

TECHNICAL MEMORANDUM #2
Vermont Agency of Transportation
Existing Conditions:
Facilities, Goals, Policies, & Management

**Vermont Bicycle and
Pedestrian Policy Plan**

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March 21, 2006

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Technical Memo #2

Existing Conditions: Facilities, Goals, Policies & Management

Disclaimer: The information below is presented for purposes of providing an overview of applicable state policy guidance and to facilitate the discussion of policy issues as they relate to the revision of the Vermont Bicycle and Pedestrian Policy Plan. Inclusion here does not constitute an endorsement by the Vermont Agency of Transportation (VTTrans) of the policies stated unless otherwise noted.

2.1 INTRODUCTION

This memorandum examines the existing VTTrans goals, policies and management as they related to walking and bicycling facilities. It also provides initial information about the bicyclist and pedestrian facility system in the State of Vermont. A thorough understanding of the existing VTTrans policies, goals, objectives, and management relating to bicyclist and pedestrian transportation will be helpful as VTTrans re-evaluates current policies, develops a strategic policy approach for the future, and updates the goals and objectives of the Bicycle and Pedestrian Program.

At this stage in this project, this review does not evaluate the existing goals, policies and management systems as to their on-going appropriateness or suitability for continuation into the future. The information is only meant to provide the basis for future discussion on policies and performance measures that are needed in Vermont.

2.2 EXISTING BICYCLING AND WALKING FACILITIES

Statewide data that clearly shows what bicycle and pedestrian facilities exist in Vermont is difficult to assemble. Each of the regional commissions in Vermont maintains some form of data but the focus and level of detail of the data are quite variable, depending on the particular emphasis in each region. No Statewide collection of bicycling and walking facility information in a user friendly format currently exists in Vermont.

Attachment 2.A includes information on the existing bicycle and pedestrian facility data that has been acquired from the various regional commissions around the State.

2.3 POLICIES

2.3.1 Federal

Establishing Federal Policies

Federal policies have an influence on state and local bicycle and pedestrian transportation decisions in Vermont. These federal policies affect pedestrian and bicycle facilities, such as curb ramps and

sidewalks, as well as pedestrian and bicycle programs, such as Safe Routes to School. The policies are established in different ways. Two main categories of federal policy are:

- United States Code (USC). The USC is modified by Congress through laws (e.g., Americans with Disabilities Act).
- Rules and Guidelines. Guidance set by federal agencies to provide information about how the laws should be carried out (e.g., Americans with Disabilities Act Accessibility Guidelines, set by the U.S. Access Board).

The sections below describe how federal policies mandate and guide the State of Vermont to provide access for people with disabilities, support the accommodation of bicyclists and pedestrians in transportation plans and projects, and implement Safe Routes to School (SR2S) programs.

Access for People with Disabilities

The State of Vermont must follow the federal policies that have been established to improve access for people with disabilities. According to the 2000 U.S. Census, nearly one in every five Americans has a disability. People with disabilities are more likely to be pedestrians than other adults because some physical limitations can make driving difficult.

United States Code (USC)

To help eliminate barriers to accessibility in the built environment, the U.S. Government established the Americans with Disabilities Act (ADA) in 1990. This law is contained in Volume 42 of the United States Code, beginning at Section 12101 (42 USC Section 12101).

Federal Guidelines

The implementing regulations for the ADA were first issued by the Department of Justice (DOJ) in 1991. These regulations require that all new and altered facilities—including sidewalks, street crossings, and related pedestrian facilities in the public right-of-way—be accessible to and usable by people with disabilities. VTrans follows accessible design best practices as issued by the Access Board, the Federal Highway Administration and others.

The latest edition of the *Americans with Disabilities Act Accessibility Guidelines* (ADAAG) is incorporated into the *Vermont Pedestrian and Bicycle Facility Planning and Design Manual* (2002) by reference.

Accommodations for Bicyclists and Pedestrians in Transportation Plans and Projects

For the past 15 years, federal laws have strongly supported the inclusion of pedestrian and bicycle facilities in transportation plans and projects, and have supplied a consistent source of funding for these activities. This new policy direction was initially established through the Intermodal Surface Transportation Equity Act (ISTEA) in 1991 and was strengthened through the Transportation

Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). This federal law is currently contained in 23 USC Section 217.

United States Code

The following excerpts of federal code mandate the following actions in Vermont:

- "Bicyclists and pedestrians shall be given due consideration in the comprehensive transportation plans developed by each metropolitan planning organization and State...." (23 USC Section 217(g));
- "Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction and transportation facilities, except where bicycle and pedestrian use are not permitted." (23 USC Section 217(g));
- "Transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians." (23 USC Section 217(g)); and
- "In any case where a highway bridge deck is being replaced or rehabilitated with Federal financial participation, and bicyclists are permitted on facilities at or near each end of such bridge, and the safe accommodation of bicyclists can be provided at reasonable cost as part of such replacement or rehabilitation, then such bridge shall be so replaced or rehabilitated as to provide such safe accommodations." (23 USC Section 217(e)).

VTrans has established policies to follow these federal requirements in the *Vermont State Standards for the Design of Transportation, Construction, Reconstruction and Rehabilitation on Freeways, Roads and Streets* (1997) and the *Vermont Pedestrian and Bicycle Facilities Planning and Design Manual* (2002).

Federal Guidelines

Federal guidelines have also been established over the past 15 years to clarify the USC. For example, a Federal-Aid Policy Guide released in December 1991 addressed several subjects, including transportation planning and design (Volume 23 of the Code of Federal Regulations, Section 652 (23 CFR 652)).

