep as Class III route where on-street parking is needed
- Add bikeway and destination signage

Project 26: San Clemente Canyon Bikeway Project

- **Project Limits – Rose Canyon Bikeway to I-805**
- **Existing Problem – Lack of a continuous bikeway in this area to connect with the existing and very popular Rose Canyon bikeway.**
- **Classification – Class I**
- **Length – Approximately 3.5 miles**
- **Cost Estimate - $4,000,000**

This proposed project would create a continuous bikeway through a scenic canyon on the border of the community of Clairemont. The path would be located adjacent to the SR-52 Freeway and would connect with the popular Rose Canyon Bikeway at its western terminus. This connectivity would be achieved via a crossing of the active San Diego Northern Railway line either as an at-grade crossing or via an underpass. This crossing can be determined at a future date when this project moves forward. The San Clemente Canyon Bikeway would also be consistent with the Marian Bear Memorial Park Natural Resource Management Plan.

This project would intersect existing Class II bike lanes on Genesee Avenue and a proposed second priority project along Regents Road/Clairemont Mesa Boulevard.

- Construct a Class I path along the San Clemente Canyon between the Rose Canyon Bikeway and I-805
- Add bikeway and destination signage

Project 27: Rose Creek Bike Path Improvement Project

- **Project Limits – Grand Avenue to North Mission Bay Drive**

- **Existing Problem – A gap currently exists in the bikeway network in this area.**
- **Classification – Class I**
- **Length – Approximately 0.25 miles**
- **Cost Estimate - $250,000**

This proposed project would close a gap in the regional bikeway network and provide connectivity through the Pacific Beach and Mission Bay Park communities. Currently, a fenced path exists in this area that does not meet standard for a Class I bikeway facility. It is anticipated that the property in the area will be redeveloped in the next several years. Construction of a standard Class I bike path replacing the existing non-standard path is planned to be completed as part of this redevelopment project. This bikeway project would serve the Mission Bay Park area as well as link with Mission Bay High School.

This project would link with the existing Class II lanes on Grand Avenue as well as with the Class III route along North Mission Bay Drive. This project would also link with the programmed Rose Creek Bridge project, which will connect with the proposed top priority Pacific Beach Drive Class III project.

- Construct a Class I path along Rose Creek between Grand Avenue and North Mission Bay Drive/Rose Creek Bridge project
- Add bikeway and destination signage

Project 28: San Diego River Bikeway Project

- **Project Limits – Qualcomm Way to Father Junipero Serra Trail**
- **Existing Problem – Lack of a continuous east-west bikeway through Mission Valley and along the San Diego River corridor.**
- **Classification – Class I**
- **Length – Approximately 7.75 miles**
- **Cost Estimate - $10,000,000**

This proposed project would provide for a continuous Class I bikeway facility, which will eventually have grade-separated crossings. This project would be an eastern extension of the San Diego River Path in Mission Valley that currently ends at Qualcomm Way. It would end at Junipero Serra Trail near Mission Gorge Road in Mission Trails Regional Park. This project would serve Qualcomm Stadium, the Fenton Parkway, Stadium, and Mission San Diego Trolley Stations, Friars Village shopping center, Kaiser Permanente Medical Center, and Mission Trails Regional Park.

The alignment of the portion of the San Diego River Bike Path within the boundaries of Mission Trails Regional Park is depicted only schematically in the proposed bikeway map. This segment will be studied in the future to develop an alignment that is agreeable to the City Council, Mission Trails Regional Park Citizen Advisory Committee, Mission Trails Regional Park Task Force, and the San Diego River Park Coalition. Furthermore, the alignment of this segment would not interfere with sensitive biological resources and would be consistent with Multiple Habitat Planning Area

This project would intersect three existing bikeways, including Class II lanes on Qualcomm Way, Camino del Rio North, and Friars Road. It would also intersect one proposed top priority project, the Tierrasanta Class I Path connector. This project would link with other proposed projects, such as the Murphy Canyon Class I Path extension and San Diego Mission Road.

- Construct a Class I path along the San Diego River
- Add bikeway and destination signage

Project 29: Sabre Springs Parkway Bikeway Project

- **Project Limits – Poway Road to Springbrook Drive**
- **Existing Problem – Lack of connections between neighborhoods and Poway Road in the area.**
- **Classification – Class II**
- **Length – Approximately 1 mile**
- **Cost Estimate - $50,000**

This proposed project would provide for a Class II bikeway along Sabre Springs Parkway south of Poway Road to Springbrook Drive. This collector street would connect the neighborhoods to the Poway Road Class II bikeway. It would also connect with the existing Sabre Springs Parkway Class II lanes north of Poway Road. It would link with proposed bikeway projects, including the I-15/Poway Road Class I extension and the Class II or III project along Springbrook Drive.

- Restripe to include Class II bike lanes along Sabre Springs Parkway between Poway Road and Springbrook Drive
- Add bikeway and destination signage

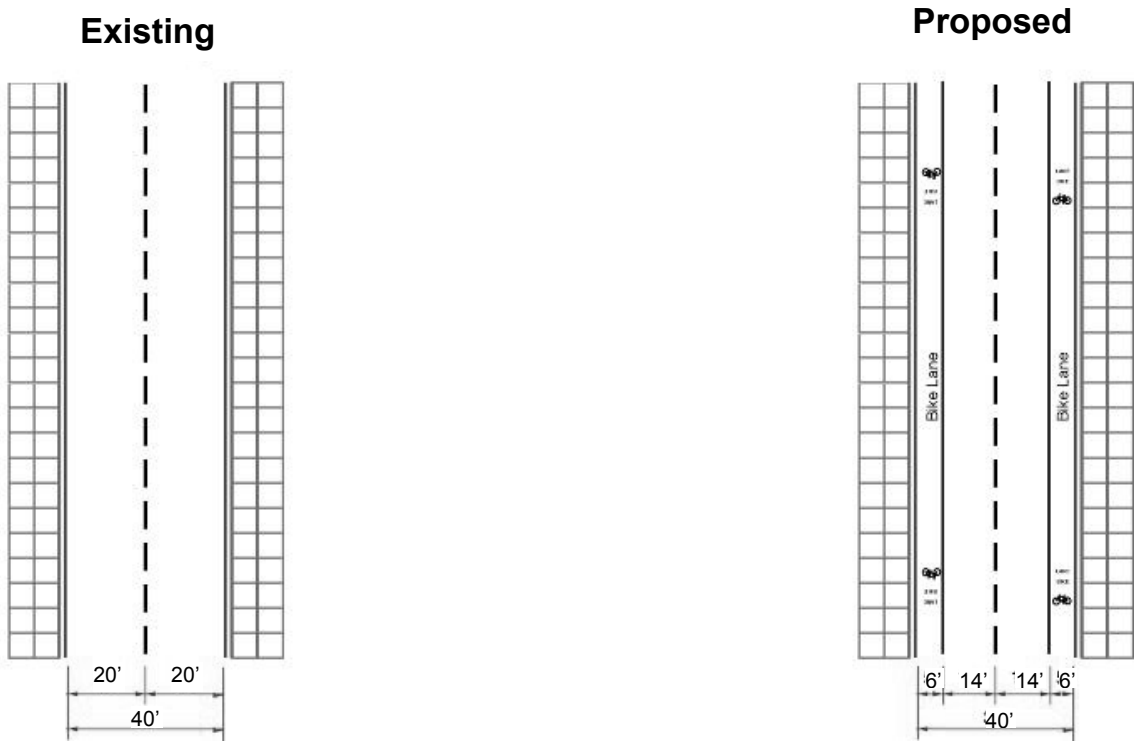


Figure 7.12
Sabre Springs Parkway Typical Cross Section

Project 30: Limerick Avenue, Charger Boulevard, Ashford Street Bikeway Project

- **Project Limits – Clairemont Mesa Boulevard to Mesa College Drive**
- **Existing Problem – Lack of a continuous bikeway to link the neighborhood of the Clairemont community.**
- **Classification – Class III**
- **Length – Approximately 3 miles**
- **Cost Estimate - $30,000**

This proposed project would provide for a Class III facility through many of the neighborhoods in Clairemont. It would provide a link to Mesa College as well as to the neighborhood shopping center located at Ashford and Beagle Streets. This project would intersect the existing I-805 path near Balboa Avenue. It would also link with the proposed top projects along Balboa Avenue and Mesa College Drive. This project would also intersect other proposed projects, including Clairemont Mesa Boulevard and Mt. Abernathy Avenue.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on the streets of this bikeway project.

- Provide Class III bikeway and destination signage and pavement markings along Limerick Avenue, Chandler Drive, Charger Boulevard, Eckstrom Avenue, and Ashford Street

Project 31: Marlesta Drive, Mesa College Bikeway Project

- **Project Limits – Genesee Avenue to Linda Vista Road**
- **Existing Problem – Lack of a bikeway facility to serve Mesa College.**
- **Classification – Class III**
- **Length – Approximately 1.5 miles**
- **Cost Estimate - $15,000**

This proposed project would provide for a critical bikeway link to serve Mesa College. It would link with the existing Class II bikeways along Genesee Avenue and Linda Vista Road as well as the proposed top priority project along Ashford Street.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. However, at this time there are no proposals to include a transit-only lane on the streets of this bikeway project.

