

4. EDUCATION

EDUCATION GOAL AND OBJECTIVES

Goal:

Educate the Public about Bicycle Safety

Objectives:

- Create, fund and implement bicycle safety curricula for the general public and targeted populations
- Create, fund and implement bicycle safety outreach campaigns for motorists, bicyclists and the general public.

INTRODUCTION

Bicycle-safety education can be divided into two major categories: education that develops safety awareness by providing information to the public through outreach channels such as media campaigns, brochures and websites; and education that teaches specific bicycle handling and traffic negotiation skills through classroom instruction combined with on-bike training.

Both motorists and bicyclists have rights and responsibilities for safe roadway sharing. Motorists endanger bicyclists' safety when they do not view bicyclists as legitimate road users. Furthermore, both motorists and bicyclists endanger themselves and others by violating certain traffic laws. Ambiguities in the California Vehicle Code (CVC) or road users' education, when combined with unaccommodating roadway designs, can exacerbate confusion and conflicts between automobile and bicycle traffic.¹

Although completion of the bicycle route network improvements recommended in Chapter 1 of this Plan and revisions to traffic codes, when necessary, can improve safety, bicycle safety education for motorists and bicyclists that teaches proper roadway behavior is an essential ingredient for improving bicyclists' safety in San Francisco.

¹ For example, CVC references to a bicyclist using a crosswalk when crossing a roadway from a multi-use path are vague. Motorist education is vague for how to share roads with bicyclists. Many motorists do not realize that they shall make right turns from the bicycle lane per CVC Section 21717.

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The following sections present information on bicycle-safety education in San Francisco for the general public and targeted populations. While similar safety themes are relevant for all audiences, each group requires a tailored approach. This chapter recommends actions that will enhance the City's bicycle-safety education program, by drawing upon existing national best practices, improvements to existing bicycle educational materials and adaptation of bicycle safety specifically to San Francisco's unique bicycling environment.

In addition to local efforts, San Francisco should support efforts at the State level for reforming the existing Driver Education Program into a broader transportation education program that includes bicycling as a viable transportation mode.

EDUCATING THE GENERAL PUBLIC

Action 4.1

Provide SFMTA bicycle safety information to diverse age, income and ethnic populations.

Action 4.2

Provide SFMTA bicycle safety information in languages that are widely used within San Francisco such as Chinese and Spanish.

Action 4.3

Partner with appropriate agencies to distribute SFMTA bicycle safety education materials in mass mailings.

The purpose of general bicycle-safety classes or media campaigns is to educate the general public about the rights and responsibilities of bicyclists and motorists and to improve the overall perception of bicycle transportation. This Plan discusses previous and existing bicycle-safety campaigns in San Francisco and makes recommendations for improvements.

The League of American Bicyclists (LAB) curriculum provides a strong foundation for the creation of a bicycle safety program. It should continue to be locally adapted to address San Francisco's unique cycling environment and to targeted populations such as existing urban bicyclists, potential bicyclists, motorists, young adults, children, commuters and City employees.

The following general actions provide a framework for improving the City's bicycle-related mass media educational outreach campaigns. The City has made much progress over the past several years in promoting awareness of bicycle-safety issues and encouraging bicycle use. Events such as Bike to Work Day, and the distribution of materials such as the San Francisco Bicycle Guideⁱ booklet and the implementation of media campaigns, such as the Coexist Campaign, are examples of this progress. SFMTA Bicycle Program staff should

explore additional opportunities for creative and effective dissemination of bicycle-safety education.

The City should continue to expand upon existing educational media campaigns, including: printed brochures, maps, stickers, posters, radio and television ads, events, mailings (such as Public Utilities Commission bills), online information, billboards and ads posted on public transit vehicles, stops and stations. Each of these tactics can encourage bicycling, while building a fundamental awareness of bicycle safety.

BICYCLE SAFETY OUTREACH

Action 4.4

Work with the SFPD to create a bicycle traffic school curriculum as an option in lieu of other pecuniary penalties for traffic law violators.

The SFMTA should work with the SFPD to create a web-based bicycle education traffic school option for traffic violators. Since motorists already have a strong incentive to participate in some type of traffic school to mitigate issues surrounding their driver's license record and insurance costs, they are more likely to sign up. This is an excellent outreach opportunity because it pairs motorists who are already experiencing the consequences of their roadway behavior with exposure to how traffic maneuvers impact bicyclists. The program also would be valuable for bicyclists cited for moving violations. The curriculum should cover relevant traffic laws, share-the-road concepts and traffic maneuvering skills.

