VERMONT
Safe Routes to
SCHOOL

Thetford Elementary School

Safe Routes to School Travel Plan

July 2012

Prepared with assistance from the VT SRTS Resource Center

SafeRoutesVT.org

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INTRODUCTION

This Travel Plan represents the work of the Thetford Elementary School Safe Routes to School (SRTS) Team. Our school is striving to be a Silver Level Partner with the Vermont Safe Routes to School Resource Center. We believe creating and maintaining this Travel Plan is a good way to ensure an on-going Safe Routes to School program at our school.

A SRTS team consisting of parents, teachers, and other community stakeholders provided input, guidance, and oversight in writing our plan.

The ideas and recommendations developed during this process will guide us in creating a well-balanced approach to building our SRTS program at Thetford Elementary School. Our school team will use this document as a resource to plan our encouragement, education, enforcement, and evaluation efforts with assistance from the VT SRTS Resource Center.

The Vermont Agency of Transportation (VTrans), through the Vermont SRTS Resource Center, has provided technical assistance in producing this plan. With the help

The Five E's

SRTS combines many different approaches to make it safer for children to walk and bicycle to school and to increase the number of children doing so.

Engineering strategies create safer environments for walking and bicycling to school through improvements to the infrastructure surrounding schools. These improvements focus on reducing motor vehicle speeds and conflicts with pedestrians and bicyclists, and establishing safer and fully accessible crossings, walkways, trails and bikeways.

Education programs target children, parents, caregivers and neighbors, teaching how to walk and bicycle safely and informing drivers on how to drive more safely around pedestrians and bicyclists. Education programs can also incorporate health and environment messages.

Enforcement strategies increase the safety of children bicycling and walking to school by helping to change unsafe behaviors of drivers, as well as pedestrians and bicyclists. A community approach to enforcement involves students, parents or caregivers, school personnel, crossing guards and law enforcement officers.

Encouragement activities promote walking and bicycling to school to children, parents and community members. Events such as Walk to School Day, contests such as a Frequent Walker/Bicyclist challenge, or on-going programs such as a Walking School Bus or Bicycle Train can promote and encourage walking and bicycling as a popular way to get to school.

Evaluation is an important component of SRTS programs that can be incorporated into each of the other E's. Collecting information before and after program activities or projects are implemented allow communities to track progress and outcomes, and provide information to guide program development.

- Excerpted from "Safe Routes to School: A Transportation Legacy", the report of the National Safe Routes to School Task Force

of the Resource Center, we have identified infrastructure improvements that would have a positive impact on walking and biking to school. These infrastructure recommendations are considered planning level and will require further engineering analysis to determine feasibility. It is our hope that our recommendations can be the basis for grants and/or improvements initiated by the Town of Thetford.

Members of the Thetford Elementary School Travel Plan Team	
Keith A. Thompson Principal	Joette Hayashigawa School Nurse
Laurel Mackin Parent	Rita Seto TRORPC
Wendy Walsh Public Health Nurse	Phil Chaput PE Teacher
Tig Tillinghast Town Select Board Member	Sara Bailey School Counselor

TEAM VISION

The SRTS program at Thetford Elementary School aligns with the community's efforts towards promoting walkability. The SRTS program goals of combining engineering, education, enforcement, evaluation, and encouragement strategies (also known as the Five E's) to improve the safety and health of students who walk to school, fit our school's and town's values perfectly.

Our vision for Thetford Elementary School (and the surrounding neighborhoods) is:

- To be a place where Route 113 serves all users
- To be a community with an integrated and extensive path system
- To be a school that has many opportunities for students to travel by foot or bike
- To be a community that works together to address needs of all roadway users in a comprehensive way
- To provide school access to all active transportation users
- To be a school that continues to serve as a community center

This Travel Plan outlines our school's intentions for making walking to and from school more sustainable and safer for students and the community. Through our SRTS program we hope to reach a rate of at least 7 of our students walking or biking to school during year one and at least 10 of our students walking or biking to school for year two. We believe this goal is attainable through developing and participating in park and walk sites within the community.

In developing and participating in the SRTS infrastructure and non-infrastructure projects, Thetford Elementary School hopes to reach a rate of at least 35% of its student population through the next year, commuting by walking or biking to school.

ABOUT THIS PLAN

Our SRTS team met three times with the VT SRTS Resource Center to develop and adopt this SRTS Travel Plan. Each meeting provided education on the benefits of SRTS and highlighted successful program components and strategies. The "engineering meeting" included a guided walk audit of the areas around our school. We also discussed education, encouragement, enforcement, and evaluation strategies, which helped identify needed and complimentary programs to support proposed engineering strategies.

Meeting Date	Content and Outcomes
April 2012	**Kick-off Meeting**: **How the VT SRTS Travel Plan Works** - Award of the planning assistance grant - Overview of the planning process **Engineering Meeting** - Team visioning - Opportunity and barrier discussions - Walk audit - Observed arrival and dismissal
May 2012	**Plan Review** - Reviewed the draft plan - Identified roles and immediate steps for non-engineering recommendations
July 2012	**Plan Adoption** - Adopted Plan - Began implementation of non-infrastructure recommendations

TRAVEL PLAN CONTEXT

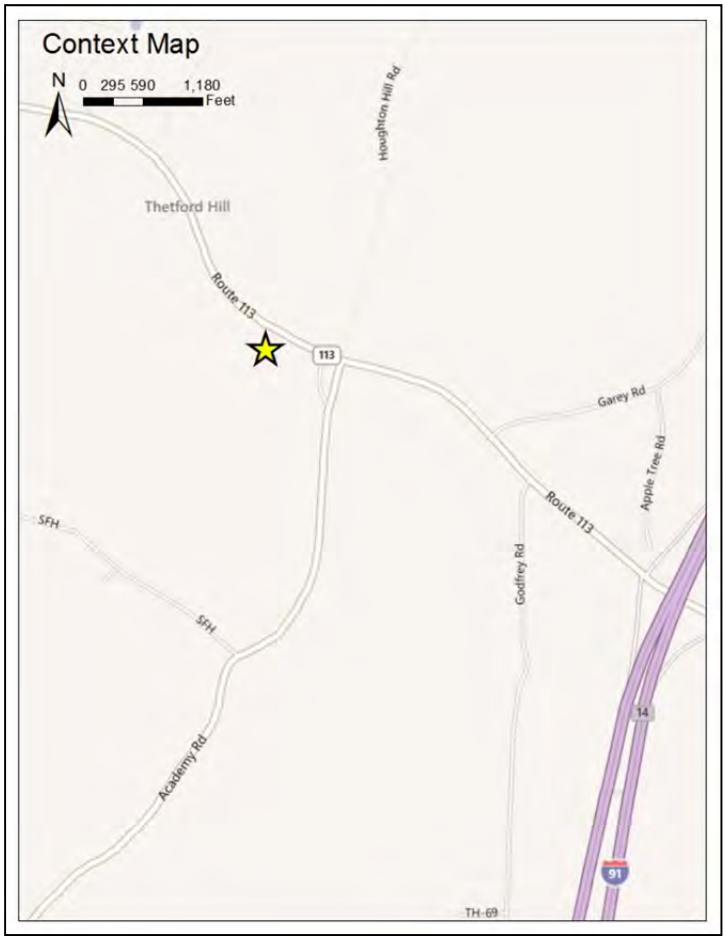
THETFORD ELEMENTARY SCHOOL AND THETFORD OVERVIEW

Thetford Elementary School is located in Thetford, VT, a small town of six active villages in the Upper Connecticut River Valley of Vermont. This area borders the Connecticut River, Interstate 91, and the State of New Hampshire. The crossroads of White River Junction, VT, Dartmouth

College in Hanover, NH, and Lebanon, NH are the larger populated areas within 15 miles of the Town of Thetford.

Thetford Elementary School is sited on Route 113 and with an Average Daily Traffic (ADT) of 3,400 vehicles, all traffic passes by the school on the main road. Route 113 is classified as a Vermont State Highway with a speed limit of 30 mph near the school and 40 mph outside the Town of Thetford.

Despite being located on a busy road, the areas surrounding the school are low-density residential neighborhoods. All of the local roads have access to Academy Road or Route 113. This direct access to the main roads makes it feasible for students to map out walking and biking routes and presents opportunities to increase walking and biking. However, the traffic conditions along Route 113 and Academy Road lack of connected pedestrian and bicycle infrastructure deter parents from allowing their children to walk or bike to school.



The star identifies the location of Thetford Elementary School.

The SRTS program at Thetford Elementary School is a key component in the school's efforts to improve the health of its students and community. The SRTS program also complements the Town of Thetford Inter-Village Trails Master Plan, (Dec 2011) and Thetford's efforts towards promoting pedestrian facilities and bicycle routes through a connected network of off-road paths. The Town of Thetford has also received a Transportation Enhancement Grant to construct a pedestrian facility on Route 113. These projects are discussed further in the Key Issues section of this document.

Vermont passed Complete Streets legislation which took effect July 1, 2011. Complete Streets policies ensure that state and local transportation agencies consider all users in the design and operation of the right of way to make roads safer and more accessible for all users regardless of

age or ability. Complete Streets policies working in tandem with the SRTS travel plan will continue Thetford's walkable, bikeable, and sustainable approach.

CURRENT SCHOOL DEMOGRAPHICS

Our school has a total of 188 students enrolled for the 2011-2012 school year. Our school serves grades K-6. Thetford Elementary School provides busing to all enrolled students.

Demographic	Count	Percentage of student body
Free/Reduced Lunch	40	21%
Students with Disabilities	1	1%
Limited English proficient students	0%	0%
Distance From School		
Students living within 1/4 mile of school	2	1%
Students living within 1/2 mile of school	6	3%
Students living within 1 mile of school	13	7%
Students living within 2 mile s of school	38	20%
Students in grades K-3	102	54%
Students in grades 3-6	86	46%

CURRENT STUDENT TRAVEL MODES

Travel Mode	Walk	Bike	School Bus	Family Vehicle	Carpool	Public Transit	Other
Percentage of Student Body (AM)	1%	0%	20%	78%	0.3%	0%	0.5%
Percentage of Student Body (PM)	2%	0%	27%	66%	4%	0%	0.8%

Data based on SRTS Student Tallies administered in April 2012

SCHOOL ARRIVAL AND DISMISSAL PROCEDURES

Thetford Elementary School relies on policies, practices, and support activities to ensure a safe and orderly process for arrival and dismissal, regardless of how students travel to school. Parents are reminded of these procedures in the student handbook and in monthly newsletters that are mailed to students' homes.

The morning bell for Thetford Elementary School starts at 8:30 am while the neighboring Thetford Academy (serving grades 7-12) has an earlier start time of 7:30 am. The opportunity to consolidate a joint morning start time for both schools would provide increased opportunities for students walking or biking between Thetford Elementary School and Thetford Academy. In collaboration with Thetford Elementary School and Thetford Academy, this travel plan document can serve to facilitate the discussion of establishing start times to within a half hour of one another.

Thetford Elementary School has one designated driveway and parking lot that all private vehicles use to both drop off and pick up students, northwest of the front entrance of the school. Parents drop-off students in the parking lot where the children gather in the playground area during nice weather or inside the cafeteria before the first bell. Parent drivers are encouraged to stay in the car at all times to reduce congestion. The school staff supervises students on the playground area before the first bell. The school staff then assembles the students at the playground area and escorts them to the school gymnasium entrance at the rear of the school. On the day of our field observation, a number of students were gathered in the playground area before the first bell.

The school staff assembles the students before the first bell.

