

BLUEPRINT FOR A BIKE-FRIENDLY LOS ANGELES COUNTY
Prepared by the Los Angeles County Bicycle Coalition
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EXECUTIVE SUMMARY

The Blueprint for a Bike-Friendly Los Angeles County is a comprehensive plan for transforming Los Angeles County into a region where bicycles play an important role in solving our mobility and air-pollution problems.

THE NEED FOR MORE RESOURCES FOR BICYCLES

The lack of planning, adequate funding and awareness about bicycling at all levels of government are the major barriers to mainstreaming bicycles as a transportation mode. Transportation agencies invest very little of their resources into planning and promoting bicycling, and the cities and subregions-which must initiate their own bike plans-for the most part mirror this pattern. In order to take advantage of this highly desirable form of transportation, our political leaders and transportation agencies must make the mainstreaming of bicycle transportation a strategic priority. The Blueprint describes the steps required for creating a cycling environment that will attract large numbers of new riders, and improve our quality of life.

SUMMARY OF RECOMMENDATIONS TO MTA

1. **Increase funding of bicycle facilities in the Call for Projects:** Provide \$25 million per year for bicycle programs (see recommendations in Tables 1, 2 and 3). The Call should be expanded to fund a comprehensive array of bicycle projects.

2. **Make bicycles a priority by funding them at the Strategic Plan level in the Long Range Transportation Plan (LRTP):** We strongly recommend specific targets for improving cycling's transportation mode share from the current 2.4% to 10% by 2025 as stated in the Draft LRTP. To achieve this, MTA must implement the Strategic Plan alternative for bicycles and incorporate the recommendations below and the budget in Table 3. Specifically, the LRTP should:
 - **Fund bicycle planning:** Encourage, facilitate and assist municipalities in the planning and implementation of bicycle infrastructure projects. MTA leadership, resources and expertise are essential to motivating the cities.
 - **Accommodate bicycles on all roadway projects.** For bicycles to be a viable mode of transportation, they must be able to ride safely on all roads and easily access the same destinations as automobiles. Desired features include bike lanes where possible or wide curb lanes, safe intersection designs and bike-sensitive signal detectors. *These improvements can be implemented at low or zero cost if done during construction or maintenance.*
 - **Require the maximum integration of bicycles into all transit facilities,** including strategies for encouraging multi-modal trips, such as secure parking for bikes, "end-of-trip" facilities at major destinations and bicycle access to transit vehicles.
 - **Develop effective, well-promoted cycling skills training programs.** Lack of traffic cycling skills and fear of roadways are major barriers to increased ridership. Focus should be on middle schools and adults.
 - **Promote cycling as transportation,** including measures such as: an ongoing, pervasive PR campaign; high-visibility pavement markings; signage; specific, high-profile bike projects; priority bike parking areas at major destinations.
 - **Additional recommendations, see Section C: Recommended Actions**

Table 1. LACBC Recommendations for Current MTA Call for Projects

Category	Funding for this Two-Year Call (in millions)	Annual Funding for Future Calls (in millions)
Class I Bikeways (see list below in Table 2)	27	10
Class II and III Bike Routes ¹	2	3
Bike Education and Promotion ²	5	5
Bike-Transit Connections ³	1	0.5
Bike Parking ⁴	2	2
Bike Planning Account ⁵		2
Bike Lane Account ⁶		3
Totals	37	25.5

Priority Class I Bikeways for this Two-Year Call

Top priority bike path projects identified by the Bike Coalition include the following (but this list does not imply lack of support for many other projects which are being proposed by the County and cities). Please note that the funding recommended below is only for this two-year Call. Substantially more funding will be needed in future years to complete the projects.

Table 2. Priority Bikeways

- **LA River Bikeway Downtown Connection** **\$8 M**
Extend River Bikeway into Downtown Union Station.
- **San Gabriel Valley Pacific Electric Right-Of-Way** **\$7 M**
Begin a 21-mile commuter bikeway from Rialto to Claremont.
- **Arroyo Seco Bikeway** **\$4 M**
Extend Arroyo Bikeway to connect Pasadena to Downtown LA.
- **Exposition Right-Of-Way** **\$4 M**
Connect bike path from West LA to Downtown.
- **San Fernando Rail Right-of-way** **\$4 M**
Begin a cross-valley bikeway.

¹ Class II and III Bike Routes – Bicyclists should be able to get to any destination quickly and safely. Therefore marked routes with bike lanes or wide curb lanes are crucial on all arterials and other major routes.

² Bike Education and Promotion - The MTA should fund youth and adult bike education. Bicycle education should be administered in the form of classes for all school children, as well as individuals, but also through a high-profile advertising and promotion campaign to encourage cycling, and to educate cyclists and motorists to bicycle safety. Part of the campaign could be run by MTA’s own public relations division, in addition to contracts with the County, various jurisdictions and school districts.

³ Bike Parking - Safe and convenient bicycle parking is needed at all destinations throughout LA County. Priority locations include: transit stations and popular work and recreational destinations.

⁴ Bike / Transit Connections - All buses throughout LA County should have bike racks, as well as storage space on rail cars.

⁵ Bike Planning Account – The MTA should establish a fund for cities create local Bicycle Master Plans.

⁶ Bike Lane Account - The MTA should establish simplified funding procedures for striping and marking of Class II and Class III bike routes. Priority should be given to long distance corridors, including those that overlap multiple jurisdictions.

Table 3. 25-Year Bicycle Needs Budget

Item #	LACBC Recommendations for Bicycle Related Need Categories	Ave. Capital Cost/mile	Miles/Year	Average Cost/Year	Cost Over 25 Years
1	Planning staff and consultants			\$2,000,000	\$50,000,000
2	100 miles of Class I bike paths*	\$1,000,000	4	\$4,000,000	\$100,000,000
3	2500 miles of Class II bike lanes	\$50,000	100	\$5,000,000	\$125,000,000
4	2500 miles of Class III bike routes	\$10,000	100	\$1,000,000	\$25,000,000
5	Upgrade of unsafe intersections			\$2,000,000	\$50,000,000
6	Bike-sensitive signal detection systems			\$100,000	\$2,500,000
7	Bike racks on all bus lines			\$100,000	\$2,500,000
8	Bicycle storage space on rail cars			\$500,000	\$12,500,000
9	Bicycle lockers/racks countywide and end-of-trip facilities at major destinations			\$250,000	\$6,250,000
10	Public relations and promotion campaign			\$1,000,000	\$25,000,000
11	Bicycle skills training and education			\$4,000,000	\$100,000,000
12	Motorist and law-enforcement officer education of cycling-related laws			\$500,000	\$12,500,000
13	Completion of LA River Bikeway			\$2,400,000	\$60,000,000
14	Pasadena-downtown cycleway			\$1,000,000	\$25,000,000
15	Burbank/Chandler Bikeway			\$800,000	\$20,000,000
17	Bicycle ownership buydown programs for low-income communities			\$250,000	\$6,250,000
Total of Needs				\$24,900,000	\$622,500,000

* The November 2000 Alta Transportation Consulting Report commissioned by the MTA projects a full buildout of the bikeway system would require construction of 237 miles of Class I bikeways over the next 25 years (an average of 9.5 miles per year).

