

# THE FORT COLLINS BICYCLE PROGRAM PLAN

*FINAL Draft*

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# 1. INTRODUCTION

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Here in Fort Collins we have all the ingredients necessary to become one of America's premier, "bicycle-friendly" communities. People here are concerned about issues such as air quality, traffic congestion and quality of life. There's a positive attitude in the community about exploring innovative approaches to building a city that will accommodate new growth in a positive, creative way while protecting basic community values.

Elected and appointed decision-makers share these values, understanding their importance to the future of Fort Collins. There is a strong bicycle/pedestrian program already in place - one that is known for its energy and innovative approaches to "getting things done." There is growing appreciation of and support for alternative transportation throughout City government.

Many people already enjoy bicycling in Fort Collins - it's seen as a healthy, responsible way to travel. By using the bike lanes, trails and secondary streets that now exist, bicyclists can get just about anywhere in town quickly and safely. There aren't many steep hills and the generally mild climate encourages year-round riding. Everywhere you look are spectacular views of mountains, rivers and natural areas. Almost any route is a "scenic route" in Fort Collins.

The overall goal of this Plan is to underscore the idea of Fort Collins as the "Choice City" - to make recommendations that can help create a physical environment free of barriers for those who *choose* to bicycle - a community where bicyclists, motorists and pedestrians are educated about their respective roles in traffic, where traffic laws are respected by all and where people are actively encouraged to bike to work, school, shopping or other destinations. In short, the goal is to help build a city where bicycling for transportation is an easy *choice* to make.

## A. The Planning Process

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Planning work was carried out at 19 meetings and work sessions, over a ten-month period by the Fort Collins Bikeway Focus Group, assisted by City staff and consultants. The Focus Group included representatives of CSU staff, CSU students, Chamber of Commerce, Transportation Board, Choice City Cycling Coalition, high school students, senior citizens, bicyclists-at-large, City departments, including Police, Fire, Engineering, Planning, Transportation Services, Parks and Recreation and other members.

The Focus Group meetings approximately parallel steps in the planning process. The process was designed to lead, step-by-step to a logical set of recommendations that could be directly related to the project's objectives and to input from the public, Focus Group and planning analysis. Steps in the planning process included:

- \*Identification of Issues
- \*Definition of Goals and Objectives
- \*Community Bicycle Transportation Survey
- \*Study of Existing Conditions
- \*Definition and Evaluation of Alternatives
- \*The Vision Plan
- \*Setting Project Priorities
- \*Define Encouragement Program Recommendations
- \*Define Education Program Recommendations
- \*Define Recommendations for Enforcement
- \*Discuss Overall Implementation Strategy
- \*Recommended Action Program

These steps will be described further in report sections on the individual Plan elements.

## **B. Organization of the Plan**

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The *Fort Collins Bicycle Transportation Plan* has four major sections: *Introduction*, *Vision Plan*; discussion of the individual *Plan Elements* (facilities, encouragement, education and enforcement); and the *Implementation Program*. The *Introduction* includes a summary of Bicycle Transportation Survey results, planning issues, goals and objectives. The *Vision Plan* shows what, someday, the Plan is meant to accomplish. The *Plan Elements* show what actions should be taken in specific program areas to achieve the Vision. The *Implementation Program* shows the steps and commitments necessary to turn the Plan's recommendations into reality.

## **C. Issues, Goals and Objectives--Why Are We Doing This Plan?**

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Identification of *issues, goals and objectives* is a basic "first step" toward developing a plan. Although planning textbooks give them many official and technical definitions, these planner-words actually have simple, common-sense meanings.

### **1. What are "Issues"?**

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*Issues* describe the types of problems and opportunities to be studied as part of the planning process - the reasons for planning. In a basic sense, when *issues* arise, people take notice. They start to think about doing something (like planning) to resolve the *issue*. If people have been made aware of an increasing number of serious bicycle crashes, for example, the crashes become an *issue*, and people look for ways to reduce them.

Analysis of the crashes may point to other types of issues. Perhaps bad pavement or maintenance conditions contributed to the crash ..... perhaps the bicyclist was riding against the flow of traffic or the motorist made some bad assumptions about bicyclist speed or behavior. Issues here can relate to maintenance practices, bicyclist education and motorist education, among others.

Identifying issues gives Focus Group members and staff a kind of shopping list of "things to resolve" during the planning process. Each issue is analyzed as part of the process to determine the actions needed to solve the problem or take advantage of the opportunity.

*Issues*, then, are the most basic building blocks of the planning process. They describe the subjects the plan must address and start the question-asking process of analysis that leads to goals, objectives and recommendations.

At the outset of the planning process, the Focus Group held a work session to define issues. Fort Collins is enjoying a period of energetic growth and saw this growth as an opportunity to lay the groundwork for future, improved bicycle transportation.

The issues were grouped into five general categories:

*Planning Issues*

*Education Issues*

*Design Issues*

*Encouragement Issues*

*Enforcement and Safety issues*

## a. Issue Categories

The list of general issue categories on the following pages was defined by the Focus Group. It is the basis for issue statements that accompany each of the four Plan Elements.

### \* Planning Issues

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- ***Facilities are, too often, discontinuous.***

When a facility just ends, a hazardous situation can be created. Frequently a facility ends where it has been determined that there isn't room on the street for a lane, or where - for some other reason - bicyclists should not be encouraged to ride. When bicyclists are "abandoned" by their facilities with little warning (or no warning at all) at an unsafe area, their uncertainty, surprise and hesitation may only exacerbate the situation. Ample warning should be given if a lane, path or other facility is about to end and information about suggested alternate routes provided

- ***Improved bicycle access to major activity centers should be provided.***

Although the present bikeway and trail systems are a good start, many barriers stand in the way of good access throughout Fort Collins. People who are not skilled at riding in heavy traffic need good routes, too. Improved alternatives to use of College Avenue, access to the downtown, to CSU, to shopping malls, schools AND OTHER ACTIVITY CENTERS is needed.

- ***Land use and policy documents should be reviewed to assess impacts on bicycle transportation.***

The need for a bicycle parking ordinance, for looking at the Land Development Guidance System, for review and supplementing street design standards and others were mentioned. Included should be consideration of bicycle-friendly traffic calming measures, a look at land use planning to facilitate bicycle transportation, access to employment centers and similar considerations. Again, Fort Collins has a good start here, but a general review and updating is needed.

- ***There is little provision for multi-modal transportation.***

What do you do if you bike to work and it rains or snows? You can't take a bike on a bus in the study area? We don't know of employers who provide a ride home for personal emergencies or bad weather to bike commuters? Do park n' ride lots have bike lockers? We need to start exploring the possibilities here.

- ***Bicycles are not routinely considered in planning and design of ALL new developments and some other street construction projects.***

Every road should have provisions for bicycle travel; every new development should consider bicycle and pedestrian circulation and design accordingly. Where development occurs next to an existing neighborhood, steps should be taken to ensure continuity of bicycle facilities. People should be able to travel on foot or by bicycle to schools, shopping, parks and local offices without being forced onto major streets.

- ***We should take advantage of all special opportunities for facilities on viable off-road corridors.***

Trails can often serve a valuable purpose as transportation corridors. The Spring Creek Trail is an excellent example of a trail that enjoys considerable commuter use. The

Poudre Trail and future Fossil Creek Trail will provide access for transportation as well as for recreational activities. In addition to these, we should consider potential use of other trail corridors (e.g., the Foothills Trail), irrigation ditches, railroad rights-of-way, utility corridors, parks and open space areas.

- ***There is no mechanism currently in place for adding an evaluation loop to the implementation process.***

Aside from the Bike Ranger program, little is formally done to evaluate bicycle facilities and programs on an on-going basis.

## ***\*Engineering Issues***

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- ***City design standards should be reviewed and updated as necessary.***

City standards are generally quite good. In some cases, however, greater specificity may be needed, or standards may need revision in response to improvement needs observed on existing facilities.

- ***Overpasses and underpasses do not always meet accepted standards.***

These are used by bicyclists and pedestrians. Sight distances, lighting, drainage, approach grades, widths, radii on access ramps and other design elements often do not meet current design standards. Consideration should be given to two-directional use by the complete range of possible users, including bicyclists traveling at commuter speeds

- ***Continuity and consistency of design can be improved.***

In some locations, facilities vary considerably in width and other design elements. There are gaps and other discontinuities in the bikeway and trail system. AT SOME PLACES, THE ENDS OF TRAILS AND BIKEWAYS LEAVE BICYCLISTS WITH UNCLEAR DIRECTIONS FOR SAFE CONTINUATION OF THEIR TRIPS OR TACITLY ENCOURAGE UNSAFE RIDING (E.G., RIDING AGAINST TRAFFIC). Continuity is of primary importance and should be a major concern of the planning effort.

- ***Signage still can be improved.***

The City has recently made significant upgrades to signage throughout Fort Collins, adopting a distinctive new sign design and sign location standards. Signs for off-street, multi-user trails that may serve a bicycle transportation purpose should be similarly consistent. Consistent signage to warn of lane or path termination, hazards, information may still be needed in some locations.

- ***Bicyclists encounter many barriers and bottlenecks that effect transportation trips.***

Throughout Fort Collins are found extremely rough railroad crossings, dead-end routes, one-way streets, narrow streets or bike lanes and other conditions that can affect bicycling. Especially if a person is trying to make good time while bicycling for transportation, these conditions may not be simple annoyances - they may be substantial disincentives to riding.

- ***Downtown Fort Collins presents many conflicts and difficult access for bicyclists.***

People should be encouraged to leave their vehicles and walk to get around central city areas. Safe, SECURE and convenient parking for all vehicles - bicycles and motor vehicles - should be provided.

- ***The closer you get to activity centers (Malls, CSU, downtown), the greater the congestion, the more hazardous conditions become for bicycling and the more difficult it is to do anything about it since everything is built-up.***

Population centers represent a concentration of the shops, restaurants, offices, government facilities, cultural attractions and residences that are high-priority destinations for cyclists just as they are for motorists. Facilitating bicycle access to and travel through these areas must be considered.

- ***"Unsafe" segments of roads should be identified and addressed.***

Harmony Road and Lemay were used as examples. Some segments of these streets may be just fine for cycling, while others are not.

- ***MAINTENANCE!***

Maintenance of facilities and roads used by bicyclists should be improved. This includes not only sweeping away dirt, gravel and debris but also snow, ice and sand removal, GROOVES CAUSED BY ICE REMOVAL, repairing pavement, providing safer railroad crossings, trimming overhanging vegetation and other activities. If facilities aren't well-maintained, people won't use them.

- ***Who is the "customer" for the bicycle transportation plan?***

Bicyclists come in all sizes, ages, skill levels and degrees of confidence. There is no standard test that a person must pass to ride a bicycle. Some people can ride safely in almost any traffic situation, while others should not be allowed in the street. Decisions should be made about the best ways to plan for the widely varying needs of bicyclists.

- ***There are possible conflicts among different types of cyclists and between, cyclists.*** Especially on multi-use facilities, there may be conflict among novice cyclists, kids, family groups, rollerbladers, dog-walkers, commuters, joggers and others. Some people want to laze along looking at the scenery, while others are headed somewhere in a hurry. It is important to recognize that not everyone on a multi-use trail has the same objectives in mind. A good rule of thumb is to provide for the type of use with the most-restrictive design requirements.

- ***Trails should be located and designed for minimum environmental impact.***

Trails through environmentally sensitive areas can potentially impact wildlife and plant communities. The paving, grading and building of trail-related improvements must be carefully considered. It may be tempting to pave an extra-wide trail to accommodate all the users ... or to pave more than one, but finding the balance between resolving multi-user conflicts, providing access to scenic areas and yet not "paving over the wilderness" are a challenge.

- ***Quality of recreational/transportation experience***

People ride bicycles to get places, to get exercise and for other practical reasons ... but they also like to bicycle because IT'S FUN! "Fun" is not being pressed up against bumper-to-bumper truck traffic spewing fumes and going 50 miles per hour. "Fun" is not risking a serious fall every time you negotiate the railroad tracks on Mason or Highway 14. "Fun" IS a facility designed and maintained to a high standard - facilities suited to YOUR style of riding - great views, the sun shining and the wind at your back. This Plan will do its best to address the "Fun" Factor in its recommendations (we don't guarantee the part about the wind, however).

- ***Work zones are often sited without due consideration for bicycles.***

If a street is under construction, where do the "lane narrows" signs get located? At the right-hand side of the roadway! Where do the bicyclists have to ride? Yup! The righthand side. If the pavement is tom up to the point where you practically need a fourwheel drive vehicle to get through it, is there an alternative route designated for bicycles? Rarely, if ever. The City's policy on work zones should be reviewed for impacts on bicycling.

## Education Issues

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- ***Use of bicycle safety equipment should be encouraged.***

Many accidents in Fort Collins involve bicyclists riding at night without the required lights and reflectors. These are usually preventable. The motorists just didn't see the bicyclists until it was too late to avoid a crash. Similarly, people should be strongly encouraged to wear bicycle helmets whenever they ride. How often have you seen a family out on their bikes ... and the kids all have helmets, but the parents don't? What kind of message does this send to the children?

- ***Motorist attitude!***

There is an attitude that "bikes ride wherever, whenever and however they like ..... so why spend money giving them special facilities?"The "put 'em on the sidewalks where they belong" attitude is often expressed. There are many misconceptions, myths, stereotypes, HOSTILITIES and prejudices to deal with. It was noted that in California almost 25% of the questions on the drivers license exams are related to bicycles. An education program directed toward motorists may be in order.

- ***Education programs are minimal and oriented only to children.***

Bicycle safety education in Fort Collins is extremely limited. Occasional bicycle rodeos, Bike Week events and classroom visits from "Officer Friendly" are about the extent of it. There is no regular curriculum being taught.

There are no adult bicyclist education programs available TO THE PUBLIC IN FORT COLLINS ON A REGULAR BASIS. At CSU, the BEEP program for people who receive bicycle citations has a strong educational component ... but you have to get cited for violating a bicycle law to attend! A look at the bicycle accidents shows a very high proportion of adult bicyclists to be involved. The *Community Bicycle Transportation Survey* conducted as part of the Plan showed a very strong perception among motorists that bicyclists do not obey traffic laws as do other vehicles. Something should be done!

- ***We need a more pro-active bicycle safety program that includes skill development.*** Studies have shown that bicyclists know the Rules of the Road, but many lack the skills and confidence that could allow them to ride safely throughout the city. These skills can be taught. You don't have to be crazy or superhuman to commute on a bicycle. There are good curricula available, such as *Effective Cycling* that teach riding skills along with basic bike maintenance and repairs.

## Enforcement and Safety Issues

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- ***What level of bicycle law enforcement is feasible?***

There is an attitude around that, "I can ride any way I want, because nobody will stop me." Enforcement is a powerful tool for helping develop a better relationship between bicyclists and other road users. If bicycles want all the rights of "vehicles," they should accept the responsibilities as well. Enforcement makes the difference. The example was given in the Focus Group work session on enforcement issues of the motorist who drives up to the red light late at night. There's NOBODY watching. If it weren't for the threat of getting a citation, how many people would still stop for the light?