- Provide Class III bikeway and destination signage and pavement markings along Mesa College Drive, the southern Mesa College access road, and Marlesta Street.

Project 32: Beyer Boulevard Bikeway Project

- **Project Limits – Dairy Mart Road to San Ysidro Trolley Station**
- **Existing Problem – Lack of bikeway connectivity and access to the International Border.**
- **Classification – Classes II and III**
- **Length – Approximately 1.75 miles (0.5 Class II and 1.25 Class III)**
- **Cost Estimate - $62,500**

This proposed project would provide for a connection with the International Border crossing at San Ysidro. It would also provide a cross-community bikeway link through San Ysidro. It would serve the business district near the border crossing and would provide direct access to the Beyer and San Ysidro Trolley stations. This bikeway would link with the existing Class II facilities along Smythe Avenue and Otay Mesa Road. It would also link with proposed second and third priority bikeway projects, including those along Beyer Boulevard, San Ysidro Boulevard, and Camino de La Plaza.

This bikeway project would link with existing Class II lanes along Otay Mesa Road and a Class III bike route along Smythe Avenue. It would also connect with proposed bikeway projects along Beyer Boulevard and San Ysidro Boulevard.

- Restripe to include Class II bike lanes along Beyer Boulevard from Dairy Mart Road to Otay Mesa Boulevard/East Beyer Boulevard.
- Provide Class III bikeway and destination signage and pavement markings along East Beyer Boulevard from Otay Mesa Road/Beyer Boulevard and the San Ysidro Trolley Station.
- Add bikeway and destination signage.

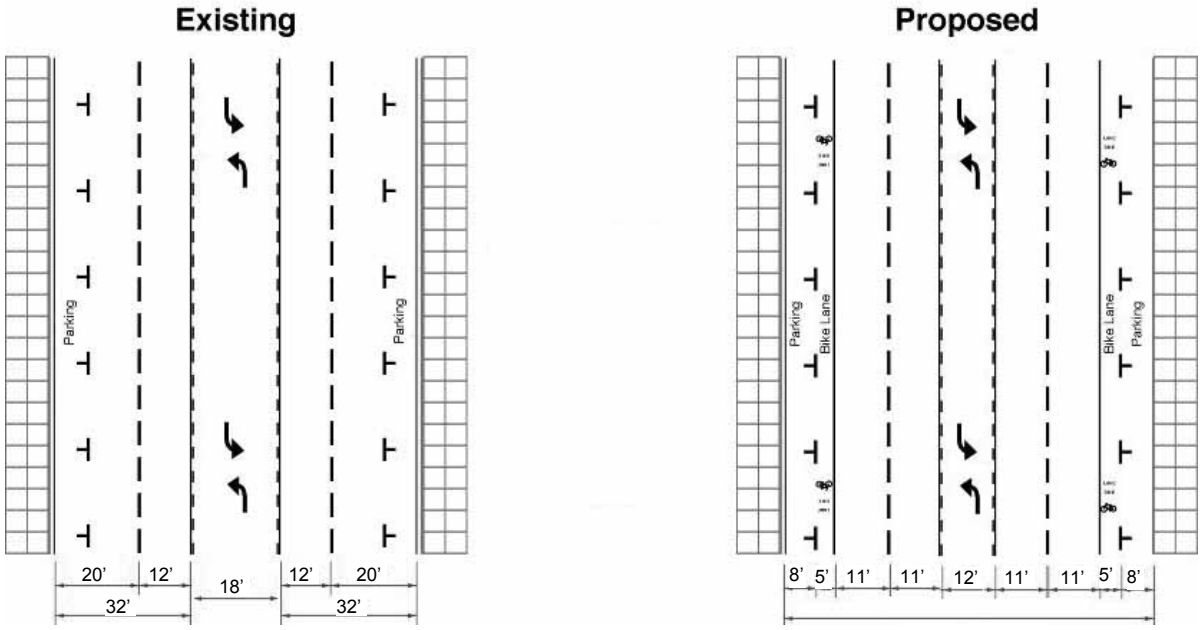


Figure 7.13
Beyer Boulevard Typical Cross Section

Project 33: Bachman Place Bikeway Project

- **Project Limits – Hotel Circle South to Washington Street**
- **Existing Problem – Lack of access between Mission Valley and Hillcrest.**
- **Classification – Classes II and III**
- **Length – Approximately 1 mile (0.5 Class II and 0.5 Class III)**
- **Cost Estimate - $30,000**

This proposed project would provide for a connection between Mission Valley and the Hillcrest area of the City. Currently, no direct connection exists for bicyclists. Bachman Place would have Class II bike lanes from Hotel Circle South to the top of the hill where a traffic choker now exists. South of there, this bikeway would be a Class III route and would be routed along Bachman Place, Lewis Street, and 4th Avenue to Washington Street. This bikeway would serve the UCSD Medical Center Hillcrest Campus.

This bikeway project would link with existing Class II lanes along Hotel Circle South. It would also connect with the proposed top priority project along 4th Avenue and another proposed project along Washington Street.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. Although it is proposed that a parking lane be removed in favor of a contra-flow transit-only lane on Lewis Street, it is not likely that this will present a conflict with the proposal to establish a Class III bikeway along a portion of Lewis Street.

- Restripe to include Class II bike lanes along Bachman Place from Hotel Circle to the traffic choker.
- Provide Class III bikeway and destination signage and pavement markings along Bachman Place south of the traffic choker and along Lewis Street and 4th Avenue.
- Add bikeway and destination signage.

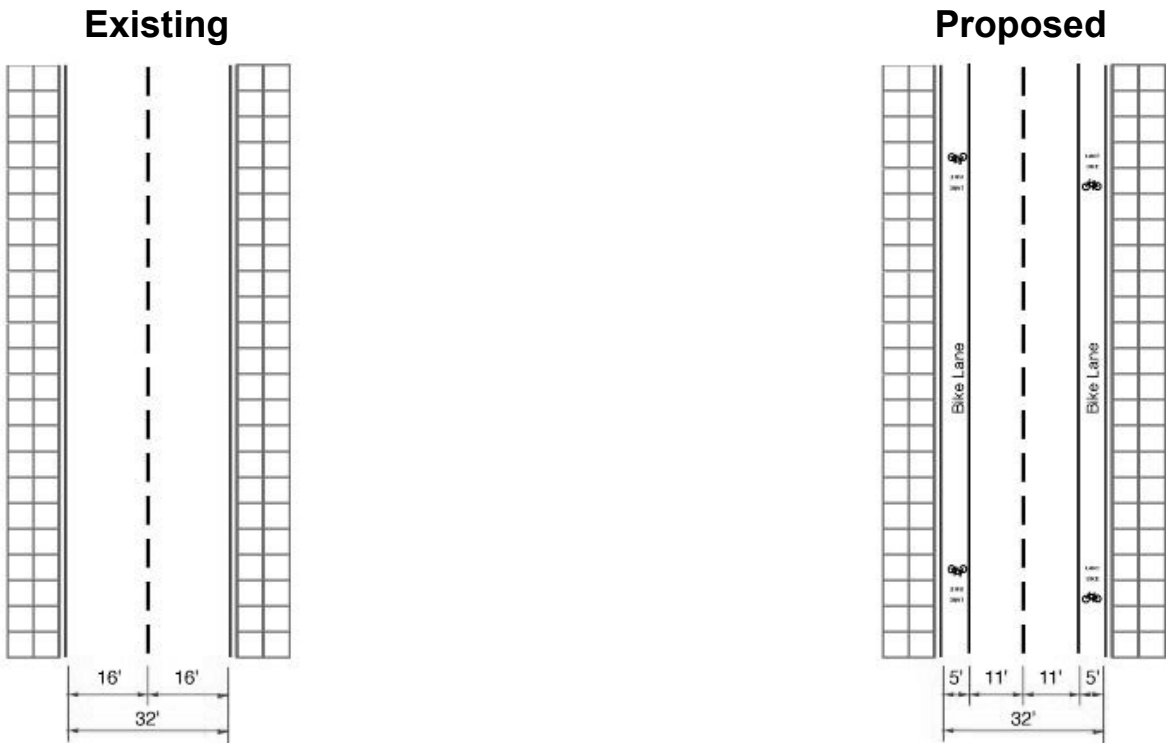


Figure 7.14
Bachman Place Typical Cross Section

Project 34: Rosecrans Street/Taylor Street Bikeway Project

- **Project Limits – Talbot Street to Morena Boulevard**
- **Existing Problem – Lack of access between Point Loma and Old Town San Diego.**
- **Classification – Classes II and III**
- **Length – Approximately 3.25 miles (2.25 miles of Class II and 1 mile of Class III)**
- **Cost Estimate - $122,500**

This proposed project would provide for a combination Class II Bike Lane/Class III Bike Route in the communities of Peninsula, Midway, and Old Town. Due to on-street parking constraints along certain portions of Rosecrans Street, Class II Bike Lanes could not be proposed throughout the entire length of the corridor. The redevelopment plans for the U. S. Marine Corps Recruit Depot site call for a future Class II bike lane facility along Rosecrans Street between Lytton Street and Russell Street.