- Federally aided pedestrian and bicycle projects implemented within urbanized areas must be included in the transportation improvement program/annual (or biennial) element unless excluded by agreement between the state and the metropolitan planning organization (23 CFR 652.11).
- Federally aided pedestrian and bicycle projects shall follow the standards below (23 CFR 652.13):

- a) The American Association of State Highway and Transportation Officials' *Guide for Development of Bicycle Facilities* (AASHTO Guide) or equivalent guides developed in cooperation with State or local officials and acceptable to the division office of the FHWA, shall be used as standards for the construction and design of bicycle routes. (*VTrans approved "equivalent guide" is the Vermont Pedestrian & Bicycle Facility Planning and Design Manual, 2002*)
- b) Curb cuts and other provisions as may be appropriate for the handicapped are required on all Federal and Federal-aid projects involving the provision of curbs or sidewalks at all pedestrian crosswalks.

TEA-21 directed the Federal Highway Administration to draft policy guidance that would better define the level of pedestrian and bicycle accommodation that was required. In 1999, the Federal Highway Administrator issued the following guidance with regards to bicycle and pedestrian accommodations:

“While these sections stop short of requiring specific bicycle and pedestrian accommodation in every transportation project, Congress clearly intends for bicyclists and pedestrians to have safe, convenient access to the transportation system and sees every transportation improvement as an opportunity to enhance the safety and convenience of the two modes. "Due consideration" of bicycle and pedestrian needs should include, at a minimum, a presumption that bicyclists and pedestrians will be accommodated in the design of new and improved transportation facilities. In the planning, design, and operation of transportation facilities, bicyclists and pedestrians should be included as a matter of routine, and the decision to not accommodate them should be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access either by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling.”

In the FHWA's subsequent Design Guidance issued in 2000 (entitled *Accommodating Bicycle and Pedestrian Travel: A Recommended Approach*), the following statement is made:

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas unless one or more of three conditions are met:
 - Bicyclists and pedestrians are prohibited by law from using the roadway. In this instance, a greater effort may be necessary to accommodate bicyclists and pedestrians elsewhere within the right of way or within the same transportation corridor.
 - The cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the larger transportation project.

- Where scarcity of population or other factors indicate an absence of need. For example, the Portland Pedestrian Guide requires "all construction of new public streets" to include sidewalk improvements on both sides, unless the street is a cul-de-sac with four or fewer dwellings or the street has severe topographic or natural resource constraints.
2. In rural areas, paved shoulders should be included in all new construction and reconstruction projects on roadways used by more than 1,000 vehicles per day, as in States such as Wisconsin. Paved shoulders have safety and operational advantages for all road users in addition to providing a place for bicyclists and pedestrians to operate.

VTrans has established policies to follow these federal requirements. The pedestrian and bicycle policy statements in Chapter 2 of the *Vermont Pedestrian and Bicycle Facilities Planning and Design Manual* (2002) cover these requirements. Further, the specific facility design guidelines included later in the manual reinforce the pedestrian and bicycle policy statements. In particular, the policy states that VTrans will:

- Address pedestrian and bicycle issues in all long range transportation plans developed with state or federal funds;
- Incorporate pedestrian and bicycle facilities in the implementation of all transportation projects and programs, where applicable;
- Design, construct and maintain all streets and highways where bicyclists are permitted under the assumption that they will be used by bicyclists;
- Ensure safe routes of travel for all pedestrians;
- Promote a connected network of pedestrian and bicycle facilities in compact villages and urban centers; and
- Enhance pedestrian and bicycle mobility and safety in rural areas.

In addition, VTrans is required to develop and update a Statewide Transportation Plan by 23 CFR 450.214. This plan must include a plan for bicycle transportation, pedestrian walkways and trails which is appropriately interconnected with other modes. The 1998 Vermont Bicycle and Pedestrian Plan and this Vermont Bicycle and Pedestrian Policy Plan fulfill these modal requirements for the Statewide Transportation Plan.

Safe Routes to Schools Programs

Federal Guidelines

Vermont's first Safe Routes to Schools Pilot Program (begun in Chittenden County in 2004) is timely due to a new Federally-assisted Safe Routes to School (SRTS) program that was created as part of the recently passed Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) transportation reauthorization. The program provides \$612 million in FHWA funds to State Departments of Transportation over five fiscal years (FY2005-

2009). These funds are available for infrastructure and non-infrastructure projects to implement statewide Safe Routes to School programs for elementary and middle school children in grades K-8. The legislative details of the program are contained in Section 1404 of SAFETEA-LU (Public Law 109-59). Section 1404 requires that:

- Vermont shall use a sufficient amount of the federal apportionment to fund a full-time Safe Routes to School Program Coordinator position.
- A portion of program funds may be used on infrastructure improvements to improve conditions for walking and bicycling to school (e.g., sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bike parking, and traffic diversion improvements).
- The infrastructure improvements may be carried out on public roads or bicycle or pedestrian pathway or trail in the vicinity of schools.
- Between 10 and 30 percent of program funds must be used on non-infrastructure-related activities to encourage walking and bicycling to school (e.g., public awareness campaigns and outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health, and environment, and training volunteers and managers).

Federal Safe Routes to School funding was first made available in September 2005. VTTrans is currently setting up a program that meets the federal requirements. Vermont will receive approximately \$1,000,000 in federal funds for SR2S programs each fiscal year through this new program. These funds will remain available until spent, and the federal share of program expenditures is 100%.

2.3.2 State of Vermont

Policy Development

VT appears to have six ways of creating transportation policies relating to bicycle and pedestrian facilities and activities (they are listed in no particular order):

- One is through legislatively generated policies which are articulated in State Statute;
- A second way is through the formal rule making process articulated in the Administrative Procedures Act 3 V.S.A. § 801-849,
- A third is initiated through the internal VTTrans Policy Manual, these policies are developed to address specific issues by one section of the Agency with comments sought from other affected sections; they are often thought of as “Internal operating policies;”
- A fourth way is through the development of Modal Policy Plans typically generated through a dialogue with a project advisory committee and a formal public input process; they are

subjected to a formal adoption procedure by the Secretary of Transportation and the Vtrans Executive staff.