- **WHAT PRIORITY SHOULD BICYCLE LAW ENFORCEMENT BE GIVEN?**

THE FORT COLLINS POLICE DEPARTMENT DOES NOT PLACE HIGH PRIORITY ON ENFORCEMENT OF BICYCLE-RELATED LAWS OR ON EDUCATION OF POLICE OFFICERS ABOUT LEGAL RIGHTS AND RESPONSIBILITIES OF BICYCLISTS. GIVEN THE IMPORTANT ROLE ENFORCEMENT CAN PLAY IN SAVING LIVES AND DEVELOPING RESPONSIBLE RIDERS/DRIVERS (NOW, BICYCLES – AND AFTER AGE 16, CARS) THE FOCUS GROUP FELT THAT BICYCLE ENFORCEMENT SHOULD BE GIVEN MUCH GREATER PRIORITY. POLICE DEPARTMENTS NATIONWIDE HAVE REPORTED DRAMATIC DECREASES IN BICYCLIST DEATHS AND INJURIES WITH IMPLEMENTATION OF EFFECTIVE ENFORCEMENT PROGRAMS.

- ***Bicycle theft - can anything be done?***

Bicycle theft is a major problem and recovery rates for stolen bicycles are very low. Would a registration program help and be cost-effective? Are there ways to improve bicycle parking so security is increased?

- ***Can bicycle crashes be prevented? Who is usually at fault?***

Understanding and reducing bicycle crashes is a major challenge for this plan. The City annually compiles an excellent summary of crashes involving bicycles that occur each year. These, however, represent (it is estimated) only about 10 per cent of all crashes. Most are not reported to the police. What can be done to change the factors that contribute to the crashes? Better facilities? Better bike riders? Motorists who make a point of looking for bicyclists when they turn?

## Encouragement Issues

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- ***Employer education***

Many employers are not aware of the substantial benefits to be gained through a modest investment in facilities and programs that encourage bicycle use. Employers need to recognize the value of commuter cyclists!!

- ***Lack of support facilities discourages some commuters.***

Provision of showers, hair driers, lockers, good bicycle parking and similar "amenities" can play a major role in encouraging transportation cycling.

- ***Bicycling can play a role In tourism and economic development***

Bicycle tourists and local bicyclists can have substantial contribution to Fort Collins' economic well-being. The plan should consider ways to encourage ALL types of bicycling.

- ***If we build it ... will they come????***

This is the \$100 question! The answer, if experience in other communities holds true, is a resounding - YES! If bicycling becomes part of the community culture ... if the City shows that it is serious about bicycling for transportation ... if good facilities and programs are implemented ... then people will ride bikes.

- ***People may not ride bicycles because they don't know which streets to use.***

Residents and visitors of all skill levels should be able to find good routes to their destinations in Fort Collins. This can be done through signage, designated routes, good maps, a route information telephone hotline, bicyclist information centers and other means. The City's "Cross-Country Cyclist" maps at convenience markets and boxes along bike routes are a good start, but more needs to be done.

Many people don't know where the bike facilities are.... or they may see bike lanes that go along for a short distance and then disappear. A means should be found to provide information about location of good routes that are continuous. These routes may make use of bike lanes or the trail system but should show how a person can bridge the gaps to get to his or her destination.

- ***There are no good regional bicycling maps.***

The City publishes good maps of designated bicycle facilities within Fort Collins' city limits. In order to plot a route that goes outside these limits, say to Loveland, LaPorte or the National Forest, involves piecing together information from two to four maps, filling in the gaps and doing the best you can. This is seen as a disincentive to bicycle travel.

## **2. What is a GOAL?**

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A "goal" describes the destination - where we want to be at the end of the planning journey. Goals are usually broad, optimistic and expressive of a long-term vision. The *Vision Plan* embodies a statement of goals adopted for bicycle transportation in Fort Collins. In summary, however, the Focus Group adopted the following, as the overall goals of the Plan. These statements were used as a basis for developing the objectives that accompany each of the four Plan Elements.

### ***OVERALL GOALS FOR PLANNING***

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#### ***The Plan should:***

- Focus on transportation bicycling.
- Improve safety

- \*Recognize the varying needs of different types of bicyclists.
  - \*Respond to community concerns and ideas about bicycling.
  - \*Improve continuity; eliminates gaps in the bikeway system.
  - \*Promote tourism and economic development.
  - \*Link to regional bikeways.
  - \*Eliminate barriers to bicycling.
  - \*Improve maintenance, parking, standards and policy.
  - \*Build on existing, planned and committed commuter and recreational facilities.
  - \*Provide access to major activity centers and destinations.
  - \*Facilitate efficient, direct bicycle travel.
  - \*Provide an enjoyable, scenic cycling experience.
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### **3. What is an OBJECTIVE?**

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"Objectives" describe mileposts along the way to achieving the goals. They are specific, measurable steps to be achieved if the overall goals are to be met. Objectives and evaluation criteria related to each are defined for the four Plan Elements. As planning recommendations were developed, the Focus Group could refer back to the objectives and criteria to make sure each was addressed.

**Objectives are listed in sections of this report for each plan element (*Engineering, Education, Enforcement, Encouragement*).**

## D. The Bicycle Transportation Survey

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Early in the planning process, approximately 55,000 questionnaires were distributed to Fort Collins residents through City utility bill mailings and through the schools. A response of 5095 surveys ( 10%) was received, a strong return. The following summary of key survey responses provides an overview of significant findings. Additional information can be found in *Appendix A. Bicycle Survey Summary* and in the *Fort Collins Bicycle Transportation Survey* report, provided as supplements to this plan.

### 1. Summary of Key Survey Findings

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\* **Survey results represent a balance of bicyclists (58%) and non-bicyclists (42%, said they did not ride a bicycle at all during the past year).**

\* **Almost two-thirds (63.8%) of the bicyclists responding ride at least once a week, with 22.1 riding "daily."**

\* **"Weather" and "Time" were the most frequently given reasons for not bicycling (more often) for transportation, followed by "need car for job" and "too dangerous."**

\* **Respondents represented adult Fort Collins residents - 88% were ages 26 and older.**

\* **Questions asked of motorists provided the following responses:**

- Most motorists think that sharing the road with bicyclists is OK if there are bike lanes or if streets are wide enough so they can pass a bike without changing lanes (88%).
- When asked "if here is one message you could send to the bicyclists out there, what would it be?" the response was loud and clear: *Obey the laws - if you want to be treated as a vehicle, you need to act like one! Stop for stop signs and red lights. Don't weave all over the roadway. Get a light for night riding. Signal turns.* Almost half of all the motorists gave similar responses - five times the number of mentions given for the next-highest message.

\* **Questions asked of bicyclists produced the following responses:**

- People who ride bicycles for transportation generally prefer on-street bicycle lanes.
- Although a sizeable percentage of bicyclists (34.7%) said that they usually bicycle for transportation purposes on all streets or "in bike lanes on any street," an even larger number (42.9%) usually ride on trails, quiet residential streets, low-traffic streets with bike lanes or sidewalks.

- The streets mentioned as being most often avoided by bicyclists are:  
College Avenue  
Shields  
Prospect  
Reasons given were similar. too much traffic, no/inadequate bike lanes, too dangerous and traffic moving too fast. In addition, bad pavement and maintenance were mentioned as factors on Shields and Prospect. The prohibition on riding was mentioned on College.
- The people who ride most regularly (3-5 times per week) are those who ride to work.
- One-third of the bicyclists responded that they ride "frequently" or "occasionally" at night. Only 39% of the people who said they ride at night have bike headlights and even fewer have taillights (although about half said they have rear reflectors).
- The two factors most important to bicyclists wishing to park their bikes are security and proximity to destinations. A third important factor is availability of bike racks that are designed to allow use of high-security locks and locking methods.
- Only half of the bicyclists always wear a helmet. About 25% never wear one and 21 wear one "sometimes."
- Of bicyclists who reported that they had been involved in a crash with an injury beyond "road rash," over half said that they did not report the crash to the police.
- Although over 85% of bicyclist respondents always ride with the flow of traffic when riding in the street, only 24% do so when riding on sidewalks. Respondents generally said that they ride either way - it doesn't matter on sidewalks.
- Over half (56%) of the bicyclists responding to the survey admitted that when they come to stop signs or traffic signals, they just slow down, check for traffic and proceed when safe to do so. Only 37% said they always come to a complete stop.

## 2. Use of Survey Information

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Information from the *Bicycle Transportation Survey* is reviewed in each Plan Element in terms of its implications for Plan recommendations. The Education and Enforcement Elements, for example, can consider the responses to Question 19C and see that most bicyclists do not obey the law and stop at stop signs and traffic signals. Education programs and public information hand-outs can target this behavior, which is also a significant factor in bicycle accidents. Enforcement agencies can focus on stop sign and signal violations as part of a selective enforcement campaign.

## E. Bicycle Crash Analysis

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POLICE REPORTS OF ACCIDENTS INVOLVING BICYCLES from 1989 through 1993 were compiled to determine locations with the highest numbers of reported bicycle crashes AND CRASH CHARACTERISTICS. Crashes studied were primarily bicycle/motor vehicle crashes in public rights-of-way. Locations with high numbers of crashes are shown in Figure 1.

ADDITIONAL INFORMATION CAN BE FOUND IN APPENDIX B.

### 1. Key Findings

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\* Street improvement projects on Shields (1994) have added bike lanes and intersection improvements at locations that ranked at the top in terms of bike crash rates. These include: Shields/Lake (10 crashes); Shields/Prospect (10 crashes) and others (Shields/Stuart, Shields/Plum).

\* Many high-crash locations are in the vicinity of Colorado State University (see Figure 1).

\* Factors contributing to the *most-frequently occurring* types of bike crashes included:

- *Bicyclist turning movements* (120 crashes)
- *Bicyclist riding on sidewalk* (91 crashes)
- *Bicyclist riding against the flow of traffic* (54 crashes)
- *Bicyclist falls* (45 crashes)

\* Other factors identified included:

- *Bicyclist fails to stop at stop sign or signal* (25 crashes)
- *Bicyclist swerves* (19 crashes)
- *Bicyclist hits stopped or parked vehicle* (19 crashes)
- *Bicyclist riding without lights and/or reflectors on bike* (16 crashes)

\* The most common *factors related to motorist behavior* were:

- MOTORIST overtaking BICYCLIST FROM BEHIND (26 crashes)
- *Motorist did not see bicyclist* (21 crashes)

**See Appendix B for additional information.**

## II. THE VISION PLAN

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The Vision Plan for Bicycle Transportation includes a "Vision Statement" approved by the Focus Group, and a map that shows the long-range plan for bicycle transportation facilities.

### Vision for Bicycling in Fort Collins

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#### ✓ ***The Fort Collins Bikeway Plan is meant for all bicyclists.***

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The bicycle is a viable transportation choice for Fort Collins residents and visitors. The Vision addresses the needs of all types of bicyclists.

Whether novice riders or experts, facilities should be available that are well suited to their needs. Each has its own preferences and facility needs:

- Some people want nothing more than a smooth, clean shoulder or bicycle lane on a direct route so they can travel as directly and efficiently as possible.
- Others prefer quiet, low-traffic streets so they can bike to their destinations without worrying about sharing the road with high-speed traffic. They want to smell the roses, not exhaust fumes. Taking a slightly longer route is no problem.
- Off-road trails appeal to many of these bicyclists and others as well. Here, they can look at scenery and not at traffic. They can ride to destinations along the trails and enjoy Fort Collins' natural beauty in the process.

#### ✓ ***The Vision Plan for Fort Collins bikeways*** ***-- Three distinct, interlocking bikeway systems in one:***

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- Major street bikeways.

*Direct routes for bicycle transportation, these are generally bike lanes on arterial streets.*

- On-street lanes
- May include short off-street sections to bypass major bottlenecks.
- Generally at one-mile intervals.
- Signalized intersections or through/priority travel (side streets stop)
- High-visibility signing and lane marking.
- Extra-high maintenance of bicycle travel areas.

- Low-traffic street bikeways.

*Bicycle lanes and routes on low-traffic collectors and residential streets form a continuous grid between major streets.*

- Bike routes or lanes
- Generally at half-mile intervals, between major streets

- Provide access to trails as well as to key destinations.
- Signalized crossings at major streets.
- Priority traffic controls between major streets (cross-traffic must stop or yield).
- Signage and striping as needed for direction and hazard identification only.
- Priority maintenance of bicycle travel areas.

**\*Off-road trails.**

*Multi-use trails shared by bicyclists and pedestrians, generally following rivers, creeks, railroad rights-of-ways or other off-road corridors.*

- Separate paths shared with pedestrians.
- Grade-separated crossings at all major streets
- Low-key signage as needed for direction, hazard identification and interpretation.
- Priority maintenance

**✓ *Fort Collins bikeways are part of the regional bicycle transportation network!***

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The Bikeway Plan Vision looks not only within Fort Collins but beyond it as well, connecting with a planned regional system of bikeways and trails. Bikeways will link Greeley, Loveland, LaPorte, and other communities in the North Front Range. Cross-country cyclists will be able to find their way to and through Fort Collins on specially designated regional bikeway routes and in the process get a good introduction to Fort Collins' character and attractions.

**✓ *The Vision is more than building bikeways.***

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Bikeways are important, but so are programs and policy. These fall into four major categories:

**\*ENGINEERING**

In addition to implementing the Action Plan for construction of bicycle facilities, advances are made through adoption of policy and operational procedures that enhance the bicycling environment. Development projects are automatically reviewed from the perspective of their positive or negative impacts on bicycling. Incentives are offered for private provision of facilities and programs and for projects that include mixed use, traffic calming and other techniques that create bicycle-friendly neighborhoods and commercial areas.

All City transportation and road maintenance activities include measures that enhance potential for bicycle use. Pavement surfaces are routinely inspected and repaired to provide a smooth travel area. Steps are taken to eliminate problems associated with construction drag-out, sand, gravel and debris on the roadway. Snow removal and street sweeping procedures give priority to streets with designated bicycle facilities. Policy is established to make provision for bicycles in work zones by maintaining a rideable surface or directing riders to convenient, marked detours. A way is established for people to report maintenance problems to the City and to get response on follow-up actions. Facilities and design standards are periodically reviewed and improved as necessary.

Building bikeways is a beginning. With bikeways, education, enforcement, encouragement and engineering programs in place, Fort Collins will be able to achieve its vision as a great place to bicycle - a place where bicycling is a popular, viable and respected transportation mode.

## **\*EDUCATION**

Education programs provide bicyclists, motorists and pedestrians with the information and techniques they need to operate compatibly in a multi-modal traffic environment.

- *Bicyclists* become familiar with effective cycling techniques, improve riding skills and learn why it is important to ride responsibly, obeying the same laws as other vehicles.
- *Pedestrians* learn to share the trails and sidewalks with other modes of travel.
- *Motorists* learn that bicyclists DO have a right to the roadway, that both they and the bicyclists have responsibilities as vehicles and that they can coexist peaceably and predictably. Bicycle education starts at an early age and is a lifelong process. Children learn traffic skills, laws and responsibilities. Adult education focuses on improving bicycling techniques and on developing confidence and competence in traffic. Older adults and people with disabilities receive special training to help them maintain mobility and independence through bicycling.