The bus-only driveway is located at the west end of the school near the gymnasium entrance. The driveway is a one-way entrance and exit loop with access from Route 113. The student bus riders unload from this loop and proceed to the playground area or inside to the cafeteria through the same rear gymnasium door.

Students walking or biking to school must use the gymnasium door as all other doors to the school are locked.

In the afternoon, buses line up end-to-end in the bus-only driveway in front of the school. Students who ride the bus are released at 3:00pm and the buses clear the front of the school by

3:05pm. Although parents are prohibited from entering the school bus driveway, on the day of the walk audit, parents were observed entering the bus-only driveway during dismissal.

Parent pick-up occurs in the same parking lot area as morning arrival. Parents either queue around the one way parking lot aisles or find a parking space and walk into the school to pick up their child.

Students who have received parental permission to walk or bike to and from school are released at the same time as school bus riders at 3:00pm. These students are released from the front main entrance, the same place as the school bus riders.

Arrival		
Travel Mode	Procedure	Time
Walk	Arrive staggered.	7:30-8:00 am
Bike	N/A	N/A
School Bus	Arrive staggered.	8:15- 8:25 am
Family Vehicle	Arrive staggered.	7:30-8:25 am
Dismissal		
Travel Mode	Procedure	Time
Walk	Bus riders and walkers exit together from same school exit.	3:00-3:15 pm
Bike	N/A	N/A
School Bus	Bus riders and walkers exit together from same school exit.	3:00-3:05 pm
Family Vehicle	Students waiting for their parents are released after buses have been loaded and leave.	3:00-3:15 pm

EXISTING TRAVEL HABITS

Students travel from all directions to Thetford Elementary School. On April 2, 2012, (the day of our safety observation) no students were observed bicycling to school and only one student walking to school.

Parents of students who drive their children to school, listed the following reasons for doing so (the factors are listed from most to least influential):

- Speed of traffic along route
- Amount of traffic along route
- Distance
- Sidewalks or pathways are not present along entire walking route
- Safety of intersections and crossings
- Weather or climate
- Adults to bike or walk with
- Time
- Child's participation in after school programs
- Violence and crime in the area
- Convenience of driving
- School crossing guards are not always present at key intersections along walking route

Crossing Route 113 is a key walking route for students.

(Data based on SRTS Parent Survey results administered in April 2012)

The parent surveys (collected in April of 2012) showed that if some of the conditions listed above were changed, they would reconsider allowing their children to walk to school. Many of the issues in the list above can be addressed with either infrastructure or non-infrastructure strategies (or in some cases both). We kept these concerns in mind when picking the strategies that we want to accomplish this school year, 2012-2013.

KEY ISSUES

The team identified the following barriers when developing this Travel Plan:

Issue: A lack of marked crossings and challenging sight lines, relatively high vehicle volumes and relatively high vehicular speeds are present on Route 113.

Marked crosswalks are not present on Route 113. Limited and non-compliant signage does not adequately alert motorists that pedestrians may be present. In particular, the team noted a direct need to safely cross Route 113 at the school and at the First Congregational Church. The school sits atop Thetford Hill, posing a challenge for site lines east and west of the school grounds.

Crosswalk markings are absent along Route 113.

The Town of Thetford has been awarded a Community Block Grant for infrastructure improvements. The proposed earmark improvements include resurfacing portions of Route 113 within the existing right-of-way. During the planning portion of this Travel Plan, the resurfacing had begun and the construction completion is anticipated for the summer 2012. As part of this project the profile of the road will be modified to improve sight distances for proposed crossings.

Issue: An overall lack of sidewalks along key walking routes deter parents from allowing their children to walk to school.

Route 113 and all residential neighborhoods lack sidewalk infrastructure. Furthermore, the right of way does not provide sufficient clear width for pedestrian travel due to narrow road shoulders and the lack of delineated space for pedestrians along the side of the road.

In 2005, the Town developed 100% design plans for a sidewalk on Route 113. The purpose of the Route 113 sidewalk enhancement project is to develop a pedestrian facility along Route 113 to connect the Post Office and Houghton Hill Road. The original plans called for the sidewalk to start on the north side of Route 113 at the Post Office parking lot. The sidewalk would continue on the north side and cross Route 113 in front of Thetford Elementary School and then proceed on the south side of Route 113. The sidewalk would cross Route 113 to the north side and connect to Houghton Hill Road. Subsequently, concerns about the alignment, including the presence of hydric soils adjacent to the Elementary School, resulted in a revision to the concept.

In 2012 the Town of Thetford requested proposals for an engineering study, design, and permitting documents to revise and update the concept for this enhancement project on Route 113. The revised design will include relocating the sidewalk segment further back from Route 113 on the south side, between the school and the library. The revision would connect to the proposed off-road path that Thetford Elementary School is planning to construct and connect to Library Road from the rear parking lot. Realigning this sidewalk segment is preferred in order to avoid the wet area adjacent to Route 113. Construction is currently anticipated in 2014.

Issue: The lack of a connected network of off-road paths for the community and students.
Multiple off-road path segments currently exist throughout the Town of Thetford and the surrounding villages. Connecting the missing segments to the overall path network would increase connectivity between the Town of Thetford, the six major villages, residential areas, and important natural resources. Increasing the off-road path connectivity would also help balance conservation and future land development to minimize future vehicle use.

The Two Rivers-Ottauquechee Regional Commission, in coordination with the Town of Thetford, developed the Inter-Village Trails Master Plan in 2011. This comprehensive effort developed a plan for a connected network of off-road paths in the area over the next 5, 10, and 50 years. In context of implementation, the next steps identified are to conduct an engineering assessment and design plans for the 'Through Woods Refined' and 'Through Woods Original' off-road path alignments (See Appendix C - Location Key 1 of 1). These trails will connect Thetford Center with Thetford Elementary School.

Issue: Insufficient lighting for all users.
Roadway lighting is limited on the streets bordering the school. Secondary lighting from homes and other buildings along walking routes does not provide sufficient lighting for safety during early morning and late afternoon student travel.

OVERVIEW: TRAVEL PLAN RECOMMENDATIONS

This Travel Plan is comprised of several sections detailing activities and programs for our school to implement now and projects for us to develop over time with local officials.

Non-Engineering Plan
This Travel Plan identifies best practice education, encouragement, enforcement, and evaluation activities and programs suitable for our school. Information on the advantages and considerations for each strategy, and resources to help us implement each, are included in the **Appendix G**.

16–Month SRTS Activity Calendar

Our team will pursue a smaller subset of items in the non-engineering plan during the next 16 months. We will review our work periodically, adding additional activities that will continue the SRTS program momentum.

Our team completed a walk audit during our second meeting.

Engineering Recommendations

With assistance from the Vermont SRTS Resource Center, we have identified short, medium and long-term engineering treatments to make walking and bicycling to school safer for our students.

Snow Removal Toolkit

Snow, sleet, slush, ice, and rain impact all modes of transportation, and the timely clearance and removal of the elements are essential for the functionality and accessibility of a Safe Routes to School program. A Snow Removal Toolkit can better inform communities about snow removal policies and procedures, and to provide tools to increase compliance and safety. Snow removal recommendations are located in **Appendix H**.

NON-ENGINEERING TRAVEL PLAN

We identified a number of activities and programs to promote walking and biking to school. These activities and programs, while grouped by "The Five E's", are dependent upon each other for their individual success. We plan to work on our highest priority programs this year, following up with other programs in successive years. We used the timeframe below to determine when to initiate programs:

Type	Short	Medium	Long
Encouragement, Education, Enforcement, Evaluation	Within 12 months *Or, what we plan to do this school year*	Within 2 years *Or, what we plan to do next school year*	Longer than 2 years *Or, what we plan to do starting in two years*

Thetford Elementary School currently participates in several programs that engage the student population with activities that promote walking and a healthy lifestyle. Two on-going activities the school participates with and will continue in the future school years are;

- Walk/Map Club- This activity currently enlists the 4th graders with the opportunity to complete an exercise by walking existing off-road paths and utilizing their creative muscles through mapping the path system once a year.
- Lunch Time Book Club- The lunch time book club is a daily walk for the 4th grade students to walk from the school to the library with the opportunity for also posting a Story Walk, a Vermont Bicycle and Pedestrian Coalition project that promotes the development of physical fitness and literacy by creating opportunities to walk and read outdoors.

EDUCATION STRATEGIES

The education strategies included in our 16-month activity calendar are aimed at providing all students with safe pedestrian walking skills. Our education activities this year will include:

- Continuing to schedule a kindergarten bike safety day each year
- Distributing the town pamphlet of existing walking trails
- Providing walking and bicycling safety materials to parents through backpack mail
- Helmet distribution and education each spring

Other education strategies we will work on after this year are:

- Reaching out to the Dartmouth College bike club to help educate students on safe bicycling skills
- Incorporating Walk Smart/Bike Smart Vermont! curriculum into 2012/2013 school year
- Sharing tips and tools on school's website and/or newsletter
- Investigating free or reduced cost bicycle helmets

ENCOURAGEMENT STRATEGIES

Encouragement strategies included in our 16-month activity calendar will help students and their parents feel more comfortable and confident about walking and bicycling to school. Our encouragement activities this year will include:

- Continuing the Winter Passport Program (Partnering with the Upper Valley Trails Alliance)
- Continuing Walk Across America
- Developing a program for students to walk during recess
- Continuing Hike for Hunger
- Developing and encouraging park/walk sites for walking school buses and bike trains
- Continuing Story Walk activity

Encouragement of existing off-road paths is a priority for this Travel Plan.

Other encouragement strategies we will work on after this year are:

- Utilizing the VT SRTS Resource Center incentive items and implementing our own items for biking/walking to school
- Participating in International Walk to School Day
- Developing Park and Walk sites for walking school buses
- Participating in Vermont Walk and Roll to School Day

ENFORCEMENT STRATEGIES

Our SRTS enforcement strategies are aimed at both changing the behavior of drivers and making the neighborhood safer and more secure for students walking to and from school. Our enforcement activities this year will include:

- Working with local enforcement officers to better communicate and address unsafe behaviors
- Providing positive reinforcement to students displaying safe and healthy behaviors (Caught Being Good Program)

Other enforcement strategies we will work on after this year are:

- Temporary speed trailer/feedback machine for Route 113

Enforcement of existing town policies will have a major role in this Travel Plan.

EVALUATION STRATEGIES

Evaluation is an important component of our SRTS program. We plan to regularly complete in-classroom student tallies, and evaluation tools, such as the student tally and parent survey forms provided by National Center for Safe Routes to School (NCSRTS). We first administered these in April of 2012, which provided base line information on student travel behavior. Subsequent student tallies and parent surveys will help us measure the effectiveness of SRTS efforts over time.

We will continue to conduct annual walk audits to evaluate the existing walking and biking environment as well as monitor the progress of recommended projects.

Other evaluation strategies we will work on after this year are:

- Administering the parent surveys annually to capture opinions of new parents and change in overall parental perceptions
- Collecting student tally data each year to measure progress towards goals
- Keeping the SRTS Travel plan updated and use it as tool for increased SRTS activities

Evaluation Tool	Leader	Schedule
Parent Surveys	Nurse/Principal	Annually, two weeks before school
Student Tallies	Nurse/Principal	Annually, two weeks before school
Walk Audits	SRTS Team	Annually, within first two months of school

ENGINEERING TRAVEL PLAN

Our goal for engineering improvements is to improve the physical environment along existing walking routes that students use. Engineering improvements generally fall into three categories: providing sidewalks and paths, improving crossings, and infrastructure projects associated with improving the safety and efficiency of school drop-off and pick-up practices. Descriptions of typical engineering recommendations can be found in **Appendix B.**

We recognize that infrastructure improvements can take time to complete and are a collaborative effort between Thetford Elementary School, the Town of Thetford and potentially

the Vermont Agency of Transportation (VTrans) to implement the projects. The following short, medium and long timeframes are a guide for anticipated project completion, but actual timeframes may vary:

Short term	**Within 2 years**
Medium term	**Within 5 years**
Long term	**Longer than 5 years**

The team prioritized the infrastructure improvements as high, medium, or low. The factors affecting this ranking include:

- Locations with specific safety concerns
- Locations along existing student walking or bicycling routes, or with a significant number of school family residences
- Locations that are priorities for the school community

Engineering Recommendations for specific locations in the vicinity of Thetford Elementary School can be found in **Appendix C.**

CONSIDERATIONS FOR DESIGN AND FUNDING

Design

- All infrastructure recommendations in this plan are considered "planning level" and will require further engineering analysis, design, or public input before implementation.