- A fifth is generated by Agency director level staff to clarify current operating procedures or to address specific questions; such policies may vary with changes in staffing at the executive staff level; and
- A sixth way is the development of policies by inclusion in the various Design/Operating Manuals that function as internal working documents for various sections of the Agency; the Vermont Pedestrian and Bicycle Facility Planning and Design Manual falls into this category, however it is far more broad in scope.

The degree to which the policies are followed and enforced is the real measure of their importance. It appears to many individuals involved directly or indirectly with the Bicycle and Pedestrian Program that it is less important what the policy says, and more important that the procedures and practice are in place to implement the policies. It is, however, important to know what the current policies are. The following section highlights the current policies as presented in various State documents.

Vermont Policies Related to Bicyclists and Pedestrians

Currently, policies relating to bicycling and walking that affect VTrans have been generated primarily by either the first or the last means of policy creation. The following list highlights legislative policies that may have relevancy for the Bicycle and Pedestrian Policy Plan. Additional information on other State policies that relate to bicycling and walking may be found in the Vermont Bicycle and Pedestrian Coalition paper “Summary of Vermont Laws Pertaining to Bicyclists and Pedestrians” (2004). The following policies have been individually numbered for ease in referencing them in the future.

Policies in State Law:

1. The agency of natural resources shall coordinate the development of trails and the agency of transportation shall coordinate the development of bicycle and pedestrian paths. (10 VSA § 447)
2. Town highway funds may be used for the establishment and maintenance of bicycle routes. (19 VSA § 306)
3. Permission may be granted by the agency for the construction and maintenance of sidewalks, bicycle paths and footpaths on state highways. (19 VSA § 905)
4. Audible warning signals shall be installed at all intersections with an exclusive walk cycle where new traffic light systems are installed. (19 VSA § 905c)
5. Municipalities shall erect on public highways near schools warning signs bearing the legend “school zone.” (19 VSA § 921)

6. VTrans may establish and maintain bicycle routes separately or in conjunction with the construction, reconstruction or maintenance of existing or new highways. (19 VSA § 2302)
7. VTrans shall assist and cooperate with regional planning commissions, municipal governments, other state agencies and citizens' groups in the development and construction of local and regional bicycle projects and in the application for any funds available for these projects. (19 VSA § 2305)
8. No landowner shall be liable for any property damage or personal injury sustained by any person who is using, for any purpose permitted by state law or by a municipal ordinance, bicycle routes constructed on the landowner's property pursuant to this chapter, unless the landowner charges a fee for the use of the property. (19 VSA § 2309)
9. The state shall provide paved shoulders on major state highways with the intent to develop an integrated bicycle route system. (19 VSA § 2310)
10. Any construction, or reconstruction, including upgrading and resurfacing projects on major state highways shall include paved shoulders unless the agency deems certain sections to be cost prohibitive. (19 VSA § 2310)
11. A fire district may tax upon the polls and taxable estate for the construction and maintenance of sidewalks. (20 VSA § 2601)
12. The legislative body of a municipality may, after considering neighborhood character, abutting land use, bicycle and pedestrian use, and physical characteristics of the highways, set the maximum speed limit, without an engineering and traffic investigation, at not more than 50 miles per hour nor less than 35 miles per hour, on all or a portion of unpaved town highways within its boundaries, unless otherwise posted in accordance with the provisions of this section. The legislative body of a municipality may also set the maximum speed limit at not less than 25 miles per hour on the basis of an engineering and traffic investigation study. (23 VSA § 1007)
13. Every person riding a bicycle is granted all of the rights and is subject to all of the duties applicable to operators of vehicles, except as to those provisions which by their very nature can have no application. (23 VSA § 1136)

Policies in *The Vermont Pedestrian and Bicycle Facility Planning and Design Manual*

The following statements are presented in the Manual as policies. The lettering has been added in this publication for ease in future referencing.

- A. Everyone is a pedestrian;
- B. Walking is a part of every trip;
- C. Pedestrian travel is expected on all highways except where prohibited by state law; and

D. Pedestrian travel is an integral part of the Agency's transportation program.

VTrans is committed to assuming a leadership role in promoting pedestrian improvement to:

- E. Encourage more walking;
- F. Reduce the number of pedestrian-motor vehicle crashes and injuries;
- G. Better address walking as a mode of transportation for all residents and visitors;
- H. Contribute to the U.S. Department of Transportation goal by helping to double the percentage of walking in the U.S.; and
- I. Contribute to national health objectives by providing opportunities for walking as a matter of lifestyle through the creation of pedestrian-friendly facilities, compact growth centers and active community environments.

To achieve these goals, VTrans will:

- J. Address pedestrian issues in all transportation plans developed with state or federal funds;
- K. Incorporate pedestrian facilities in all transportation projects and programs, where applicable.
- L. Ensure safe routes of travel for all pedestrians;
- M. Promote a connected network of pedestrian facilities in compact villages and urban centers;
- N. Enhance pedestrian mobility and safety in rural areas;
- O. Reinforce a sense of neighborhood and community with transportation designs that encourage pedestrian use;
- P. Encourage land use and transportation development that accommodate pedestrians. Enhance intermodal access for individuals with impaired mobility;
- Q. Maintain the transportation system so pedestrian use is maximized;
- R. Define jurisdictional roles for providing and maintaining pedestrian facilities;
- S. Encourage towns and villages to use these guidelines in local planning and development;
- T. Promote pedestrian safety initiatives and public awareness of the benefits that can be derived from walking; and
- U. Improve data collection and evaluation techniques of existing and proposed facilities.

and

- V. Bicyclists have the same mobility needs as every other user of the transportation system and use the highway system as their primary means of access to jobs, services and recreational activities;
- W. To varying extent, bicycles will be used on all highways except where prohibited by state law; and
- X. Bicycle travel is an integral part of the Agency's transportation program.