## **\*ENFORCEMENT**

Enforcement is an important part of the vision. Laws related to bicycle use are enforced consistently and energetically by police officers who are knowledgeable about the rights and responsibilities of bicyclists. Laws and ordinances are consistent among all adjacent jurisdictions and are periodically reviewed and updated. Emphasis is placed on the educational potential of law enforcement. People who violate the law learn from the experience. Reasons for citations are clearly stated and follow-up includes educational materials and activities.

## **\*ENCOURAGEMENT**

Efforts to encourage bicycle use become a citywide priority. All levels of government, the schools and community organizations do what they can to promote bicycle use. Events such as Bike Week and Alternate Way Day include year-round incentives for regular bicycling. The media give ongoing support to bicycle events, facilities, personalities and programs. Fort Collins becomes known nationally as a "good city for bicycling," which attracts bicycle tourism and enhances economic development.

*The Vision Plan for Bicycle Facilities is shown in Figure 2 (following this page).*

### III. THE PLAN ELEMENTS

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The *Fort Collins Bicycle Program Plan* includes elements addressing bicycle facilities, enforcement, education and encouragement of bicycle use. Although these elements are presented separately, it is important to emphasize that they are strongly interrelated. Fort Collins can build the best bikeway system on the planet and yet not accomplish the goals of this plan if other plan elements are not actively implemented. An action program that combines all of them must be implemented if Fort Collins is to achieve its potential for improved transportation choices. In the sections that follow, each Plan element is discussed separately, identifying specific objectives, conditions, criteria, alternatives, priorities and recommendations for each. The final chapter in the Plan combines them into an integrated Action Program for Bicycle Transportation.

#### A. Engineering

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Even though we have stressed the importance of enforcement, education and encouragement, bicycle facilities should not be neglected. In a way, they are the cornerstone of the Plan. If people have no choice but to ride on narrow streets, crowded into a debris-strewn gutter by motorists whizzing by inches from their shoulder at high speed, they are unlikely to opt for the bicycle. They may be educated and encouraged, but they aren't stupid. All streets should be "bicycle-friendly" - designed with bicycle use in mind and without built-in hazards and maintenance problems affecting bicyclists. Off-road trails should be similarly designed, taking into account the additional factor of shared use with pedestrians. Systems of bicycle lanes and other on-street facilities should be designated and mapped to help guide people around the city and to alert motorists to the fact that bicyclists have a place within the roadway too.

#### B. Education

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At the same time, everyone using our streets - motorists, bicyclists, and pedestrians - needs to know what the laws and expected behaviors are. They need to be educated about safe and efficient bicycling on today's street and trails systems. They not only need to know the laws and "rules of the road" but also should know the reasons behind those laws and their respective roles in operating under those laws.

Bicyclists should learn to operate their vehicles skillfully, just as young adults do through driver's education. Even though they can pedal and maintain forward momentum without failing over, they may lack skills essential to operating safely on today's crowded trails and busy streets. These skills can be taught - to adults as well as to children.

Finally, bicyclists should learn the basics of bicycle repair and maintenance. Poor maintenance can contribute to bicycle crashes and take some of the pleasure out of riding. Many bicycle repairs, especially emergency "on-the-road" repairs, such as flat tires, are easy, once the basic procedures are explained. Some people don't ride because they are intimidated by the thought of changing a tire or adjusting the height of their bicycle saddle. Do-it-yourself bicycle maintenance and repairs can be taught to people of all ages.

## C. Enforcement

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If laws related to bicycling are not enforced, compliance with those laws cannot be expected. Injuries and deaths resulting from bicycle crashes will continue to rise. The common stereotype of the "crazy, law-defying bicyclist" will continue to keep people from giving the bicycle the respect it deserves as a transportation vehicle. Children will watch their parents run stop signs and, tacitly, understand that this type of behavior is okay - it's what adults, their role models, usually do. If no one gives them a good reason (like a citation) for obeying the laws, they are not likely to do so. Enforcement is the key!

## D. Encouragement

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All of this does no good at all if people are not encouraged to get on their bicycles and ride. The bikeways and trails would be unused, except by walkers, joggers, in-line skaters and other pedestrians. People would keep on driving their cars everywhere, all the time, in greater and greater numbers. Encouragement is an important element of the Plan. People need some form of stimulation before they are going to make lifestyle changes such as using bicycles for transportation. They need incentives, role models, goals and motivation. Left to their own devices, they will just keep doing what they've always done - drive cars. Change is difficult to accomplish, whether it is losing weight, moving to a new home or riding a bicycle to work. If a person is rewarded for making the change, his or her behavior is validated and the message is sent that the change is a good thing to do. This is where *encouragement* comes in. The Plan includes recommendations for ways to encourage people to choose the bicycle.

## IV. ENGINEERING

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To develop recommendations for bicycle facilities, the Plan combines a long-term vision with realistic appraisal of existing conditions using criteria related to the objectives defined by the Focus Group early in the planning process. The Engineering Element includes the following sections:

- A. Planning Process
- B. Issues and Objectives
- C. Existing Conditions
- D. Planning Analysis - Definition of Alternatives
- E. Vision Plan for Facilities
- F. Setting Priorities
- G. Fiscally-Constrained Plan for Facilities

## A. Planning Process

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The recommendations contained in this Plan Element resulted from an interactive planning process that involved the following steps:

### 1. Definition of Issues and Objectives

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Specific issues and objectives for bicycle facilities were defined at a Focus Group Work Session. This very important part of the process provided a clear definition of problems to be resolved, opportunities to be pursued and description of desired results in terms of planning objectives. The planning objectives were used as references throughout the planning process refresh focus and help keep things on track.

### 2. Documentation of Existing Conditions

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A wide range of conditions was studied, including: key activity centers and destinations, bicycle crash sites, questionnaire survey results, existing plans, policy and projects, Regional Bikeway Plan recommendations and conditions along existing bikeways and trails. Existing facilities were evaluated using information collected by going out and looking - on bicycles - using an evaluation checklist developed for Fort Collins. Each "segment" of each bike lane, route and trail was described in terms of approximately 30 variables. Information was also provided by the Focus Group and C4 about "good places to ride," gaps, "places to avoid" and other topics.

### 3. Definition of Alternatives

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Alternatives were developed that take into account:

- Existing Facilities* - The need to improve existing facilities;
- New Facilities* - The need to fill gaps, eliminate hazards and barriers, extend facilities for better access and continuity; and
- Future Facilities* - The need to plan future expansion of the facilities as Fort Collins grows.

### 4. Preliminary Priorities

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To develop the alternatives, the Focus Group had to set some preliminary priorities within each of the three categories of facilities. It had to ask, for example, "Of all the improvements needed to existing facilities, which are most important in terms of improving safety, continuity and meeting other specified objectives?" By narrowing down the choices in each category to those that would go farthest to meet the objectives, preliminary alternatives for the overall facilities system could be selected for discussion and further analysis. Specific steps included:

#### ***a. Set priorities for improving existing facilities***

Priorities were based on field evaluations performed by Group members, staff and the consultant. *This provided a set of priorities based on existing facility improvement needs.*

### ***b. Set priorities for new facilities***

Priorities for new facilities were set by identifying the "hot spots," gaps, missing linkages and destinations not adequately served by bicycle facilities at the present time. Identified routes were rated on the:

- degree of hazard (What happens if there is no facility? Is it really a problem?);
- anticipated level of use;
- potential linkages - importance to continuity of the facilities system; and
- relationship to the Regional Bikeway Plan.

*This provided a set of priorities based on new facility needs.*

### ***c. Set priorities for future facilities***

Priorities for future facilities were established by identifying significant regional linkages and opportunities from "long-term vision" elements such as use of railroad rights-of-way, utility corridors, ditches and facilities built as part of long-term land use, street and development plans. *This provided a set of priorities based on future facility needs.*

Using these priorities, a preliminary set of alternatives was prepared.

## **5. Evaluation of Alternatives**

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Criteria were defined for evaluation of the alternatives. The alternatives were rated according to these criteria and were reviewed at a Focus Group work session to select routes that would be part of the preliminary "Facilities Vision Plan."

## **6. Preparation of the Facilities Vision Plan**

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The preliminary Vision Plan was discussed and refined over the course of several Focus Group meetings. It was approved by the Group and includes both a Vision Statement and a Vision Plan map, showing the future bicycle facilities system in its entirety.

## **7. Development of a Fiscally Constrained Plan for Bicycle Facilities**

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Each segment of each route shown in the Vision Plan was subjected to additional evaluation, using criteria related to access, safety, continuity and other factors. For the highest-rated group of routes, the Focus Group discussed the types of improvements needed, such as major capital improvements, maintenance projects, minor capital projects. For all potential capital projects, the Project Engineers prepared costs estimates and additional evaluation. At a work session, the Focus Group reviewed the costs and rated the projects as "high," "medium" or "low" priority based on cost and other criteria. The "high"-priority project list was refined and forms the basis for the Fiscally Constrained Bicycle Facilities Plan.

## B. Issues and Objectives

### 1. Planning Objectives

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Encourage bicycling for transportation through urban growth that puts most major destinations within a comfortable bicycling distance, that assures good access by bicycle and that reduces the prominence of motorized transportation in neighborhoods and other pedestrian and bicyclist-oriented districts.

- a. Plan a continuous, citywide bicycle transportation system with linkages between on- and off-street bicycle facilities, between bicycle facilities and streets without special facilities, between Fort Collins and adjoining communities and between Fort Collins and the planned regional bikeway system.
- b. Plan improvements for bicycle transportation that provide direct and convenient access to major activity centers and other destinations such as employment centers, downtown, schools, shopping, government buildings, parks and other recreational destinations. Special attention should be given to access to:
  - destinations along and across College Avenue (especially at Drake, Horsetooth, Harmony and Prospect);
  - neighborhood shopping centers,
  - central Fort Collins, south of CSU campus;
  - employers on outskirts of town such as HP and NCR,
  - Laporte and other areas to the north;
  - northeast Fort Collins;
  - CSU;
  - along and across I-25; and
  - regional destinations (such as Windsor).
- c. Review and recommend amendments, as appropriate, to City policy and planning documents to strengthen their positions in encouraging non-motorized transportation. Specifically, review the following:
  - zoning, project review and development incentives planning and design
  - guidelines for neighborhoods policy and
  - guidelines on school/neighborhood planning and
  - design guidelines for commercial and employment centers downtown planning
  - other area and corridor plans.Ways of encouraging bicycle transportation within these planning and policy areas will be developed.
- d. Encourage development of opportunities for multimodal transportation that includes bicycles. Specifically encourage a stronger relationship between bicycle transportation and transit, between bicycling and park n' ride facilities.
- e. Integrate bicycle transportation considerations into the City's overall planning process for programs such as Transportation Demand Management, Congestion Management Plan, Master Transportation Plan, City Plan and Comprehensive Plan processes.

## 2. Engineering/Design Objectives

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Design a citywide system of on- and off-road bicycle transportation facilities that maximizes safety, convenience and comfort for bicyclists of all ages and skill levels in conformance with accepted design guidelines. Take full advantage of transportation opportunities represented by off-road multi-use trails while mitigating impacts on wildlife, plant communities, pedestrians and other trail users.

- a. Work toward continuity of design standards to enhance safety and legibility of the bikeway system.
  - Identify areas (both within Fort Collins' city limits and in County areas affected by this plan) where facilities have not been designed in conformance with current design standards.
  - Where nonconformance is found, provide a conceptual assessment of potential and actions for retrofit or other improvement.
- b. Identify and take steps to eliminate gaps and discontinuities within the Fort Collins bikeway system.
- c. Update City design standards for construction of bicycle facilities as necessary to respond to bikeway system evaluation and implementation experience. Specifically consider such design elements as: gutter pan construction standards along bike lanes, right-turn lane design treatments, lane width (exclusive of gutter) and others.
- d. Develop a policy for dealing with situations where improvements **in strict conformance with accepted standards** are not feasible.
- e. Identify and develop strategies for elimination of bottlenecks, barriers and potential hazards to the efficient flow of bicycle traffic.
- f. Provide a hierarchy of facilities to accommodate the transportation needs of all ages, skill levels and trip purposes.
- g. Evaluate existing off-road trails for suitability with regard to transportation bicycling. If appropriate, recommend improvements to increase suitability, decrease potential multiuse conflicts and mitigate potential negative impacts on wildlife and plant communities.
- h. Evaluate the potential of additional off-road facilities for transportation bicycling, including railroad rights-of-way, utility easements, ditch easements and others.
- i. Assess the City's current policy on treatment of bicycles in work zones. Make recommendations to assure that location of signs, surface conditions, detours and diversions are planned to give full accommodation to bicycle traffic.

### **3. Management and Operations Objectives**

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Protect the City's investment in streets and bicycle facilities through an aggressive, high-quality maintenance program that is tailored to the specific needs of transportation bicyclists and to risk management considerations.

- a. Maintenance of bicycle facilities and streets used for bicycling should be frequent and performed with sufficient care to keep the streets in safe, comfortable condition for riding. The planning study should work with City staff to document current practices and problem areas and to recommend any necessary changes. Among specific areas of concern are:
  - Snow removal policy
  - Street sweeping
  - Removal of dried leaves
  - Construction drag-out
  - SNOWPLOW GROOVES
  - Railroad track crossings
  - Drainage and ice build-up
  - Inter-jurisdictional inconsistencies
- b. Existing standards and facilities should be evaluated in cooperation with the City's Risk Management staff to identify problem areas and recommendations for improvement.

### **4. Implementation Objectives**

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- a. Establish project recommendations and priorities in keeping with funding guidelines for ISTE A projects and those of other funding sources, to maximize success of funding applications.
- b. Develop phased recommendations showing a logical sequence of improvements to achieve continuity as the city grows.
- c. Establish a long-term vision for bicycling in Fort Collins through identification of a future facilities system and supporting programs and policy.
- d. Make recommendations for coordination of all aspects of the bicycle program, allocation of responsibilities and periodic evaluation and updating.

## C. Survey of Existing Conditions

### 1. Bicyclist Destinations and Activity Centers

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Early in the planning process, destinations, or "activity centers" expected to generate substantial numbers of bicyclists were identified. These included:

- Colorado State University
- High schools
- Junior high schools
- Elementary schools
- Parks and recreation facilities
- Trails
- Sports arenas
- Shopping malls
- Other major retail uses
- Major employers
- Governmental offices and facilities

Figure 4 shows the identified destinations and activity centers. This information was useful as a reference point in making sure that recommended facilities provide access to all important destinations.

### 2. Evaluation of Existing Facilities

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Fort Collins has a strong history of building bikeways and off-road trails, providing an excellent starting point for this Plan. Facilities were generally found to be well-designed and in good condition, although many improvement needs were documented. The Plan looks at both the existing facilities system and at recommendations for expansion of the system as Fort Collins grows.

Evaluation of existing facilities was accomplished in four basic phases:

- *Identification of existing facilities*
- *Field evaluation of existing facilities*
- *Identify the types of improvements needed*
- *Establish relative priorities for improvement of existing facilities.*

Information on existing facilities gained through this evaluation was used in later phase of planning in combination with analysis of gaps, linkages needed, planned facilities and other information to develop recommendations.

#### a. Identification of existing facilities

Existing bicycle lanes, bike routes, trails and other facilities were mapped (see Figure 4), updating information on location and facility type. The system of existing facilities was divided into smaller "segments" for purposes of field evaluation. Each segment represents a portion of the facility with relatively consistent design characteristics.