This bikeway would connect several commercial and entertainment districts and would provide a regional link along the Point Loma peninsula and through the Midway area. It would connect the Peninsula with Old Town and links to Mission Valley, Mission Bay Park, and Downtown San Diego. This bikeway project would link with existing Class II lanes along Rosecrans Street south of Talbot Street and along Nimitz Boulevard, and Class III bikeways along Pacific Highway and Taylor Street east of Morena Boulevard. It would also connect with the proposed bikeway projects along Talbot Street, Canon Street, Shelter Island Drive, Lytton Street, Midway Drive, Sports Arena Boulevard, Congress Street, Juan Street, and Morena Boulevard.

One or more routes of the proposed Transit First Plan for expanded transit in San Diego County is located along this route. One of the alignments for the Transit First demonstration project is proposed along a portion of Rosecrans Street between Pacific Highway and Sports Arena Boulevard. In the event that a transit-only lane is established along this section of Rosecrans Street, the bike lane would either be relocated to the left of the transit lane, or become part of a shared bike-transit lane, which would be of width at least 14 feet.

- Restripe to include Class II bike lanes along Rosecrans Street between Talbot Street and Nimitz Boulevard, between Russell Street and Lytton Street, between Sports Arena Boulevard and Pacific Highway, and northbound only between Nimitz Boulevard and Russell Street.
- Restripe to include Class II bike lanes along Taylor Street between Pacific Highway and Congress Street.
- Provide Class III bikeway and destination signage and pavement markings along Rosecrans Street between Lytton Street and Sports Arena Boulevard and southbound only between Russell Street and Lytton Street.
- Provide Class III bikeway and destination signage and pavement markings along Taylor Street between Congress Street and Morena Boulevard.
- Add bikeway and destination signage.

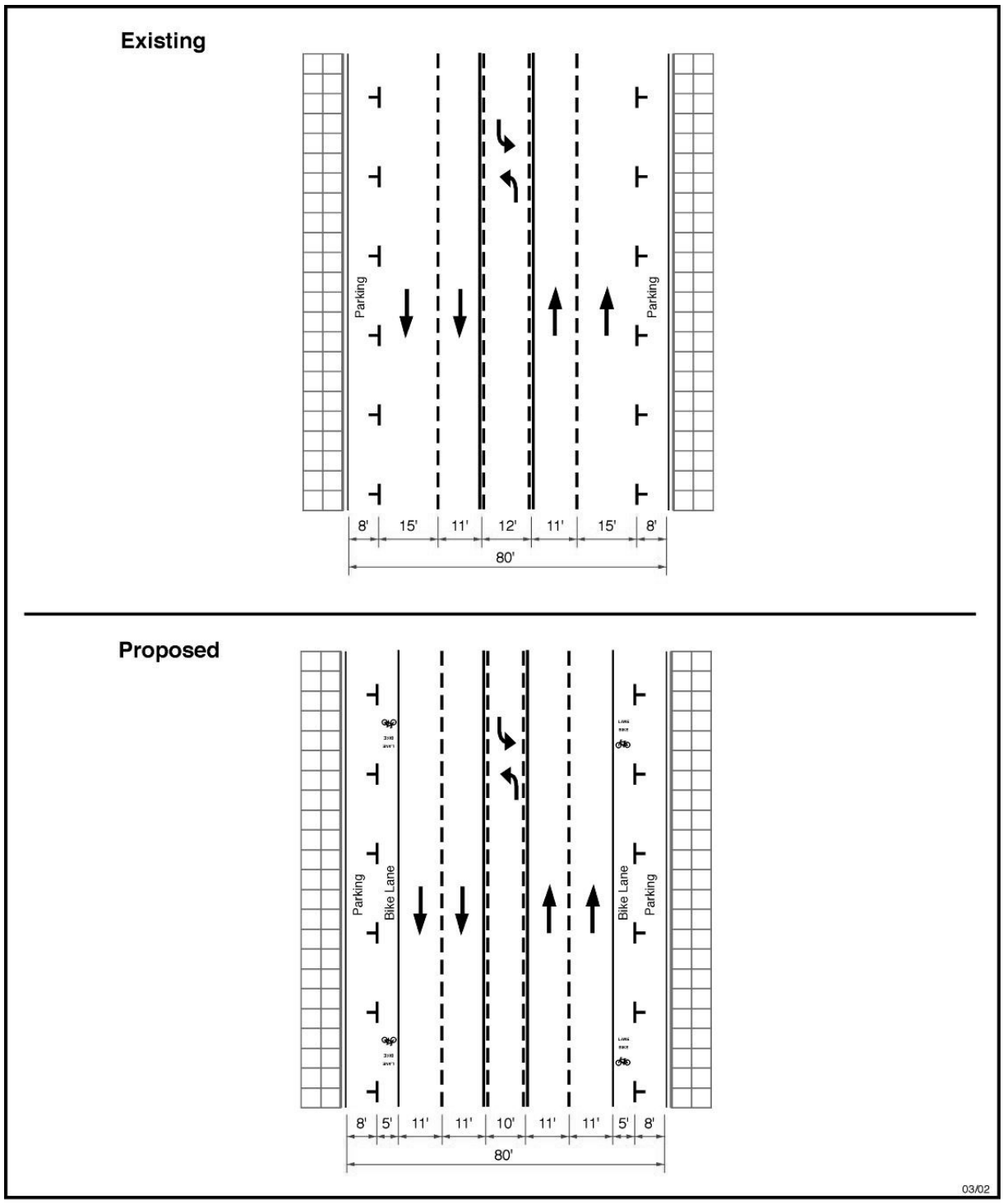


Figure 7.15
Rosecrans Street Typical Cross Section
for Class II Bike Lanes

Project 35: I-15 Class I Bike Path Extensions

- **Project Limits – Sabre Springs Parkway to Poway Road/I-15 Path, Erma Road to Mira Mesa Boulevard**
- **Existing Problem: Provide continuity and close gaps in the existing bikeway network.**
- **Classification: Class I**
- **Length: Approximately 1.00 mile**
- **Cost Estimate: $1,500,000**

The existing I-15 bike path extends from Poway Road/I-15 to Erma Road. The north extension of this path would provide a link to the Sabre Springs bike lane facility with its continuity to the north. It would also provide a safe crossing point for bicyclists desiring to travel across busy Poway Road. The southern terminus of the existing path currently does not connect with Mira Mesa Boulevard, a major east-west thoroughfare with a proposed bikeway project outlined in this plan (see Project 24). This project would extend the I-15 path to Mira Mesa Boulevard to provide continuity.

- Construct a Class I path adjacent to Poway Road and the I-15 Freeway
- Add bikeway and destination signage

Project 36: Chollas Creek Bike Path

- **Project Limits – I-805/Federal Boulevard to 54th Street**
- **Existing Problem: A lack of facilities exists in the bikeway network in this area.**
- **Classification: Class I**
- **Length: Approximately 2.00 miles**
- **Cost Estimate: $2,000,000**

This project would provide for a Class I bike path in an area of the City that does not have many bikeway facilities. It would connect the College Area with links to the south and west via Federal Boulevard and Fairmount Avenue. It would intersect other proposed bikeway projects along 54th Street, Euclid Avenue, Fairmount Avenue, and Federal Boulevard.

- Construct a Class I path adjacent to Chollas Creek
- Add bikeway and destination signage

Project 37: Feasibility Study to Link SR-56 Bike Path to Sorrento Valley Road

- **Project Limits – I-5 Freeway to Sorrento Valley Road**
- **Existing Problem: A Gap Exists Under the I-5 Freeway Structure**
- **Classification: Class I**
- **Cost Estimate: $25,000**

A bike path currently exists along the south side of SR-56 from Carmel Country Road to the east side of the I-5 Freeway. This Bicycle Master Plan includes a proposal to extend this bikeway further west to Sorrento Valley Road. On the west side of I-5, Sorrento Valley Road is currently used only for non-motorized travel. A link between the SR-56 bike path and Sorrento Valley Road would facilitate continuous bicycle travel between Carmel Valley and the beach and other destinations west of the I-5 Freeway.

Only a gap under the I-5 Freeway separates the bike path and Sorrento Valley Road. To close this gap cyclists must get under or over the I-5 Freeway. Going under presents challenges in that clearance under the freeway is low and water often flows through the channel that exists there. Bridging the freeway would be very costly. These issues need to be explored further to determine the feasibility of various alternative freeway crossings and their costs and to identify the preferred solution.