VTrans is committed to assuming a leadership role in promoting bicycle improvements to:

- Y. Encourage more bicycling;
- Z. Reduce the number of bicycle-motor vehicle crashes and injuries;

- AA. Better accommodate those who are dependent upon bicycling as their primary mode of transportation;
- BB. Contribute to the U.S. Department of Transportation goal by helping to double the percentage of total trips made by bicycles in the U.S; and
- CC. Contribute to national health objectives of providing opportunities for bicycling as a matter of lifestyle through the creation of bicycle-friendly facilities, compact growth centers and active community environments.

To achieve these goals, VTTrans will:

- DD. Address bicycling issues in all long range transportation plans developed with state or federal funds;
- EE. Incorporate bicycle facilities in the implementation of all transportation projects and programs, where applicable;
- FF. Design, construct and maintain all streets and highways where bicyclists are permitted under the assumption that they will be used by bicyclists;
- GG. Promote a connected network of bicycle facilities in compact villages and urban centers;
- HH. Enhance bicyclists' mobility and safety in rural areas;
- II. Reinforce a sense of neighborhood and community with transportation designs that encourage bicycle use;
- JJ. Encourage land use and transportation development that accommodate bicyclists;
- KK. Define jurisdictional roles for the provision of bicycle facilities;
- LL. Define jurisdictional roles for the maintenance of bicycle facilities so bicycle use is maximized;
- MM. Encourage towns and villages to use these guidelines in local planning and development; and
- NN. Promote bicycle safety initiatives and public awareness of the benefits that can be derived from bicycling; and
- OO. Promote improved data collection and evaluation techniques of existing and proposed facilities.

2.4 GOALS AND OBJECTIVES

2.4.1 Federal

Establishing Federal Goals

Federal Goals for bicycle and pedestrian transportation have been established by the Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration (NHTSA).

Federal Highway Administration (FHWA)

FHWA established two goals through the 1994 *National Bicycling and Walking Study*:

- Double the percentage of total trips made by bicycling and walking in the United States from 7.9 percent to 15.8 percent of all travel trips; and
- Simultaneously reduce by 10 percent the number of bicyclists and pedestrians killed or injured in traffic crashes.

In addition to these goals, the Study outlined a five-point State Action Plan that suggested activities for State agencies. These action items included:

- Organize a State Bicycle/Pedestrian Program
- Plan and Construct Needed Facilities
- Promote Bicycling and Walking
- Educate Bicyclists Pedestrians, and the Public
- Enforce Laws and Regulations

National Highway Traffic Safety Administration (NHTSA)

In 2000, NHTSA produced *National Strategies for Advancing Bicycle Safety*. This document summarized goals and strategies that were developed by a diverse group of bicycle advocates, injury prevention specialists, and government representatives. Goals that were generated included:

- Motorists will share the road.
- Bicyclists will ride safely.
- Bicyclists will wear helmets.
- The legal system will support safe bicycling.
- Roads and paths will safely accommodate bicyclists.

In 2001, NHTSA gathered a group of experts to establish goals for child pedestrian safety. The resulting document, *National Strategies for Advancing Child Pedestrian Safety*, outlines three general goals and the following six strategies:

- Enhance public awareness about the need to improve safety for child pedestrians while promoting the health and environmental benefits of walking.
- Modify the behavior and attitudes of both pedestrians and drivers to improve sharing the road.
- Modify the physical environment to better support pedestrian traffic.
- Develop and conduct effective safe-walking programs.
- Conduct research to address gaps in knowledge and to translate research findings into effective programs and public policy.
- Conduct surveillance to measure children's pedestrian injury rates, quantify the amount of walking children normally do, and identify risk factors for injury.

The general goal of NHTSA's pedestrian safety programs are: "Through education, enforcement, and outreach, NHTSA's pedestrian safety programs are directed toward reducing pedestrian injuries and fatalities. Walking is encouraged as an alternate mode of transportation to motor vehicle travel."

Additional goals of these programs include:

- Reducing the number of physically impaired pedestrian injuries and fatalities.
- Improving the safety of elderly pedestrians.
- Reaching diverse communities.

2.4.2 State of Vermont

Vision and Goals

Note: Where applicable VTrans progress toward meeting the associated vision, goals, objectives, action steps are noted in *parentheses and italics* following the applicable section.

The *State of Vermont Agency of Transportation Bicycle and Pedestrian Plan* (1998) (*The Plan*) presents a vision and goals for bicycling and walking in Vermont. The vision summarizes the overall ideal for what VTrans sees as the future of bicycling and walking activities in Vermont. The vision reads:

Vermont will provide a safe, convenient and accessible environment for bicyclists and pedestrians for both transportation and recreation. All transportation projects will recognize and consider bicyclist and pedestrian needs. Local government and citizen involvement will be integral to the planning process. Bicycle and pedestrian systems will provide mobility and links with other transportation modes, while enhancing our appreciation of Vermont's natural environment, the community character of its town centers, and the overall quality of life in the state.

The *Plan* goes on to describe the goals as follows:

Bicycling and walking are environmentally friendly modes of transportation that enhance both personal and social well-being. They are also important modes of recreation with many public health, social, and economic benefits. In addition, automobile ownership is not always an option for all Vermont's citizens, and therefore some people have no choice but to bicycle or walk on our roadways. For these reasons, the State of Vermont believes it is desirable to encourage bicycling and walking.

The *Plan* supports four broad goals to encourage bicycling and walking in Vermont:

- To provide all residents and visitors to Vermont with a safe, efficient and accessible transportation system that allows them to walk and bicycle with independence and comfort.
- To support and enhance a healthy environment and ecosystem by providing safe and convenient bicycle and pedestrian facilities, which will help to accomplish this.
- To support and encourage bicycling and walking by integrating transportation and land use decisions to protect and enhance a development pattern of human scale villages/cities/settlements, surrounded by nature and agriculture.
- To allow all residents and visitors to Vermont to safely use public transportation corridors for bicycling and walking (except where prohibited by law).