## **b. Field survey of existing facilities**

The purpose of this survey was to document the condition of existing bikeways and trails, to get information on the types of improvements needed. The following steps were involved:

- **Review of design standards**

Applicable design standards were reviewed and summarized for use in the evaluation.

- **Preparation of an evaluation checklist**

An evaluation checklist was developed to help determine whether facilities meet the design standards and to obtain other data. The checklist provided the following information:

- Type of facility  
(lane, route, trail)
- Surface material
- Facility width  
(including information on whether width varies and on the width of the outside traffic lane on bike routes)
- Continuity  
(identifying gaps, end of facility, warning signs)
- Edge conditions  
(curb and gutter, condition of asphalt seam at road edge, presence of drainage grates and obstructions in bike travel area)
- Surface conditions and maintenance  
(identify cracks, patches, utility covers, slippery spots, debris, gravel, drainage problems, overhanging trees, utility poles, dirt dragout from unpaved driveways or side streets)
- Steep grades
- Sight distances  
(on hills, on curves, from/to intersecting streets and driveways, description of what obstructs the view if a problem exists)
- Intersections  
(number of driveways and street intersections)
- Lighting
- Bikeway/Trail signing
- Traffic controls  
(stop signs, signals, difficult crossings, signal actuation)

- **Conduct field survey.**

Members of the Focus Group, City staff and the consultant team used the checklist to evaluate conditions on all existing bikeways and trails. Typical conditions and key problem areas were photographed and described in detail. Completed checklists for all segments of the bikeway and trail system were compiled in notebooks for use during the planning process.

- **Fieldwork was performed on bicycles.**

The perspective gained by riding a bicycle is quite different from that experienced by motorists. A two- or three-inch drop off the edge of the asphalt or path may be hardly noticeable to a motorist but can easily deflect a bicycle tire and cause a fall. The little things mean a lot when you're riding a bicycle - gravel on the pavement, standing water, blind comers, areas with lots of in-line skaters. Evaluating the bikeway system

"from the saddle" provided detail and first-hand experience for the evaluation.

- ***All improvement needs were documented.***

Even though funds are limited and all improvement needs cannot be addressed right now, it was decided that all possible deficiencies should be documented so positive steps can be taken toward developing an effective, long-term improvement program. Interim measures such as improved signage, hazard marking, increased maintenance, supportive planning policy and programs were discussed as ways to supplement capital improvements as cost-effective ways to create a better environment for bicycle transportation in the interim.

- ***Both place-specific improvements and system-wide needs were identified.***

Even though one of the key products of this study is to develop a set of recommended improvement projects to meet "most critical" needs at specific locations, problems common to the entire bikeway system were also observed.

### **c. Identification of improvements needed**

To condense all the fieldwork into a manageable format and to identify the location, types and relative importance of improvement needs, the following steps were taken:

- \* **Describe specific improvements needed for each segment**

Results of the fieldwork were summarized for each segment and a matrix was prepared to give the Focus Group an overview of detailed fieldwork findings.

- \* **Describe the general types of system-wide improvements needed**

The field survey showed some types of improvements to be common to many segments of the existing bikeway and trail systems. These improvement needs are generally small projects, many of them maintenance needs. Plan recommendations should address these improvements as well as the larger capital projects. They include:

- ***Bicycle lane striping discontinuity***

Bicycle lane stripes sometimes end before intersections, leaving the bicyclist without clear direction about where to ride. The Focus Group referred to this as a "Go Fish" situation. Usually, the stripes are discontinued because right-of-way is not sufficient both to stripe bike lanes and provide other intersection improvements, such as right- or left-turn bays.

- ***Shared bikelparking lanes***

Where there are both on-street parking and bike lanes, the bike lane is typically delineated by a single painted stripe at a distance from the curb that allows room for both the parked vehicle and bicycle operation. It was observed that in many cases, the single stripe seemed to be subject to misinterpretation. It wasn't clear that it marked the edge of a bike lane rather than of a parking spot. Cars were parked farther away from the curb than normal, intruding into the bicycle travel area.

- ***Sight obstructions caused by parked cars near intersections***

In many segments parked cars near street corners were found to block views of intersecting traffic both from the bicyclist's vantage point and by screening the bicyclist from view.

- ***Traffic signal actuation***

Although the field survey checklists did not report significant problems with bicycle actuation of traffic signals, this was mentioned repeatedly in Focus Group meetings. The problem is that the bicycles do not actuate traffic signals reliably.

- ***Dirt dragout***

A problem throughout the city, dirt dragout is commonly found at construction sites, unpaved driveways and intersecting dirt roads. Street sweeping is not the whole answer here, because every vehicle using the driveway, street or construction site drags dirt into the paved street when entering it, the condition persists.

- ***"Washboard" intersections***

Intersections, primarily in older parts of Fort Collins were cited as having extremely uneven paving ("washboard" paving). This can be hazardous because the bicyclist's attention is diverted from traffic to focus on staying upright on pavement that seems to roll every which way.

- ***Rough railroad track crossings***

Every railroad crossing surveyed is in need of improvement. Many tales were recounted of wheels caught in flange ways, injury-causing falls, bicycle damage due to rough, sharp, eroded flange way edges and deteriorated pavement.

- ***Improved maintenance of lane striping***

Every spring, the bicycle lanes seem to almost vanish as the snow melts. Even on streets that are models of good bicycle facilities, such as Remington, the lane striping and other pavement markings are difficult to see.

- ***Improved sweeping of facilities***

On-street bicycle facilities need to be swept more frequently. Many problems were reported with dirt, sand, debris and landscape materials in the bicycle travel areas.

- ***Rough pavement patching***

Where work has been done on the street, an asphalt patch is generally laid to cover up the area where pavement was removed. These patches tend to be uneven, with edges that are not flush with the pavement around them. This creates problems for bicyclists, especially since the patches usually extend across part (but not all) of the lane width. Bicyclists must either ride around them or bump up, over and across them, risking a fall.

- ***Utility covers and grates located in the bikeway***

Many segments have utility covers or drainage grates within the bicycle travel area. These often are not flush with the surrounding pavement and are made of metal which can be slippery to bicycles when wet. Parallel-slat grates are found occasionally in Fort Collins. These are recognized hazards which can trap bicycle wheels and cause loss of control or falls.

- ***Overhanging trees, vegetation encroaching into bike lanes and trails***

Problems were reported with trees overhanging the bicycle facilities and trails in many locations. In addition, grass, weeds and shrubs encroach into the facilities. Bicyclists must ride under, through or around these obstructions, sometimes swerving out of the bike lane.

- **Seam between gutter and asphalt paving creates a drop-off**

A common problem is the seam that builds up where the asphalt roadway meets the concrete gutter. A lip builds up that can become several inches high as the street is resurfaced. Especially where bike lanes are narrow, this can be hazardous. The bicyclist typically rides to the right-hand side of the bike lane, away from traffic. If the bicycle wheel slips into the gutter, it can easily be deflected by the asphalt lip, causing loss of steering control and a possible fall.

#### **d. Develop criteria for rating facility conditions**

A preliminary evaluation of existing facilities was performed using criteria that rated segments according to the severity of problems encountered and the extent of actions necessary for improvement. The evaluation criteria were grouped into four categories and given numerical ratings based on the relative complexity, cost and potential associated hazard along the segments. Low values were given to segments with low potential hazard and complexity of required improvements. High values were assigned where major improvements were needed.

- **Maintenance needs** (*weighted value of 1.0*)

Criteria indicated the need for improved, routine maintenance, to be addressed without capital expenditures. Examples include shrub overhang, gravel, potholes, minor drainage problems.

- **Minor repairs and improvements** (*weighted value of 2.0*)

Criteria indicated relatively simple or low-cost repairs and improvements such as repairing cracked pavement or replacing lane striping and signage. Also included in this category are deficiencies that might be expensive but which did not generally represent a high degree of hazard to cyclists, such as trees too close to the trail or bike lane. Other examples include repair of cracking or rough pavement patching, utility covers and additional signage.

- **Moderate repairs and improvements** (*weighted value of 3.0*)

This category included conditions where further design evaluation was needed but where projects necessary to make the improvements will be reasonably straightforward. Examples of such projects include repair of uneven gutter seams, areas of seasonal ice build-up, lane widening on steep grades, construction dragout and improvement of railroad crossings.

- **Major capital projects** (*weighted value of 4.0*)

Criteria assessed the need for improvement of severe potential hazards. Improvements in this category were major projects requiring significant design and engineering evaluation. Typical projects include improving blind curves at underpasses, low underpasses and narrow bridges.

#### **e. Rating of existing facility Improvement needs**

Each segment was assigned a score based on criteria related to these categories. This score was then multiplied by a *Motor Vehicle Conflict Rating* factor. This rating factor considered each segment in the context of:

- Average daily traffic volumes
- Number of driveways per mile
- Number of intersections per mile
- Land use types adjoining the facility

*Ratings were used to help generate alternatives and priorities in later phases of planning.*

### 3. Current Plans, Policy and Standards

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All applicable local and regional plans, design standards, policy, programs and projects were reviewed for potential impacts on bicycle transportation. This review is summarized in *Appendix C*. Among documents reviewed were:

- *The Poudre River Trust Land Use Policy Plan for the Downtown River Corridor,*
- *The City of Fort Collins Land Use Policies Plan,*
- *Land Development Guidance System for Planned Unit Developments;*
- *The City of Fort Collins Downtown Plan,*
- *The City of Fort Collins Parks and Recreation Master Plan,*
- *The Goals and Objectives element of the Comprehensive Plan;*
- *The Fort Collins Area Transportation Plan Mission Statements, Policies and Objectives,*
- *DRAFT Fort Collins Congestion Management Plan;*
- *The Northeast Area Transportation Study,*
- *The Fort Collins Traffic Signal System Past, Present and Future;*
- *Design Criteria and Standards for Streets;*
- *The City of Fort Collins Work Area Traffic Control Handbook,*
- *The North Front Range Regional Bicycle/Pedestrian Transportation Plan.*
- *THE NORTH COLLEGE AVENUE CORRIDOR PLAN*
- *WEST SIDE NEIGHBORHOOD PAN*
- *EAST SIDE NEIGHBORHOOD PLAN*
- *HARMONY CORRIDOR PLAN*
- *PROSPECT ROAD STREETSCAPE PLAN*
- *NATURAL AREAS PLAN*

### 4. Potential Use of Canals, Ditches, Other Off-Road Corridors

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#### a. Canals and ditches

Canals and ditches in the area serve two primary purposes: Drainage conveyance or irrigation supply. Open channel drainage ditches owned and maintained by the City of Fort Collins Storm Drainage Department offer opportunities for bicycle use because:

- They often connect to other trail corridors or detention ponds (Poudre River Fossil Creek, Spring Creek, etc).
- Required maintenance roads paralleling the drainage channels are of adequate width (15 feet) to allow for bicycle use.
- Right of way is owned by the City of Fort Collins.

According to the City's Storm Drainage Department, ***examples of existing channels with 15 foot-wide maintenance roads which could be improved for bicycle use*** are:

- "Brown Farm Channel". This facility extends from the corner of Prospect and Taft west to the City's detention pond along the north side of Brown Farm.

- "Foothills Channel". Constructed as part of the new high school improvements. This channel parallels the north side of the high school property, through the CSU Agronomy Farm from Timberline to County Road 9.

Planned drainage channels all require the 15-foot maintenance roads. Any future drainage channel improvements will provide opportunities for bicycle facilities.

Irrigation companies were contacted for the potential of utilizing rights of way for bicycle facilities. Contacted were:

- Larimer No. 2 & New Mercer and Dixon Canal Laterals
- Pleasant Valley & Lake Canal
- Larimer and Weld Canal
- Fossil Creek (Wellington)
- Sherwood Lateral

Responses were received from Pleasant Valley & Lake Canal, Larimer and Weld Canal, and Fossil Creek. Pleasant Valley & Lake Canal indicated that their Board has allowed and currently have bicycle paths along their facilities. Larimer and Weld Canal indicated that most of their alignment is within their right-of-way and that the Board of Directors would have to vote on any shared usage. The Board would be open to discussion but their primary concerns would be those of liability and the type of maintenance agreement which could be negotiated with the City.

Fossil Creek indicated that the canal from the Poudre River to the Fossil Creek Reservoir (east of Fort Collins) is primarily on easements from individual private property owners. The reservoir is owned by the irrigation company. In the past, shared usage has not been allowed.

## **b. Other Off-Road Facilities**

Potential off-road facilities that were investigated included utility easements and railroad rights-of-way.

### **•Transmission Lines**

Transmission line information was received from Tom McCormick (303-226-4000) at the Platte River Power Authority (PRPA). The transmission lines are divided into three categories: Transmission Lines on City Rights-of-Way; Transmission Lines on Railroad Rights-of-Way, and; Transmission Lines on PRPA Acquired Easements. PRPA has indicated that shared usage within their acquired easements is possible based on agreements with PRPA. However, the liability and maintenance issues must be agreed upon individually with parcel owners. This usually occurs at the time easement usage is sought.

The transmission lines on City rights-of-way are along Drake Street from Taft Hill to Lemay; transmission lines on railroad rights-of-way are within the Burlington Northern right-of-way on the east side of the city, and, transmission lines on acquired easements are predominantly in the northern portion of the city (e.g. along Lemay Ave).

### **•Railroads**

Railroad contacts were as follows:

Union Pacific Railroad

Burlington Northern Railroad

Union Pacific and Burlington Northern Railroad rights-of-way typically range from 50 to 200 feet in width. Although, specific proposals for shared use are dealt with on a case by case basis. Indications are that past policy has not been to allow shared usage, but might be considered provided that a maintenance and liability agreement is reached. In addition any drainage caused by the bicycle facility would be required to not impact the railroad grade and would be accommodated for by construction of the bicycle facility. Setbacks are generally 20 to 25 feet from the railroad grade and the two facilities would need to be physically separated by a fence. In addition, any crossings (either by separation or at-grade) would require Public Utilities Commission (PUC) approvals.

**•Examples of Opportunities and Constraints**

The greatest potential for bike facilities appears to exist along the railroad and drainage and irrigation canal alignments. These corridors can provide some cross town opportunities while tying other planned and existing bike routes.

*The Larimer and Weld County Canal alignment* could connect to the Poudre River trail system west of Shields Street and provide access to the northeast. Some constraints identified along this corridor would be the railroad crossings, which would require PUC approval, and several arterial crossings or underpasses, such as N. College Avenue and County Road 9F. This corridor could be extended north towards the Anheuser-Busch plant along the railroad spur.

The *Sherwood Lateral* parallels Dartmouth which has adequate bike lanes. The Sherwood lateral may, however, provide an opportunity to link with Dartmouth and cross under College Avenue providing access to activity centers west of College Avenue.

*The Burlington Northern railroad line* running west of and parallel with College Ave could provide a route which would extend clear through Fort Collins providing connections to several other east-west bike facilities. This corridor would require mid-block crossings of virtually every east-west arterial in the City and several irrigation and drainage crossings.

*The Union Pacific Railroad alignment* running west of and parallel with Timberline would also provide a north-south route extending through most of the City further east than the BNRR line. This alignment would also be complicated by mid-block crossings of the east-west roadways and several irrigation and drainage crossings.