Project 38: 3rd, 4th, and 5th Avenues Bikeway Project

- **Project Limits – I-5 Freeway to Washington Street**
- **Existing Problem – Inadequate connection between Downtown and Hillcrest.**
- **Classification – Classes II and III**
- **Length – Approximately 3 miles (1 mile of Class II and 2 miles of Class III)**
- **Cost Estimate - $70,000**

This proposed project would provide a combination Classes II and III bikeway link between Centre City and the Hillcrest area of San Diego. 4th and 5th Avenues are a one-way couplet, with 5th Avenue serving northbound traffic and 4th Avenue serving southbound traffic. These two streets pass adjacent to Balboa Park to the east. 3rd Avenue serves as a one-way northbound street north of the I-5 Freeway to Fir Street. North of Fir, 3rd Avenue is a low volume two-way street, which can be easily striped for a northbound Class II bike lane. 3rd Avenue is a better northbound alternative than 5th Avenue between the I-5 Freeway and Laurel Streets because it does not encounter freeway ramps at the I-5 overcrossing. At Laurel Street, the northbound bikeway would jog from 3rd to 5th Avenue. Signals currently exist where Laurel intersects 4th and 5th Avenues to assist bicyclists' transition to 5th Avenue to continue north on the bikeway. The 3rd-4th-5th Avenues corridor is a major route to access Centre City from the north and also serves the heart of the Hillcrest retail district.

There are sections of streets in this project that are proposed to include a dedicated transit bus-only lane as stated in the MTDB's Transit First Plan. These sections include the following:

- 4th Avenue from Washington Street to Grape Street
- 5th Avenue from Washington Street to Laurel Street

Along these portion of these streets, it is proposed that the following options be considered:

- Provide a shared bus-bike lane of width 14 feet where the transit-only lane is the right lane of the street as a Class III bike route facility
- Where the transit-only lane is the left lane of the street, provide a wide right travel lane for a Class III bike route facility

Toward the north of Balboa Park, this Class II bikeway project would connect with the Upas Street Class I SR-163 freeway crossing, which connects with the top priority Upas Street project to the east in North Park. To the north, this bikeway would connect with the proposed second priority projects of Robinson Avenue and Washington Street.

- Restripe to include Class II bike lanes along the following segments:
  - 3rd Avenue between Laurel Street to the I-5 Freeway
  - 4th Avenue between Grape Street and the I-5 Freeway
- Provide Class III signage and pavement markings along the following segments:
  - 4th Avenue between Washington Street and Grape Street
  - 5th Avenue between Washington Street and the I-5 Freeway
- Add bikeway and destination signage

The Implementation of Proposed Action

Every proposed action in this plan will be considered separately upon receiving funding and prior to implementation. Each project will have to comply with all applicable federal, state, and local environmental regulations and will be reviewed by the applicable community planning group.

Funding

Previous Expenditures for Bikeways

The City of San Diego has had several projects funded over the past four years. The following table identifies specific projects funded since the year 1997, the communities in which they are located, and the amounts of the expenditures.

Table 7.1
City of San Diego Expenditures for Bikeways, 1997-2000

Project	Communities	Amount
Rose Creek Bike Path	Mission Bay Park, Pacific Beach	$1,000,000
Friars Road at Pacific Highway connector	Linda Vista	$198,000
Qualcomm Stadium/Zion Avenue Bikeway Study	Mission Valley, Navajo	$50,000
SR-56 Path	Rancho Penasquitos	$1,200,000
City of San Diego Bicycle Master Plan	Citywide	$100,000
Sorrento Valley Road at Sorrento Valley Boulevard Coastal Rail Crossing Feasibility Study	Torrey Pines, University	$40,000
Ocean Beach-Mission Valley Path (Pacific Highway to Hotel Circle Place) Feasibility Study	Mission Valley	$35,000
Camino de La Reina (Avenida del Rio to Camino de La Siesta) Class II Lanes	Mission Valley	$37,000
Camino Santa Fe (Calle Cristobal to Lopez Canyon) Class II Lanes	Mira Mesa	$177,000
SR-15 (Camino del Rio South to Landis Street) Path	Mid-City	$2,500,000
San Diego River Path III (Qualcomm Way to Qualcomm Stadium) Feasibility Study	Mission Valley	$50,000
Via de La Valle (San Andreas Way to El Camino Real) Class II Lanes	Via de La Valle	$305,000
Bayshore Bikeway	Otay Mesa-Nestor	$1,500,000
Coastal Rail Trail Design	Several Communities	$712,000

Funding Sources

There are a variety of potential funding sources including local, state, regional, and federal funding programs that can be used to construct the proposed bicycle improvements. Most of the Federal, state, and regional programs are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. Local funding for projects can come from sources within jurisdictions that compete only with other projects in each jurisdiction's budget. A detailed program-by-program of available funding programs along with the latest relevant information is provided on the following pages. The funding sources are shown in the matrix that begins on page 149.

TEA-21

Federal funding through the TEA-21 (Transportation Equity Act) program will provide the some of the funding. TEA-21 currently contains three major programs, STP (Surface Transportation Program), TEA (Transportation Enhancement Activities), and CMAQ (Congestion Mitigation and Air Quality Improvement) along with other programs such as the National Recreational Trails Fund, Section 402(Safety) funds, Scenic Byways funds, and Federal Lands Highway funds.

TEA-21 funding is administered through the state (Caltrans or Resources Agency) and regional governments {San Diego Association of Governments (SANDAG)}. Most, but not all, of the funding programs are transportation versus recreational oriented, with an emphasis on (a) reducing auto trips and (b) providing an inter-modal connection. Funding criteria often includes completion and adoption of a bicycle master plan, quantification of the costs and benefits of the system (such as saved vehicle trips and reduced air pollution) proof of public involvement and support, CEQA compliance, and commitment of some local resources. In most cases, TEA-21 provides matching grants of 80 to 90 percent, but prefers to leverage other moneys at a lower rate.

With an active and effective regional agency such as the SANDAG, the City of San Diego should be in a good position to secure more than its fair share of TEA-21 funding. It will be critical to get the local State assemblymember and senator briefed on these projects and lobbying Caltrans and the California Transportation Commission for these projects.

All TEA-21 funds have been programmed. The successor legislation, presently called TEA-3, will be a future source of funds. This new legislation may come with additional categories of funding and guidelines.

State Funding Programs

TDA Article III (SB 821)

Transportation Development Act (TDA) Article III funds are awarded annually to local jurisdictions for bicycle and pedestrian projects in California. These funds originate from sales taxes and are distributed through a competitive Call For Projects administered by SANDAG on a yearly basis to local jurisdictions.

AB 434

AB 434 funds are available for clean air transportation projects, including bicycle projects, in California.

AB 2766

Clean air funds are generated by a surcharge on automobile registration. The San Diego County Air Pollution District allocates some of these funds for external bicycle projects.

Bicycle Transportation Account

The State Bicycle Transportation Account (BTA) is an annual statewide discretionary program that is available through the Caltrans Bicycle Facilities Unit for funding bicycle projects. Available as grants to local jurisdictions, the emphasis is on projects that benefit bicycling for commuting purposes. Funding that is available on a statewide basis amounts to 7.2 million dollars annually beginning this fiscal year 2001. The City of San Diego may apply for these funds through the Caltrans Office of Bicycle Facilities.

Safe Routes to School (AB1475)

The Safe Routes to School program is a newly created State program using funds from the Hazard Elimination Safety program from TEA-21. For the year 2001, this program is meant to improve school commute routes by eliminating barriers to bicycle and pedestrian travel through rehabilitation, new projects and traffic calming. A local match of 11.5% is required for this competitive program, which will allocate 18 million dollars annually. Planning grants are not available through this program. This fund expires this year, but legislation is pending to extend it.

Local Funding

New Construction

Future road widening and construction projects are one means of providing bike lanes and sidewalks. To ensure that roadway construction projects provide these facilities where needed, appropriate and feasible, it is important that an effective review process is in place so that new roads meet the standards and guidelines presented in this Bicycle Plan.

Impact Fees

Another 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 reduce the number of trips (and hence impacts and cost) by paying for on- and off-site bikeway improvements, which will encourage residents to bicycle rather than drive. In-lieu parking fees may be used to help construct new or improved bicycle parking. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical in avoiding a potential lawsuit.

Mello Roos

Bike paths, lanes, and pedestrian facilities can be funded as part of a local assessment or benefit district. Defining the boundaries of the benefit district may be difficult unless the facility is part of a larger parks and recreation or public infrastructure program with broad community benefits and support.

Transnet

San Diego County has implemented a ½-cent sales tax that is allocated on a competitive basis to various transportation-related projects throughout the County. Bicycle projects are eligible to receive these funds, of which approximately $1-million is allocated annually to bicycle projects throughout the County of San Diego. These funds are allocated by the San Diego

Association of Governments (SANDAG) and are lumped together with Transportation Development Act (TDA) fund allocations.