COEXIST CAMPAIGN

As a result of the City's compact geography and multimodal transportation system, bicyclists must often share the road with automobiles. In response to growing concerns over how to encourage motorists and bicyclists to operate in a legal and safe manner, the SFMTA and the San Francisco Bicycle Coalition (SFBC) jointly developed the Coexist Campaign. Important concepts used in developing this campaign included:

- Promotion of safe bicycling behavior
- Encouragement of respect among road users
- Creation of a positive image for both bicyclists and motorists

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In addition to placing posters (with the message of encouraging motorists and bicyclists to share roadway space safely) on SFMTA Municipal Railway (Muni) buses and at transit shelters throughout the City, the Coexist Campaign also involved installation of permanent “Bicycles Allowed Full Use of Lane (BAFUL)/Change Lanes To Pass” signs alerting motorists and bicyclists that CVC Section 21202 permits bicycles to use the full laneⁱⁱ. On certain streets, the “door zone” (the area next to parked cars into which a car door can be abruptly opened) extends so far into a lane that bicyclists must position themselves fully in the lane to operate safely.

PRINTED MATERIALS

The San Francisco Bicycle Guide is a 50-page handbook that covers a wide range of topics for beginner, intermediate and advanced bicyclists. The handbook can be downloaded from the Bicycle Program website or obtained for free from the SFMTA. The handbook covers urban riding skills, including more advanced techniques for lane positioning and intersection movements, tips for using transit, riding at night, riding in inclement weather, information on road users’ rights and responsibilities, bicycle fit and equipment, proper helmet use, simple maintenance checks and secure bicycle parking. Bicycle safety and promotion materials could be included with residential parking permits or other mass mailings distributed by the City. An annual mailing of a simple brochure or pamphlet on safe bicycle practices might be included in existing mailings from a variety of agencies and companies.



SFBC volunteers install batteries in bike lights for the fall 2007 Bike Light Campaign



Fall 2007 Coexist campaign advertisement encouraging bicyclists to light their bikes at night was combined with a public distribution and installation of 2,000 bike lights.



Winter 2007/08 Coexist campaign advertisement urging motorists to keep bike lanes clear.

ELECTRONIC MATERIALS

The SFMTA Bicycle Program

website is an affordable, flexible way to reach many San Francisco residents, commuters and tourists from around the world.

The SFMTA Bicycle Program Home Page, <http://www.sfmta.com/bikes>, provides educational materials and informational resources such as San Francisco's official Bike Map, the San Francisco Bicycle Guide, relevant reports and studies and links to other useful websites.

EVENTS

Action 4.5

Increase SFMTA participation in Bike to Work Day activities by providing resources and materials as staff availability and funding allow.

Events such as Bike to Work Day are an effective way to promote bicycle transportation and encourage driver (and media) awareness of bicycle commuting. In previous years the SFMTA, the SFBC and the Metropolitan Transportation Commission (MTC) have taken a very active role in organizing Bike to Work Day. The SFMTA should continue its participation level in this event. Similar events could include bicycle safety presentations made by volunteers to give interested community members basic bicycle safety tips as well as maintenance and riding techniques. These organized events also present opportunities to distribute safety materials such as bicycle lights, helmets, reflective leg bands, stickers, real-view mirror decals and bumper stickers, as funding allows. Refer to Chapter 6 for additional Bike to Work Day discussion.

REGIONAL INFORMATION PROGRAMS

Partnerships with regional agencies such as the Bay Area Bicycle Coalition (BABC) and the MTC are the most efficient and effective way for City staff to undertake large-scale regional education programs. Recent regional information distribution efforts including the 511 telephone hotline, for example, could target bicyclists from other cities that frequent San Francisco. San Francisco routinely attracts many visiting motorists to its employment centers, restaurants and cultural offerings. It is important, therefore, for the City to collaborate regionally in order to educate Bay Area motorists to increase the chance that commuters and visitors will properly share San Francisco streets with bicyclists.



San Francisco Mayor Gavin Newsom with SFBC staff, SFMTA staff and others during the 2004 Bike to Work Day.

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The SFMTA Bicycle Program should continue to be actively involved in the Bay Area regional LAB education program. Under contract with the SFMTA, the SFBC has been teaching monthly four-hour indoor classes and six-hour LAB Road Iⁱⁱⁱ classes. The City's official bicycle-safety classes are consistent with LAB's BikeEd^{iv} concepts and national best practices adapted to the particular challenges, such as steep hills, found in San Francisco. The SFMTA Bicycle Program should continue to take the primary role in bicycle education for the City and County of San Francisco and develop regional opportunities for collaboration. Bicycle safety education classes throughout the Bay Area are listed on the 511.org website.^v

BICYCLE FACILITIES EDUCATION

Action 4.6

Implement new outreach campaigns for improved bicycle facilities.