## **5. Focus Group Input on Gaps, Hazards, Barriers**

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In the process of examining all the information collected to document existing conditions, a long list of hazards, barriers, "hot spots" and gaps in the facilities system was compiled. Focus Group members and others contributed input based on their experiences bicycling in Fort Collins. Results from the field evaluation, crash analysis and questionnaire survey were integrated with this input.

## a. Hazards and Barriers

At a work session, Focus Group members prepared maps showing location and types of hazards and barriers to bicycling. Information was also received from Choice City Cycling Coalition (C4), from the public through questionnaire survey results and from observations of fieldwork conducted as part of this plan. Hazards and barriers identified were combined into an annotated map that showed *Good Routes*, *Bad Routes* and ideas for *Future Routes*. A summary of this information is shown in Figure 6.

In addition, the following general comments were made:

- There is no way to ride continuously through downtown, and there is no place to park a bike.
- There is limited access going north from Spring Creek Trail - this could be improved.
- The Burlington Northern Railroad route would be a good bike facility.
- A continuous bikeway paralleling College Avenue from Harmony to downtown is needed.
- There is no good way to bicycle into town from the northeast (from north or east of Mulberry and Lemay).
- Improved access to downtown from the Overland Trail is needed - consider use of Mountain or Laporte.
- Consider extending the Poudre River Trail south to Harmony. It could even go all the way to the future transit center at Harmony and Interstate 25.
- Eliminate the "dangerous" curves along the Spring Creek Trail at Prospect and Timberline.
- The planned Fossil Creek Trail from CR32/Timberline to Dixon Reservoir will be a very positive addition to the trails system, with good potential for transportation uses.
- Consider steps needed to develop neighborhoods with high "porosity" - that are easily accessible by bicycle and which offer convenient, advantageous routes to shopping, schools, parks and other activity centers. Avoid walled communities.
- An official development policy is needed to guarantee that good bicycle and pedestrian facilities are planned and constructed as the city grows and that all improvement projects on existing streets fully consider potential bicycle use.
- Continuous, designated routes through town are needed - both east/west and north/south.

## b. Hot Spots

Throughout the planning process, places were identified as "hot spots" where there were tough facilities challenges, no easy solutions and a strong need for action. Among these are:

- College Avenue facilities - all along the street.

### *How can bicyclist access to Fort Collins' "Main Street" be improved?*

- Intersections where the bicycle lane markings are discontinuous - the "GO FISH" syndrome.
- On some bike lanes, the concrete gutter is counted as part of the lane width. The gutter is really not a safe place to ride, so the usable part of the lanes is actually about two feet wide. This situation should be evaluated and a better design standard proposed.
- Lemay, from Mulberry to Horsetooth - a LONG, STRETCHED-OUT HOT SPOT! Mulberry to Prospect is especially uncomfortable for bicycling. The narrow bike lanes were cited as one of the primary reasons why bicyclists avoid Lemay. This area has serious maintenance needs, rough railroad crossings, a substandard trail crossing on the bridge and a formidable variety of hazards for bicyclists at the Riverside intersection.
- Timberline, from Drake to Horsetooth - a HOT SPOT! There are a number of maintenance problems and difficult intersections in this fast-developing area near the new high school.
- There is no facility near College on Horsetooth (Mason as well) - this important connection needs to be made, somehow.
- East/west connections are badly NEEDED so bicyclists can get across town.
- Centre Avenue on CSU's south campus should be built. There is a great deal of demand for access through this area.
- During peak periods, the Spring Creek Trail is overcrowded and being "loved to death!"

### **c. Gaps**

One of the major problems with existing facilities is discontinuity in terms of both gaps where no facilities exist and where there are inconsistencies in facility design. Comments were made at Focus Group meetings and in surveys conducted by Choice City Cycling Coalition that discontinuities in the bike facilities system are a major deterrent to transportation bicycling.

Gaps are serious problems for bicyclists. For example:

- It is difficult to get between north and south parts of the city efficiently on a bicycle, and between east and west sides as well.
- Facilities on Harmony, Horsetooth and Drake do not continue across College.
- Routes across CSU are needed.
- Bike lanes do not continue on Mulberry past City Park; no alternative is designated.
- The Lemay/Mulberry/Poudre Trail intersection is very difficult to cross by bicycle.
- There is no good way to get from the east end of Pitkin to the Spring Creek Trail.

- Bike lanes on Prospect just END about one-half mile west of Taft Hill.

A total of 25 major gaps in the facilities system was identified. Focus Group members volunteered to visit and evaluate the gaps individually and to report back to the Group in writing. The Group, as a whole, discussed the evaluations and reached consensus on how the gaps were to be treated in Plan recommendations.

## D. Facilities System Concept

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### ***Facilities System Concept***

**\*Arterial streets:** All arterials should be improved, over time, to become "bicycle friendly." The arterial street system provides the most direct access to activity centers *and* other destinations.

**\*Collectors, residential streets and trails:** Within each mile-square section of the city, at least one alternative, continuous facility should be provided in both east-west and north-south directions, using collector streets, off-road trails or other low-traffic alternatives to major roads.

**\*Regional connections:** On-road and off-road facilities should be provided *through* Fort Collins and as linkages to adjoining cities as shown in the Regional Bikeway Plan.

The System Concept statement below expresses the basic structure of the bicycle facilities system. It evolved out of Focus Group discussions and work on the overall Vision Plan.

## E. Setting Priorities

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Based on the Vision Plan a list of potential bicycle facility projects was defined, including 42 projects on off-road trails and 238 on-street facility projects. Each project was rated on a scale of 1 to 5 according to criteria listed below. Based on this scale:

- 1 = "excellent" (top rating)
- 2 = "good"
- 3 = "average"
- 4 = "fairly poor"
- 5 = "bad" (lowest rating)

***Ratings were based on the degree to which the projects meet the criteria.***

### 1. Primary Criteria

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All primary criteria were given equal weight in establishing priorities. A composite score was given to each project based on the sum or scores for primary criteria.

## **a. Access to Destinations**

*Higher priority is given to projects that improve access to key destinations.*

- 1      *Connects to major, citywide destinations.*  
Project completes a connection to a major destination such as CSU, downtown, major commercial center (with citywide draw) or citywide recreational destination. Major destinations attract people from throughout the city or region.
- 2      *Improves access to citywide destinations OR connects to areawide destinations*  
Project improves (but does not complete) linkages to major destinations OR connects to a major employer (50+ employees), high schools, community shopping centers (destinations serving an area larger than a "neighborhood").
- 3      *Connects to local destinations OR improves access to areawide destinations*  
Project connects to elementary schools, neighborhood shopping, neighborhood parks, small employment and service centers, high-density residential uses; OR improves linkages to destinations indicated in #2.
- 4      *Provides indirect access*  
Project improves a portion of a street or trail that can be used to connect with destinations listed. Additional improvements are needed to assure good access.
- 5      *Does not provide access*  
Project does not provide access or substantially improve connections to any significant destinations at this time.

## **b. Continuity**

*Higher priority is given to projects that fill gaps, extend existing facilities and otherwise create greater connectivity within the bikeway system.*

- 1      Project eliminates a gap or "significant" discontinuity between existing, unconnected facilities. A "significant" discontinuity is one that places the bicyclist in a potentially hazardous situation.
- 2      Project extends an existing facility or contributes toward (but does not complete) elimination of a gap.
- 3      Project will provide continuity between more than one future facility.
- 4      Project provides linkage to one future facility.
- 5      Project does not contribute to system continuity.

## **c. Safety**

*Higher priority is given to projects which result in elimination of hazards and bottleneck, significant maintenance problems, retrofit of existing facilities to address improvement needs from the field survey and of bicycle crash sites.*

- 1      Project eliminates a major barrier, hazard or bottleneck OR retrofits a high-frequency (top 30%) bicycle crash site.
- 2      Project improves a major barrier, hazard or bottleneck OR eliminates one or

more minor/moderate problem areas, including retrofit of (middle 30%) crash sites. Project substantially improves conditions where chronic maintenance problems have been observed, such as: drainage problems, rough railroad crossings, dirt-drag-out, slopes that wash debris onto the lane or trail.

- 3 Project improves a minor/moderate problem area, other crash sites or maintenance conditions.
- 4 Project will result in minor improvements that may enhance safety.
- 5 Project does not have a significant safety benefit.

## 2. Secondary Criteria

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A project could receive bonus points in the form of a deduction from its total rating in consideration of the following secondary criteria:

### a. Regional Plan facilities

Bonus points were awarded if the project would involve a facility in the Regional Bikeway Plan.

### b. Linkage to transit

Bonus points were awarded if the project would complete a link to bus line or park n' ride lot.

### c. Design that exceeds minimum standards

Bonus points were awarded if the project would bring a substandard facility into conformance with current "desirable" standards as defined by the City, CDOT and AASHTO ("desirable" standards are generally in excess of required minimums).

### d. Aesthetics

Bonus points were awarded if the project would provide access to a scenic area with high amenity value -- an area with good views, natural and/or historic interest, public art, water, rest areas, access to recreation facilities or similar attributes.

## 3. Results of the Rating

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Ratings were summarized in a set of tables that identified location of each segment, general project description, scores according to each criterion, bonus points and a total rating score. The results were compiled into four priority groups, with #1 Priority Group being the highest rated. The projects in the top group were discussed at length with the Focus Group, to arrive at a final list for consideration as part of the Fiscally Constrained Plan.

## F. Fiscally Constrained Plan for Facilities

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Approximately 65 projects were included in the group evaluated at this phase of planning. The projects varied widely in their scope. Some were primarily maintenance projects, while others were capital projects of varying degrees of scale and complexity.

In recognition of this, the projects were identified as being either Capital Projects (new construction) or *Maintenance* Projects (sweeping, snow, removal, pavement repair, debris removal, etc.). The 40 top-rated Capital Projects were field-inventoried and evaluated by Project Engineers for construction requirements.

Costs were assigned to the construction factors based on the general criteria listed in *Appendix E*. Detailed work sheets for each project were prepared by the Project Engineers and reviewed with the Focus Group, itemizing unit costs and all assumptions that went into preparation of conceptual cost estimates. These costs were used to assess relative costs of one project as compared to others.

### 1. The "Hot List"

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Following Focus Group approval and City Council review of the Preliminary Fiscally Constrained Plan for Facilities, it became evident that there was a need to pull from the Plan a list of high-priority facilities projects that were unlikely to be funded outside of specific capital project allocations. Many projects in the Fiscally Constrained Plan were considered likely to be funded in conjunction with major street improvement projects or future trail improvement projects.

At a Focus Group work session, the Group worked with City staff to approve a HOT LIST of selected capital projects recommended for early implementation. These are the highest of the *high-priority* projects because they:

- were given highest priority ranking during the general planning process;
- are located in areas of highest bicycle use;
- will help solve one of the two most-critical access problems identified by the Group (getting across College and provision of a good north-south route); and
- are not likely to be addressed as part of other capital projects.

*Figure 7 and the following table show the Fiscally Constrained Plan for Bicycle Facilities.*

## Fiscally Constrained Plan for Bicycle Facilities Estimated Project Costs

The HOT LIST	Total Cost
<p><u>BURLINGTON NORTHERN RAILROAD TRAIL</u>            COMMENT: The BN Railroad Trail was strongly supported by public comment, was a high priority in Focus Group evaluations, provides an excellent north-south access (one of the most-critical access problems, supports recommendations of the CSU Bicycle Plan, will provide regional bikeway connections into Loveland and other destinations; links with many other bikeways and trails and is located in areas of highest bicycle use.</p>	\$1,100,000
<p>• Harmony Road to Horsetooth Road  <i>Build underpass at Horsetooth; build new trail.</i></p>	\$250,000
<p>• Horsetooth Road to Drake  <i>Build underpass at Drake; assume use of bike lanes on McClelland.</i></p>	\$260,000
<p>• Drake to Prospect  <i>Build underpass at Prospect; build new trail, east side, rail right-of-way.</i></p>	\$340,000
<p>• Prospect to Laurel  <i>Improve roadway paralleling railroad right-of-way; other improvements.</i></p>	\$250,000
<p><u>PITKIN. COLLEGE TO SHIELDS</u>            COMMENT: This project would provide essential access into CSU. Conditions on Pitkin at present are not good for bicycling and this is an area of very heavy demand. The project will link with CSU bicycle facilities.</p>	\$962,196
<p><u>LAUREL. SHIELDS TO COLLEGE</u> <i>Add bike lanes.</i>            COMMENT: This is a low-cost project that can have substantial benefits in terms of safety and improved access. It will link with other city bicycle facilities and with facilities planned at CSU. This is an area of very heavy bicycle use, a high-accident location. It would provide east-west access across College.</p>	\$41,580
<p><u>HORSETOOTH, SHIELDS TO COLLEGE</u>  <i>Improvements to the Mason and College intersections.</i>            COMMENT: These improvements would provide a good east-west crossing of College Avenue south of Spring Creek Trail.</p>	\$306,601
<p><b>TOTAL COST OF "HOT LIST" PROJECTS</b></p>	<b>\$2,410,377</b>

### OTHER HIGH-PRIORITY PROJECTS

Lake, Shields to Center	\$29,106
Elizabeth, Overland Trail to Taft Hill	\$271,992
Laurel, Stover to Poudre River Trail <i>Add bike lanes.</i>	\$906,150
Linden/Redwood, Vine to Walnut <i>Add bike lanes, widening.</i>	\$358,246

<b>Elizabeth, Remington to Lemay, with connection to northeast</b> <i>Add bike lanes from Fuqua to Overland Trail.</i>	<b>\$41,580</b>
<b>Taft Hill, Mulberry to Prospect</b> <i>Widen the bike lanes.</i>	<b>\$1,543,346</b>
<b>Shields, Spring Creek Trail to Horsetooth</b> <i>Widen bike lanes north of Drake; maintenance needed as well.</i>	<b>\$1,527,078</b>
<b>Oak, College to Loomis</b> <i>Improve/ add bicycle facilities, College to Howe.</i>	<b>\$24,948</b>
<b>Mulberry, College to Peterson</b> <i>Add bike lanes, improve Remington, College intersections.</i>	<b>\$573,943</b>
<b>Drake, Shields to College</b> <i>Improve railroad crossing, add bicycle facilities through College intersection.</i>	<b>\$409,161</b>
<b>Drake, College to Lemay</b> <i>Add bike lanes, College to Stover</i>	<b>\$1,599,046</b>
<b>Poudre River Trail, College to Lemay</b> <i>Improve tight turns at Linden; improve trail access at Lemay.</i>	<b>\$300,000</b>
<b>Lemay, Riverside to Prospect</b>	<b>\$1,445,974</b>
<b>Lemay, Prospect to Drake</b>	<b>\$1,666,818</b>
<b>Lemay, Drake to Horsetooth</b>	<b>\$1,460,446</b>
<b>Spring Creek Trail, Shields to College</b> <i>Build a trail providing improved access from Shields.</i>	<b>\$325,000</b>

## G. Other Recommended Actions

### 1. Maintenance

Develop an upgraded procedure and schedule for maintenance of all City streets, with added priority given to streets with bicycle facilities. The objective is to improve safety and comfort for bicyclists, especially those traveling near the right-hand side of the roadway (except at left turn lanes). The maintenance program should be addressed to:

- cleaning pavement
- removal of debris
- repair of pavement
- snow and ice removal
- sand removal
- painting/lane striping
- railroad crossings
- definition of specific responsibilities for maintenance

Hire additional staff and/or reschedule existing staff to provide upgraded maintenance services.