- Recommended changes to existing traffic patterns (adding a signal, adding a stop sign, changing lane patterns, etc.) will require a study to evaluate the potential impact that the recommendation could have on existing traffic conditions.

- Drainage, existing utilities and ADA compliance will need to be evaluated for all recommendations at the time of design. ADA guidelines recommend particular design features to accommodate persons with disabilities. ADA design considerations for curb ramps, sidewalks and paths, include appropriate slopes, landing areas, surface conditions, and use of detectable warning materials for visually impaired pedestrians, among other design features.

- A variety of funding sources may be used for the recommendations. For example, projects requiring right-of-way acquisition or existing utilities relocation are not typically eligible with SRTS funds, but may be funded through other sources.

More information on the types of projects eligible for SRTS funding through VTrans and at http://saferoutes.vermont.gov/getting_started/funding.

ATTACHMENTS

A. Non-infrastructure Strategy Calendar

B. Typical Infrastructure Recommendations

C. Location-Specific Engineering Recommendations (Location Key and Recommendations Table)

D. Thetford Elementary School Student Population

E. School Profile

F. Student Travel Tally/Parent Survey Reports April 2012

G. Non-Engineering Strategies Resource Guide

H. Snow Removal Toolkit

I. Infrastructure Strategies Resource Guide

Appendix A Non-Infrastructure Calendar

Activity		May 2012	Jun 2012	Jul 2012	Aug 2012	Sept 2012	Oct 2012	Nov 2012	Dec 2012	Jan 2013	Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013
EDUCATION																	
Continue kindergarten bike safety day each year																	
Lead	PE teacher																
Plan																	
Implement																	
Distribute town pamphlet of existing walking trails																	
Lead	Principal																
Plan																	
Implement																	
Providing walking and bicycling safety materials to parents through backpack mail																	
Lead	Health Office/PE teacher																
Plan																	
Implement																	
Helmet distribution and education each spring																	
Lead	PE teacher/Health Office																
Plan																	
Implement																	
Reach out to Dartmouth College bike club																	
Lead	Tig Tillinghast																
Plan																	
Implement																	
Incorporate Walk Smart/Bike Smart Vermont! curriculum																	
Lead	PE teacher																
Plan																	
Implement																	
Sharing tips and tools on school's website and/or newsletter																	
Lead	Principal																
Plan																	
Implement																	
Apply for free or reduced cost bicycle helmets																	
Lead	Nurse																
Plan																	
Implement																	
ENCOURAGEMENT																	
Continue the Winter Passport Program																	
Lead	PE teacher																
Plan																	
Implement																	
Continue Walk Across America																	
Lead	PE teacher																
Plan																	
Implement																	
Develop off-road paths for students to walk on during recess																	
Lead	Outdoor Space Committee																
Plan																	
Implement																	
Hike for Hunger																	
Lead	Guidance Counselor																
Plan																	
Implement																	

Activity		May 2012	Jun 2012	Jul 2012	Aug 2012	Sept 2012	Oct 2012	Nov 2012	Dec 2012	Jan 2013	Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013
Develop and encourage park and walk sites for walking school buses and bike trains (Implement 2014)																	
Lead	Outside Space Committee																
Plan																	
Implement																	
Story Walk																	
Lead	SRTS Champion																
Plan																	
Implement																	
Utilize VT Resource Center incentive items																	
Lead	SRTS Champion																
Plan																	
Implement																	
Participate in International Walk to School Day																	
Lead	SRTS Champion																
Plan																	
Implement																	
Develop Park and Walk sites for walking school buses																	
Lead	Outdoor Spaces Committee																
Plan																	
Implement																	
Participate in Vermont Walk and Roll to School Day																	
Lead	SRTS Champion																
Plan																	
Implement																	
ENFORCEMENT																	
Work with local enforcement officers to better communicate and address unsafe behavior																	
Lead	Local Police Department																
Plan																	
Implement																	
Provide positive reinforcement to students displaying safe and healthy behaviors; i.e. Caught Being Good Program (Implement 2014)																	
Lead	Parent Teacher Organization																
Plan																	
Implement																	
Obtain temporary speed trailer/feedback machine for Route 113 (Orange County)																	
Lead	Local Police Department																
Plan																	
Implement																	
EVALUATION																	
Parent Survey																	
Lead	Nurse/SRTS champion																
Plan																	
Implement																	
Student Tallies																	
Lead	Nurse/SRTS champion																
Plan																	
Implement																	
Conduct annual walking audit																	
Lead	SRTS team																
Plan																	
Implement																	

APPENDIX B TYPICAL INFRASTRUCTURE RECOMMENDATIONS

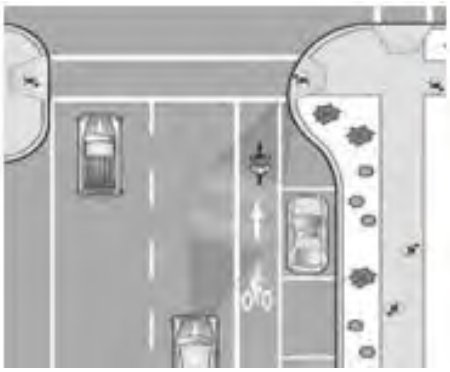
The following infrastructure recommendations are typical treatments used in SRTS projects. These recommendations may or may not be included in this travel plan. The basic information is provided to give an overall understanding and implementation guidance on each treatment.

Rectangular Rapid Flashing Beacons:

Rectangular rapid flashing beacons (RRFB), as shown to the left, are warning beacons used to increase visibility of students and all pedestrians as they cross the roadway at uncontrolled crosswalks. This type of signal is pedestrian-activated, i.e., the signal will only flash if a pedestrian has pushed a button, indicating that they need to cross the street. Any proposed RRFB locations need to meet current guidance provided in the interim approval of the MUTCD. For proposed uncontrolled crosswalks on state maintained roads, VTrans approval and justification are needed.

Curb Extensions:

Curb extensions, as shown below, are recommended to reduce pedestrian crossing distances (and thus exposure to traffic) and to slow motor vehicle turning speeds at intersections. Curb extensions located along school bus routes should effectively calm traffic, but not impede buses from making the turn. Design considerations should include the appropriate design vehicle, maintenance concerns, and snow plow accommodations depending on the roadway jurisdiction.



Curb Radius Reductions:

Curb radius reductions are recommended to slow motor vehicle turning speeds and to reduce pedestrian crossing distances (and thus exposure to traffic). Curb radius reductions involve tightening the motor vehicle turning radius at an intersection, as

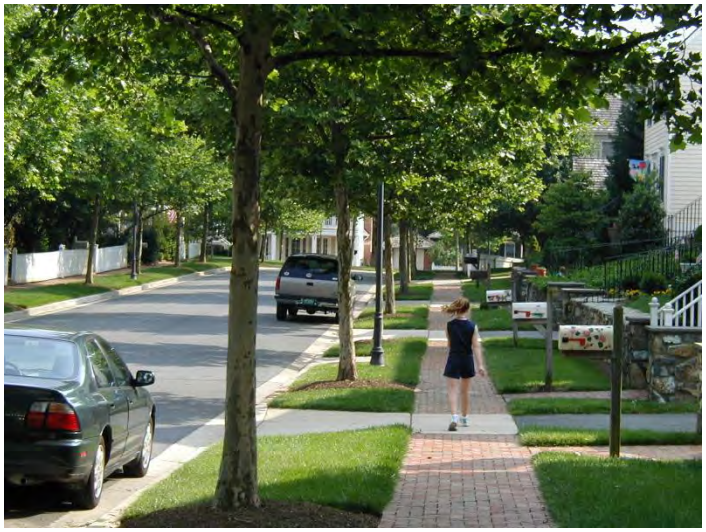
shown to the left, without extending the curb line into a parking lane. Curb radius reductions located along school bus routes should effectively calm traffic but not impede buses from making the turn. Design considerations for curb radius reductions include the appropriate design vehicle depending on the roadway jurisdiction and ADA compliance.

<u>High Visibility Crosswalks:</u>

High visibility crosswalk striping improves the visibility of pedestrians to motorists. Different striping patterns can be used and the most common patterns are variations of the ladder style, shown right. Reflective durable materials should be used to resist decay.

<u>Sidewalks and buffers:</u>

One of our long-term goals is to establish a well-connected sidewalk network throughout the neighborhoods so that families can walk for more of their daily trips, rather than drive. Sidewalks are the most effective when they include a buffer. This buffer increases pedestrian comfort and safety and can also serve as a place for pedestrian "overflow", especially closer to the school where groups of walkers are largest. Based on Vermont Pedestrian and Bicycle Facility Planning and Design Manual, the preferred design for sidewalks is a minimum six foot wide sidewalk with a minimum two foot wide buffer for local roadways with curbs. For downtowns and village centers on roadways with curbs, the preferred design for sidewalks is a minimum eight foot wide sidewalk with a minimum four foot wide buffer. For roadways without curbs, the buffer should be a minimum of five feet. Available right of way will impact the ultimate design of the sidewalk.



School Zone Identification:

School pavement markings are recommended to alert motorists that they are entering a school zone where pedestrians may be present both along and crossing the roadway. New pavement markings can work with existing school zone signs to reinforce the message to motorists about the school zone. The detail provided in the figure below is an excerpt of the MUTCD.

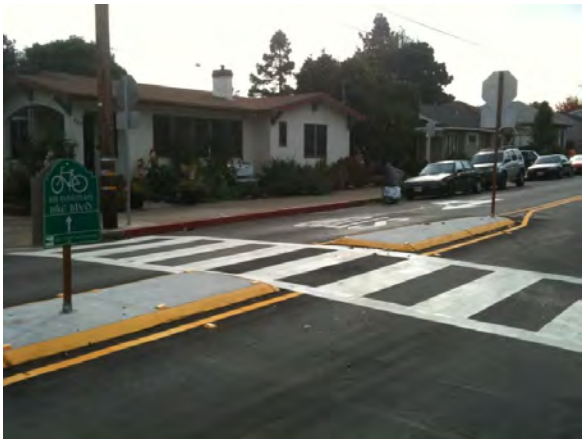
Speed Feedback Signs:

Communities may use a mobile "speed trailer" that can be placed in locations where motorists exceed the speed limit often enough that passive enforcement is appropriate. Permanently installed feedback signs, shown right, provide ongoing information to motorists about the speed at which they are traveling. SRTS recommended any potential feedback signs be strategically located at main access points.

For towns interested in reducing the speed limit of a roadway, an engineering study needs to be conducted by the town. Approval from VTrans is needed for state maintained roads.