Electronic and printed educational materials can educate people about the City's bicycle route network, secure bicycle parking, bicycle shops and rental locations, traffic laws and safe bicycling techniques. The City should explore innovative techniques, such as using private business funds to distribute bicycle-safety materials in exchange for advertising and celebrity involvement in educational campaigns to generate wider appeal. In addition to general bicycle transportation awareness, outreach campaigns also should educate the public about the proper meaning and use of specific bicycle-facilities.

Newly introduced traffic control devices, such as the shared roadway bicycle markings (sharrows) require specific educational outreach to the public. Though the SFMTA conducted a public outreach campaign on this new type of traffic control device in 2004, a sustained educational campaign is still needed to communicate the intended behavior signaled by sharrows. A study on the effectiveness of sharrows titled "San Francisco's Shared Lane Pavement Markings: Improving Bicycle Safety"^{vi} explains the need for such an educational outreach campaign in greater detail. In summary, the study found that although sharrows had positive effects on motorists' and bicyclists' behavior and lane placement, the intended message of the markings was poorly understood by a significant percentage of survey respondents. Recommended themes for campaigns and public service announcements include:

- Encouraging motorists to respect bicyclists' legal right to use the road
- Encouraging drivers to open car doors with caution to avoid "dooring" collisions (collisions that result when an opened door of a parked car impacts a bicyclist)
- Encouraging safe cycling and driving practices including discouraging double-parking in bicycle lanes
- Informing bicyclists' that they are required to follow the rules of the road

TARGETED BICYCLE EDUCATION

CITY EMPLOYEES

Action 4.7

Develop SFMTA bicycle safety classes for City employees.

Since City employees routinely use vehicles in San Francisco, they should be formally trained in how to safely share the streets with bicycles. SFMTA Bicycle Program staff should develop educational materials to teach employees of all City departments safe bicycling techniques. There were almost 30,000 City employees in June 2008 (prior to recent layoffs)^{vii}. A concerted bicycle education effort for all City departments could encourage an increase in the bicycle commute mode share for San Francisco, encourage use of bicycles for City business, and educate City employees about the proper sharing of the road with different modes of travel.

TRANSIT OPERATORS

Action 4.8

Develop an SFMTA bicycle safety workshop for transit vehicle operators and other large fleet vehicle operators.

Because many Muni vehicles share the roadway with bicyclists, SFMTA Bicycle Program staff should work with Muni to develop a comprehensive training program for transit vehicle operators that promotes bicycle-safety awareness and effective road sharing techniques. Such a program also should be targeted toward shuttle and taxi drivers. Additionally, effective road-sharing techniques should be included in all bicycle-safety curricula for bicyclists.

BICYCLE EDUCATION FOR CHILDREN, YOUTH, AND ADULTS

Action 4.9

Develop bicycle education curricula for use in the San Francisco Unified School District (SFUSD), San Francisco public colleges and sharing with other schools.

Action 4.10

Work with the SFUSD to promote a transportation curriculum in lieu of driver's education at City high schools that provides instruction on all modes of transportation.

CHILDREN

Bicycling and walking are the only independent transportation modes available to children. Bicycling allows children to explore their neighborhood, get exercise and gain valuable skills that are useful throughout their lives. Before the age of nine, most children do not have the maturity and cognitive skills required to ride a

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bicycle in urban traffic situations. These skills include the development of wider peripheral vision and the ability to judge the spatial movement of objects, especially the speed and direction of automobiles. Parents of children under nine, therefore, should supervise their children's bicycle use by first learning the essential bicycle safety concepts themselves such as proper fit and type of bicycle equipment and basic mechanical skills needed to start, balance, steer and stop a bicycle.



San Francisco bicycle education in progress.

For elementary school children over eight years old, bicycle-safety education should include both students and their parents. Although educational materials, along with donated helmets and bicycle accessories should be distributed to school-aged children, parents should be included in young children's education in order to reinforce messages and lessons. Studies have shown that "videos, flyers, posters, coloring books and assemblies are effective at introducing traffic safety rules, but unfortunately they have little bearing on child behavior. Safe bicycling requires skills that can best be learned through repetitive practice..."^{viii}

Some of the child-targeted bicycle education events conducted in the City have included: school and community-based bicycle safety skills training "roadeos," the annual Safe Awareness for Everyone (SAFE) Bicycle Safety Fair, Family Bike Days, Freedom from Training Wheels classes, Walk n' Wheels Bike Fair and various grassroots earn-a-bike programs. The City also maintains a Safe Moves Trailer that contains mock traffic signals, plywood automobile and house cut-outs, and other props that enable SFMTA staff and community partners to build simulated roadway conditions to teach bicycle safety at neighborhood schools and community events throughout San Francisco. City staff should evaluate these and other bicycle education programs for children and prioritize funding for those that are deemed the most effective in teaching bicycle handling skills.