LOS ANGELES COUNTY BICYCLE COALITION

The Los Angeles County Bicycle Coalition (LACBC) is a membership-based advocacy organization working to improve the bicycling environment and quality of life in Los Angeles County. We promote bicycling as a healthy, economical and non-polluting means of transportation and recreation. Our vision is to make Los Angeles County a great place for everyday, year-round cycling that is safe and enjoyable for everyone. We advocate for an interconnected network of bike lanes, paths and widened curb lanes. See Appendix C for more information about LACBC's history, mission, vision, objectives and accomplishments. More information can be found at www.labikecoalition.org or by calling (213) 629-2142.

BLUEPRINT FOR A BIKE-FRIENDLY LOS ANGELES COUNTY

INTRODUCTION

To everyone who rides a bicycle in Los Angeles, to everyone who wants to but doesn't dare, and to everyone who longs for a more vibrant county, we offer this Blueprint for a Bike-Friendly Los Angeles County.

As bicyclists and cycling advocates, we have found joy and freedom using bicycles for transportation. Cycling enriches our lives and humanizes our city, and we want to help others share this experience. At a time when our region faces severe mobility and air-quality challenges, we want to be part of the solution.

With this Blueprint, the Los Angeles County Bicycle Coalition calls on government and the private sector to change the equation on our streets. We offer scores of compelling, feasible recommendations for bringing cycling into the mainstream in Los Angeles County. The many benefits that bicycles offer at this critical time demand that we begin thinking and planning for them as the high-value transportation solution they are. Together, let us create a more bicycle-friendly, livable Los Angeles County.

BACKGROUND

In the next 25 years Southern California is projected to grow by six million people. Congestion will become much worse and air pollution will continue to adversely affect our quality of life. Further, we are once again facing the prospect of rising fuel costs and the possibility of an energy crisis. Our region is very vulnerable to such events due to our heavy reliance on private automobiles for our basic transportation needs. Long-range transportation planning should prepare us for a future where energy resources will be far more limited than in the past.

Fortunately, our Mediterranean climate and mostly flat terrain are well-suited to bicycling, creating conditions ideal for taking advantage of this zero-pollution, energy-efficient transportation mode, as cities all over the world have done. Bicycle transportation provides many additional benefits needed at this critical time: It is cost-effective, reduces congestion and parking requirements, facilitates livable community development, integrates well with transit and provides healthful activity. Bicycle ownership levels already number in the millions in our region. This represents a huge potential for increased usage.

Local and regional governments have historically overlooked cycling as a mode of transportation. As a result, few roads incorporate facilities to accommodate cyclists needs and other fundamental improvements are very limited. This neglect has literally driven cyclists from the roads and caused cycling to be disregarded as a viable travel choice. Today, bicycle trips represent only 2% of all trips in Los Angeles County. By contrast, some U.S. cities enjoy bicycle use levels as high as 5% of trips, and in Northern Europe, bicycle use is as high as 30% in many cities.

THE VISION

Our vision is for Los Angeles County to become a place where traveling by bicycle is a safe, easy and desirable option. With an inviting, pervasive bicycle network in place, people from all walks of life will choose to make many of their trips by bicycle because it is convenient, provides

healthful activity and the opportunity to be outdoors enjoying our favorable climate. Further, using a bicycle will obviate the need to drive and park an automobile for most trips, significantly reducing road congestion, air pollution and the need for vast parking lots.

As land-use planning is transformed to create more livable, mixed-use, transit-oriented communities, the bicycle will play a major role in providing local mobility. Bicycles will be thoroughly integrated with transit systems, serving as feeders to bring transit riders to stations and stops, as well as extending their range at the destination end of trips. Ultimately, the reorienting of our streets to better accommodate bicycles, transit and pedestrians will transform our communities into more desirable places to live and add value to our regional economy.

THE NEED

Cycling receives little attention in the design of our transportation systems. The lack of planning, adequate funding and awareness about bicycling at all levels of government are the major barriers to bicycles becoming an important transportation mode. Transportation agencies invest very little of their resources in planning and promoting bicycling. In order to take advantage of this highly desirable form of transportation, our political leaders and transportation agencies must make bicycle transportation a strategic priority. This Blueprint describes many of the steps needed for creating a cycling environment that will attract large numbers of new riders.

THE RATIONALE FOR BICYCLES

• Bikes Reduce Congestion

Each 1% of vehicle trips diverted to bicycles in the MTA region would remove about 3 million miles of vehicle travel per day, according to the November 2000 Alta Transportation Consulting Report commissioned by the MTA. This would reduce congestion, increase auto trip speed and reduce peak period delays, saving millions of dollars' worth of time for auto and truck drivers each day.

• Bikes Improve Air Quality

Forty percent of all trips in the nation are less than two miles, and 75% of all shopping trips are less than 5 miles, as are half of all work commutes [National Personal Transportation Survey 1990]. Therefore, each 1% of vehicle trips diverted to bicycles would yield a reduction of 1.5 tons per day of smog-forming gases (reactive organic gases and nitrogen oxides), and 0.4 tons reduction in dangerous PM10 particles in the county (assuming an average bicycling trip length of 1.8 miles) [Estimates for 2010 from the California Air Resources Board Fact Sheet on Bicycling, 1998]

In addition, if at least one member of a family could bike or walk to work or to shop, many two-car families could become one-car families. This would significantly reduce emissions of evaporating fuel from parked vehicles.

• Bicycles Enhance Transit Use and Efficiency

Getting passengers to public transit stations and stops is a challenge, especially in our low-density, suburban communities. Alternatives to cycling - driving and walking - have severe limitations in Southern California. Automobiles are expensive and already overload our roadways. Walking is generally limited to distances less than 1/2 mile, providing access to destinations in the surrounding 0.79 square mile. In contrast, bicycles are excellent for distances out to 5 miles. This provides access to an area 100-fold greater than walking. In many major

European cities, bicycles are vital to moving people to transit stops, naturally complementing both fixed-rail and bus transit. If a bicycle is available at the destination end of the trip as well, the overall efficiency of the trip is greatly enhanced, making the transit option a much more desirable choice. However, all roads must provide safe and inviting mobility for bicycles, especially to primary destinations, most of which lie along major arterials.