After describing the vision and goals, the *Plan* proceeds to describe how the VTrans Bicycle and Pedestrian Program will work towards accomplishing these goals through a series of specific objectives. For the VTrans Bicycle and Pedestrian Program itself, the *Plan* states:

- Broaden the orientation of the bicycle and pedestrian program to include the development of: *(With the exception of bullet #5 – all elements noted have been integrated into B/P Program since 1998)*
 - On-road facilities (expanded shoulders, bicycle lanes, bicycle routes, line striping, signs, traffic calming);
 - Off-road facilities (multi-use paths, rail trails, bicycle parking);
 - Pedestrian facilities (sidewalks, cross walks, paths, pedestrian amenities);
 - Educational and promotion programs (expanded educational activities for bicycle and pedestrian safety and increased promotion of Vermont as a place to bicycle and walk);
 - A program for facility maintenance;
 - Consideration of bicycle and pedestrian needs within AOT programs and project development activities (from project selection and scoping to maintenance).
- Allocate, to the maximum extent possible, adequate resources and staff assistance, to sustain the bicycle and pedestrian program. *(Since 2004 \$31.56 Million in State and federal funds have been expended on B/P Program projects)*
- Continue working with a bicycle and pedestrian advisory committee to assist AOT with policy and program development. *(Advisory committees have been enlisted for specific tasks since 1998)*
- Use the AOT Local Transportation Facilities Unit to improve the efficiency of project development and increase local involvement in the design and implementation of pedestrian and bicycle projects. *(Ongoing since 1998)*
- Promote bicycle and pedestrian facilities that maintain the aesthetic value and character of the existing roadway (for on-road facilities) and the scenic quality of the landscape.
- Work with regional planning entities to develop a coordinated, state-wide system for bicycle and pedestrian travel. *(Ongoing since 1998)*

- Focus bicycle and pedestrian needs in downtown and village centers. *(Proximity to town and village centers has been part of B/P and Transportation Enhancement funding eligibility since 1997)*

It goes on to list a series of action steps that VTrans should consider for the Bicycle and Pedestrian Program:

- AOT should continue to support a bicycle and pedestrian program with at least one coordinator, who should be funded regardless of federal support for the position. His/her duties should expand to include planning for the broad range of bicycle and pedestrian facilities described in this plan. *(State B/P Coordinator on board since 1993; 2nd staff position added in 2000; temporary employee(s) enlisted for special projects)*
- Develop a Vermont bicycle and pedestrian design manual that will provide clear, consistent guidelines for facility design to ensure that safe, well constructed facilities and cost effective facilities are built. *(Completed in Dec. 2002)*
- Greater emphasis should be given to developing a broader range of bicycle and pedestrian activities and facilities in Vermont, including: improvements to existing road shoulders; sidewalks and pedestrian facility development; maintenance activities; traffic calming strategies; education and promotion programs; signs and pavement markings; facilities for bicycle commuters; and opportunities for intermodal connections. *(Ongoing)*
- Pedestrian and bicyclist needs should continue to be considered within transportation improvement projects. The AOT Project Scoping Manual should ensure consideration of bicycle and pedestrian needs within the scoping process. The bicycle and pedestrian coordinator and the Local Transportation Facilities program manager should continue as permanent members of the AOT Project Definition Team (PDT). *(B&P Coordinator and LTF Program Manager have served on the PDT since 1997)*
- AOT should ensure that future roadway improvements, paving projects and bicycle and pedestrian facilities consider aesthetic impacts of projects in order to maintain the scenic character of Vermont's roads and paths, and maintain our current reputation as a desirable destination for bicycling and walking. *(Ongoing)*
- Additional funding should be sought to craft a small grants program within the bicycle and pedestrian program to allow municipalities an opportunity to fund small, cost effective projects. Ideally, this program should be state-funded to avoid the many additional steps required by the use of federal funds. *(Not Accomplished)*
- Whenever bicycle and pedestrian projects selected for implementation are located in communities that are willing and able to manage their own projects, project management should be offered to the community. *(Since the creation of LTF section in 1997 all B/P Program projects have been turned over to local project sponsors for implementation)*
- The Department of Motor Vehicles should incorporate bicycle and pedestrian safety education into the manual for driver education and incorporate bicycle and pedestrian safety question(s) into the motor vehicle licensing examination. *(2000 first round of driver manual changes completed and licensing exam questions added)*

- A public awareness, education, safety, and promotion program should be undertaken within the AOT Bicycle and Pedestrian Program. Education programming should be coordinated with other state agencies (Tourism and Marketing, the Governor's Highway Safety Program, the Department of Motor Vehicles, the Department of Education, the Governor's Council on Physical Fitness and Sports) and should address public safety education, and tourism promotion. *(The VTrans BikeSmart in-school bicycle safety education program was implemented in 2003 and is entering its third school year.)*

It then lists a series of duties that the VTrans Bicycle and Pedestrian Coordinator and the program manager of the Local Transportation Facilities program should continue to do or begin. As the *Plan* states:

The State Bicycle and Pedestrian Coordinator and the Local Transportation Facilities program manager should be responsible for broadening and defining the State Bicycle and Pedestrian Program. Responsibilities should include, but not be limited to:

- Coordinating bicycling and pedestrian activities in Vermont. *(Ongoing)*
- Working with the bicycle and pedestrian advisory committee to: assess state priorities for bicycle and pedestrian program and facility development; develop an education and promotion program in coordination with state agencies, assist with policy and program development, work toward the appropriate application of the Vermont state design standards for bicycle and pedestrian facilities; coordinate initiatives with other state agencies and local communities; and advise AOT on the development of a bicycle and pedestrian facilities design manual. *(VTrans has used focused advisory committees for specific tasks e.g. Bike/Ped Project Selection, VT Ped/Bike Design Manual, Bike/Ped Plan)*
- Developing a bicycle and pedestrian education program for Vermont, in conjunction with other state agencies, which seeks to address the range of facility user groups and issues, including public safety, tourism, and professional education and development. *(Since 2000 50-60% of B/P staff time goes to bicycle and pedestrian safety and education. In addition the BikeSmart, in school bike safety program pilot, initiated in 2004, statewide program in 2005-06. To date approximately 6,500 kids in 86 schools statewide have received BikeSmart training)*
- Coordination with other AOT Divisions, such as Pavement Management, Roadway, Structures, Traffic Design, Construction & Maintenance, as well as District Transportation Administrators, to ensure that bicycle and pedestrian needs are routinely considered within the development of new facilities and the improvement and maintenance of existing facilities. *(Ongoing since 1998)*
- Focusing program development on addressing pedestrian needs, including; sidewalk development; enhancing pedestrian safety with crosswalks and traffic calming; encouraging walking opportunities through pedestrian oriented design within towns and villages; and increasing intermodal connections. *(Ongoing since 1998)*
- Developing an information program supportive of private sector interests and activities, in coordination with the Department of Tourism and Marketing and other appropriate entities