Streets with a high priority for maintenance are shown in Figure 8

## **2. New or Updated Standards and Guidelines**

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Develop updated/new City standards for:

- drainage grate design and location
- bicycle parking
- lane striping and marking (include marking of bike lanes next to on-street parking, of bike lanes at right-turn lanes)
- signage along on- and off-road facilities
- signal actuation
- pavement repair quality/smoothness on bike facilities
- design standards for off-road trails
- alternative curb/gutter/bike lane designs
- intersection paving/design to minimize "washboard" conditions
- provision of bike ramps/troughs next to stairways
- railroad crossing treatment along bike facilities
- vertical clearance in underpasses
- provision of additional width on uphill lanes/trails
- drainage across paths
- sight distance requirements
- location of utility covers
- work zones; placement of signs so as not to obstruct bicycle travel.

Involved in this task will be time on the part of City Engineering Department staff, Bicycle/Pedestrian Coordinator, drafting and clerical staff for research, drafting standards, review and the approval process.

## **3. Policy on Work Crews**

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Contact all utility companies and other service companies who may have occasion to park vehicles in the street while working. Inform them of the prohibition on parking in bike lanes/distribute literature. Prohibit placement of signs and equipment in bicycle travel areas of the roadway. Provide guidelines on designation of alternative bicycle routes during work or construction. Work will include:

- Preparation of a brochure or single-page flyer to illustrate reasons for not parking in the bike lanes and to emphasize enforcement efforts.
- Telephone contacts and follow-up with utility companies by City Bicycle/Pedestrian Coordinator or staff.

## **4. Coordination with Enforcement Agencies**

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Work with the Police Department, City inspectors and other involved City departments to:

- Direct law enforcement officers to issue citations to vehicles parked in bike lanes
- Provide stronger enforcement of dirt drag-out ordinance.
- Enforcement of vegetation maintenance requirements.

## **5. Intersection Pavement Standards**

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Survey intersections along bike lanes and repair "washboard" conditions.

Staff time

Engineering/design

Construction costs

## **6. Traffic Signal Actuation**

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Retrofit traffic signals on bike facility streets to "sensitize" actuation loops to bicycles, where needed.

Work will include:

Survey of "problem" intersections;

Research/selection of actuation devices;

Cost of materials; and

Installation time/costs.

## **7. Support the Downtown Alternative Modes Program**

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Continue work with downtown merchants on alternative modes program.

## **8. Regional Bicycling Maps**

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Cooperate with other agencies to design, develop and distribute regional bike maps.

## **9. Plans and Policy**

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Consider the following policy and planning matters:

- Evaluate traffic calming techniques in Fort Collins in terms of impacts on traffic operations, bicycle travel, pedestrians, visual quality, potential reclamation of street space and neighborhood cohesiveness. Include review of existing traffic calming projects, such as Whedbee/Laurel, Laurel/Remington, Remington/Mountain and Remington/Elizabeth.
- Review and amend the LDGS to strengthen bonuses for provision of bicycle facilities and "bike friendly" planning/design.
- Require any new arterial and collector street to have full on-street bike lanes.
- Provide good, secure bike parking at schools and other locations; develop a bicycle parking ordinance.
- Review plan and policy documents to strengthen recommendations for good school access via bike.
- Plan for good access to the Senior Center.
- Develop alternative access to destinations along routes where bicycling is prohibited.

## IV. ENFORCEMENT

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### A Issues, Goals and Objectives

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The following goal and objectives for Enforcement were adopted to guide the process of developing the Fort Collins Bikeway Program Plan:

#### 1. Goal

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Respect for bicyclists and by bicyclists for traffic laws should be encouraged through effective, on-going enforcement programs. These programs should emphasize safety and educational messages.

#### 2. Objectives

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- a. *Work with law enforcement officials to determine the types of enforcement programs that will be most feasible and effective for Fort Collins. Recommend actions to develop support for implementation of these programs.*
- b. *Support the bike cop and bike ranger programs; publicize their roles in promoting public safety, good will and a positive image for bicycling.*
- c. *Evaluate the most commonly given types of bicycle citations for use in developing educational messages and other countermeasures.*
- d. *Develop recommendations to reduce bicycle theft and increase recovery of stolen bicycles.*
- e. *Analyze police records and City reports of bicycle crashes and develop recommendations for appropriate countermeasures.*
- f. *Encourage the Fort Collins Police Department to assign greater priority to enforcement of bicycle-related laws.*
- g. *Focus enforcement efforts on specific types of violations that most commonly are involved in accidents where the bicyclist is at fault.*

### B. Enforcement Issues

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Key issues related to enforcement of bicycle traffic laws include:

- Any law enforcement-based program should include engineering, education and encouragement considerations as well.

- The Police Department should make bicyclist law enforcement a priority and strive to make it a community commitment.
- The program must have support from both Police Department administrators and street supervisors if it is to get the support of the line traffic officers.
- To gain the support of line officers, they need to be sold on the importance of enforcement efforts. This is primarily a training effort which can begin in recruit school, progress through field training and continue with in-service training efforts.
- The status of bicycle violations as "misdemeanors" rather than civil offenses must be reviewed and changed if it is found to represent an impediment to enforcement efforts.
- Bicyclist attitude ("laws don't apply to ME") is a factor in crashes and in the public perception of bicyclists.
- A violators program for the City of Fort Collins that can serve an educational/motivational purpose should be considered.
- Since bicycles are not allowed on parts of College Avenue, the City should construct and designate a good alternative route or remove the prohibitions, in compliance with State law.

## **C. Discussion**

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### **1. Bicycle law enforcement - more than just giving tickets.**

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Enforcement involves more than giving tickets. Enforcement can take any of several forms:

- Citations
- Written warnings
- Verbal warnings
- Positive reinforcement

Positive reinforcement programs are used by many communities to reward and encourage safe riding behavior. Officers carry with them coupons for fast food, ice cream, or movie tickets. When safe riding conduct is observed the bicyclist is stopped and rewarded both verbally and with the coupon. This aspect is positive and very popular in the cities that use it.

#### **a. Penalties for violations**

Penalties can include:

- Fines
- Community service
- Violator seminars or classes.
- Other local programs

Some communities combine penalty and education by requiring offenders to attend bike violator

classes (defensive bicycling class) as part of their penalty. Some require community service. Programs such as CSU's Bicycle Education and Enforcement Program (BEEP) can serve dual purposes as enforcement and education.

## **2. Why should bicycle-related laws be enforced?**

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Enforcement plays a tremendously important role in enhancing overall traffic safety. Experience has shown that if the other traffic safety elements (engineering, encouragement and education) are in place, but no one enforces the rules, behavior won't reflect safe traffic practices. This applies to all travel modes - bicycling, driving a motor vehicle and walking.

### **a. What can we expect from effective enforcement?**

- Achieve voluntary compliance with the laws.
- Identify and correct violators and repeat violators.
- Reduce the number of crashes.
- Reduce the injuries and deaths resulting from these crashes.
- Effect a behavioral change in the community.
- Reduce the very substantial expenditures per year per person spent as a result of these crashes in the United States.

### **b. Enforcement reduces injury and death**

In Coon Rapids, Minnesota *bicycle/motor vehicle crashes were reduced by 55% within two years after implementing a bicycle enforcement program.*

This was done without perceivable changes in education programs or engineering. The only difference was the addition of penalties for unsafe and illegal bicycling conduct. Enforcement was the element that made the difference.

The Cross-Fisher Study<sup>3</sup>, made a startling discovery while interviewing bicycle crash victims. The bicyclists who were violating a law at the time of the crash revealed that 90% of them knew they were violating the law, and did it anyway. Quite often the key issue is not education - these cyclists had been educated. These cyclists simply had no fear of penalty.

### **c. Why do you obey traffic laws?**

Do you obey the speed limit because you are consciously aware that increasing your speed will reduce your reaction time? Do you think that a faster speed will increase your probability of a crash? Are you aware that higher speeds result in multiplied physical forces which result in more serious injuries or even death?

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<sup>3</sup>A Study of Bicycle-Motor Vehicle Accidents -Identification of Problem Types and Countermeasure Approaches, Anacapa Sciences, Inc., for National Highway Traffic Safety Administration, 1977.

Why do you remain stopped at a red traffic signal when you are the only car at the intersection and there isn't another car in sight? Are you afraid your search as been deficient and you may have missed that semi bearing down on you?

Unless you teach defensive driving or are an extraordinary driver, your reasons for obeying traffic laws have nothing to do with the reasons listed above. Most drivers obey the law because **they do not want to get a traffic ticket and deal with the penalties associated with it**. They don't want to pay fines, pay higher insurance premiums, explain a ticket to angry parents, go to court or lose their drivers licenses. These are the things that cause most people to obey traffic laws. We comply because we're always afraid of the traffic cop hiding behind the billboard.

Imagine for a moment you are driving your car in a place where the traffic laws have been suspended, or you know the only cop in the county is eating lunch 20 miles away. You are still going to drive the speed limit, right? If you know you will not possibly get a ticket or pay any penalty, most of you will not obey the law. That is the state of mind bicyclists are in all the time.

#### **d. Bicycle enforcement programs must also enforce motor vehicle laws affecting cyclist safety.**

*Common motorist violations that affect bicyclists include:*

- improper passing
- Failure to yield right-of-way
- No right turn on red (RTOR).

### **3. Why Don't Police Enforce Bicycle Laws?**

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All too often we are told that there aren't enough personnel or other resources to spend on non-critical matters like bicycles. Yet issuing parking, equipment and expired registration tickets, which questionably affect safety, are accepted practice. This allocation of resources continues despite the fact almost everyone in our communities spend at least some time as either bicyclists.

Persuading administrators and street officers to place higher priority on bicycle issues is the main challenge we face. We must remember that for many people, bicycling is a daily activity that kills and injures more people than most of the front-page crimes.

### **4. Strategies for a Successful Enforcement Program**

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A new enforcement program is not guaranteed to be successful or effective simply because it is new. Success and effectiveness can be improved by employing certain strategies before beginning a new enforcement program. Departments around the country who have run successful programs give this advice to those starting out or upgrading their programs.

### **•Administration**

Get the administration behind the program. A program will go smoother if everyone knows it has the Chiefs blessing and the line supervisors are prepared to support it.

### **•Program coordinator**

The coordinator has to be someone who wants the program to work. Nothing kills a program faster than a coordinator who doesn't care. Many pick officers who are self-starters and highly motivated to make the program succeed.

### **•Courts and prosecutor**

Going into a new program that will bring many new juveniles into the system may meet with disaster if it doesn't have the support of the courts and prosecutors. Meet with them and get their input and endorsement before starting the program. Courts might want input on such things as what age is the cut-off for court appearance (e.g., no one under 14 goes to court), seminar attendance requirements and other measures.

### **•Policy and procedure**

Print up citation books, obtain safety materials, develop form letters, and establish record-keeping procedures before starting out. Procedures need to be developed for violator seminar attendance, enforcement guidelines, bicycle impoundment guidelines, and so on.

### **•Education**

Education is strongly encouraged for administration, supervisors and the line officers doing the enforcement. Education must also include the public, via the media, schools, PTA meetings, civic groups, flyers sent home from school, city newsletter, water bill stuffers, local cable TV, town bulletin boards and the like.

### **•Media**

Don't surprise the public with this new campaign. Let them know what is about to happen and why. Tell them what the targeted violations are and encourage voluntary compliance. The public will be supportive if the program is run fairly and consistently, and if it doesn't feel like the victim of an ambush.

## **D. Existing Enforcement Programs**

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Bicycling-related laws are enforced within Fort Collins' geographic boundaries by two agencies: City of Fort Collins Police Department and Colorado State University (CSU) Police Department. These two Departments vary substantially in their bicycle law enforcement practices.

### **1. City of Fort Collins Police Department**

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The Department includes a bicycle unit of six officers who ride bicycles. They conduct occasional patrols of trails but are not dedicated, full-time to bicycle law enforcement.

Enforcement of bicycle-related laws is left to the discretion of individual officers. There is no enforcement plan, policy or other directive that encourages enforcement of bicycling laws. The

result is very limited enforcement activity. A member of the Department's Traffic Unit estimated that approximately five tickets were issued to bicyclists within a six-month period.

Reasons given for not enforcing bicycle-related laws include:

- \*Not enough officers;
- \*A primary focus on cars and traffic/bike traffic is not a Department priority;
- \*Bicycle law violations are technically misdemeanors - arrestable offenses; motor vehicle law violations are civic offenses, which raises a fairness issue in the minds of officers;

To get an idea of the types of bicycle-related violations occurring in Fort Collins, citations issued to bicyclists involved in bicycle accidents were reviewed for the five-year period from 1989 *through* 1993. In these cases, the bicyclist's riding contributed to the accident.

The most frequently occurring types of bicyclist violations involved in these accidents are:

1. Wrong-way riding	(22 accidents)
2. Careless/did not obey traffic laws	(13 accidents)
3. No lights or lighting equipment	(11 accidents)
4. Ran a red light	(10 accidents)
5. Stop sign violation	(8 accidents)
6. Failure to yield right-of-way (crossing or entering street)	(6 accidents)
7. Failed to ride to the right	(4 accidents)
8. Riding where prohibited (College Avenue, sidewalks)	(2 accidents)

Eighty-one bicycle accidents serious enough to be reported to the police might have been prevented had an active enforcement program been in place to motivate bicyclist compliance with the laws, supplemented by an effective education program.

*Most bicyclists know the laws! In the City of Fort Collins, they also know that the likelihood of their being punished for disobeying the laws is negligible.*

## **2. Colorado State University Police Department**

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Colorado State University has the largest concentration of bicycle users in Fort Collins - an estimated 20,000 bicycles events on campus. CSU has implemented an active program of enforcing bicycle law violations. Among key aspects of the program are:

- \*Well-publicized regulations, modeled after those of other universities and the Colorado Model Traffic Code;
- \*Information on regulations is distributed via *Collegian* newspaper, enrollment packets, information at residence halls, previews and focus.
- \*Bicycle license requirement (\$5.00 fee to license bike for five years);
- \*Bicycle lights required when riding on campus streets or sidewalks;
- \*Dismount zones (plaza) enforced;
- \*Education is a major program component - violators are given the option of attending a twohour safety class in lieu of half the fine;
- \*An oral and/or written appeal process is established. Appeals are heard by campus Court Referee.

Patrol officers and student commissioned officers are authorized to write violations. Both bicycle officers and officers in vehicles enforce the regulations. Approximately 2,851 tickets were written in the past year, with an average fine of \$15 - a total of \$42,000 in additional revenue. The number of repeat offenders is estimated at 10 to 15%. Since the current program was initiated, officers are reported to be more motivated to enforce the laws.