- **Bikes Improve Transportation Equity**

Well-founded concerns for environmental justice have brought attention to the need to provide safe, affordable, convenient transportation options to all segments of our society. Bicycle transportation is by its nature affordable and easy to access. Our low-income communities often depend on it. Increasing the safety and availability of bikeways to serve those most dependent on non-motorized transportation should be a high priority for transportation planning.

All taxpayers subsidize our road systems and bicycles have the legal right to use all roads (except freeways). Local governments should accommodate cyclists on all roadways.

- **Bicycles Increase Transportation Accessibility**

Bicycles provide transportation options to those who cannot drive a car, especially the young and those unable to afford automobile ownership.

- **Bicycles Enhance Livable Communities**

Bicycles provide local mobility, mitigate congestion and relieve parking demands. All are desirable for improved, "smart growth" land-use patterns. Bicycles can facilitate even higher levels of transit use in transit-oriented developments by extending the range of riders at both ends of the trip.

- **Bicycles Enhance Economic Vitality**

Communities with inviting, well-utilized bicycle networks enjoy a high quality of life. This in turn attracts talented, creative individuals and businesses desiring to locate in such communities. In particular, high-tech workers are frequently cyclists. Bicycle-friendly roadways, in concert with well-developed public transit alternatives, increase personal prosperity by diminishing automobile dependence. This potentially reduces the cost of living and makes money available for other investments or purchases. Additionally, attractive and inviting bicycle facilities make communities and retail districts more appealing to tourists. For example, the beach bike path is a key attraction that brings visitors (and customers) to the many coastal communities through which it passes.

- **Bikes Reduce Energy Consumption**

Rising fuel costs and the possibility of a full-blown energy crisis have not been adequately addressed in recent regional transportation plans. Our region is very vulnerable to such events due to our heavy reliance on private automobiles. It is incumbent on us to remember the transportation disruptions and economic impact caused by past fuel crises. As fuel prices rise, our heavy reliance on cheap petroleum and the limitations of our transit alternatives will make Southern California a less desirable place to live and less competitive in the world market as the cost of living and doing business here increases. Long-range plans must prepare us for a future where energy resources could be far more expensive and scarce than in the past.

Additionally, the prospect of federal or international mandates to reduce greenhouse gas emissions, especially CO₂, is a likely possibility within the next 25 years. In the United Nations Inter-governmental Panel on Climate Change, the key industrialized nations have been negotiating to set levels for greenhouse gas reductions. While setting reduction levels is difficult

and controversial, all participants agree that it must be done. This could require measures that would place disincentives on private automobile use. Clearly, having a viable regional bicycle transportation system has many advantages which can prepare us for these scenarios.

- **Bicycling Improves Health**

Cycling is an excellent way to incorporate regular exercise into daily activities. The Center for Disease Control has warned, "A growing obesity epidemic is threatening the health of millions of Americans in the United States." (Jeffrey Koplan, *Caloric Imbalance and Public Health Policy*) The California Department of Health Services states that "Too few Californians are physically active on a regular basis to reap any health benefits. The result is illness, injury and premature death. . . and health care costs in the billions of dollars."

"Because physical activity may prevent obesity . . . strategies to increase physical activity must be implemented for the entire population." The CDC report recommends "changes in the community environment to promote physical activity may offer the most practical approach to prevent obesity or reduce its co-morbidities. Restoration of physical activity as part of the daily routine represents a critical goal."

- **Bicycles Reduce Costs for Businesses by:**

- **Helping Businesses Meet Carpool Requirements:** Every person traveling to work by bicycle helps the company meet its ride-sharing requirements.
- **Reducing Parking Costs:** Every person using nonmotorized transportation reduces the parking space costs of companies for their employees and of store owners for their customers. (Surface parking spaces typically cost \$3,000 to \$6,000 per space. Above-ground structures generally run \$15,000 to \$25,000 per parking space. Sub-surface spaces cost \$20,000 to \$30,000 per space. So an average \$20,000 space constructed with a loan of 9% over 30 years requires a monthly debt payment of \$161. Add on taxes, maintenance, insurance costs, etc. and the space really costs well over \$200 per month. Since at least 10 bikes can be put in the space of one car, those costs are reduced by a factor of 10 or more for bicycles.)
- **Encouraging Employee Health:** Employees who bicycle regularly are healthier, more productive and take fewer sick days.

- **State and Federal Regulations Require Thorough Bicycle Planning**

State and Federal statutes spell out specific requirements for bicycle planning, including:

1. Vision and Goal Statements and Performance Criteria
2. Assessment of Current Conditions and Needs
3. Identification of Activities required to meet the stated vision and goals
4. Implementation of the bicycle and pedestrian elements in the statewide and regional transportation plans and transportation improvement programs
5. Evaluation of Progress
6. Public Involvement as required by the ISTEA and the FHWA/FTA joint planning regulations
7. Transportation Conformity Requirements for Air Quality

See Appendix A for further details about state and federal requirements.

STRATEGIES FOR IMPLEMENTING A BIKE-FRIENDLY LOS ANGELES COUNTY

A. Goals

1. Increase cycling to 10% of all trips.

The 1991 SCAG Origin and Destination Survey found of all daily trips in the County of Los Angeles, about 1.0% were via bicycles. However, the Technical Working Paper, "Long Range Transportation Plan Off-Model Analysis Methodology – Bikeway Category," prepared for the MTA in November 2000 by Alta Transportation Consulting found that traditional methods vastly underestimated the number of utilitarian bicycle trips on our streets. They found that currently daily bike trips total 720,000 or 2.4% of all trips, by identifying undercounted utilitarian trips by school children, college students and adults. They projected that bikeway spending of only \$6 million per year in Call for Project funds, plus \$2 million per year, over the 21 years from FY 2005 – 2025, would increase the mode split to 5.3%. Increasing the Call amount to \$10 million per year would increase the mode split to 10%. We concur with the Draft LRTP which states on page 1-20, "The analysis also concluded that a 5% mode share is a reasonable goal for 2025."

2. Design and implement a transportation system that is accessible, safe and convenient for bicycles, by adopting the strategies, policies and funding guidelines outlined in this paper.

3. Create a cultural environment in which bicycling is regarded as a normal and preferred mode of travel, by implementing the education and promotional recommendations in this Blueprint.