Other

Local sales taxes, fees, and permits may be implemented, requiring a local election. Parking meter revenues may be used according to local ordinance. Volunteer programs may substantially reduce the cost of implementing some of the proposed pathways. Use of groups such as the California Conservation Corp (who offer low cost assistance) will be effective at reducing project costs. Local schools or community groups may use the bikeway or pedestrian project as a project for the year, possibly working with a local designer or engineer. Work parties may be formed to help clear the right of way where needed. A local construction company may donate or discount services. A challenge grant program with local businesses may be a good source of local funding, where corporations 'adopt' a bikeway and help construct and maintain the facility.

Other opportunities for implementation will appear over time, which may be used to implement the system.

The total estimated cost of all top priority projects is $21,732,500 to $21,965,500.

The following table provides an overview of bicycle facilities funding sources.

Table 7.2
City of San Diego Bikeway Facilities Funding Sources

Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
						Commute	Recreation	Safety/ Education	
Federal Funding									
F1. TEA-21 Surface Transportation Program (STP)	Already Programmed	San Diego Association of Governments (SANDAG), Caltrans, FHWA		11.47% non-federal match	federally certified jurisdictions	X	X		STP funds may be exchanged for local funds for non-federally certified local agencies; no match required if project improves safety
F2. TEA-21 Congestion Mitigation and Air Quality Program	Already Programmed	SANDAG, CTC		11.47% non-federal match	federally certified jurisdictions	X			Counties re-designated to attainment status for ozone may lose this source
F3. TEA-21 Transportation Enhancement Activities (TEA)	Already Programmed	FHWA, SANDAG		11.47% non-federal match	federally certified jurisdictions	X	X		Contact SANDAG
F4. TEA-21 National Recreational Trails	Already Programmed	State Dept. of Parks & Recreation		no match required	jurisdictions, special districts, non profits with management responsibilities 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
						Commute	Recreation	Safety/ Education	
State Funding									
S1. Environmental Enhancement and Mitigation (EEM) Program	Nov.	State Resources Agency		not required but favored	Local, state and federal government non-profit agencies	X	X	X	Projects that enhance or mitigate future transportation projects; contact EEM Project Manager (916) 653-5800

City of San Diego Bikeway Facilities Funding Sources (continued)									
Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
S2. Bicycle Transportation Account (BTA)	Spring 2001	Caltrans	$7.2 m annually	10%	Cities and counties	X			Contact local Caltrans district office for details
S3. Safe Routes to School (AB1475)	Varies	Caltrans	$18 m	11.5%	Government agencies, non-profit groups, schools, community groups	X	X	X	Only two years of funding currently authorized as of 2000; legislation pending to extend
						Commute	Recreation	Safety/ Education	
Local Funding									
L1. Transportation Development Act (TDA) Section 99234 (2% of total TDA)	March	SANDAG		no match required	Cities, counties; currently allocated by population	X	X	X	Contact SANDAG
L2. Transnet (1/2-cent Countywide sales tax)	March	SANDAG	Approx. $1-million for bike projects	no match required	Local agencies within San Diego County	X	X	X	
L3. State Gas Tax (local and regional share)		Allocated by State Auditor Controller		no match required	local jurisdictions	X		X	
L4. Developer Fees / Exactions (developer fee for street improvements - DFSI)		Cities, or County		no match required		X	X	X	Mitigation required during land use approval process
L5. Vehicle Registration Surcharge Fee (AB 434)		Air Quality Control District		no match required	local agencies, transit operators, others	X	X	X	Competitive program for projects that benefit air quality

City of San Diego Bikeway Facilities Funding Sources (continued)									
Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
L6. Vehicle Registration Surcharge Fee (AB 434)		Air Quality Control Dist. or Congestion Management Agency		no match required	local jurisdictions	X	X	X	Funds are distributed to communities based on population
L7. Clean Air Fund (AB 2766)	Varies by region	Air Quality Control District	$50,000-$200,000	10-15%	local jurisdictions, transit agencies	X	X	X	Consult local air quality control district for program details

DESIGN AND MAINTENANCE

This chapter provides details on the recommended design and operating standards for the City of San Diego Bikeway System.

National design standards for bikeways have been developed by the American Association of Highway and Transportation Officials (AASHTO) and the California Department of Transportation (Caltrans). **The Caltrans Highway Design Manual, Chapter 1000: Bikeway Planning and Design, serves as the official design standard for all bicycle facilities in California.** Design standards in Chapter 1000 fall into two categories, mandatory and advisory. Caltrans advises that all standards in Chapter 1000 be followed, which also provides a measure of design immunity to the cities. Not all possible design options are shown in Chapter 1000. For example, intersections, ramp entrances, rural roads, and a variety of pathway locations are not specified in the Caltrans Highway Design Manual.

The following section summarizes key operating and design definitions:

- Bicycle: A device upon which any person may ride, propelled exclusively by human power through a belt, chain, or gears, and having either two or three wheels in tandem or tricycle arrangement.
- Class I Bike Path: Provides for bicycle travel on a paved right-of-way completely separated from any street or highway. Other users may also be found on this type of facility, including pedestrians and in-line skaters.
- Class II Bike Lane: Referred to as a bike lane. Provides a striped lane for one-way travel on a street or highway.
- Class III Bike Route: Referred to as a bike route. Provides for shared use with pedestrian or motor vehicle traffic.

The following guidelines present the recommended minimum design standards and other recommended ancillary support items for Class I bike paths, Class II bike lanes, and Class III bike routes. All bikeways should meet minimum Caltrans standards as spelled out in the California Highway Design Manual, Chapter 1000. Where possible, it may be desirable to exceed the minimum standards for bike paths or bike lane widths, signage, lighting and traffic signal detectors.

Class I Bike Path Facilities Design Recommendations

1. All Class I bike paths should generally conform to the design recommendation by Caltrans.

2. Multi-purpose trails and unpaved facilities that serve primarily a recreation rather than a transportation function may not need to be designed to Caltrans standards.

3. Class I bike path crossings of roadways require preliminary design review. Generally speaking, bike paths that cross roadways with Average Daily Trips (ADTs) over 20,000 vehicles will require signalization or grade separation.

4. Landscaping should generally be low water consuming native vegetation and should have the least amount of debris.

5. Lighting should be provided where the bike path will likely be used by commuters in the evenings.

6. Barriers at bike path entrances should be clearly marked with reflectors and ADA accessible (minimum five feet clearance). See Figure 8.1 for the design of a bollard entrance treatment.

7. Bike path construction should take into consideration maintenance and emergency vehicles but minimize their impacts on bike path width, shoulders, and vertical clearance requirements.

8. Provide two feet wide unpaved shoulders for pedestrians/runners, or a separate tread way where feasible. Direct pedestrians to right side of pathway with signing and/or stenciling.

9. Where paths are heavily used, consideration should be made to install emergency phone service.

10. In the design of bike paths, attention should be paid to preventing illegal use of the bike path by motor vehicles.

11. Where bike path design occurs in environmentally sensitive areas, design exceptions should be pursued to minimize environmental impacts.

Caltrans Highway Design Manual Section 1003.1 provides more detailed standards for the design of Class I bike paths.

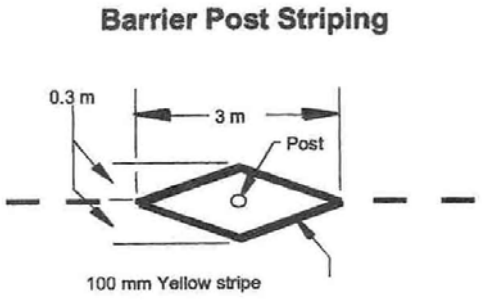


Figure 8.1 Class I Bike Path Entrance Treatment (from the Caltrans Highway Design Manual, Chapter 1000)

Class II Bike Lane Facilities Design Recommendations

1. All Class II bike lanes should generally conform to the minimum design recommendations stated in Chapter 1000 of the Caltrans Highway Design Manual. These call for minimum bike lane width of 5 feet in most cases. Please see Figure 1003.2A of the Caltrans Highway Design Manual. Striping of Class II facilities is found in Figure 8.2 on page 157 taken from the Caltrans Highway Design Manual Chapter 1000.

2. Intersection and interchange treatment. Caltrans provides recommended intersection treatments in Chapter 1000 including bike lane 'pockets' and signal loop detectors. Please see Figure 8.3 taken from Chapter 1000 of the Caltrans Highway Design Manual and Figure 1003.2E of the HDM.

3. Signal loop detectors that sense bicycles should be considered for all arterial/arterial, arterial/collector, and collector/collector intersections. The location of the detectors

should be identified by a stencil of a bicycle in accordance with Figure 1003.2D of the HDM.

4. When loop detectors are installed, traffic signalization should be set to accommodate bicycle speeds.

5. Bicycle-sensitive loop detectors are preferred over a signalized button specifically designed for bicyclists.

6. Bike lane pockets in Figure 8.3 (minimum 4 feet wide) between right turn lanes and through lanes should be provided wherever available width allows, and right turn volumes exceed 150 motor vehicles/hour.

7. Where bottlenecks preclude continuous bike lanes, they should be linked with Class III route treatments.

Caltrans Highway Design Manual Section 1003.2 provides more detailed standards for the design of Class II bike lane facilities.