Pedestrian Refuge Island:

A Pedestrian refuge island, as shown right, may be used to narrow the roadway, reduce motor vehicle speeds, and improve pedestrian crossings. In locations with crosswalks, these islands improve pedestrian safety and access by reducing crossing distances and enable pedestrians to cross roadways in two stages. Pedestrian refuge islands should be used on multi-lane roadways or roadways with insufficient vehicular gaps to pedestrians to safely cross. Prior to design, a gap study should be conducted. Other considerations for pedestrian refuge islands include ADA compliance, maintenance concerns, and snow plow accommodations.



Appendix C: Location-Specific Engineering Recommendations

SRTS engineering strategies create safer environments for walking and bicycling to school through improvements to the infrastructure surrounding them. These improvements focus on reducing motor vehicle speeds and conflicts with pedestrians and bicyclists, as well as establishing safer and fully accessible crossings, walkways, trails, and bikeways.

The following table provides a summary of the engineering strategies recommended for Thetford Elementary School. These recommendations were developed by Toole Design Group, LLC based on input from the Thetford Elementary SRTS Team. The table includes an estimate of the amount of time that is likely to be needed to implement the recommended improvements at each site (Estimated Time Frame). The table also indicates the priority of the proposed improvements at each site for the Thetford Elementary SRTS Team (Team Priority).

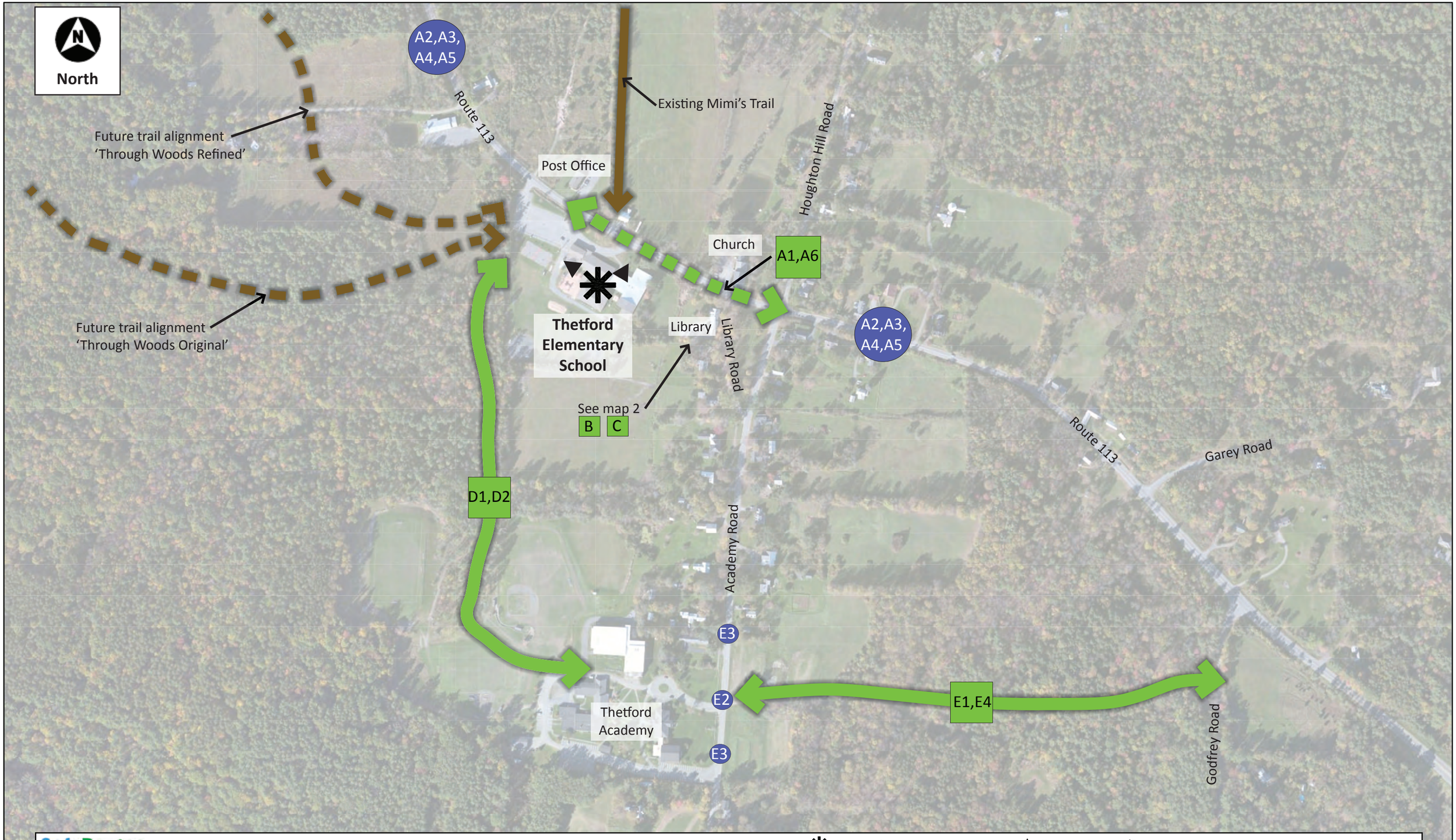
These recommendations are for planning purposes only and may require further engineering analysis, design, or public input before implementation and shall be in full compliance with the Manual on Uniform Traffic Control Devices for Streets and Highways, (MUTCD) Latest Edition adopted by the state.

The summary table provided below is followed by information about implementation and a map which shows where the recommendation sites are located in relation to the school.

Description of Streets with Engineering Recommendations

Street name	Classification of Town Highways	Speed Limit	Curb/No curb & Surface
Academy Road	Class Two	25	No curb - Paved
Godfrey Road	Class Three	35	
Houghton Hill Road	Class Three	35	No curb - Paved
Library Road	Private Road		No curb - Unpaved
Route 113	Vermont State Highway	30/40*	No curb - Paved

* 40 MPH north and south of the Town of Thetford



SafeRoutes Vermont Safe Routes to School

Thetford Elementary School Location Key 1 of 2

Thetford, VT

July 2012

- School Location
- Segment Improvement
- Intersection/Spot Improvement
- School Arrival/Dismissal Locations

Toole Design Group

North

Thetford Elementary School

Route 113

Church

Houghton Hill Road

Future Thetford Elementary School off-road path

Future Thetford Elementary School off-road path

Library

C2

C1

Library Road

Academy Road

B2,B3, B5

B1,B4

Thetford Elementary School Location Key 2 of 2

SafeRoutes Vermont Safe Routes to School

Thetford, VT

July 2012

School Location

Segment Improvement

Intersection/Spot Improvement

School Arrival/Dismissal Locations

Toole Design Group

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
A Route 113 Route 113 is classified a Vermont State highway and has two, 11-foot travel lanes with four feet of unpaved shoulder. The right-of-way is roughly 30-feet wide. The posted speed limit is 35 mph. Route 113 provides direct access to Thetford Elementary School and experiences high traffic speeds and high volumes of vehicular traffic.	Thetford Elementary School sits atop Thetford Hill on Route 113 and has limited site lines for all users traveling the corridor. The current sight lines in front of the school do not support appropriate conditions for a level, at-grade crossing. Since students are traveling from all directions to access the school, it is highly desirable for the community to have a safe crosswalk to cross Route 113. The lack of sidewalks, pedestrian crossings, and school zone signage on Route 113 does not properly alert motorists that pedestrians are present and creates uncomfortable walking conditions for this corridor. Motorists were observed traveling at relatively high speeds and in relatively high volumes during the morning arrival and afternoon dismissal observation. Specifically, the team requested a marked crossing near the school and Old Congregational Church.	A1. Resurface portions of Route 113 (To be completed by VTrans) and Route 113 pedestrian facility enhancement project, including crosswalks (managed by the Two Rivers-Ottauquechee Regional Commission).	Short term	☑ *Safety concerns.* ☑ *Existing walking or bicycling routes.* ☑ *Priorities for the school community.*	High
		A2. Install speed feedback signs within the 30 mph zone at both existing school zone sign locations to alert drivers to their actual speed and the posted speed limit. A speed study will be required in order to assess the appropriateness of this measure.	Short term		
		A3. Replace the existing 'AHEAD' plaque with 'XX FEET' (W16-2ap) plaque at both existing school sign locations. The distance to Thetford Elementary School shall be measured and confirmed. The signs shall be a high fluorescent yellow/green color.	Short term		

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
A (Continued)		A4. Repaint 'SCHOOL' pavement markings at both existing school zone sign locations.	Short term	☑ *Safety concerns.* ☑ *Existing walking or bicycling routes.* ☑ *Priorities for the school community.*	High
		A5. Trim existing tree branches for improved visibility of existing signage.	Short term		
		A6. Install pedestrian-level lighting along the proposed sidewalk and roadway lighting to illuminate proposed crossing on Route 113.	Long Term		

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
B Library Road Library Road connects Route 113 to Academy Road and runs parallel to Academy Road, west of the Town Green. Library Road is a Class Three unpaved roadway with a width of 20-feet. An existing stone dust sidewalk starts at Thetford Academy on Academy Road and continues north until the intersection of Academy Road and Library Road where the path terminates.	Library Road is a popular destination route for the Thetford community and students. The Town of Thetford Latham Memorial Library, Town Green and Old Congregational Church can be accessed using Library Road. The intersection of Academy Road and Library Road lacks appropriate road geometry, allowing motorists to negotiate the intersection without coming to a complete stop. The intersection is also uncontrolled. Pedestrians do not have a clear, dedicated space for travel from the existing off-road path onto Library Road.	B1. Reconstruct and realign a portion of Library Road and Academy Road intersection so that Library Road approaches the Academy Road intersection at a 90-degree angle.	Long term	☑ *Safety concerns.* ☑ *Existing walking or bicycling routes.* ☑ *Priorities for the school community.*	High
		B2. Install an off-road path on the west side of Library Road from Route 113 to the existing path on Academy Road.	Short term		
		B3. Install asphalt pavement on Library Road from Route 113 to Academy Road.	Medium term		
		B4. Install a 'STOP' sign and stop bar pavement marking on Library Road at the Academy Road intersection.	Short term		
		B5. Convert Library Road to a common space to be shared by pedestrians, bicyclists, and low-speed motor vehicles closed to through traffic. Designating Library Road as a shared street could facilitate closing the roadway to thru traffic.	Long term		