B. Specific Objectives For Implementing Bicycle Transportation Goals

1. Improve accessibility and safety for bicyclists, which includes providing:

- a. Wide curb lanes, bike lanes and paths that are safe, convenient and connect to needed origins and destinations of all types.
- b. Bicycle parking that is safe and convenient wherever needed, including rental lockers.
- c. Accommodation of bicycles on all transit lines at all times.
- d. Connections to bus and rail transit and other multi-modal facilities, including carpools, vanpools and park-n-ride lots.
- e. Bicycle support facilities, such as showers and clothing lockers at employers and bike stations at major transportation hubs (similar to the Metrolink Long Beach Bike Station).
- f. Education and enforcement of laws for bicyclists and motorists.
- g. Transportation system management (TSM) projects to improve travel safety through facility design, signing and pavement markings.
- h. Monitoring causes of bicycle-related accidents to develop and implement solutions to achieve targeted collision reductions.
- i. Systems for reporting and responding to maintenance problems on bikeways.
- j. Safety and security programs, including call boxes, illumination, police patrols, and licensing to locate stolen bicycles.

1. Implement livable communities designs, including mixed-use and transit-oriented zoning, to encourage activity centers in close proximity to residences and transit facilities.

2. **Increase the non-motorized constituency**, through public outreach, education, marketing, maps, promotion and involvement programs and strategic, high profile demonstration projects, such as veloways.
3. **Establish, develop and sustain an integrated bicycle planning information management system**, with regular user surveys, traffic counts, project monitoring and plan updates.
4. **Establish bicycle planning as a key component of the transportation planning process**, including:
 - a. Triennial updates identifying existing conditions and future needs, with specific recommendations for facilities and programs to be phased in over the next 25 years.
 - b. Development of a regional Bicycle Master Plan as a resource and coordination tool for local jurisdictions to use in planning local bicycle and pedestrian facilities.
 - c. Appropriate funding of MTA staff and consultants as well as subregional funding to provide support for bicycle planning throughout the county to meet the modal split goals.
 - d. Provision of reliable local matching funds to leverage federal and state funds for bicycle transportation.

C. Recommended Actions

1. **Increase funding of bicycle facilities in the Call for Projects:**

Provide \$25 million per year for bicycle programs (see recommendations in Tables 1 and 2 on page 2).

The MTA staff is recommending Call for Projects Modal Category Funding Marks which provide only \$21 million for bikeways over the next 6 years, which is only \$3.5 million per year, only 2.5% of the total. This level is much lower than in past Calls for Projects, and seems to mark a serious reversal of MTA support of bikeways, just after an MTA consultant report indicates there are many more utilitarian bike trips than previously estimated.⁷ In fact, the Draft LRTP recommends \$10 million per year in the Constrained Program Recommendations and \$20 million per year in the Strategic Plan.

The LA County Bicycle Coalition (LACBC) calls for greatly increased bicycle funding. A Call for Projects that takes bicycling seriously would allocate more than \$25 million annually specifically to bicycle projects. The LACBC recommends \$150 million for bicycles over the

⁷ More People Riding Bikes - This reduction in funding is especially embarrassing in light of the findings in the Technical Working Paper, "Long Range Transportation Plan Off-Model Analysis Methodology – Bikeway Category," which was prepared under contract for the MTA in November 2000 by Alta Transportation Consulting. The report found that traditional analysis methods have vastly underestimated the number of utilitarian bicycle trips on our streets. Instead of the 1.0% found by SCAG in its 1991 Origin and Destination Survey, Alta calculated that currently daily bike trips total 720,000 or 2.4% of all trips, by identifying undercounted utilitarian trips by school children, college students and adults.

The Alta report projects that bikeway spending of only \$6 million per year in Call for Project funds (plus \$2 million per year from other sources), over the 21 years from FY 2005 – 2025, would increase the mode split to 5.3%. Increasing the Call amount to \$10 million per year would increase the mode split to 10%. This independent analysis shows that doubling the County bike modal split of all trips by 2025 to 5% can be realistically achieved, if the MTA provides the resources.

next six years. LACBC analysis indicates there should be much more than only \$850 million available for the Call for Projects over the next six years.⁸

1.1 **The Call should fund a comprehensive array of projects:**

The LACBC recommends the MTA fund a complete spectrum of bike projects as outlined Tables 1 and 2. Equally important to the high profile Class I bike paths in creating a bike-friendly LA County are smaller-scale expenditures, including on-street bike routes, education, parking, and planning. Since the MTA stopped funding bike planning, there has been few local Bicycle Master Plans created. In addition, because of the cumbersome Call for Projects process, a simplified Bike Planning Account should be used in future Calls for Class II and III bike routes.

2. **Make bicycles a priority by funding at the Strategic Plan level in the Long Range Transportation Plan:**

We strongly recommend specific targets for improving cycling's The Strategic Plan alternative for bicycles in the LRTP proposes many important steps for helping achieve a 10% mode split for bicycle use by 2025. We support all of these objectives and offer the following specific actions for achieving this goal:

2.1 **Fund and encourage bicycle planning:**

MTA leadership is needed to encourage, facilitate and assist municipalities in the planning and implementation of bicycle infrastructure projects. The planning and public works departments of many cities simply cannot be expected to fulfill their obligation to build needed bicycle facilities, due to budget constraints and workloads. MTA leadership, resources and expertise is essential to motivating municipalities. A well-funded, high-priority campaign is needed.

Actions:

- a. Promote bikeway development to cities; articulate the value it adds to their transportation improvements; create incentives.
- b. Host seminars for cities on engineering bike lanes, etc.
- c. Include bike planning in the Call For Projects, or provide other funding to aid cities' planning.
- d. Add bicycle planning staff to MTA as needed.
- e. Provide clear guidelines

2.2 **Accommodate bicycles on all roadway projects:**

The biggest need for improving our bicycling environment is the upgrading of the general road network to better accommodate bicycle travel. For bicycles to be a viable mode of transportation, they must be able to ride safely on all roads and easily access the same destinations as automobiles. Needed improvements include bike lanes where possible or wide curb lanes, safe intersection designs and bike-sensitive signal detectors. *These improvements can be implemented at low or zero cost if done during construction or maintenance.*

Actions:

⁸ More Funding Should Be Available for the Call - The MTA staff presented to the LRTP Focus Group on October 27, 2000, projections that a total of \$89.1 billion would be available for FY 2005 –2025 (approximately \$4.2 billion per year) of which \$18.1 billion was flexible or unallocated (approximately \$862 million per year). However, the MTA staff presented to the TAC on January 10, 2001, projections that only \$850 million in local, state and federal funds will be available for the Call for Projects over the next six fiscal years (FY 2002 – 2007) (only \$142 million per year).

- f. Adopt policies that requires the inclusion of bicycle facilities, whenever possible, into all roadway and transit projects funded through the agency. This should include the integration of class II lanes when possible or at least wide curb lanes in every project.
- g. Install bicycle-sensitive signal sensors. When bicyclists cannot trip signal detectors, they are either unfairly inconvenienced or forced to run a red light. MTA should require that all projects that install or improve signal systems must utilize bicycle-sensitive detection systems. In addition, funding for upgrading existing signal systems should be made easily available to cities wishing to do this work.
- h. Encourage, fund and, where possible, require pavement maintenance programs that alleviate hazardous and problematic pavement conditions for cyclists. Consider strategies for encouraging organizations to adopt a bikeway and maintain it.