Class III Bike Route Facilities Design Recommendations

Class III bike routes have been typically designated as simply signed routes as indicated in Section 1003.3 of the Highway Design Manual. With proper route signage, design, and maintenance, Class III bike routes can be effective in guiding bicyclists along a route that is more suited for bicycle riding without having enough roadway space to provide a Class II bike lane. Class III routes can become more useful when coupled with such techniques as:

- route, directional, and distance signage
- wide curb lanes
- accelerated pavement maintenance schedules
- traffic signals timed for cyclists
- traffic calming

In addition to those identified by Caltrans, there are a variety of improvements that will enhance the safety and attraction of streets for bicyclists. Figures 8.4 and 8.5 show signage and stencils used on Class III Bike Routes.

Riding on Sidewalks

The use of sidewalks as bicycle facilities is not encouraged by Caltrans, even as a Class III bike route. There are exceptions to this rule. The California Vehicle Code states: 'Local authorities may adopt rules and regulations by ordinance or resolution regarding the...operation of bicycles...on the public sidewalks.' (CA VC 21100, Subdiv. H). Caltrans adds in Chapter 1000: 'In residential areas, sidewalk riding by young children too inexperienced to ride in the street is common. With lower bicycle speeds and lower auto speeds, potential conflicts are somewhat lessened, but still exist. But it is inappropriate to sign these facilities as bikeways. Bicyclists should not be encouraged (through signing) to ride facilities that are not designed to accommodate bicycle travel.

Signage

All bikeway signing in San Diego should conform to the signing identified in the Caltrans Traffic Manual and/or the Manual on Uniform Traffic Control Devices (MUTCD). These documents give specific information on the type and location of signing for the primary bike system. A list of bikeway signs from Caltrans and the MUTCD are shown in Table 8.1 (Bikeway Signing and Marking Standards).

Stencils can also be included on Class III bicycle facilities, to help cyclists and motorists more easily identify the bike route. Stencils currently under examination for approval should be used (see Figure 8.5).

Bicycle Parking

Bicycle Parking is not standardized by any codes. However, there are preferable types of secure bicycle furnishing available on the market. When bicycle parking is being considered the types of bicycle lockers and racks in Figures 8.6 through 8.14 are recommended. More specific guidelines to determine bicycle parking capacity and location can be found in San Diego Municipal Code Sections 142.0525, 142.0530, and 142.0560.

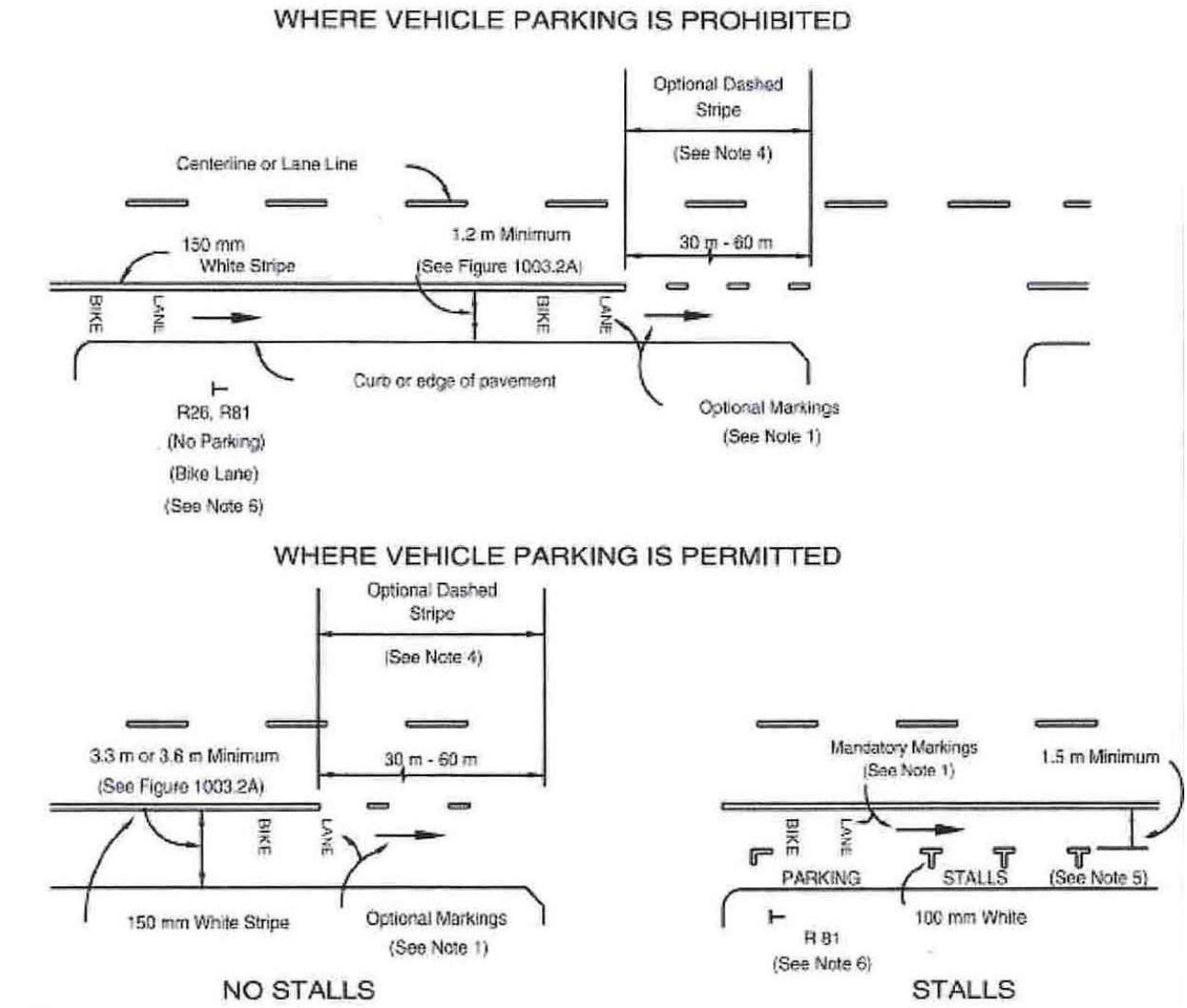
A bicycle-parking program is recommended as a high priority project for San Diego. Specific bicycle parking guidelines should be developed to help city staff, developers and commercial districts determine the types of furnishings and location of bicycle parking.

Traffic Calming

Traffic calming includes any effort to moderate or reduce vehicle speeds and/or volumes on streets where that traffic has a negative impact on bicycle or pedestrian movement. Because these efforts may impact traffic outside the immediate corridor, study of traffic impacts is typically required. For example, the City of Berkeley instituted traffic calming techniques by blocking access into residential streets. The impact was less traffic on local streets, and more traffic on arterials and collectors. Other techniques include installing traffic circles, intersection islands, partial street closings, 'bulb-out' curbs, pavement treatments, lower speed, signal timing, and narrowing travel lanes.

The City of San Diego already has a relatively continuous street system with some filtering of through traffic into residential neighborhoods. Traffic circles, roundabouts, and other measures may be considered for residential collector streets where there is a desire to control travel speeds and traffic volumes but not to install numerous stop signs or traffic signals.

Traffic calming alternatives should be considered where traffic speeds are exceedingly high, and when safety is an issue.



NOTES:

1. The Bike Lane pavement markings shall be placed on the far side of each intersection, and may be placed at other locations as desired.
2. The use of the bicycle symbol pavement marking to supplement the word message is optional.
3. The G93 Bike Route sign may be placed intermittently along the bike lane if desired.
4. Where motorist right turns are permitted, the solid bike lane line shall either be dropped entirely, or dashed as shown, beginning at a point between 30 m and 60 m in advance of the intersection. Refer to Detail 39A in the Traffic Manual for striping pattern dimensions.
5. In areas where parking stalls are not necessary (because parking is light), it is permissible to paint a 100 mm solid white stripe to fully delineate the bike lane. This may be advisable where there is concern that motorists may misconstrue the bike lane to be a traffic lane.
6. The R81 bike lane sign shall be placed at the beginning of all bike lanes, on the far side of every arterial street intersection, at all major changes in direction, and at maximum 0.8 km intervals.