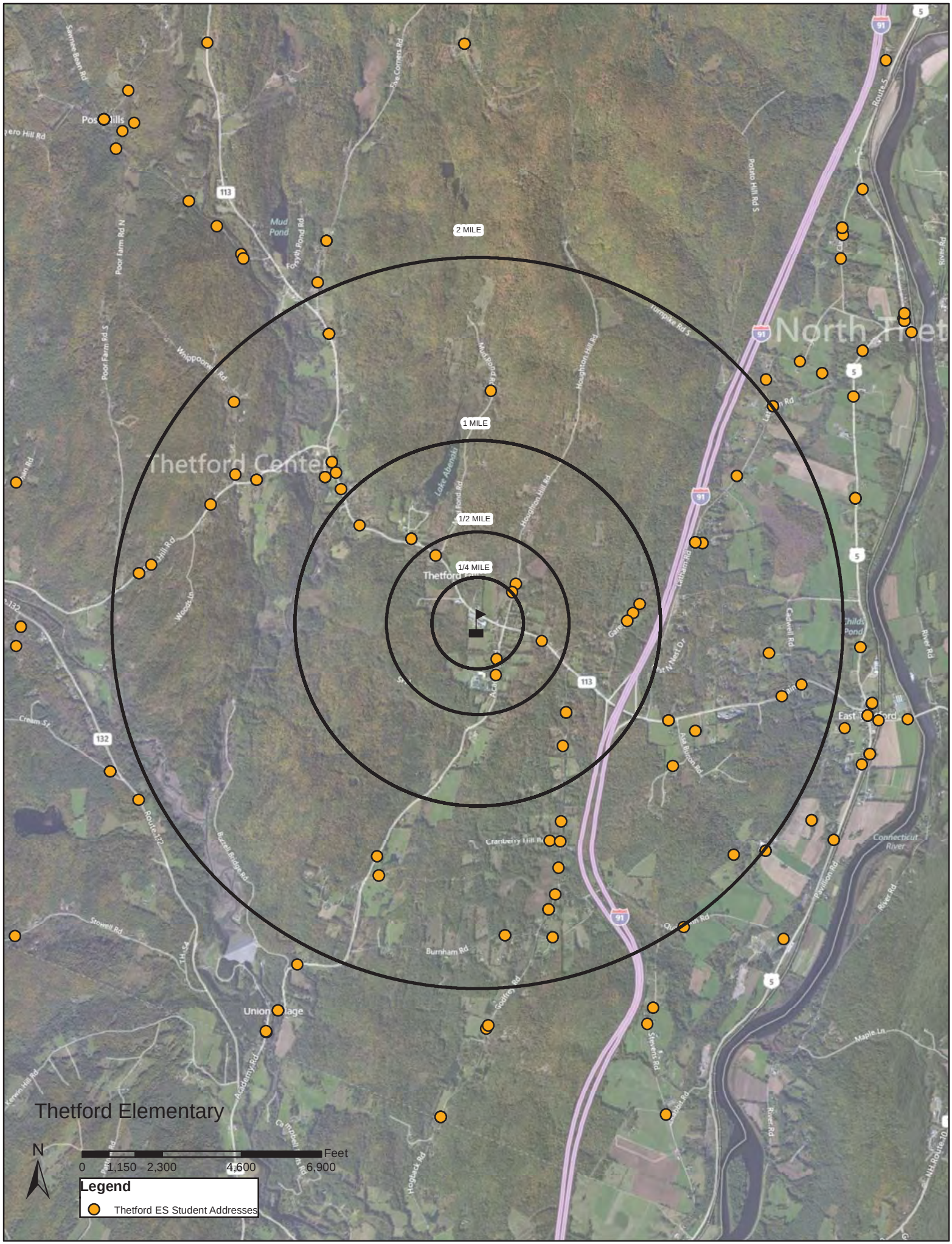
Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
C School Grounds A stream and open drainage system occupies most of Thetford School property east of the school behind the Latham Memorial Library. Any future proposed pedestrian accommodations on the south side of Route 113 would be very costly to construct due to the stream and open wet drainage area. The Thetford Elementary School property is classified under the wetland advisory layer with hydric soils.	An informal walking route currently exists from the parking lot behind Latham Memorial Library to access the front and rear of the school over a stream using a temporary bridge structure. The bridge provides direct off-road access to Thetford Elementary School and the library. Thetford Elementary School has currently raised funding to design and construct an off-road path on the school property from the rear access road to the front of the school on the east side. Formalizing this connection with an enhanced off-road path and upgrading the pedestrian bridge with a permanent structure would encourage the community and students of the school to utilize the path.	C1. Install an off-road path from the south side of the library driveway over the stream. The proposed path segment would connect to the off-road path segment that Thetford Elementary School is currently planning to design and install on the school property. Formalizing the path will require ADA compliance, necessary easements and permits, and parcel ownership verification for the proposed path alignment.	Short term	☑ *Safety concerns.* ☑ *Existing walking or bicycling routes.* ☑ *Priorities for the school community.*	High
		C2. Install an accessible, permanent pedestrian bridge crossing the stream to replace the existing temporary bridge.	Medium term		

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
D Thetford Academy Trail An informal off-road walking path is currently used by the community and students between Thetford Elementary School and Thetford Academy.	The on-road conditions are unsafe for walking and biking because the roads surrounding the school lack adequate pedestrian or cycling facilities. Connecting Thetford Elementary School to Thetford Academy with an off-road path would increase connectivity for all users and link popular destinations within the community. Thetford Academy is located on private land so necessary right-of-way, easements, and/or permits will need to be in compliance in order to make this off-road connection.	D1. Install an off-road path from the western edge of the parking lot at Thetford Elementary School to Thetford Academy.	Medium term	☑ *Safety concerns.* ☑ *Existing walking or bicycling routes.* ☑ *Priorities for the school community.*	High
		D2. Team up with students, private landowners, the Town of Thetford, the Vermont Trails & Greenways Council, and the Upper Valley Trail Alliance (UVTA) to schedule long term trail management and a maintenance program.	Short term		

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
E Godfrey Road Trail An informal off-road path is currently used by the community and students between Godfrey Road and Thetford Elementary School.	The on-road conditions are unsafe for walking and biking because Route 113, parallel to this path, lacks adequate pedestrian or cycling facilities. Connecting Thetford Elementary School with the Godfrey Road neighborhood would increase off-road path connectivity for this residential neighborhood and link popular destinations within the community.	E1. Install an off-road path from Godfrey Road to Academy Road.	Medium term	☑ *Safety concerns.* ☑ *Existing walking or bicycling routes.* ☑ *Priorities for the school community.*	Low
		E2. Install one high-visibility, durable, ladder-style crosswalk crossing Academy Road north of the Thetford Academy entrance driveway. Install pedestrian scale and roadway lighting to illuminate the proposed midblock crossing.	Medium term		
		E3. Install an advanced crosswalk and crosswalk signs (W11-2 and W16-7P). The proposed signs shall be high fluorescent yellow/green color with reflective material.	Short term		
		E4. Team up with students, private landowners, the Town of Thetford, the Vermont Trails & Greenways Council, and the Upper Valley Trail Alliance (UVTA) to schedule long term trail management and a maintenance program.	Short term		

APPENDIX D

THETFORD ELEMENTARY SCHOOL STUDENT ADDRESSES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Thetford Elementary
N
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1,150
2,300
4,600
6,900
Feet
Legend
Thetford ES Student Addresses

APPENDIX E

THETFORD ELEMENTARY SCHOOL PROFILE

Vermont Safe Routes to School
Partnership Form

Please complete entire form and return to info@saferoutesvt.org or fax to 802.828.5712. Forms can also be sent to: Vermont Agency of Transportation, Program Development - LTF, 1 National Drive, Montpelier, VT 0563-5001, Attn: Aimee Pope.

School Name: Thetford Elementary School

Address: 2689 Route 113

Telephone: 802-785-2645 **Fax:** 802-785-2645

School Hours: _____

1. Do you have an existing Safe Routes to School Program? ○ YES ◉ NO

If yes, please check the SRTS Elements your school currently participates in:

☐ Education ☐ Enforcement ☐ Encouragement ☐ Evaluation ☐ Engineering

2. Has your school completed a SRTS Travel Plan? ○ YES ◉ NO

If no, would you like to be considered for hands-on Travel Plan assistance offered by the Resource Center? ◉ YES ○ NO

3. How many students attend this school? List total student population per grade:

K	1	2	3	4	5	6	7	8

4. Approximately what percentage of students live within one mile _____ or two miles _____ of the school?

5. Approximately how many students currently walk _____ or bike _____ to school?

6. How many crossing guards are assigned to this school? _____

7. Please CHECK the stakeholders that will participate in the SRTS Program:

☐ Principal ☐ Parents ☐ School staff ☐ Safety/patrol Officer ☐ Local Health Department

☐ Local Planning or Engineering Department ☐ Other: _____

The below contacts express their interest and support of becoming a Safe Routes to School Partner

Main Point of Contact(s)

Name Laurel Mackin

Title Co-Chair TES Open Spaces Committee

Email laurel@tuckermancapital.com

Telephone 802-785-2414

Principal Information

Name Keith Thompson

Signature _____ **Date** _____

Email _____

Comments:

Questions? Please contact Abby at info@saferoutesvt.org or 802.598.8651

Brought to you by the Vermont Agency of Transportation

APPENDIX F

STUDENT TRAVEL TALLY APRIL 2012/PARENT SURVEY REPORTS APRIL 2012

Safe Routes to School Students Arrival and Departure Tally Sheet

CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY

School Name:

Teacher's First Name:

Teacher's Last Name:

Grade: (PK,K,1,2,3...) 0 2

Monday's Date (Week count was conducted) M M D D Y Y Y Y

Number of Students Enrolled in Class: 1 5

- Please conduct these counts **on two of the following three days Tuesday, Wednesday, or Thursday. (Three days would provide better data if counted)**
- **Please do not conduct these counts on Mondays or Fridays.**
- Before asking your students to raise their hands, please read through all possible answer choices so they will know their choices. Each Student may only answer once.
- Ask your students as a group the question "**How did you arrive at school today?**"
- Then, reread each answer choice and record the number of students that raised their hands for each. **Place just one character or number in each box.**
- Follow the same procedure for the question **"How do you plan to leave for home after school?"**
- You can conduct the counts once per day but during the count please ask students both the school arrival and departure questions.
- Please conduct this count regardless of weather conditions (i.e., ask these questions on rainy days, too).

Step 1.
Fill in the weather conditions and number of students in each class

Step 2.
AM – "**How did you arrive at school today?**" Record the number of hands for each answer.
PM – "**How do you plan to leave for home after school?**" Record the number of hands for each answer.

Key	**Weather** S= sunny R= rainy O=overcast SN=snow	**Student Tally** Number in class when count made	**Walk** -	**Bike** -	**School Bus** -	**Family Vehicle** Only with Children from your family	**Carpool** Riding with children from other families	**Transit** City bus, subway, etc.	**Other** Skate-board, scooter, etc.
Sample AM	S N	2 0	2	3	8	3		3	1
Sample PM	R	1 9	3	3	8	1	2	2	
Tues. AM									
Tues. PM									
Wed. AM									
Wed. PM									
Thurs. AM									
Thurs. PM									

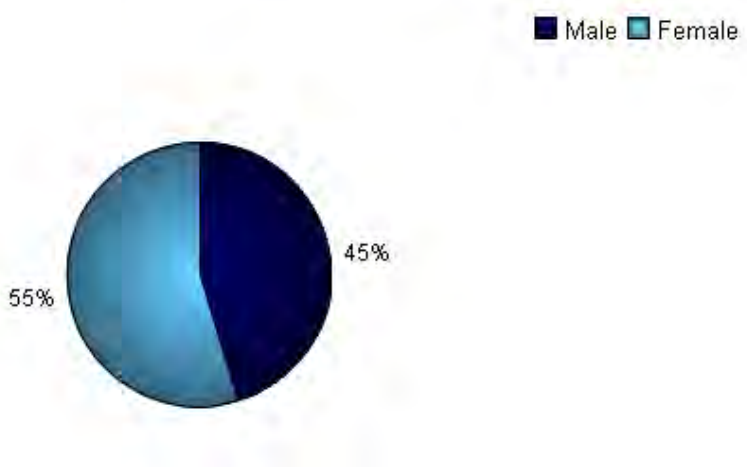
Please list any disruptions to these counts or any unusual travel conditions to/from the school on the days of the tally.