2.3 Require the maximum integration of bicycles into all transit facilities:

As noted in the Rationale section, it is impossible to overstate the role of bicycles in delivering passengers to transit, including bus lines. Many of our communities are low density and cannot justify numerous, close-proximity bus routes that make access convenient by foot. Bicycles are an ideal means for creating easier access to bus stops.

Actions:

- i. Provide secure parking at transit stations, including rentable bike lockers and racks. See Appendix B.
- j. Accommodate bicycles on transit vehicles at all times to the fullest extent possible and remove requirements for special permits to bring a bicycle aboard.
- k. Encourage and support the development of more "Bike Stations", similar to the one at the Blue line in downtown Long Beach. Convenient bicycle rental at such locations adds flexibility and access to transit-based trips.
- l. Provide secure bicycle parking (racks and/or lockers) at bus transit centers and selected bus stops. See Appendix B
- m. Complete the installation of bike racks on buses, assuring that ALL buses are so equipped (for passengers planning a multi-modal bus trip with their bike, the lack of a bike rack on the arriving bus renders the trip futile and creates severe inconvenience).
- n. Expedite the implementation of racks on all MTA and municipal bus line routes.
- o. Promote and facilitate multi-modal bus-bike travel. Advertising theme suggestions: "Bike To The Bus!" "Buses and Bikes Work!" "Bikes Love Buses!"
- p. Again, to facilitate ease of access, incorporate bicycles into general roadway improvements, particularly within transit corridors.

2.4 Develop effective, well-promoted cycling skills training programs:

Safe cycling results from simple skills that can be learned by anyone, yet they are not taught. These skills, which allow people to travel safely and securely almost anywhere on two wheels should be supported by the government and incorporated into our educational system. Lack of traffic cycling skills and fear of roadways are major barriers to increased ridership. Focus should be on middle schools, high schools and adults. The goal should be to have a cycling education/ skills training program at every middle and high school.

Actions:

- q. Encourage, facilitate and fund bicycle education programs at school-age, college and adult levels.

- r. Select and recommend suitable course programs to promote utilizing what is already available.

2.5 Promote cycling as transportation:

Promotion is vital to a transit resource as under-utilized as bicycles. MTA's sophisticated marketing resources should be utilized to the fullest extent possible to articulate the advantages of bicycling. MTA should initiate and fund an ongoing, pervasive media campaign to create public awareness about bicycling that stimulates greater ridership, including literature, exhibits, billboards on transit vehicles, programs with schools, public service announcements, etc.

Key marketing and promotion messages include:

- Bicycles are viable transportation.
- Bicycles work better than cars for short trips.
- Cycling promotes health (studies confirm this).
- Bicycling is good for the environment; cars create problems.
- Bicycling is cool! (include role models, leaders and trend-setters shown using bikes for transportation).

2.6 Prepare a new Bicycle Master Plan for the entire County:

The route network described in the 1995 MTA Bicycle Master Plans is inadequate to attracting large numbers of new bicycle users. It does not constitute a viable regional system even when all of it is built. The updated MTA Bicycle Master Plan requires a truly comprehensive network that can more thoroughly serve the County's bicycle travelers. This needs to be a cooperative venture of the bicycle planners of MTA, the subregions and municipalities, with ongoing participation of bicycle experts and advocates.

2.7 Create easy procedures for funding small-scale bicycle projects:

Because most funding sources that MTA administers require voluminous documentation and reporting, small bicycle improvements, like bicycle lanes, do not warrant the trouble of the arduous application process. The result is that some of the most needed, cost-effective bicycle improvements are often ignored or given low priority by over-worked municipal agencies. A means of providing easy access to available funds for small-scale projects is needed.

Actions:

- s. Create a Bike Lane Account that can disperse funding for small-scale bicycle improvements with an appropriate level of paperwork.
- t. Assist municipalities in grouping numerous small projects in such a way as to reduce the individual accounting and reporting needed for each one.

2.8 Include Class III bike routes in planning and funding:

Because of the many challenges of creating class two lanes, it is imperative that Class III routes be seen as viable, fundable components of our bikeway system.

Actions:

- u. Class III designation should require the preservation of road width for bicycles so that it is not lost during restriping or capacity expansion programs.
- v. Class III routes should be enhanced with effective signage, pavement markings (see Class III Pavement Stencils, below), mapping and promotion.

2.9 Support and adopt the Class III Pavement Stencil:

This unique roadbed stencil, which is distinct from the Class II bike lane symbol, could be utilized on Class III bike routes and other roads where there is a need to create awareness about the presence of bicycles. When approved, it will be a valuable, much-needed tool for creating motorist awareness of bicycles, encouraging bicycle use, indicating recommended lane positioning for bicyclists and preserving lane width for bicycles. It is now undergoing testing in San Francisco and awaits approval by Caltrans. MTA should encourage Caltrans' speedy approval of the Class III pavement stencil.

2.10 Encourage and support development of "end-of-trip" facilities:

Bicyclists need to be able to find secure parking at their destinations. The lack of this amenity can discourage a bicycle trip even when there is a safe and inviting route. For those commuting to work, the need for a place to change ones clothes and freshen up is also important.

Actions:

- w. Encourage or require bicycle racks or lockers at all significant destinations, such as malls, shopping centers, recreational facilities and places of employment.
- x. Adopt guidelines for the siting and design of bicycle parking facilities that maximizes security and convenience. See Appendix B.
- y. Encourage the adoption of local regulations that require new places of employment to include secure bicycle parking, bike lockers and changing rooms with showers.
- z. Encourage the provision of supervised "valet parking" at major event facilities such as sporting events, exhibitions and concert venues.

2.11 Fund bicycle facility maintenance:

Conditions such as potholes, excessive debris, rough or deteriorated pavement and high gutter skirt transitions can create dangerous hazards for bicycles and discourages cyclists from using routes where these are present.

Action:

- Provide funding assistance to municipalities to maintain bicycle facilities in safe conditions.

2.12 Fund and support the development and distribution of bicycle maps serving all of the county.

Make available in print form as well as via the internet.

2.13 Monitor, survey and research costs and benefits of bicycle facilities.

Accurate statistical data on bicycle improvements are important for analyzing performance. Research should include:

- a. Before and after traffic counts for bicycle improvements.
- b. Analysis of demand and growth potential.
- c. Capacity increases (adjacent roadway congestion reductions, transit demand reductions, etc).
- d. User satisfaction surveys.