Figure 8.2
Class II Bike Lane Striping
(from the Caltrans Highway Design Manual Chapter 1000)

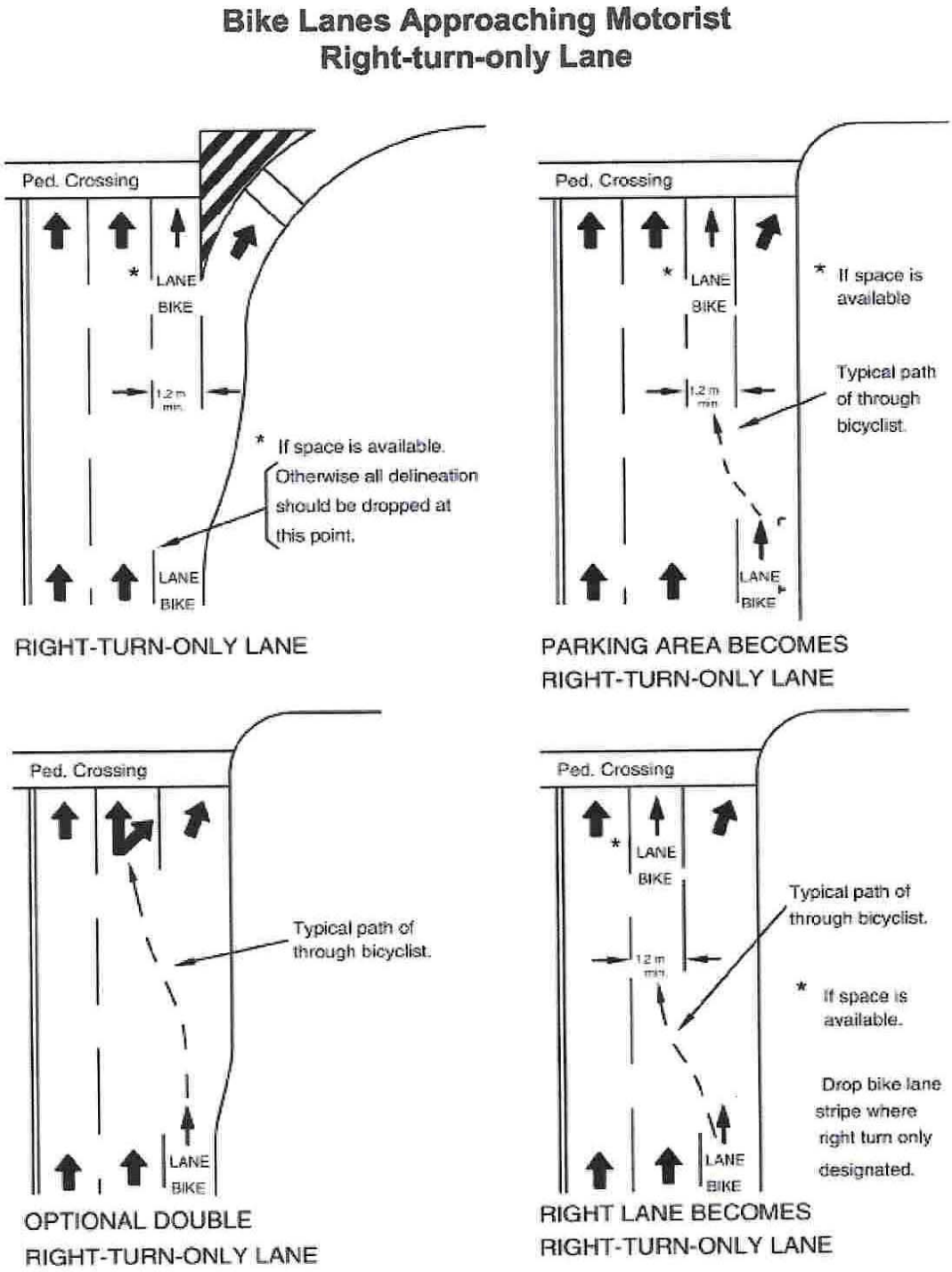


Figure 8.3
Bike Lanes Approaching Right Turn Lane(s)
(from the Caltrans Highway Design Manual Chapter 1000)

Table 8.1
Recommended Signing and Marking

Item	Location	Color	Caltrans Designation	MUTCD Designation
No Motor Vehicles	Entrances to trail	B on W	R44A	R5-3
Use Ped Signal/Yield to Peds	At crosswalks; where sidewalks are being used	B on W	N/A	R9-5 R9-6
Bike Lane Ahead: Right Lane Bikes Only	At beginning of bike lanes	B on W	N/A	R3-16 R3-17
STOP, YIELD	At trail intersections with roads and Coastal Bikeways	W on R	R1-2	R1-1 R1-2
Bicycle Crossing	For motorists at trail crossings	B on Y	W79	W11-1
Bike Lane	At the far side of all arterial intersections	B on W	R81	D11-1
Hazardous Condition	Slippery or rough pavement	B on Y	W42	W8-10
Turns and Curves	At turns and curves which exceed 20 mph design specifications	B on Y	W1,2,3 W4,5,6,14 W56,57	W1-1,2 W1-4,5 W1-6
Trail Intersections	At trail intersections where no STOP or YIELD required, or sight lines limited	B on Y	W7,8,9	W2-1, W2-2 W2-3, W2-3 W2-4, W2-5
STOP Ahead	Where STOP sign is obscured	B,R on Y	W17	W3-1
Signal Ahead	Where signal is obscured	B,R,G	YW41	W3-3
Bikeway Narrows	Where bikeway width narrows or is below 8'	B on Y	W15	W5-4
Downgrade	Where sustained bikeway gradient is above 5%	B on Y	W29	W7-5
Pedestrian Crossing	Where pedestrian walkway crosses trail	B on Y	W54	W11A-2
Restricted Vertical Clearance	Where vertical clearance is less than 8'6"	B on Y	W47	W11A-2
Railroad Crossing	Where trail crosses railway tracks at grade	B on Y	W47	W10-1
Directional Signs (i.e. Cal State LB, Downtown, Train Station, etc.	At intersections where access to major destinations is available	W on G	G7 G8	D1-1b(r/l) D1-1c
Right Lane Must Turn Right; Begin Right Turn Here, Yield to Bikes	Where bike lanes end before intersection	B on W	R18	R3-7 R4-4
Trail Regulations	All trail entrances	B on W	n/a	n/a
Multi-purpose Trail: Bikes Yield to Pedestrians	All trail entrances	n/a	n/a	n/a
Bikes Reduce Speed & Call Out Before Passing	Every 2,000 feet	B on W	n/a	n/a
Please Stay On Trail	In environmentally-sensitive areas	n/a	n/a	n/a
Caution: Storm Damaged Trail	Storm damaged locations	B on Y	n/a	n/a
Trail Closed: No Entry Until Made Accessible & Safe for Public Use	Where trail or access points closed due to hazardous conditions	n/a	n/a	n/a
Speed Limit Signs	Near trail entrances: where speed limits should be reduced from 20 mph	B on W	n/a	n/a
Trail Curfew 10PM - 5AM	Based on local ordinance	R on W	n/a	n/a

Figure 8.4
Bike Route Sign
(from the Caltrans Highway Design Manual Chapter 1000)

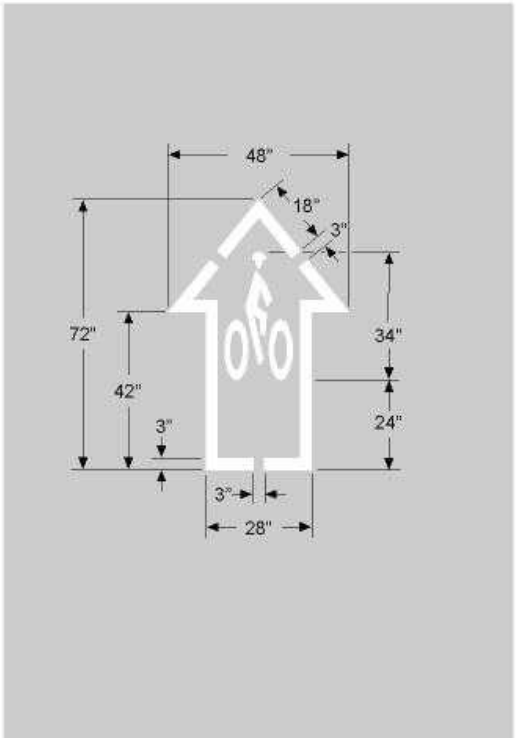


Figure 8.5
Schematic of Class III Bike Route Pavement Stencil in use in San Francisco and Denver

Bike Hitch Racks

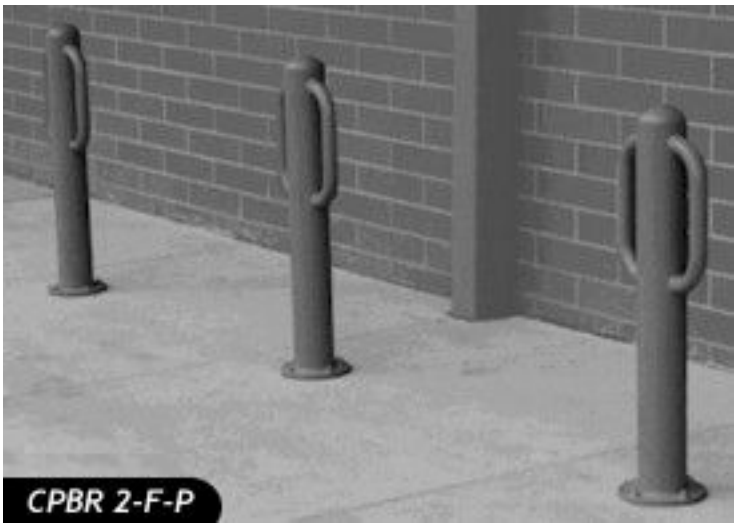
The Bike Hitch is an attractive and space efficient bike rack. The Bike Hitch was specifically designed for sidewalks and other narrow space applications. It is also an ideal rack to coordinate with parking meters. A 7-foot sidewalk width is the minimum requirement per ADA standards if bicycles are parked parallel to the curb. The Bike Hitch uses thick tube construction and the full radius bend of the ring makes it almost impossible to cut with a pipe cutter. It allows for the wheels and the frame to be secured using a u-style bike lock.