Parent Survey Summary

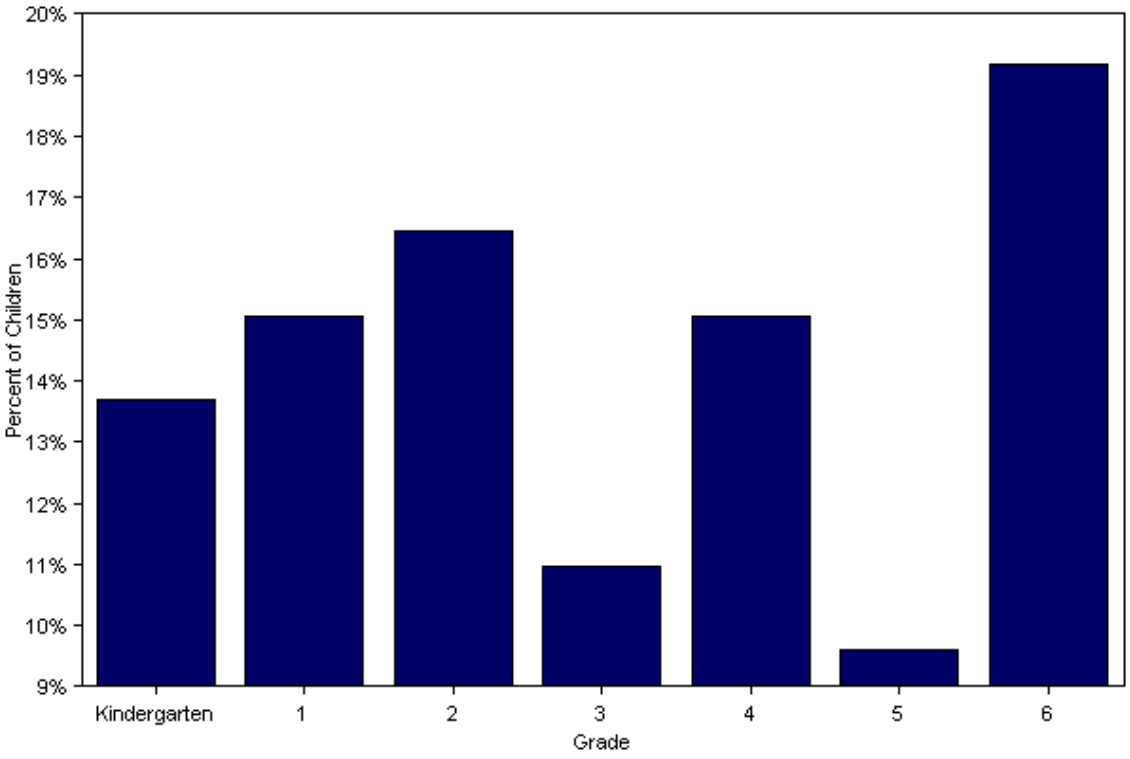
Program Name:	Thetford Elementary School	**Month and Year Collected:**	April 2012
School Name:	Thetford Elementary	**Set ID:**	7820
School Enrollment:	188	**Date Report Generated:**	05/14/2012
Enrollment within Grades Targeted by SRTS Program:	188	**Number of Questionnaires Analyzed for Report:**	73
Number of Questionnaires Distributed:	188		

This report contains information from parents about their children's trip to and from school. The report also reflects parents' perceptions regarding whether walking and bicycling to school is appropriate for their child. The data used in this report were collected using the Survey about Walking and Biking to School for Parents form from the National Center for Safe Routes to School.

Sex of children for parents that provided information



Grade levels of children represented in survey

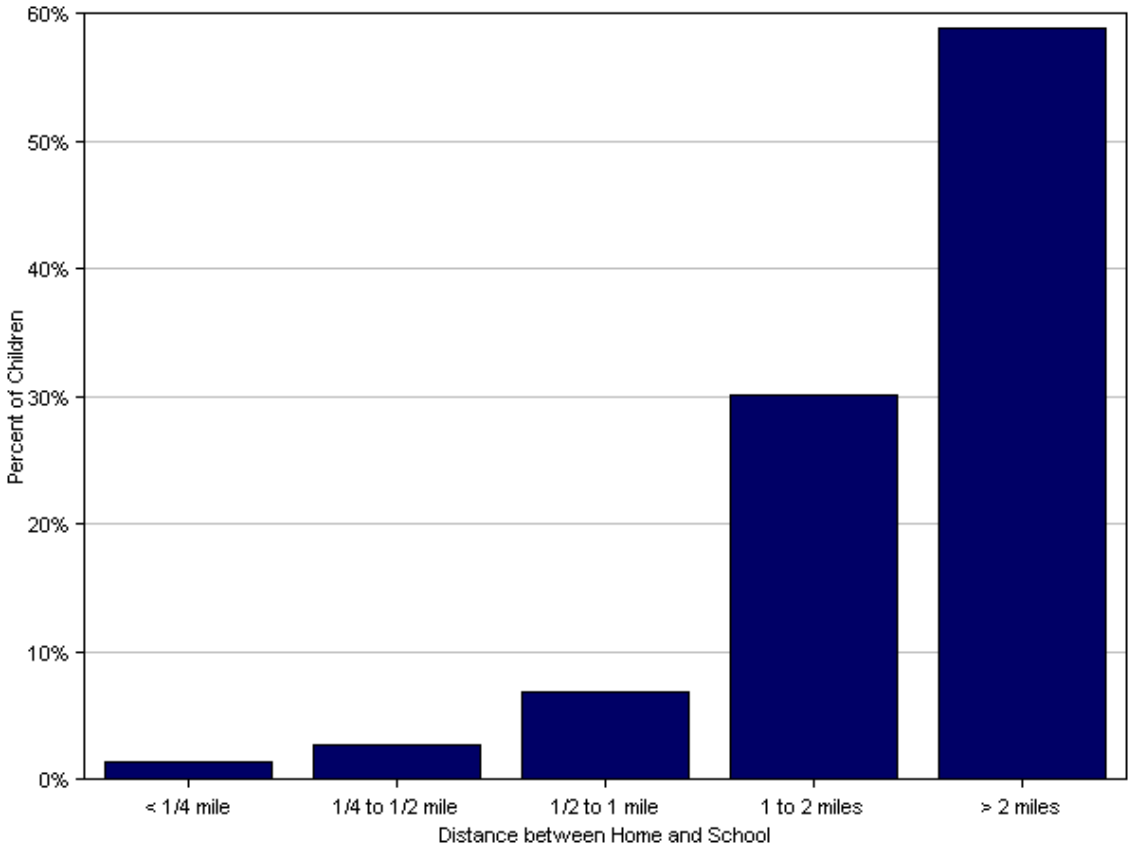


Grade levels of children represented in survey

Grade in School	Responses per grade	
	Number	Percent
Kindergarten	10	14%
1	11	15%
2	12	16%
3	8	11%
4	11	15%
5	7	10%
6	14	19%

No response: 0
Percentages may not total 100% due to rounding.

Parent estimate of distance from child's home to school

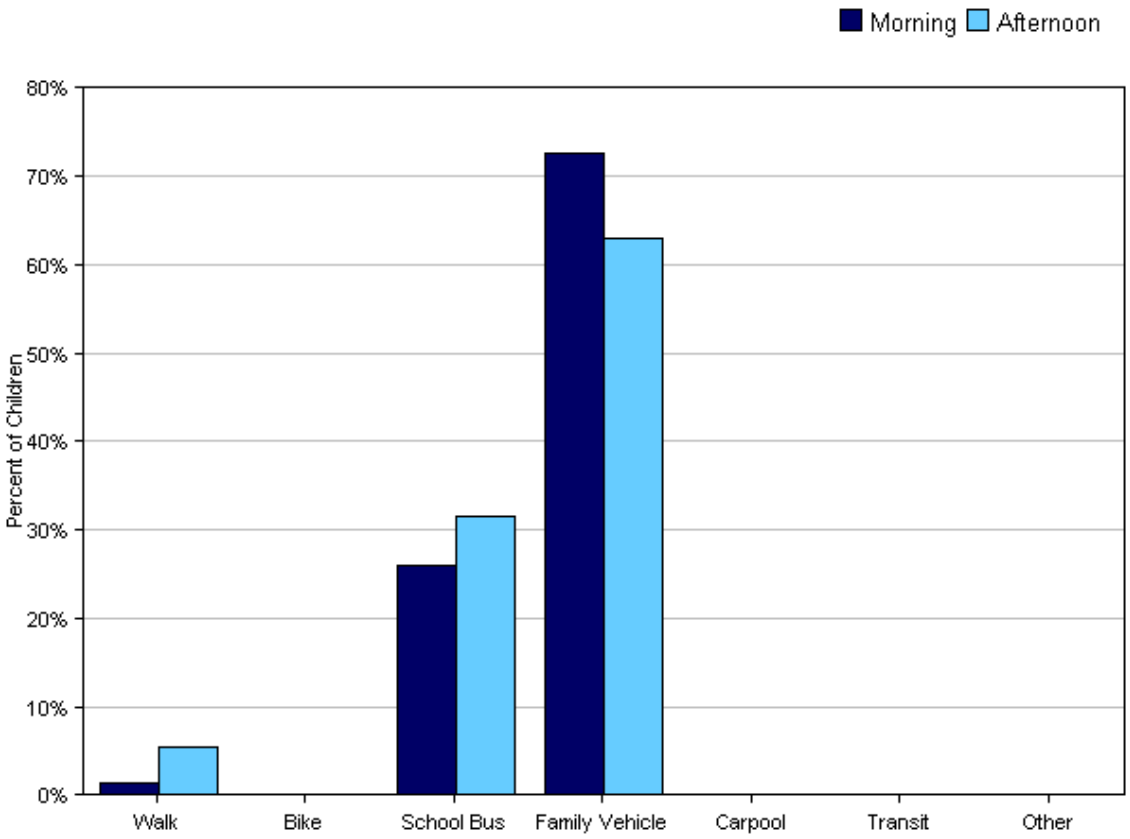


Parent estimate of distance from child's home to school

Distance between home and school	Number of children	Percent
Less than 1/4 mile	1	1%
1/4 mile up to 1/2 mile	2	3%
1/2 mile up to 1 mile	5	7%
1 mile up to 2 miles	22	30%
More than 2 miles	43	59%

Don't know or No response: 0
Percentages may not total 100% due to rounding.

Typical mode of arrival at and departure from school

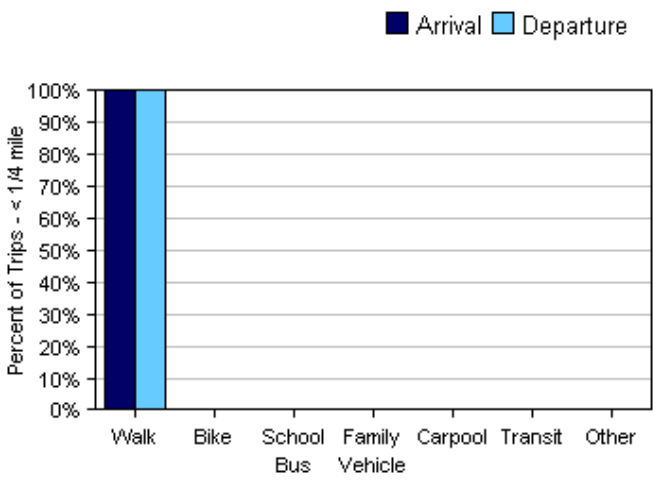


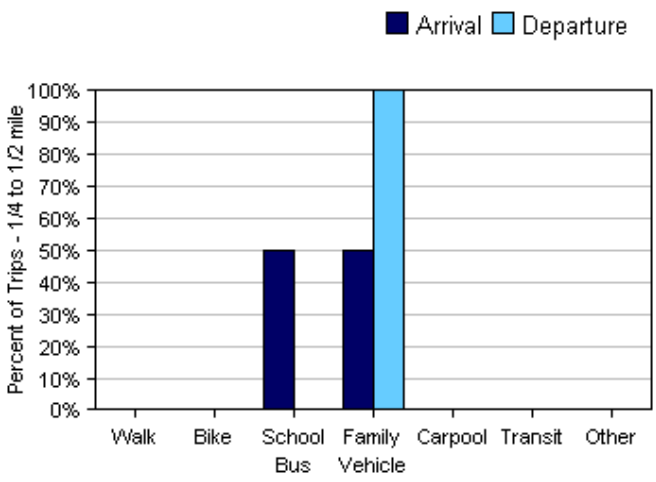
Typical mode of arrival at and departure from school