2.14 Integrate bicycles with government operations:

Even well-crafted bicycle plans and policies are insufficient to achieve the goal of mainstreaming bicycles if all levels of government do not integrate them into their planning and operations. For instance, it is not uncommon for planned bicycle improvements to be over-looked by the departments doing road work because of insufficient inter-departmental communication procedures.

Actions:

- a. Create clear, inter-departmental procedures for assuring that planned bicycle facilities and related improvements are thoroughly integrated and understood by all departments, personnel and contractors who will be involved.
- b. Empower a Bicycle Coordinator to monitor inter-departmental integration of bicycle plans and projects and enforce their implementation.

2.15 Include cycling transportation experts on all relevant MTA committees and sub-committees.

2.16 Integrate bicycles with ride-share programs:

Bicycles have the ability to bring rideshare participants to park-and-ride lots (or other rendezvous points) without generating automobile trips.

Actions:

- a. Provide secure bicycle parking (racks and/or lockers) at rideshare lots and other rendezvous points.
- b. Promote bicycle use in conjunction with rideshare programs.

2.17 Educate motorists about how to share the road with bicycles and pedestrians:

- a. Develop and distribute materials, courses and outreach for motorists. Distribute at DMV and Auto Club offices, auto parts stores, automobile retailers, etc.
- b. Develop and distribute materials, courses and outreach for motorists. Distribute at DMV and Auto Club offices, auto parts stores, automobile retailers, etc.
- c. Teach awareness of safe merging and passing procedures, bicyclists' legal right to "take lanes," intersection hazards, how to make safe left and right turns without injuring cyclists and pedestrians, etc.
- d. Include these elements in all traffic school courses.

2.18 Lobby Caltrans to implement bicycle-friendly policies:

Because Caltrans' design manuals are seen as the state standard for roadway design, municipalities nearly always conform their road plans to these for liability reasons. It is crucial that Caltrans adopt or approve provisions that support the inclusion of much-needed bicycle improvements, some of which are not included in the existing manual. The intent should be to pro-actively seek the speedy adoption of these provisions by utilizing any appropriate resources MTA has at its disposal, including staff lobbyists.

Policies and guidelines needing Caltrans adoption or approval:

- a. Approve the Class III pavement stencil.
- b. Treat bicycles as design vehicles in the highway design manual and recognize that all public roads (except freeways) are bicycle facilities.
- c. Require wide curb lanes on arterial and collector roads to safely accommodate parallel flows of autos and bicycles.
- d. Require installation of bicycle-sensitive loop detectors.
- e. Urge "Autos Must Share the Road" signage, especially for narrow lanes, tunnels, bridges, etc.
- f. Implement improved Class II Bike Lane Standards, including:
 - Vehicular routing at intersections.
 - Improved routing at freeway on/off ramps.
 - Sufficient "door zone" buffer area next to parked cars.
 - Frequent bike symbols (approximately every 100 feet) on wide curb lane roads.
 -

- Implement improved bike path design:
- g. Increase path widths to accommodate the diversity of uses, such as baby strollers, in-line skaters, etc.
- h. Improve layout standards, eliminating sharp curves, blind corners, etc.
- i. Separate bicycles and pedestrians wherever possible.

2.19 **Fund and support the initiation of a wireless bicycle information system,** to allow on-the-road access to bicycle traveler information such as maps, routes, inter-modal connections, restroom and bike rental facilities, etc..

CONCLUSION

The huge transportation challenges we will be facing in the next 25 years demand that we utilize every viable resource available to meet our mobility needs and preserve our quality of life. Never has the need and opportunities for integrating bicycles as a viable transportation resource been more timely. We offer the specific recommendations of the Blueprint For A Bike-Friendly Los Angeles County as a resource to help express the vision of MTA's Long Range Transportation Plan. Let us work together to create a new reality for the streets and communities of our region.

APPENDICES

Appendix A

FHWA/FTA Interim Technical Guidance for Bike/Ped Planning at the State and MPO Levels

Bicycle and Pedestrian Transportation Planning

Introduction:

Sections 1024 and 1025 of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) require that States and Metropolitan Planning Organizations (MPOs) develop transportation plans and Transportation Improvement Programs (TIPs) which consider and include, as appropriate, bicycle and pedestrian projects and programs. These plans and TIPs will be used to define transportation projects and programs for Federal transportation funding at State and metropolitan levels.

Purpose:

This document offers technical guidance on meeting the requirements for consideration and appropriate inclusion of bicycle and pedestrian elements in Statewide and MPO transportation plans and TIPs.

Federal Transportation Policy:

It is Federal transportation policy to promote the increased use and safety of bicycling and walking as transportation modes.

Specific Legislative Requirements:

Specifically, Section 1024 of the ISTEA, "Metropolitan Planning," amends Section 134 of Title 23, United States Code (U.S.C.) as follows:

... metropolitan planning organizations, in cooperation with the State, shall develop transportation plans and programs for urbanized areas of the State. Such plans and programs shall provide for the development of transportation facilities (including pedestrian walkways and bicycle transportation facilities) which will function as an intermodal transportation system for the State, the metropolitan areas, and the Nation.

Similarly, Section 1025 of the ISTEA, "Statewide Planning," amends Section 135 of Title 23 U.S.C. as follows:

Subject to section 134 of this title, the State shall develop transportation plans and programs for all areas of the State. Such plans and programs shall provide for the development of transportation facilities (including pedestrian walkways and bicycle transportation facilities) which will function as an intermodal State transportation system.

In addition, in Section 1025 of the ISTEA, 23 U.S.C. §135 is amended to read:

Each State shall undertake a continuous transportation planning process which shall, at a minimum, consider the following:

(3) Strategies for incorporating bicycle transportation facilities and pedestrian walkways in projects where appropriate throughout the State.

Final regulations implementing the State and MPO requirements for transportation plans and programs were published in the Federal Register on October 28, 1993, by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as 23 CFR Part 450.

23 CFR 450.214, "Statewide transportation plan," states that the Statewide transportation plan shall:

(3) Contain, as an element, a plan for bicycle transportation, pedestrian walkways and trails which is appropriately interconnected with other modes;

23 CFR 450.216, "Statewide transportation improvement program (STIP)," states:

In addition the STIP shall: (6) Contain all capital and non-capital transportation projects (including transportation enhancements, Federal lands highway projects, trails projects, pedestrian walkways, and bicycle transportation facilities), or identified phases of transportation projects.

23 CFR 450.322, "Metropolitan transportation planning process: Transportation plan," states:

In addition the plan shall: (2) Identify adopted congestion management strategies including, as appropriate, traffic operations, ridesharing, pedestrian and bicycle facilities ... and (3) Identify pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217 (g).

23 CFR 450.324, "Transportation Improvement Program: General," states:

(f) The TIP shall include: (1) All transportation projects, or identified phases of a project, (including pedestrian walkways, bicycle transportation facilities and transportation enhancement projects) within the metropolitan area proposed for funding under title 23, U.S.C.