to respond to the many out-of-state requests for bicycle route information for tourists. (*Effort initiated by VTrans, lukewarm response from DTM and VT Chamber*)

- Oversight and coordination of regional bicycle and pedestrian plans, prioritization, and facility development with the aim of developing a statewide system of bicycle and pedestrian facilities. (*Ongoing – since 1998*)
- Ensuring adequate state funding for project and program development through annual state allocation of transportation funds. (*Since 1994 VTrans has expended \$31.56 Million in State and federal funds on Bicycle & Pedestrian Program Projects*).
- Ongoing coordination and communication with the Agency of Natural Resources regarding rail trail and multi-use path management and maintenance as well as trail and path funding programs. (*Ongoing since 1998*)
- Establishing a Rail Trail Task Force, perhaps as a subcommittee of the Advisory Committee, to address outstanding rail trail policy and legal issues. (*Not Accomplished*)

The *Plan* recommends continued use of a bicycle and pedestrian advisory committee. Relative to this committee, the *Plan* says:

- AOT should continue to work with a bicycle and pedestrian advisory committee (BPAC) to institutionalize a public process for bicycle and pedestrian program development. The BPAC should be coordinated within the state bicycle and pedestrian program, and should meet on a regular basis to consider key issues within the program and assist and advise the coordinator in his/her duties. (*Not specifically accomplished; the BPP works with focused public advisory committees on an as needed basis.*)

The *Plan* points out several recommendations that will need the support of the Vermont Legislature. In particular it notes that they should consider:

- Defining the bicycle as a vehicle within Vermont statute.
- Allocating sufficient annual appropriations to the bicycle and pedestrian program. (*Since 1994 \$31.56 Million in state and federal funding have been authorized by the Legislature on Bicycle & Pedestrian Program Projects*).
- Considering new funding sources, such as user fees, registration fees and gas tax increases.
- Repealing the mandatory sidepath law. (*Repealed in 2004*)
- Refining the shoulder development law.

The *Plan* highlights activities that should be conducted by the regional commissions or the Chittenden County Metropolitan Planning Organization. The *Plan* states:

The regional planning entities should work in partnership with the State Bicycle and Pedestrian Coordinator to improving this plan. They should be encouraged to:

- Undertake and implement bicycle and pedestrian plans. The regional plans should include:
 - i. Inventory of existing facilities.
 - ii. An assessment of existing facility use and future need, including: identification of primary bicycle routes and needed shoulder improvements, potential rail trails, multi-use paths, sidewalks and pedestrian facilities, potential intermodal connections, and traffic calming needs.
 - iii. The prioritization of desired future facilities and/or facility improvements.
 - iv. The potential development of a regional system of facilities which can link with neighboring regions.
- Encourage and assist local communities to assess pedestrian needs, including development site plan review of major development proposals to evaluate pedestrian and bicycle needs and linkages.
- Formulate pedestrian-oriented design recommendations or guidelines for local site review processes.
- Encourage participation by bicycle and pedestrian interests on regional transportation advisory committees.

The *Plan* highlights activities that should be conducted by municipalities to improve bicycle and walking conditions in Vermont. The *Plan* states:

Municipalities are also key partners in improving facilities for bicyclists and pedestrians. Municipalities are encouraged to:

- Assess local needs for bicycle and pedestrian access and mobility.
- Build and maintain local bicycle and pedestrian facilities when desired and feasible.
- Coordinate facility planning and development with adjacent communities and regions.
- Enact local by-laws and subdivision regulations that enhance compact settlement, and encourage bicycling and walking.
- Evaluate bicycle and pedestrian needs within site plan review of local development proposal and require developers to invest in bicycle and pedestrian facilities whenever possible.
- Encourage the formation of local citizen advisory committees for bicycle and pedestrian activities.

The *Plan* also outlines activities that VTTrans should encourage bicycle and pedestrian organizations within Vermont to undertake;

- Participate in the BPAC.
- Participate in regional transportation advisory committees and regional planning efforts.

- Assist regional planning entities with primary bicycle route identification, inventories of bicycle and pedestrian needs, possible user surveys, and deficiency analyses for regional bicycle and pedestrian plans.
- Support safety education and promotional efforts.

Lastly, the *Plan* outlines potential activities for the private sector to undertake to increase the awareness and use of bicycling and walking activities. The *Plan* states:

Bicycle and pedestrian-related businesses should work together with the state to support and promote bicycle and pedestrian interests. Employers and retailers within village and urban centers should:

- Encourage bicycle commuting by providing showers, bicycle parking facilities and pedestrian amenities.
- Build sidewalks in front of commercial businesses in urban and village centers, and support pedestrian linkages within village and town centers.