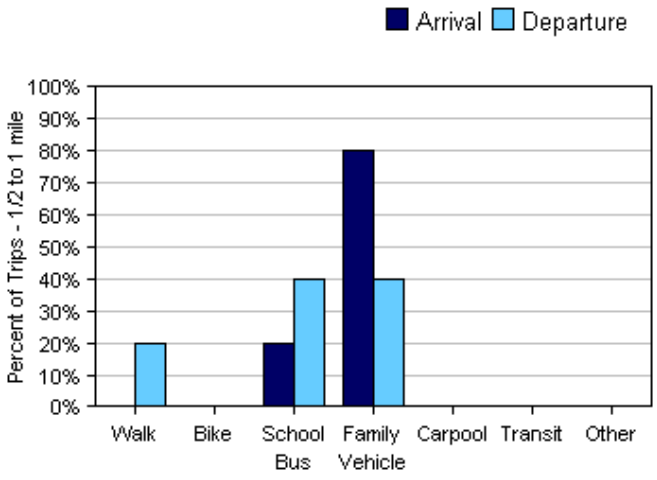
Time of Trip	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	73	1%	0%	26%	73%	0%	0%	0%
Afternoon	73	5%	0%	32%	63%	0%	0%	0%

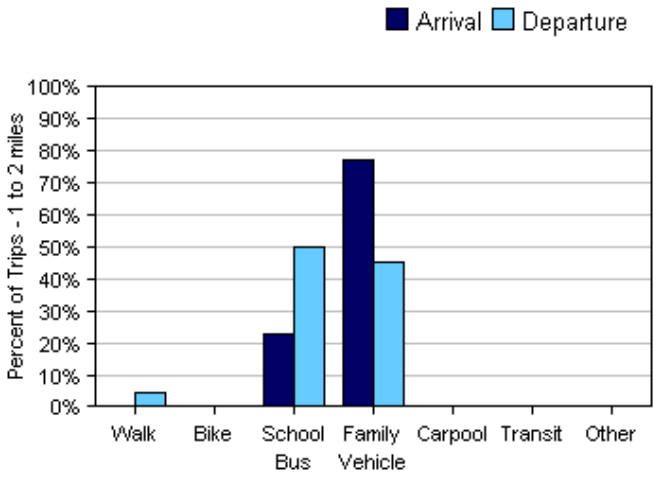
No Response Morning: 0
No Response Afternoon: 0
Percentages may not total 100% due to rounding.

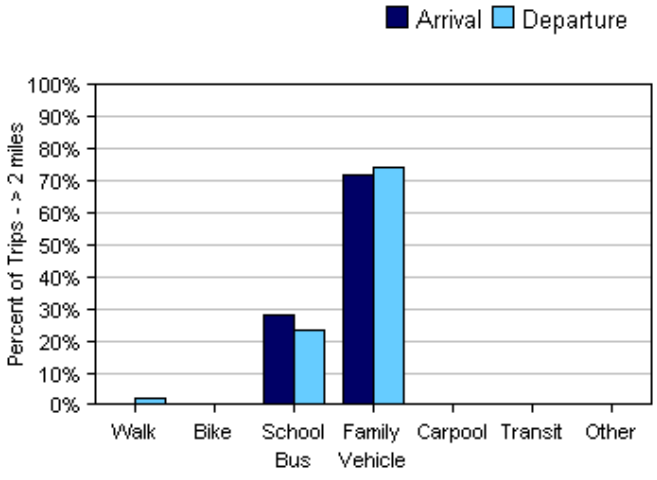
Typical mode of school arrival and departure by distance child lives from school











Typical mode of school arrival and departure by distance child lives from school

School Arrival

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	1	100%	0%	0%	0%	0%	0%	0%
1/4 mile up to 1/2 mile	2	0%	0%	50%	50%	0%	0%	0%
1/2 mile up to 1 mile	5	0%	0%	20%	80%	0%	0%	0%
1 mile up to 2 miles	22	0%	0%	23%	77%	0%	0%	0%
More than 2 miles	43	0%	0%	28%	72%	0%	0%	0%

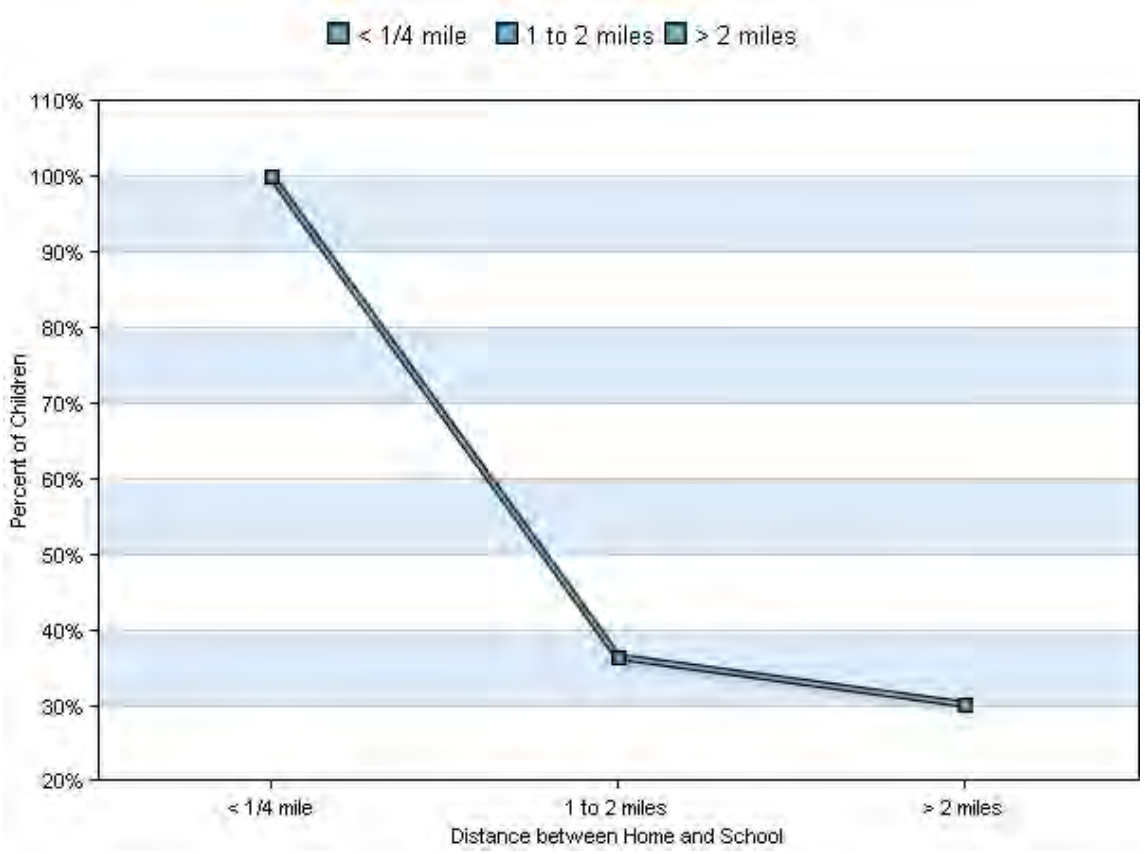
Don't know or No response: 0
Percentages may not total 100% due to rounding.

School Departure

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	1	100%	0%	0%	0%	0%	0%	0%
1/4 mile up to 1/2 mile	2	0%	0%	0%	100%	0%	0%	0%
1/2 mile up to 1 mile	5	20%	0%	40%	40%	0%	0%	0%
1 mile up to 2 miles	22	5%	0%	50%	45%	0%	0%	0%
More than 2 miles	43	2%	0%	23%	74%	0%	0%	0%

Don't know or No response: 0
Percentages may not total 100% due to rounding.

Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

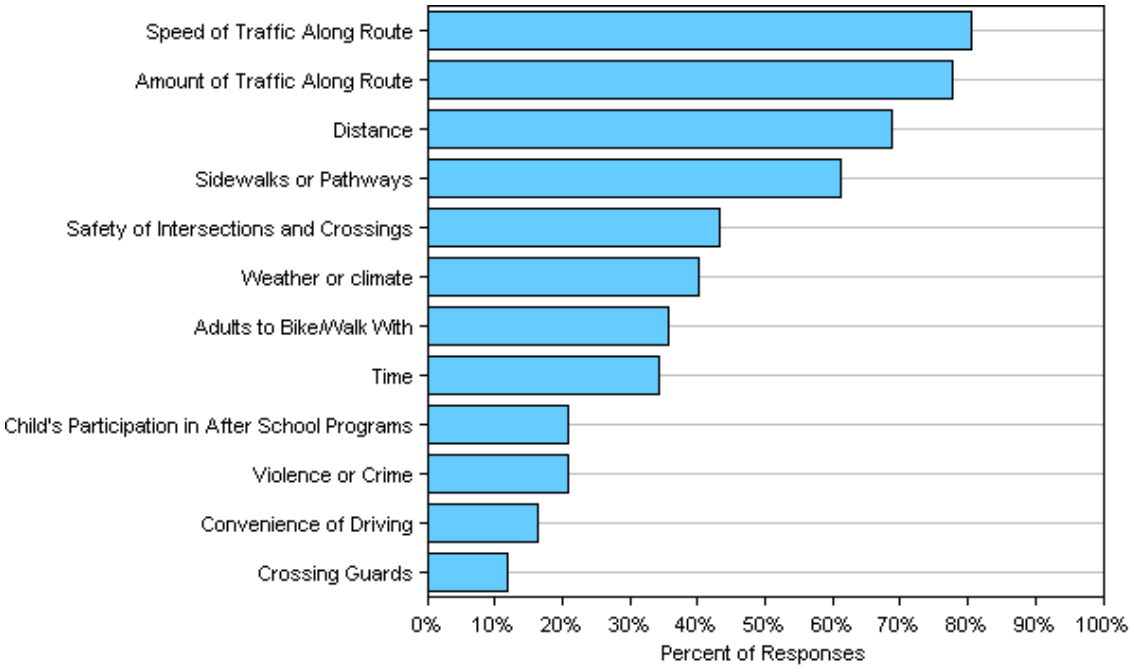


Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

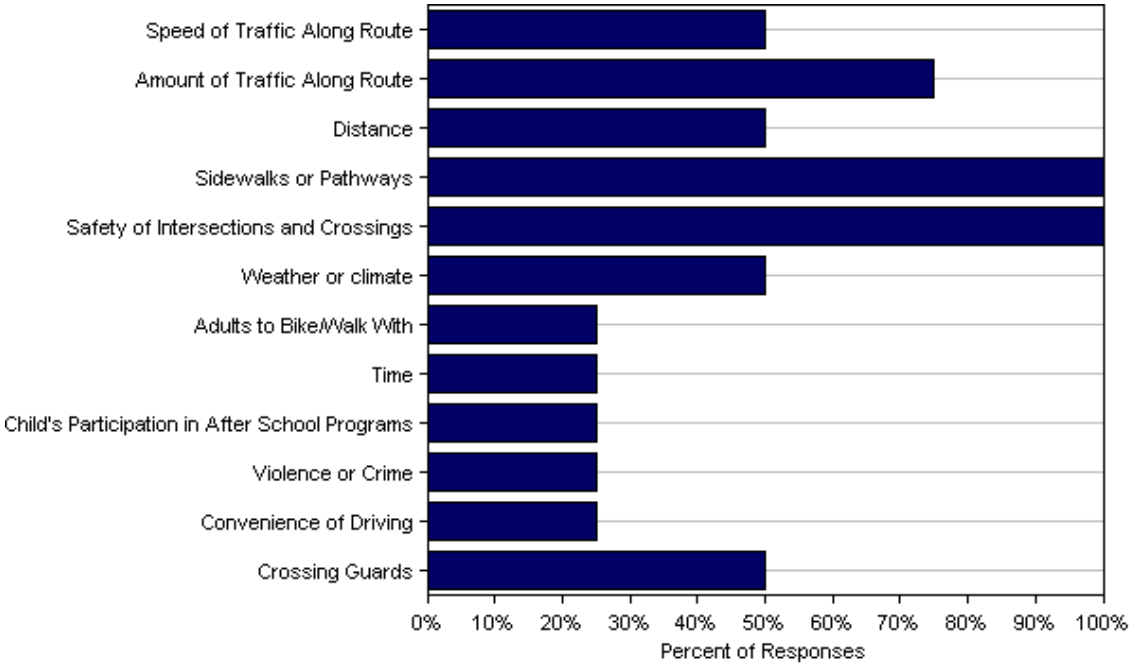
Asked Permission?	Number of Children	Less than 1/4 mile	1/4 mile up to 1/2 mile	1/2 mile up to 1 mile	1 mile up to 2 miles	More than 2 miles
Yes	22	100%	0%	0%	36%	30%
No	50	0%	100%	100%	64%	70%

Don't know or No response: 1
Percentages may not total 100% due to rounding.