Inverted U Racks

The U Bike Racks are some of the most often used for their simple design and effective use of space. The U Rack can be typically used as part of sidewalk parking programs where bicycle parking for small businesses is accommodated. The bicycle makes contact with the rack in two places for additional stability and security. Simple, attractive, economical, and space-saving design is ideal for city sidewalks. Optional center crossbars are available to make the racks more ADA-friendly and to provide greater stability. The minimum sidewalk width per ADA requirements is 7 feet.

Figures 8.6, 8.7, 8.8, and 8.9
Recommended Bicycle Racks

Bollard Rack



The Bollard Bike Rack provides an attractive parking device for sidewalk areas or plazas. They could be used in coordination with sidewalk or street bollards. These racks can be placed so that bicycles are parked parallel to the curb on sidewalks in order to minimize sidewalk obstruction and adhere to ADA standards for sidewalk access.

Alley Rack/Hoop Rack

These racks are intended for use in high-density locations where space is limited. Such locations as Centre City or the beach areas are suitable for these types of parking devices. The Alley Racks allow bikes to be parked at an angle of 45 to 90 degrees against a wall. Required width for an alley with these racks in use is 15 feet to allow for alley traffic. When not in use, these racks can be folded against the wall to eliminate conflicts and storage problems.

Figures 8.10 and 8.11
Recommended Bicycle Racks

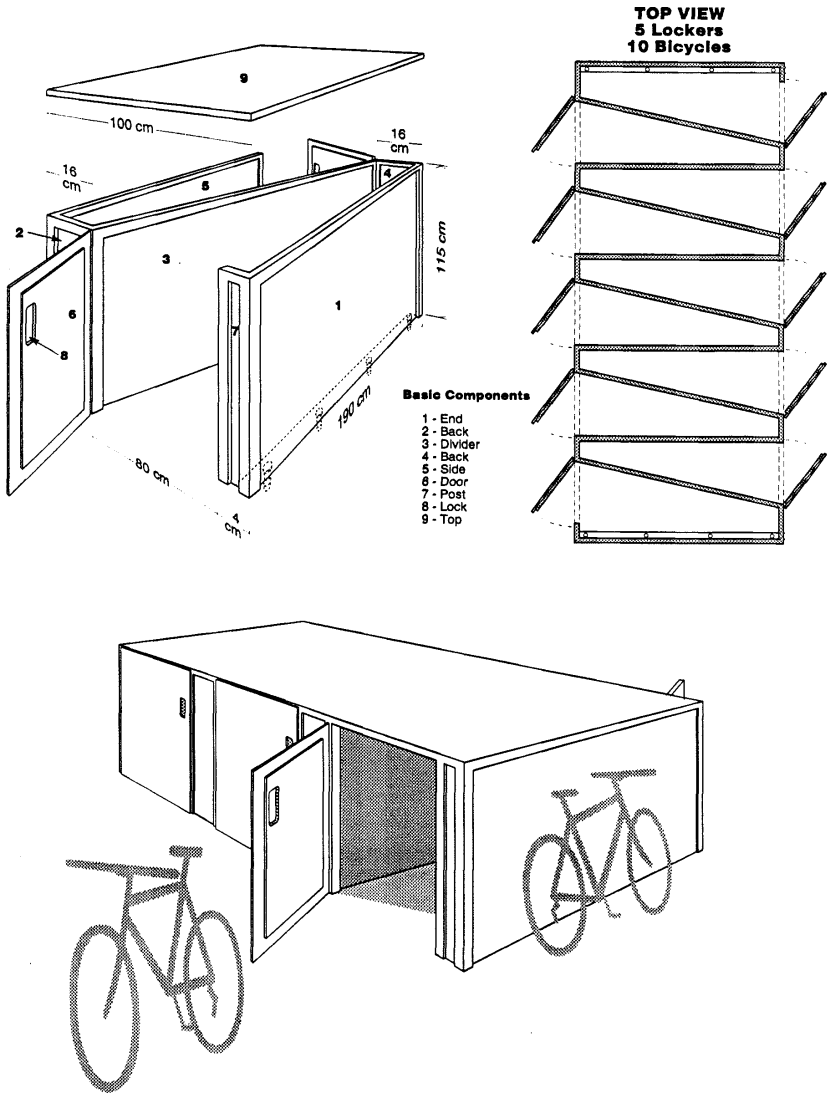


Figure 8.12
Bicycle Lockers

Figures 8.13 and 8.14
Bicycle "eLockers"

The eLocker bicycle locker is a new innovative parking and storage device that can be used without an often-burdensome key administration program. Functional characteristics long desired by both cyclists and facilities managers such as keyless on-demand parking, pay-parking, usage monitoring, unattended bicycle rental, and a wide range of other options can now be provided at a reasonable cost by the multi-faceted eLocker. The eLocker bicycle locker can also offer traditional assigned-key parking that can be easily upgraded to on-demand, or other modes.

Maintenance

The City should establish street maintenance schedules for the regular sweeping of streets, including bike lanes and Class I bike paths. Resurfacing specifications should be maintained as the City performs street improvements or when companies require the trenching of certain streets for a period of time. Compaction standards should also be adhered to in order to ensure that the settlement of pavement does not occur, especially within zones that have been trenched for some purpose. The inspection of roadways after construction activities have been completed should also be a required component of roadway work.

Maintenance requirements for all roadways in the City are outlined in the City of San Diego's Standard Drawings. Maintenance access on Class I bike paths should be achieved using standard City pick-up trucks on the pathway itself. Sections with narrow widths or other clearance restrictions should be clearly marked. Class I bike path maintenance includes cleaning, resurfacing and restriping the asphalt path, repairs to crossings, cleaning drainage systems, trash removal, and landscaping. Underbrush and weed abatement should be performed once in the late spring and again in mid-summer. In addition, these same maintenance treatments should be performed on Class II and Class III facilities. These facilities should be prioritized to include an accelerated maintenance plan that is already a part of the City's ongoing street maintenance. A maintenance schedule and checklist is provided in Table 8.2.

Trenching has become a major issue regarding roadway and bikeway maintenance in the City of San Diego. Trenching most often occurs in the bicyclists' path of a street and/or in the bike lane on those streets that have these facilities. The typical construction location in the roadway makes trenching a major maintenance issue for bicyclists. Field inspection should be increased to ensure that the condition of post-construction roadway surfaces is the same or better than the surface condition before construction commenced.

Utility and fiber-optic company trenching should be coordinated so that the number of trenching activities is minimized. Construction treatments for bicyclists are discussed in the Appendix.

When streets are resurfaced, the City's Street Division should coordinate with the Traffic Engineering Division to determine the best striping plan for streets when they are restriped after resurfacing projects. If a segment of roadway slated to be resurfaced is identified as a proposed bikeway in the Bicycle Plan, efforts should be made to provide space for bicycle travel either as a Class II bike lane or a Class III bike route with a widened curb lane.

An effort should be made to improve the maintenance of existing roadways that are regularly traveled by bicyclists regardless of whether a specific bikeway designation exists on those roadways.

Table 8.2
Bikeway Maintenance Check List and Schedule

Item	Frequency
Sign Replacement/Repair	1 - 3 years
Pavement Marking Replacement	1 - 3 years
Tree, Shrub & grass trimming/fert.	5 months - 1 year
Pavement sealing/potholes	5 - 15 years[1]
Clean drainage system	1 year
Pavement sweeping	Weekly-Monthly/As needed
Shoulder and grass mowing	Weekly/As needed
Trash disposal	Weekly/As needed
Lighting Replacement/Repair	1 year
Graffiti removal	Weekly-Monthly/As needed
Maintain Furniture	1 year
Fountain/restroom cleaning/repair	Weekly-Monthly/As needed
Pruning	1 - 4 years
Bridge/Tunnel Inspection	1 year
Remove fallen trees	As needed
Weed control	Monthly/As needed
Remove snow and ice	Weekly/As needed
Maintain emergency telephones, CCTV	1 year
Maintain irrigation lines	1 year
Irrigate/water plants	Weekly-Monthly/As needed

Security

Security may be an issue along portions of the Class I bike paths. The following actions are recommended to address these concerns.

Enforcement of applicable laws on the bike path should be performed by the San Diego Police Department, using both bicycles and vehicles. Enforcement of vehicle statutes relating to bicycle operation should be enforced on Class II and Class III bikeways as part of the Department's normal operations. No additional manpower or equipment is anticipated for Class II or III segments.