Note:

These items are presented as specific references to bicycling and walking in the metropolitan and statewide planning requirements of the ISTEA. All other provisions of the ISTEA and the final regulations issued on October 28, 1993, by the FHWA and the FTA also apply as appropriate to the bicycle and pedestrian elements of State and MPO plans and TIPs.

Deadlines:

The final regulations published in the Federal Register on October 28, 1993, by the FHWA and the FTA require that the statewide transportation plans must be completed by January 1, 1995. The MPO Plans for non-attainment areas requiring Transportation Control Measures were due on October 1, 1994, and all other metropolitan areas shall comply by December 18, 1994.

Scope:

The inclusion of the bicycle and pedestrian elements in transportation plans and programs may be accomplished by addressing bicycle and pedestrian issues throughout the transportation planning process and integrating bicycle and pedestrian elements as appropriate in the transportation plan and programs. A separate section on bicycle and pedestrian specific issues in addition to or in place of an integrated element may be appropriate. This approach would address the ISTEA mandate of developing transportation facilities that will function as an intermodal transportation system.

The bicycle and pedestrian plan elements should contain policy statements and goals as well as, whenever possible, the inclusion of specific projects and programs. The plan and the TIP should identify the financial resources necessary to implement the bicycle and pedestrian projects and programs.

Bicycle and pedestrian projects may be on- or off-road facilities. For off-road trails, all such facilities that serve a transportation function must be consistent with the planning process.

A trail serves a valid transportation purpose if it serves as a connection between origins and destinations. Trails funded through programs requiring FHWA or FTA approval, except for the National Recreational Trails Fund Act (NRTFA), are determined to serve primarily a transportation purpose. These must be included in statewide and MPO plans.

For Statewide Transportation Improvement Programs (STIPs), if a bicycle or pedestrian project is determined to be regionally significant (as defined in the Planning Rule) and is funded by or

requires an action by the FHWA or the FTA, it must be included. If it is funded using other Federal or non-Federal funding, it should be included for informational purposes. Projects can be grouped in STIPs.

For Metropolitan Transportation Improvement Programs (TIPs), if a bicycle or pedestrian project is determined to be regionally significant (as defined in the Planning Rule) and is funded by or requires approval of the FHWA or the FTA, it must be included. In air quality non-attainment or maintenance areas, if it is funded using other Federal or non-Federal funding, it shall be included for informational purposes. Projects can be grouped in TIPs.

A trail serving a recreational purpose with no transportation function is a recreational trail. For example, a closed loop trail within a park or recreation area would be a recreational trail.

Similarly, a linear facility serving only recreational users would be a recreational trail. Any trails funded through the National Recreational Trails Fund Act (NRTFA) are determined to be primarily recreational in nature and are intended to enhance the recreational opportunity and resources of the park or recreation area. The NRTFA planning requirements are met in each State's Statewide Comprehensive Outdoor Recreation Plan (SCORP). Except as noted below, projects funded under the NRTFA are not required to be on statewide or metropolitan plans or TIPs. However, their inclusion is recommended.

It is essential to coordinate the statewide and metropolitan transportation plans with the SCORP document with regards to trail policies and plans. Also, it is essential to coordinate recreational trail projects with the STIPs and TIPs. This coordination will help protect the continuity of existing and proposed trail and greenway corridors.

Bicycle and Pedestrian Considerations in a Transportation Planning Process:

The bicycle and pedestrian element of transportation plans should include:

1. Vision and Goal Statements, and Performance Criteria: The vision statements express concisely what the plan is expected to accomplish. For example:

- * The vision of this program is a nation of travelers with new opportunities to walk or ride a bicycle as part of their everyday life. The vision of this program is the creation of a changed transportation system that offers not only choices among travel modes for specific trips, but more importantly presents these options in a way that they are real choices that meet the needs of individuals and society as a whole.

The goals to reach the vision, and the time frame for reaching each goal should be spelled out. They should be clear and objectively measurable. For example, some goals would be:

- * To double the percentage of trips taken by bicycling and walking for all transportation purposes, and to reduce by 10 percent the number of bicyclist injuries and fatalities by the year 2000.
- * To increase the number of bicyclists and pedestrians or to increase facility mileage by a certain amount by a given year.
- * To improve the connections among bicycle, pedestrian, and transit systems.
- * To allow people to bicycle safely, conveniently, and pleasurably within five miles of their homes, and to make streets and roads "bicycle friendly" and well-designed to accommodate both motorized and nonmotorized modes of transportation.

Network performance criteria also should be developed. Some applicable criteria would be accessibility, directness, continuity, route attractiveness, low numbers of conflicts with other route users, number of bicycle links with transit, cost, ease of implementation, etc.

Specific State and MPO goals and performance criteria should be developed to support locally determined bicycle and pedestrian program implementation efforts.

2. Assessment of Current Conditions and Needs:

A baseline of information should be collected on which to base strategies and actions necessary to reach the vision and goal statements. The information collected in this step should determine the extent to which the existing transportation system meets the needs of bicyclists and pedestrians. The Intermodal Management System should provide information on existing and needed bicycle and pedestrian access to major intermodal transportation terminals such as commuter rail stations. Specifically, this assessment could include:

- * Determination of current levels of use for bicycling and walking transportation trips, and current numbers of injuries and fatalities involving bicyclists and pedestrians.
- * Evaluation of the existing transportation infrastructure (including on- and off-road facilities) to determine current conditions and capacities and to identify gaps or deficiencies in terms of accommodating potential and existing bicycle and pedestrian travel.
- * Determination of the capacities and the type and security level of bicycle parking offered at intermodal connections such as transit facilities and destination points.
- * Identification of desired travel corridors for bicycle and pedestrian trips.
- * Examination of existing land use and zoning, and the patterns of land use in the community.
- * Planning, design standards, and agency policies and the extent to which they affect the accessibility of the transportation system for bicyclists and pedestrians, e.g., do they meet policies and design guidance issued by the American Association of State Highway and Transportation Officials (AASHTO) for bicycle and pedestrian facilities?
- * State and local laws and regulations affecting the vision and goals, e.g., growth management and trip reduction laws, or constitutional restraints on expending highway funds on bicycle and pedestrian facilities.
- * Availability of bike-on-bus or bike-on-rail access; including hours service is available, routes where available, and incentives and barriers to using the service (i.e., training, permit, or additional charges required).