**a. Types of bicycle violations at CSU**

CSU Police Department data indicate that the following were the most frequently issued bicycle violations between March 1, 1994 and March 1, 1995 (NOTE: see also APPENDIX F):

<b>TYPE OF BICYCLE VIOLATION</b>	<b>Number</b>	<b>% of Total</b>
Riding in a dismount zone	920	32.3
Failed to obey traffic control device	850	29.8
Rode without lighting equipment	657	23.0

**E. Recommended Actions**

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Following are specific actions recommended for inclusion in the overall Bikeway Program Implementation Plan.

**1. Change status of bicycle violations**

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Take steps to change the status of bicycle law violations from misdemeanors to civil offenses.

**2. Expand bicycle enforcement program**

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By January 1, 1997, gain City approval for an expanded bicycle enforcement program.

*Elements of this program might include:*

- Increase the priority given to enforcing bicycle-related laws within the Fort Collins Police Department, with enforcement applying to both bicyclists and motorists.

- Expansion of the bike cop program, with additional training, visibility and direction to enforce bicycling laws as a priority.

- Designation of Community Service Officers to assist in enforcement efforts.

- Consider establishing a citation quota for all officers enforcing traffic laws, at least on a trial basis.

- Provide bicycle law enforcement training for all officers who enforce traffic laws.

- Develop an education-oriented program for violators, similar to CSU's BEEP program.

Target enforcement efforts on the most-common bicycle violations found in reported accidents:

- Wrong-way riding
- No lights or other required night-riding equipment
- Running red lights
- Running stop signs
- Bicyclists that are careless or disobey traffic laws

Implement a selective enforcement program (see *Appendix F*)

### **3. Develop alternatives to streets where bicycling is prohibited**

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Review all areas where bicycle riding is prohibited and develop proposals for alternative access, where appropriate, to destinations within these areas. This is especially important in the downtown area. Bicycling on College Avenue is prohibited and bicyclists frequently use the sidewalk, creating conflicts with pedestrians.

### **4. Focus on specific-accident-related education messages**

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In education programs, stress the reasons why bicyclists should obey traffic laws and the role this obedience plays in accident prevention. Emphasize education messages relating to the most common types of violations:

- Wrong-way riding
- No lights or other required night-riding equipment
- Running red lights
- Running stop signs
- Bicyclists that are careless or disobey traffic laws

### **5. Ride like a VEHICLE!**

---

Develop the basic message that, "if you want to be taken seriously as a VEHICLE on the roadways, you have to ride responsibly and obey the same traffic laws as motorists."

The community bicycle transportation survey showed a very strong concern on the part of motorists about bicyclists' disregard for traffic laws.

Most education efforts seem to focus on children. While the importance of training the upcoming generation of bicyclists should not be neglected, the education of adult riders should also be given priority. Each adult cyclist is a role model -- to motorists, other bicyclists and to his or her children. How often have you seen a family out bicycling, and the kids all are wearing helmets while the adults are not? What kind of message does this send to the children? How often do you see bicyclists cutting across the street, mid-block, in front of traffic? Would they do that if they were driving a car? Of course not! What kind of message does this send to motorists? Do the bicyclists act like responsible operators of vehicles on the roadway or like overgrown kids playing on their toys? Enforcement is necessary to back up education efforts.

## **6. Include motorists**

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In education programs, let motorists know that bicyclists on the roadways have the same rights and responsibilities as other vehicles. Emphasize the "One Less Car" message and the role that bicycling can play in reducing congestion. Encourage courtesy and good road-sharing practices.

## **7. Involve the Police Department in bicycle events**

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Spotlight the Police Department in activities such as Bike Week. Highlight its accomplishments for bicycling. Feature "bike cop seminars" where civilians can learn some of the unique and wonderful bicycling skills routinely taught to bicycle patrol officers.

## **8. Publicize enforcement efforts**

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Publicize the Department's enforcement effort, casting it in a positive light as a powerful weapon against traffic deaths and injuries.

# **V. EDUCATION**

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## **A. Issues, Goals and Objectives**

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The following goal and objectives for Education were adopted to guide the process of developing the Fort Collins Bikeway Program Plan:

### **1. Goal**

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Improve safety and encourage increased transportation bicycling through recommendations for a comprehensive, on-going group of education programs targeted at motorists, pedestrians and bicyclists of all ages. Work with school districts, civic groups and others to help find resources to support this effort and to reach the broadest possible audience.

### **2. Objectives**

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- a. *Explore ways of involving children in bicycle education and skill-based learning experiences at all grade levels. Evaluate the suitability of existing programs and work with appropriate parties to develop a strategy for implementing an on-going program.*

- b. *Develop recommendations for informational materials and programs to reach adults and encourage them to take up bicycling. Use educational programs to increase their skill levels, teach them that bicycles are vehicles and introduce them to "role models" for learning appropriate and predictable bicycling behavior.*
- c. *Review and make recommendations related to the potential need for specialized education programs that target professional drivers (e.g., school bus drivers, truck drivers), law enforcement officers, the elderly and people with disabilities.*
- d. *Provide special emphasis in all education programs on:*
  - *helmet use*
  - *use of lights, reflectors and other safety equipment*
  - *being predictable*
  - *messages directly related to bicycle crash countermeasures*
  - *messages specifically related to problem areas such as downtown sidewalk use and "median hoppers":*
- e. *Develop a strategy for education-oriented events and public information materials that can supplement activities such as Hike Week to extend its influence to other times of the year.*

## **B. Existing Programs**

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There are presently no active bicycle education programs in Fort Collins, aside from occasional visits by "Officer Friendly" to elementary school classrooms and education-oriented bicycle safety events held annually during Bicycle Awareness Week.

## **C. Discussion**

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The Focus Group held a brainstorming session to discuss what issues associated with bicycle education in Fort Collins. The session was identified the populations that should be reached through education about bicycle safety and improving bicycling skills.

One thing that came across loud and clear is that education has to become a *community value*. People "talk it" now, but don't actually follow through with action. There has been very limited success at getting bicycle education into the schools. There is very little enforcement and encouragement programs are primarily limited to Bike Week and distribution of promotional materials. These bicycle program elements are strongly related to education.

There's an especially fine line between education and encouragement. Bike training courses through the Parks and Recreation Department, for example, could be tailored to different skill levels and include basic bike maintenance and emergency repairs - things that give bicyclists the confidence to be able to get out and ride. Knowledge is power!

## **1. School-based education programs - the challenge of getting into the schools**

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What efforts have been made to get bicycle safety education into the schools? Decisions about bicycle education curricula are generally left to the individual schools ... and only a few have responded to the offer of education programs and activities. Teachers are generally not trained to teach bicycling skills and are not active bicyclists.

## **2. Populations to be reached through education**

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What groups should be targeted with bicycle education programs? Training will be most effective if it is designed with messages and activities appropriate to specific audiences (e.g., children, adults, motorists).

The Focus Group defined the following "audiences" for bicycle education:

- elementary school students
  - K-3
  - 4-6
- junior and senior high school
- young adults
- commuters
- recreational riders
- seniors
- public school administrators and teachers • motorists
- neighborhoods
- law enforcement officers

*NOTE. Appendix G includes a detailed list of program ideas and considerations developed by the Focus Group for each of these "target audiences" for bicycle education.*

## **D. Recommended Action Program for Education**

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### **1. Hire a Bike Education /Encouragement Coordinator on City staff**

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This should be a new position, full-time, to coordinate education and encouragement programs, reporting to the City Bicycle/Pedestrian Coordinator.

This person would work closely with schools, employers, community organizations and other City staff to develop and implement educational programs and activities.

## 2. Specific tasks might include:

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### a. Helmet Campaign

Contact/work with helmet manufacturers to obtain donation or low-cost bike helmets for distribution through schools, rodeos, events, as rewards.

### b. Develop a Bicycle Education Program in the Schools

Work with school principals, risk management staff and administrators to research available materials and to develop a bicycle education program for incorporation into the regular school curricula at all levels (K-high school). Elements of this program might include:

#### *Elementary schools*

Helmet program - donated or at-cost/required if kids ride to school

P.E. program

Bike outings tied to training for sign i.d., what to do before you go on a bike (bike check), emergency repairs, taking care of your bike, signaling, good riding, etc.

Select curriculum and teach it (opportunity to learn and do)

#### *Junior high schools*

Helmet program - donated or at-cost/required if kids ride to school

Select curriculum and teach it (opportunity to learn and do)

Environmental/science education

Health science education .

Bike shop class

#### *High schools*

Helmet program - donated or at-cost/required if kids ride to school

Select curriculum and teach it (opportunity to learn and do)

Incorporate into drivers' ed

Offer through P.E. program

Discuss in civics classes, where urban growth, transportation are involved.

Offer credits to the students for teaching elementary school kids about bicycling .

Work with school principals, risk management staff and administrators to research available materials and to develop a program for training teachers and others who will be involved in bicycling education,

### c. Coordination between City and Schools

Provide coordination between schools and City departments on enforcement of bicycle-related laws around schools, provision/design of bicycle parking, "safe routes to school," land use plans and policy,

#### **d. Bicycle Education Pilot Project**

Coordinate with school officials to develop, implement and evaluate a bicycle education pilot project

#### **e. Coordination with CSU Education Programs and Activities.**

Work with student, faculty and administration representatives of CSU to promote bicycle safety education programs.

#### **f. Adult Bicycle Commuter Education Campaign**

Develop an educational campaign aimed at adult commuter bicyclists. This may include research and development of educational materials, coordination with other City departments, with bike shops and other retailers, with media representatives and bike clubs, among others.

Among potential elements of this campaign are:

- Bike training offered through City Parks and Recreation Department - Bicycling 101, bike maintenance, emergency repairs, outings
- Hang tags on new bikes sold in city
- Brochures, other info on need for lights, helmets, safety equipment
- Adult bike rodeo
- Training programs offered through employers (financial incentives, work time allowed for training)
- Regular newspaper column stressing education, issues, improvement of skills
- Use commuters as role models for educating kids
- "How to do it" for commuters during Bike Week/Bike Fair
- Increased television coverage of bicycling-related issues, events, personalities; education messages.

#### **g. Novice Bicyclist Education Campaign**

Develop an educational campaign aimed at beginning and novice bicyclists, especially those using off-road trails.

Among possible elements of this campaign are:

- Stress "share the trail" messages
- Add "share the trail" messages to City bike map
- Kiosks, other "on-trail" information
- Provide trail maps with educational messages
- Publish educational articles in newsletters and newspapers (Coloradoan, Commuter News)
- Mileage markers, messages (Burma Shave)
- Bike parcours

## **h. Senior Bicyclist Education Campaign**

Develop an educational campaign aimed at seniors who wish to use bicycles for transportation, exercise, social activities and maintaining their independence.

Among possible elements of this campaign are:

Offer classes through the Senior Center and Parks and Recreation Department

Stress sidewalk safety, riding with traffic, other rules of the road - and reasons why.

Provide articles in senior publications, newsletters - education and "how to get there."

Inform/educate about the existence, location of facilities and programs

Speaker's bureau to provide slide presentations, handouts on bike/bike ed topics.

"Dial-a (Bike)-Ride"/Bike Buddies programs - experienced cyclists escort and teach

## **i. Motorist Education Campaign**

Develop an educational campaign aimed at motorists to teach roles, rights and responsibilities related to bicyclists.

Among possible elements of this campaign are:

Expand bike coverage in drivers' license manual

Weekly newspaper column on bike ed topics

Insert with auto registration renewal mailings

In education programs, let motorists know that bicyclists on the roadways have the same rights and responsibilities as other vehicles.

Emphasize the "One Less Car" message and the role that bicycling can play in reducing congestion.

Encourage courtesy and good road-sharing practices.

## **j. Neighborhood Bicycle Safety Program**

Develop an educational campaign aimed at neighborhoods that wish to improve safety and the quality of bicycling in their areas.

Among possible elements of this campaign are:

Offer training for neighborhood volunteers (one day, annual event??)

Neighborhood volunteers to offer annual training to the neighborhood  
Use seniors and /or CSU Extension pay-back community service hours to provide bike ed training  
Speakers at Congress of Neighborhoods; homeowners association meetings  
Provide articles for homeowner association newsletters  
Hold bike rodeos, safety events in the neighborhoods

## **k. Coordination with Police Department**

Work with the Fort Collins Police Department and other law enforcement agencies to:

- Offer training/require participation for all law enforcement officers
- Stress reasons for enforcement as well as "what the rules are,"
- Develop BEEP/Peer Court or similar technique for dealing with offenders that has a strong educational component.
- Focus on specific crash-related violations and messages.

## **l. Define Program Objectives**

Provide a clear definition of objectives for the education programs, Develop education messages that stress the reasons why bicyclists should obey traffic laws and the role this obedience plays in accident prevention.

Emphasize education messages relating to the most common types of violations:

- Wrong-way riding
- No lights or other required night-riding equipment
- Running red lights
- Running stop signs
- Bicyclists who are careless or disobey traffic laws
- Ride like a VEHICLE!

## **m. Get the Word Out!**

Develop and distribute educational materials that use these messages and the basic idea that, "if you (the bicyclist) want to be taken seriously as a VEHICLE on the roadways, you have to ride responsibly and obey the same traffic laws as motorists,"

# V1. ENCOURAGEMENT

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## A. Issues, Goals and Objectives

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### 1. Goal

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Develop an environment in which people are actively encouraged to bicycle for transportation through information about facilities and "good streets for bicycling," through positive publicity about bicycling activities, through publicizing actions by employers, developers and business owners to encourage bicycling, regular news and television coverage, major bicycle transportation events (Bike Week, etc.) and other measures geared toward enhancing Fort Collins' reputation as a BICYCLE CITY!!

### 2. Objectives

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- a. *Document and promote Fort Collins' position as a destination for bicycle tourism through maps, events (e.g., Ride the Rockies), contacts with adventure travel and tour operators, media coverage and other means.*
- b. *Document and promote bicycling's contribution to Fort Collins' economy in terms of jobs, sales tax and other sources.*
- c. *Promote establishment of employer incentive programs for bicycle commuting. Recognize existing programs and encourage their expansion.*
- d. *Make recommendations for coordination of encouragement efforts, creating a partnership between government agencies and private sector organizations.*

## B. Existing Programs

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Fort Collins actively promotes bicycle use through a variety of events, programs and materials. Among these are printing and distributing maps bicycle of bikeways and trails, Bicycle Awareness Week and the Downtown Alternative Transportation Program.