Specific Action Steps

The *Plan* outlines a series of action steps that VTrans and the Bicycle and Pedestrian Program should undertake to advance the status of bicycling and walking in Vermont. A large majority of the action steps recommended for the Bicycle and Pedestrian Program have already been accomplished or are part of ongoing work now done by the Bicycle and Pedestrian Program. Relative to the connection of bicycle and pedestrian facilities to other modes of transportation, the *Plan* lists these recommendations or action steps:

- Encourage Regional Planning entities to inventory pavement widths and road conditions and to identify and prioritize bicycle and pedestrian facility needs and improvements (e.g. shoulder widening, maintenance activities, sidewalk project).
- Encourage Regional Planning entities to work with the Agency to inventory and prioritize primary bicycle travel routes, and to assist with resource inventory and identification of environmental permitting and historic preservation issues for those routes where shoulder expansion/improvements appear feasible.
- AOT should consider bicycle and pedestrian needs and potential, and incorporate improvement activities, such as providing paved shoulders of adequate width, when feasible and appropriate.
- Allow small scale shoulder widening and improvement projects on state roadways to be eligible for state funding through the bicycle and pedestrian program.
- Expand information and educational efforts via roadway signs and programs aimed at motorists, bicyclists, and pedestrians.
- Ensure that regular roadway maintenance activities address bicycle and pedestrian needs.

- VAOT should develop a bicycle route marking and signage program.

Relative to the traffic calming, the *Plan* lists these recommendations or action steps:

- Where feasible, traffic calming techniques, such as roundabouts, bulbouts, splitter islands, speed limit reductions and landscaping, should be considered and investigated as an option on all intersection and roadway improvement projects where bicycle and pedestrian access is desired. (*Draft VT Traffic Calming Standards underdevelopment; procedure for municipality requests for traffic calming treatments on state highways complete*)
- When landscaping features such as tree planting are used, communities should be encouraged to contact the Urban and Community Forestry program and the Department of Forests, Parks and Recreation for technical assistance and additional funding opportunities. (*VTrans Technical Landscape Manual completed in 2004*)

Relative to maintenance issues, the *Plan* lists these recommendations or action steps relative to each type of system:

Pedestrian System

- Provide guidance to towns so that they can inventory and prioritize local pedestrian needs. (*Included in Vermont Pedestrian & Bicycle Facility Planning and Design Manual*)
- Create a pedestrian-friendly infrastructure that will safely and efficiently accommodate people who walk, and will encourage walking for both transportation and recreation. Provide relevant pedestrian-related improvements, including sidewalks, cross walks, handicap accessible curb ramps and pedestrian crossing signals.

Community Linkages

- Create a network of safe and attractive facilities to encourage walking within village centers, central business districts, resort centers, and other areas of concentrated activity including residential neighborhoods, commercial areas, major employment centers, recreation areas, schools, and public buildings.
- Utilize pedestrian facilities to access, link and draw attention to scenic, historic, cultural, and recreational centers of activity.
- Locate public parking in convenient locations in or near village and urban centers that are connected by sidewalk systems or safe and attractive walkways. Encourage visitors to “park and walk” rather than drive, by installing signs designating the location and distance between stores and parking.

Intermodal Connections

- Encourage development of ancillary facilities for pedestrians such as seating, weather protection, public telephones, and informational and directional signs at community destinations, transit stops, and recreation facilities.
- Encourage intermodal trips by requiring transit system improvements to consider improved pedestrian access to and from all transit stations and stops.

Local Planning and Development Review

- Encourage walking for trips of less than one mile through land use policies and local ordinances that are designed to strengthen village centers, minimize unnecessary automobile movements, increase intermodal connections with transit, and connect services with residential areas.
- Adopt or amend local site plan review procedures and design guidelines to assure convenient pedestrian access to new and existing public and private buildings.
- Encourage development patterns that are compatible with non-motorized travel through compact and mixed land uses.

Private Sector Encouragement

- Encourage or require development projects to include sidewalks and pedestrian amenities as a condition of use within local development site plan review.
- Support walking by providing facilities and programs in the workplace.
- Encourage the elimination of employee parking subsidies.
- Encourage employers to create incentives for using non-motorized modes.

Relative to education, the *Plan* lists these recommendations or action steps for the different types of programs:

Public Safety Education

- In cooperation with other state agencies, develop education and enforcement programs that will result in a reduction of accidents and crashes and a greater sense of security and confidence for pedestrians and bicyclists. Maximum use should be made of opportunities provided by existing programs.
- In cooperation with other state agencies, establish a public safety education program using TV, radio, signs, and informational materials to teach motorists, bicyclists, and pedestrians how to share the road. Provide training for law enforcement officials in the conduct of safety education and enforcement programs for pedestrians and bicyclists. Promote the “Police on Bikes” programs. Maximum use should be made of opportunities provided by existing programs.

- Encourage schools, safety organizations, and law enforcement agencies to deal with pedestrian and bicyclist safety issues and to focus on the most important crash problems. Support the development of public awareness campaigns keyed to the most important causes of crashes, injuries, and deaths.
- Encourage the use of safety equipment among pedestrians and all bicyclists.
- In cooperation with other state agencies, create pedestrian and bicycle skills training and education programs for children, particularly upper elementary school level students and their parents.
- Incorporate pedestrian and bicycle education in driver education and defensive driver classes. Include pedestrian- and bicycle-related information in the Vermont driver's manual and questions relating to the interaction of motorists, bicyclists on motor vehicle examinations.
- Partner with the Governor's Council on Physical Fitness and Sports to develop and conduct public awareness campaigns to promote walking and bicycling as a means of improving personal health and wellness and enhancing the quality of life.

Tourism Education

- Work with the Vermont Department of Tourism and Marketing and other appropriate entities to develop appropriate programs and materials that promote Vermont as a walking and bicycling tourist destination. Raise public awareness about Vermont private bicycling outfitters and other resources such as guidebooks and maps.

Professional Education

- Support the education and training of key transportation design professionals in the application of pedestrian and bicycle facility planning and design guidelines and standards, as well as aesthetic principles, to ensure appropriate planning and design treatments throughout the state. (*Approximately seven training sessions held since Dec. 1998 including B/P consultants, agency staff, VT ITE chapter, RPC etc., prior to design manual educational session have been held with municipal officials, public works officials, planners, trails & greenways and recreation professionals and engineering groups*)

The *Plan* lists the following recommendations or action steps relative to shared use paths:

- Develop multi-use paths to help link community facilities, improve access and mobility, offer recreation, and support the local economy.
- Develop a statewide network of on- and off-road bicycle and pedestrian facilities, including multi-use paths.