3. Identification of activities required to meet the vision and goals developed above.

These activities or strategies could include:

- * Basis of the need for modifications to the transportation system through surveys, origin destination studies, public input, or other data collection techniques.
- * Needed modifications to the existing transportation system of on- and off-road facilities to meet the vision and goal statements.
- * Development and application of criteria to prioritize and to identify specific facility-related improvements.
- * Identification of changes required to planning, design standards, and agency policies.
- * Specification of education, encouragement, and law enforcement components to support facility development.
- * Identification of nonconstruction activities such as mapping, parking facilities, etc., that are needed to reach the vision and goals developed above.
- * Investigation of the effects on bicyclist and pedestrian safety.
- * The relationship of statewide, MPO, and local plans for bicyclists and pedestrians, i.e., ensuring that such plans are coordinated among the involved jurisdictions.
- * The consideration, as appropriate, of the 23 statewide transportation planning factors and the 15 metropolitan planning process factors in the development of bicycle and pedestrian projects and programs.

- * The inclusion of recreational bicycling and walking facilities such as recreational trails is encouraged, but not required. Nevertheless, the coordination of transportation and recreational bicycle and pedestrian facilities and programs is essential.
- * Provide a mechanism for evaluating the performance of the transportation system containing implemented projects against the performance of the original system.

4. Implementation of the bicycle and pedestrian elements in the statewide and MPO transportation plans and transportation improvement programs:

Inclusion in the Plans: The bicycle and pedestrian elements as a set of policy statements and/or a list of projects will be included in statewide and metropolitan transportation plans and will be updated appropriately as statewide and MPO plans are updated.

Inclusion in the TIPs: The bicycle and pedestrian element of the transportation plan should be implemented by including identified projects in the TIP in accordance with priorities established by MPOs, States, and transit operators, and in accordance with 23 CFR Part 450, sections 216 and 324.

5. Evaluation of progress: Using the performance measures developed previously, regularly determine progress in reaching the identified vision and goals. Appropriate changes to either the vision and goals or to the strategies and proposed projects should be made.

6. Public Involvement: As required by the ISTEA and the FHWA/FTA joint planning regulations published on October 28, 1993, public involvement is essential in the development of transportation plans and programs including the bicycle and pedestrian components. Public involvement should include, to the extent possible, input from individuals who will be affected by the transportation plan and programs. This involvement must meet the requirements for statewide planning spelled out in the regulations in 23 CFR Section 450.212, and those for MPO planning spelled out in 23 CFR Section 450.316(b). Any subsequent policy statements and guidance provided by the FHWA and FTA also needs to be considered.

The regulations require that State departments of transportation and MPOs have public involvement processes which are followed in preparing transportation plans and programs. Bicycle and pedestrian groups should be aware of the opportunity to participate in the development of these public involvement processes and to comment on them before they are adopted. This is in addition to the opportunity to participate according to the public involvement processes in the development of transportation plans and programs. Public involvement will occur at key decision points as described in the public involvement procedures for the planning process.

7. Transportation Conformity Requirements for Air Quality: Per 40 CFR Parts 51 and 93, bicycle and pedestrian facilities are exempt from transportation conformity requirements. Their inclusion as part of a larger project that does not meet the conformity requirements could result in delay while the requirements for the larger project are satisfied. Trails funded through the National Recreational Trails Fund Act (NRTFA) that may have an air quality impact in air quality non-attainment areas must be analyzed to determine if they conform with the State Implementation Plan (SIP). Such projects must be included in the transportation plan and TIP. To be eligible for Federal funding or approval, such projects must come from a conforming plan and TIP and may not cause or contribute to a new or existing violation of the air quality standards. In air quality non-attainment areas only projects from a conforming TIP shall be included on the STIP.

The following kinds of projects are determined to have no significant air quality impact:
Projects funded under the following paragraphs of Section 1302(e)(1) of the ISTEA: (A), (B), and (E); (F) except for facilities that may cause air quality impacts such as parking facilities; and (C), (D), and (G - K) for nonmotorized trails.

The following kinds of projects must be analyzed for air quality impact:

All motorized recreational trail projects in non-attainment areas

Provision of parking facilities.

Appendix B

GUIDELINES FOR THE SITING AND DESIGN OF BICYCLE PARKING

BACKGROUND

An essential component of using a bicycle for transportation is the availability of secure parking. By their nature, bicycles are vulnerable to theft, so special precautions must be taken in the location, design and supervision of bicycle parking. The lack of secure places to park bicycles will reduce bicycle use. Bear in mind, if designated bicycle parking is not safe, cyclists will not use it. What can happen then is that bike owners will utilize non-designated lock-up opportunities (poles, trees, benches, etc.) in a safer location. These locations might not be ideal for nearby businesses for other reasons, so it is best to create bicycle parking that is safe, convenient and inviting for bicyclists to use.

1. LOCATE BICYCLE PARKING CLOSE TO PEDESTRIAN ACTIVITY OR EMPLOYEE SUPERVISION.

The closer the parking site is to pedestrian traffic, the more intimidating the location is to a thief. Therefore, locations as close as possible to pedestrian entrances, kiosks, well-used outdoor seating and other heavy-pedestrian-traffic areas are ideal. Conversely, inconspicuous locations to the side of buildings, away from entrances, in parking garages, and areas where there are few pedestrians are ideal only to the bicycle thief. Such locations as parking garages are acceptable only if the site is close to and within easy view of an attendant that is always present.

2. LOCATE BICYCLE PARKING TO MINIMIZE ACCESS OF AUTOMOBILES. This is often overlooked, but it is common for bicycle thieves to use motor vehicles to conceal stolen bicycles as they leave the location of theft. Even if a location has pedestrian traffic, it can still be vulnerable if it allows easy vehicle access, since an experienced bike thief can work extremely fast. Vulnerable locations are close to roads, alleys and driveways, removed from heavy pedestrian traffic or constant supervision. If a vehicle can pull up next to the bike parking area and block view of it, that is a worst-case scenario. Therefore, the more removed a bicycle parking location is from automobile access, the less opportune it is for theft. Fencing, landscaping and other barriers to separate the parking area from easy access to a motorway might make locations close to streets and driveways safer.

3. PROVIDE SECURE BICYCLE RACKS. Many good bicycle rack designs are available today. One that is very versatile resembles an inverted “U”. Other variations are also available. It is important that the design allow the frame of the bike to be placed close to the rack for secure locking. Older style, wheel-receptacle designs make secure lock-up difficult. Some designs, which should be avoided, can be unusable to many of the new bicycle types used today, such as suspension bikes, small-wheeled bikes, folding bikes, recumbents, etc.

4. INSTALL BICYCLE LOCKERS. For places of employment, transit stations, bus transit centers and other locations needing regular, long-term bicycle parking, lockers are an ideal solution. Designs that conceal what is inside deter theft even in unsupervised locations. These may require a rental-type arrangement for users to access them. Other designs that are appropriate for occasional use, perhaps with coin-operation, can be made more visually permeable to discourage non-intended uses if necessary.