YOUTH

Qualified City staff should work with the SFUSD to develop bicycle safety curricula for all SFUSD classrooms that includes on-bike safety skills training. The LAB, the Federal Highway Administration's Bicycle Safety Education Resource Center and best practices from other cities should all be considered when developing these classes.

In addition to technical skill and traffic laws, bicycle safety education for youth should promote bicycling as an enjoyable transportation method with positive

lifestyle, health and environmental benefits. Programs and practices that will make bicycling to school easier and safer, such as the Safe Routes to Schools Program, should continue to be promoted.

The recommended curricula to teach youth bicycle safety should include:

- Recognition and avoidance of the most common bicycle collisions
- Motorists' and bicyclists' rights, responsibilities and safe roadway sharing behaviors
- Proper lane placement for typical bicycle maneuvers
- Bicycle handling skills
- Other urban traffic riding skills
- Proper bicycle helmet adjustment and fit²
- Bicycle purchase, maintenance and repair
- Physical, social and economic consequences of bicycle collisions
- Environmental, economic and health benefits of bicycling
- Proper bicycle locking techniques

ADULTS

Many teenage and adult bicyclists have not had formal bicycle education outside of learning the basic bio-mechanics required to ride a bicycle. Additionally, misconceptions, myths and outdated advice can further erode adult bicyclists' safety (for instance, some believe that one should ride a bicycle on the left side of the street, facing traffic, rather than with the flow of traffic).

San Francisco has the highest percentage of bicycle commuters of any U.S. city with a population of over 500,000 people^{ix}. These riders are often familiar with the basics of safe cycling, but they have limited formal training in the proper techniques of bicycling in urban traffic. The compact nature of the City's streets and San Francisco's high volume of traffic underscore the importance of teaching adults effective urban cycling skills. The SFMTA, therefore, should create a strategic plan for teaching bicycle safety to the City's diverse adult population.

² Although helmets are not a legal requirement in California for adult bicyclists, they have been shown to reduce or prevent head injuries in bicycle collisions. Many adults, however, do not wear helmets while riding a bicycle and those that do often wear them incorrectly, greatly diminishing their potential to prevent injury in the event of a collision.

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The SFMTA should also create a plan for offering the City's official bicycle education curriculum at local college and university campuses.

Possible topics to be addressed in adult bicycling education classes include:

- Traffic maneuvers: lane positioning and safe turns
- Riding predictably while scanning for conflicts and traffic
- Visibility techniques: see and be seen
- Relevant traffic laws
- Advanced bicycle commuting skills: intermodal transit; and load distribution to maximize bicycle transportation utility
- "Door zone" awareness
- Crash avoidance maneuvers
- Helmet fitting demonstrations and tips
- Securely locking and parking a bicycle
- Bicycle maintenance and repair
- Proper bicycle sizing, type, components and accessories

PROGRAM EVALUATION

Action 4.11

Periodically evaluate and adjust, where appropriate, the SFMTA's bicycle safety program.

Periodic program evaluation of outreach, advertising and class offerings is needed to improve quality and help the bicycle safety program achieve its intended effect. This should be an interactive process that monitors the efficacy of classes, workshops and educational materials and allows changes to program elements where appropriate. Shifts in popular culture or demographics can have an impact on the program. Program evaluations can reveal opportunities and challenges for specific safety messages as well as identify new populations for targeted outreach. At each periodic review, the SFMTA should try to identify subpopulations that have not been historically targeted, consider them for specific campaigns and try to determine the effectiveness of such an approach.

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- i The San Francisco Bicycle Guide can be viewed online at <http://www.sfmta.com/bikes>.
 - ii A Report on BAUFL signs can be viewed online at http://www.sfmta.com/cms/uploadedfiles/dpt/bike/Article_BAUFL_Sign.pdf.
 - iii <http://www.bikeleague.org/programs/education/courses.php#road1>
 - iv <http://www.bikeleague.org/programs/education/>
 - v <http://bicycling.511.org>.
 - vi “San Francisco’s Shared Lane Pavement Markings: Improving Bicycle Safety” can be viewed online at http://www.sfmta.com/cms/uploadedfiles/dpt/bike/Bike_Plan/Shared%20Lane%20Marking%20Full%20Report-052404.pdf.
 - vii Based on annual data from the Controller’s Office Report, Comprehensive Annual Financial Report, June 2008.
 - viii DiBrito, Roger and Sharon et al. Left, Right & Left Again, Volume I. 1994. Ride Safe, Inc., Warrenville, IL.
 - ix U.S. Census Bureau 2000 Census