- Develop a streamlined process for the design and construction of multi-use paths, including a process for allowable exceptions from existing standards. Allow for flexibility and site-specific solutions. *(Addressed in VT B/P Design Manual)*
- Design and maintain multi-use facilities that have aesthetic appeal and help preserve and enhance the scenic beauty of Vermont. *(65 miles of facilities developed)*
- Repeal the mandatory side path law in order to allow high speed bicyclists more options and reduce potential conflicts with other users of multi-use paths. *(Repealed 2004)*
- Coordinate with the Agency of Natural Resources when there may be environmental and recreational concerns regarding the siting of multi-use paths. *(Ongoing)*
- Coordinate with the Department of Forests Parks and Recreation on funding programs that involve multi-use paths. *(Ongoing)*
- Incorporate design standards for multi-use paths into the Bicycle and Pedestrian Facilities Design Manual that is recommended in other sections of this Plan. *(Addressed in VT B/P Design Manual)*

Relative to rail trails, the *Plan* lists these recommendations or action steps:

- Continue to support the concept of rail trails by actively working to rail bank Vermont rail corridors officially proposed for abandonment. *(Mandated by state law. To date 55 miles of rail trail have been developed / managed by VTTrans)*
- Support local and regional efforts to develop old railroad corridors into rail trails. *(Ongoing)*
- Establish a Rail Trail Task Force to address outstanding policy and management matters. These include: trail management, long term maintenance, funding, and legal issues relating to rail trail development of non-railbed rail corridors. *(Not accomplished)*
- Develop a system for expediting the design and construction of rail trails. *(Process created in 1997 with creation of LTF section)*
- Develop and work with trail advisory groups to assist with trail development, design, and management. Work with local landowners to ensure concerns are addressed early in the trail planning process.
- Assist local trail advisory groups with the variety of funding options for rail trail development, including VTTrans, the Agency of Natural Resources, regional and state-wide organizations, and private foundations.
- Continue to coordinate with the Department of Forests, Parks and Recreation on parallel funding programs, such as the Vermont Recreation Trails Fund.

2.5 MANAGEMENT

Organizationally, the VTrans Bicycle and Pedestrian Program (BPP) is located in the Local Transportation Facilities (LTF) section of the VTrans Program Development Division. Most of the recognized VTrans activities relating to bicycle and pedestrian activities are initiated by LTF staff or by municipalities via LTF Programs. There has also been an effort to incorporate bicycling and walking facilities into other VTrans programs including paving, roadway, structures, public transit and maintenance projects.

The day to day implementation of the BPP is in the hands of the Vermont Bicycle and Pedestrian Coordinator. The Coordinator's activities are primarily directed by the *Plan*. To a lesser degree, they are also directed by the federal guidance. The activities undertaken by the BPP Program staff, which in addition to the Coordinator includes the Safe Routes to School Coordinator and a part time intern, is diverse and varied. It generally falls within seven program categories. The percentages in the following list represent the approximate amount of staff time devoted to the particular activity. Please note the list of items that follow each program category is not intended as a comprehensive list of all tasks undertaken but is intended to provide a few examples of the types of activities that each program category encompasses.

1. Bicycle & Pedestrian Program Infrastructure Improvement Projects (5%)
 - a. Oversee the solicitation and selection of new projects
 - b. Review project plans and research innovative design treatments
 - c. Participate in public participation and permitting process, as needed (e.g. Act 250 and Resource Coordination meetings)
 - d. Participate in final inspection
2. Project Planning (15%)
 - a. Direct oversight of VTrans and Transportation Enhancement program (since 2004) funded bike/ped feasibility studies,
 - b. Serve on RPC/MPO project advisory committees for RPC/MPO and municipally funded feasibility studies and scoping reports.
 - c. Review and comment upon bike/ped related local, regional and state plans.
3. Safety (15%)
 - a. BikeSmart Program
 - b. Safe Routes to School Pilot program in Chittenden County
 - c. Statewide Safe Routes to School Program – pending
 - d. Coordination with VT Safe Kids, Governor's Highway Safety Council, Dept. of Education Injury Prevention section.
 - e. Crash data analysis
4. Education and Outreach (15%)
 - a. Internal and external VTrans education of planning, landscape architecture and engineering professionals
 - b. Education and outreach to municipal officials, RPC Transportation Advisory Committee and public works officials.

5. Research (5%)
 - a. Identify research needs, develop research problem statements, develop project scopes of work
 - b. Conduct research and/or oversee consultants. Current projects include green bike lanes FHWA request for experiment, Shared-use path fencing and barrier study, truncated dome product testing for cold weather climate, and in-pavement crosswalk lights.
6. Design Support (20%)
 - a. Develop and maintain VTrans bike and pedestrian related standard drawings and construction specifications
 - b. Review and comment upon roadway, transportation enhancement, paving and bridge design plans, as requested.
7. Coordination with other Programs and Partners (25%)
 - a. Review and as requested provide feedback to other funding programs on project applications including: VT Youth Conservation Corp, VT Recreation Trails Grant Program, DHCA - Municipal Planning Grant Program etc.
 - b. Serve in an ex-officio capacity on bike and ped non-profit organizations such: VT Safe Kids, Lake Champlain Bikeways, Local Motion etc.

The LTF section is within the VTrans Program Development Division, which brings the BPP under the management of the Director of Program Development. As a general rule, the Director intervenes minimally in the day to day management of the BPP but relies on the directives of the *Plan*, Federal guidance, and LTF staff recommendations to direct the VTrans work related to bicycling and walking. The Secretary of Transportation also relies on the *Plan* but does not participate in direct management of the BPP.

The work of the BPP staff is currently welcome and well respected within the AOT and around the State by local municipalities, regional commissions, the Chittenden County Metropolitan Planning Organization, private consultants and bicycle and pedestrian advocate groups.