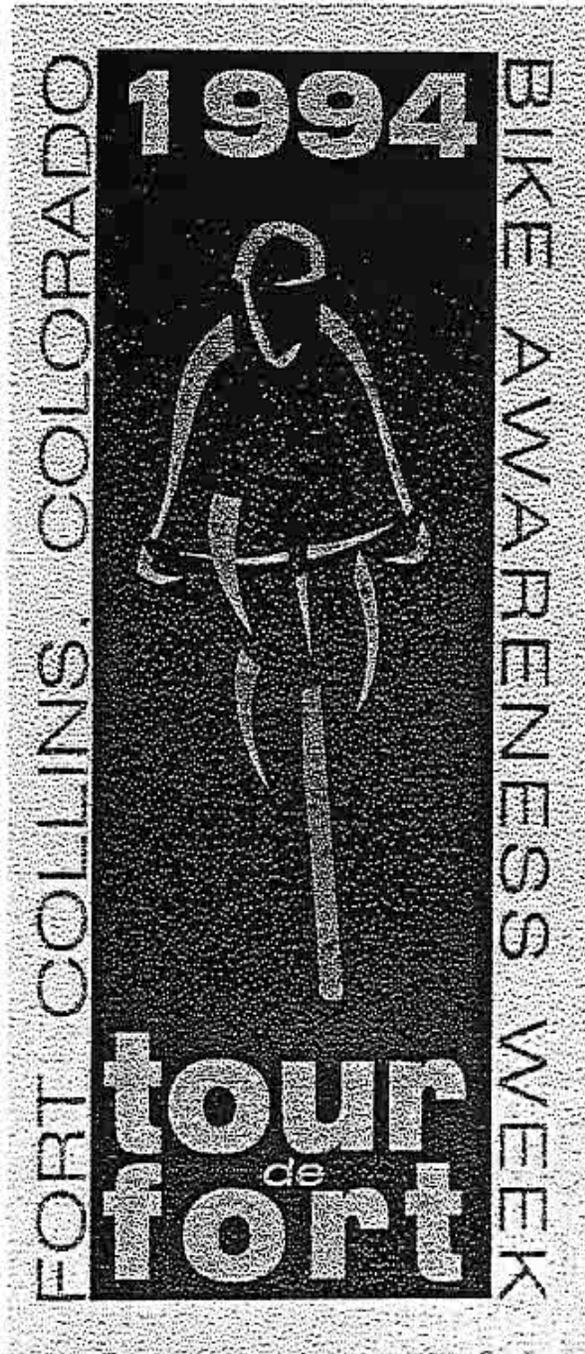
### 1. Bicycle Maps

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The City provides a colorful map of Fort Collins bicycle facilities and multi-use trails for public distribution. The map, which is updated annually, includes information on safety and bicycle resources within the community.

## 2. Bicycle Awareness Week

Bicycle Awareness Week is held each summer. It is coordinated by the City's Bicycle and Pedestrian Coordinator. In 1994, the following events were held:



### **Sunday**

*Bike to Church Day* - join congregations citywide in bicycling to church,

*Tri-City Metric Century Bike Ride* - ride Fort Collins/Greeley/Loveland.

*Family Used Bike Sale* - trade outgrown and used bikes,

### **Monday**

*Card Rally Trail Ride* - an evening ride on the City's bike trail system with prizes given for cards collected along the way,

### **Tuesday**

*Community Team Hunt* - teams of community members test their knowledge of Fort Collins landmarks on bikes.

### **Wednesday**

*Bike to Work Day* - Cycle to work and stop at one of eight locations for a free continental breakfast.

Free bicycle check-up clinics provided at each stop.

### **Thursday**

*Bike the Night* - Wear helmets, use lights and cycle safely for a concert in Old Town, Visit Bike Fair sponsored by local bike shops,

### **Friday**

*Low Rider Bike Design Contest* - Prizes given in a variety of categories,

### **Saturday**

*Bicycle Rodeo* - Children learn bicycle safety; held at an elementary school,

*Bike Week Essay Contest* -- Your most notable, humorous, memorable or extraordinary Bike Week Experience.

### 3. Downtown Alternative Transportation Program

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This program involves downtown merchants in efforts to promote bicycling and walking as alternatives to motorized transportation for their employees and customers. As part of this program informational handouts have been distributed and new bicycle parking spaces have been installed at convenient locations.

## C. Discussion

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The Focus Group held a brainstorming session on the issue of "Encouragement." Discussion focused on the following topics:

- What can we do to encourage more people to bicycle for transportation?
- What is being done now that works and that doesn't?
- How can we build on our strong programs and expand to reach a greater part of the population?
- What are ideas of events, program elements and activities that might be incorporated into a City encouragement program and into plan recommendations?

*Appendix H* includes a discussion of 20 general ideas that came out of the brainstorming session as well as detailed program recommendations. Key ideas and recommendations are summarized here.

### 1. Key Encouragement Issues and Ideas

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- Facilities play an important role in encouraging bicycle use.
- Promotions help increase visibility for bicycling -- year-round efforts are needed.
- Secure bicycle parking is an incentive to bicycle use,
- *Yes, you CAN bicycle in winter!!* Many people are intimidated by the idea, although it is really quite pleasant under all but the most extreme conditions.
- Bicycling promotions can be tied to merchant discounts, give-aways and coupons.
- What about a "cycling hall of fame" in a prominent location at City Hall?
- How about developing a "starter kit" for new bike commuters.
- Employer involvement is essential!
  - Encourage businesses to have nonmotorized pool vehicles ... pool bikes, It is also important to have pool motor vehicles for bike commuters,
  - Encourage businesses to reimburse employees for mileage "driven" on bicycles.

The "guaranteed ride home" is an important idea.

- Trails encourage people to try two-wheeled travel.
- Provide bicycling opportunities for tourists and other visitors.
- Bike maps could show people how to get around town (and out of town) on bicycles, as well as providing safety and program information.

## **D. Recommended Action Program for Encouragement**

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A detailed listing of possible Encouragement Program activities and elements can be found in *Appendix G*. The following actions are recommended:

### **1. Hire a Bike Education /Encouragement Coordinator on City staff**

---

This should be a new position, full-time, to coordinate education and encouragement programs, reporting to the City Bicycle/Pedestrian Coordinator.

This person would work closely with schools, employers, community organizations and other City staff to develop and implement encouragement programs and activities.

*Among possible elements of the encouragement program are:*

Print and distribute bicycle maps showing location of facilities and bike parking.

Work with TransFort to put bike racks on buses and lockers at park n' ride lots; provide good waiting areas for bicyclists at bus stops.

Provide year-round promotion of bicycle activities.

Develop a competition (bike for bucks) and awards program.

Continue and strengthen coordination with CSU.

Provide and work for publication of articles, tv spots on "how to" bike in winter, bike to work, ride the trails, etc.

Work with employers on implementation of bike commuter programs

Provide bicycling information in hotels, motels

*Encourage bicycling by school-age students and others, through such activities as:*

Bike club/bmx activities

Program to encourage teachers and administrators to ride

Bike outings, camping

Restrictions on student car use (college and high school)

A "reward program"/competition over the whole school year with awards (merchandise, etc.) both year-end and at intermediate stages, for bike use/activities.

Offer incentives encouraging school administrators, teachers/faculty and staff to ride to work.

Develop an encouragement program aimed at *adult commuter bicyclists*. Among possible elements of this campaign are:

- Alternative mode breakfasts
- Commuter "starter kits"
- Bike buddy program
- "Ride to work" events
- Competition/awards program
- Employer incentive programs

Develop a bicycling encouragement campaign aimed at *seniors*. Among possible elements of this campaign are:

- Senior bike clubs, rides and events
- Involve seniors in "Bike Friendly City" campaign
- Prizes, incentives, bike trips, history tours by bike.

Develop a bicycling encouragement campaign aimed at *motorists*. Among possible elements of this campaign are:

- Include bike education information with Welcome Wagon, Chamber of Commerce, other new resident contacts; "Bike Friendly City" campaign

Develop a bicycling encouragement campaign aimed at *neighborhoods*. Among possible elements of this campaign are:

- Offer neighborhood events during Bike Week/tie with training

Develop a bicycling encouragement campaign aimed at *law enforcement officials*. Among possible elements of this campaign are:

- Involve the Police Department
- Spotlight the Police Department in activities such as Bike Week, Highlight its accomplishments for bicycling. Feature "bike cop seminars" where civilians can learn some of the unique and wonderful bicycling skills routinely taught to bicycle patrol officers,
- Publicize the Department's enforcement effort, casting it in a positive light as a powerful weapon against traffic deaths and injuries,

## **V11. IMPLEMENTATION -- THE BOTTOM LINE**

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Adopting a plan is a beginning, not an end, Although this Plan is the product of a year's work by many dedicated Fort Collins residents, consultants and staff, it represents, in reality, a small piece of the overall transportation puzzle. Bicycling for transportation is the primary focus of this plan. Although we are strongly dedicated to promoting bicycling in Fort Collins, we recognize that the person riding the bicycle, the person designing the bike lanes, the motorist,

the pedestrian and the bus driver all must work together if the goals of this plan are to be achieved.

The "big picture" goes beyond transportation. Recommendations in this plan can affect the health and quality of life for many individuals. They can prevent injury and death by reducing traffic accidents. They impact land use and land development. Neighborhoods with a high degree of porosity, oriented to local activity centers can be "home base" for people who can choose any of several good transportation options.

They don't need a car to get around. They can walk, ride a bicycle or take public transportation or combine several of these modes. Kids will learn good traffic skills at an early age and will not be as dependent on mommy and daddy for rides to soccer practice, to school or to visit friends. Seniors can enjoy greater mobility and independence (not to mention relief from the economic burdens of car ownership) since they will be able to bicycle, walk and/or use transit in an environment that is considerate of their preferences and abilities.

People of all ages can learn the pleasure that can come from "getting there" under their own power. They can enjoy the breezes, the views, the fragrance and sounds around them as they travel, arriving relaxed and refreshed at their destination.

The recommendations of this plan can have very positive economic benefits for Fort Collins as well. Not only do people save money by bicycling for transportation, but they also tend to expand their horizons to bicycling for recreation as well. Bicycle tourism has many potential benefits for Fort Collins. A bicycle-friendly community, on the North Front Range, with trails, shopping, good restaurants and a welcoming attitude can become a primary destination for people taking vacations with their bikes.

The bottom line, then, is that the recommendations in this plan must be fully considered in an integrated way, as important elements of actions that have far-reaching community benefits. Educating bicyclists, and motivating them to obey traffic laws, not only benefits them but also develops good role models, whose behavior can induce others to try bicycling and establish improved respect for bicycling by motorists. Improving an intersection for bicycles improves it for other road users as well. This is not "just" a bicycle plan.

## **A. Implementation Priorities**

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Highest priority should be given to implementing the policy, programs and administrative actions recommended in this plan. Fort Collins' bicycle facility system is, overall, in good shape. Improvement is certainly needed, but costs are high and funds are limited. A small investment in staff time, energy and materials needed to implement education, enforcement and encouragement programs can achieve benefits of lasting significance to Fort Collins. The payback can be many times the price of implementation. These "soft" types of recommendations are typically mere sidebars in transportation plans. The more-tangible recommendations for capital projects -- things we can see on the ground - get all the attention. The bikeway and trail systems in Fort Collins, however, have already established a firm foundation of facilities. What is needed is encouraging their use, creating a safe and predictable transportation environment through better enforcement, teaching people how to ride safely and skillfully,

putting in place the policy and standards that will build a bicycle-friendly community and, finally, taking care of what we've got, through responsible maintenance and management of the facilities system.

For these reasons, the Fort Collins Bikeway Focus Group established the following general priorities for implementing this plan:

Highest Priority	<i>Programs and Policy</i>
Second Priority	<i>Maintenance and Management of the Facilities System</i>
Third Priority	<i>Capital Projects for Facilities.</i>

## **B. Summary of Recommended Action Items**

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Following is a *summary of recommended actions*, along with priorities and estimated costs. Additional information can be found in the *Plan Elements* sections and *Appendices* of this report.

### **1. Hire a Bike Education /Encouragement Coordinator on City staff**

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<i>Estimated Costs:</i>	<i>Salary</i>	<i>\$44,000/year</i>
	<i>Costs for printing, materials</i>	<i>\$10,000/year</i>
<i>Priority:</i>	<i>FIRST PRIORITY</i>	
<i>Implementation Phase:</i>	<i>1996-1997</i>	

This should be a new position, full-time, to coordinate education and encouragement programs, reporting to the City Bicycle/Pedestrian Coordinator.

This person will work closely with schools, employers, community organizations and City staff to develop and implement education and encouragement programs and activities as described in this Plan.

### **2. Expand Fort Collin's Bicycle Law Enforcement Program**

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<i>Estimated Costs:</i>	<i>Salary</i>	<i>\$ ? Assign staff</i>
	<i>Costs for training</i>	<i>\$10,000</i>
	<i>Costs for printing, materials</i>	<i>\$ 500</i>

*Priority:* *FIRST PRIORITY*

<i>Implementation Phase:</i>	<i>1996</i>	<i>Develop Enforcement Program Plan</i>
	<i>1996-1997</i>	<i>Hire or assign Coordinator, conduct training, begin upgraded enforcement efforts in concert with Enforcement Program Plan</i>
	<i>1998-2000/Future Phases</i>	<i>Ongoing implementation and evaluation of impacts.</i>





of street space and neighborhood cohesiveness. Develop guidelines for design of traffic calming improvements.

*Consultant* \$50,000  
*Implementation Phase:* 1997-98

(2) Review and amend the LDGS to strengthen bonuses for provision of bicycle facilities and "bike friendly" planning/design.

*Staff*  
*Implementation Phase:* 1996-1998

(3) Strengthen and clarify City street design policy, to require all new arterial and collector streets to have full on-street bike lanes.

*Staff*  
*Implementation Phase:* 1996-1997

(4) Develop and secure adoption of a bicycle parking ordinance to ensure provision of secure, high-quality bike parking at employment centers, activity centers, schools, commercial centers, community facilities, apartments and other locations.

*Staff (with possible  
consultant review/input)* \$10,000  
*Implementation Phase:* 1996-1997

(5) Prepare design/planning studies and development guidelines for assuring bicycle access to major destinations and activity centers, especially along streets identified as barriers to bicycling (e.g. College Avenue). Work would involve:

Selection of representative case studies  
Design/planning analysis  
Review and input from developers, homeowners associations, merchants and others.  
Develop design/planning guidelines and "typical" design concepts  
Make specific recommendations for integrating the guidelines into applicable plans, policies and/or regulatory documents.

*Staff*  
*Consultant* \$50,000  
*Implementation Phase:* 1997-1998

(6) Prepare a neighborhood design/planning study to investigate ways of encouraging porosity in the context of larger land use and transportation planning considerations. The study will explore ways to encourage use of alternative transportation modes through land use and site planning. It will result in preparation of specific guidelines and recommendations for incorporation into City plans, policies and/or regulatory documents.

*Staff*  
*Consultant* \$100,000  
*Implementation Phase:* 1997-1999



guidelines for facilities maintenance should be prepared. The objective is to improve safety and to encourage bicycle use for transportation. The maintenance program should address:

- |                      |                        |
|----------------------|------------------------|
| cleaning pavement    | sand removal           |
| removal of debris    | painting/lane striping |
| repair of pavement   | railroad crossings     |
| snow and ice removal |                        |

## **7. Implement the Fiscally Constrained Plan for Bicycle Facilities**

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*Estimated Costs:* (see table, Facilities Element)

*Priority:* THIRD PRIORITY

*Implementation Phase:* 1996-2010, in response to funding opportunities

The Fiscally Constrained Plan for Bicycle Facilities presents the highest-priority bicycle facilities projects, along with costs based on preliminary engineering analysis. "HOT LIST" projects should be scheduled for early implementation. Other high-priority projects in this Plan should be implemented as funds become available and integrated with other transportation improvements, where feasible.

## LIST OF FORT COLLINS BICYCLE FOCUS GROUP MEMBERS

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Dale Beucler  
Joe Bilotta  
Peggy Catlin  
Suzanne Cordery-Cotter  
Rita Davis  
Mike Doten  
Betty Drake  
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Larry Schneider  
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Paul Valentine  
Eldon Ward**