Issues reported to affect the decision to not allow a child to walk or bike to/from school by parents of children who do not walk or bike to/from school



Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

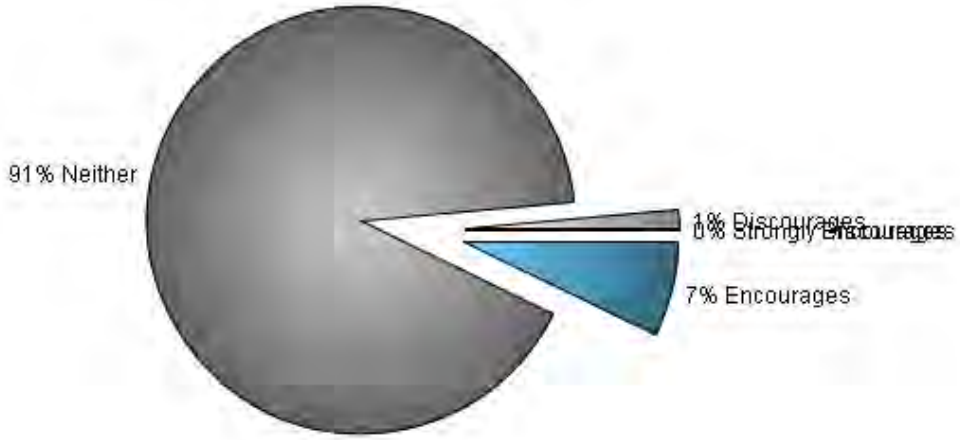


Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

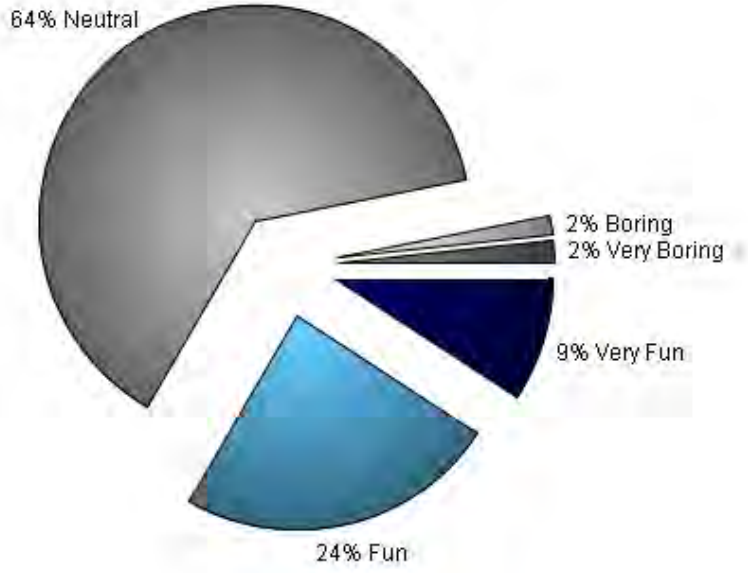
Issue	Child does not walk/bike to school	Child walks/bikes to school
Speed of Traffic Along Route	81%	50%
Amount of Traffic Along Route	78%	75%
Distance	69%	50%
Sidewalks or Pathways	61%	100%
Safety of Intersections and Crossings	43%	100%
Weather or climate	40%	50%
Adults to Bike/Walk With	36%	25%
Time	34%	25%
Child's Participation in After School Programs	21%	25%
Violence or Crime	21%	25%
Convenience of Driving	16%	25%
Crossing Guards	12%	50%
Number of Respondents per Category	**67**	**4**

No response: 2
Note:
--Factors are listed from most to least influential for the 'Child does not walk/bike to school' group.
--Each column may sum to > 100% because respondent could select more than issue
--The calculation used to determine the percentage for each issue is based on the 'Number of Respondents per Category' within the respective columns (Child does not walk/bike to school and Child walks/bikes to school.) If comparing percentages between the two columns, please pay particular attention to each column's number of respondents because the two numbers can differ dramatically.

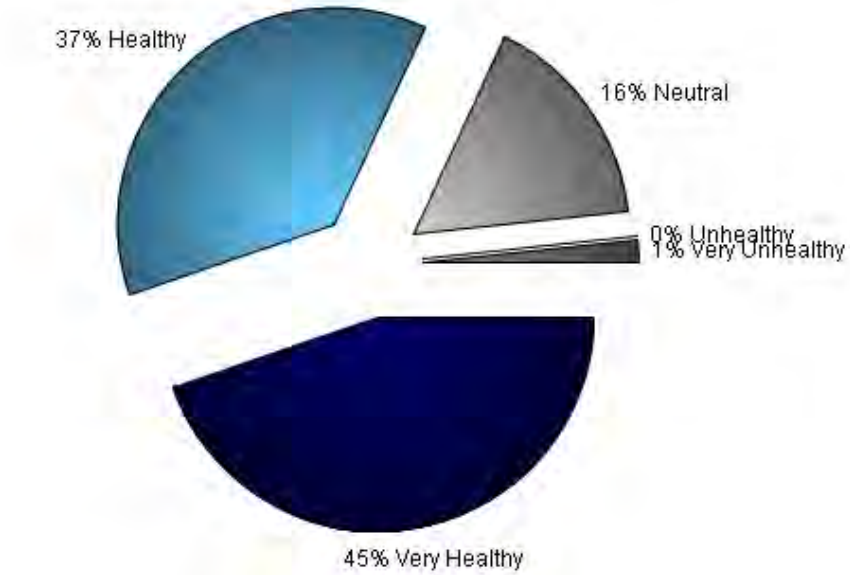
Parents' opinions about how much their child's school encourages or discourages walking and biking to/from school



Parents' opinions about how much fun walking and biking to/from school is for their child



Parents' opinions about how healthy walking and biking to/from school is for their child



Comments Section

SurveyID	Comment
831521	My largest concern is speeding along Route 113 with Thetford Academy students racing, texting along the way. Also, turn onto Godfrey Road off Route 113, often swerve to go around - have seen accident before. Could there be a check-in system to know that children arrived safely?
831528	We say it would be "very healthy" to walk to/from school, but only regarding exercise. Because of traffic and road conditions, walking wouldn't be healthy.
831632	We would definitely let our children walk to TA/TES if they did not have to go up Route 113. Route 113 is too dangerous.
831639	Darkness in the winter affects our decision.
831641	There is a very long and large hill, very bus with traffic from our house to school. It would be a tough bike ride even if the above problems (sidewalks, traffic) were remedied.
831643	Because of the narrow road/volume of truck traffic, my child does not bike alone to school, I bike with her. If this were to change (pathways), she would do well by herself or with a friend.
831648	Early start time at TA will discourage walking due to darkness at 6:30 mid-winter.
831652	Too far!
831497	Children bus first half of year but the route changed halfway so the ride is an hour long - we are close enough to walk if it was safer.
831501	Our distance, from Post Mills, makes walking or biking less likely. However, if the trails in planning go forward, I would love to be able to use them, even if mostly on non-school days or travel home from school.
831538	The issue for us is Route 113. No sidewalks and high speeds and some difficulty in terms of seeing cars. It is a real barrier for us.
831554	Thetford Elementary has a steep hill making it a tough school to bike to. That said, biking and walking trails or paths are incredibly beneficial to communities on many levels!!
831620	Our situation this year is a little different from our pas school commuting patterns as my youngest started kindergarten at a private school with no busing options. As a result, I have driven them directly to/from school the majority of the year. Typically, children take the bus to school every morning; their afternoon busing schedule is dependent on their after school activities. // They currently have a 2-mile walk to the bus stop along a winding, narrow dirt road, I typically drive them to the bus stop and pick them up there in the afternoon. Now that they are older, I have started to let them walk home in the fall and the spring as it stays light late enough for them to get home before dark. They are dropped at the bus stop at 3:45pm. In the winter, they don't get to the house before dark and so I will not allow them to walk as it is unsafe.// Next year, my youngest starts public school and will take the bus with his older siblings, however, it is too long of a walk for him to make it with a full backpack and I will continue to pick them up from the bus stop and drop them off.// I would love to see a secure shed at the bus stop where they can lock their bikes during the school day or a rack on the bus. This would allow them to bike the 2 miles to the bus stop and ride the bus the remaining 4-5 miles to school.// Better yet, using smaller buses that can access some of the side roads would allow my children to walk to the bus stop year round as the Norwich bus already stops 1/4 mile from our house.
831624	Because of where we live, I most likely would allow him to walk or bike to school until at least 10th grade. By then he can almost drive.
831627	Children bus the first half of the year, but the route changes to an hour ride - we are close enough to walk if it were safer!
831656	When he is older we may bike with him to school. He walks to his after school program 3x a week. Thanks :)
831496	We would need sidewalks on Route 113 to Godfrey Road, crossing guards etc., to make it safe for 3rd graders to walk or bike.
831544	Thank you for asking as well as taking interest in this subject.
831631	We live too far from the school for walking or biking to be an option.
831633	Walking/biking is totally impractical considering the distance and traffic along Route 113.

831655	We feel Route 113 is too dangerous for a young child to walk alone. She gets picked up afterschool by an adult who walks her to daycare. If my hours were different, I'd walk her to school.
831531	Distance is too great.
831536	Children who do not live within 1/4-1/2 mile are unable to walk or bike at any age - just too dangerous.
831541	He is too young to walk alone.
831547	Family would bike to/from activities if there were bike paths, sidewalks, or wider streets.
831622	Due to a very steep hill, it would help to be able to put a bike on the bus going to school and to ride home downhill.
831635	We live too far
831640	The real issue is busy roads with little or no shoulder.
831651	We would support our children walking or biking, but we feel there is no good route to walk to school from the location of where we live (rt 5 & pavillion rd). It is winding, potentially dangerous uphill road and would take a considerable amount of time.
831654	My child walks less than 1/4 mile to a child care center with an adult after school.
831478	Please understand that there has been an increase in crime and homicides in this area and I would never let my child go to school alone at any age.
831556	Our children are very active in other ways that don't expose them to the risks of traffic or criminal acts. Without those risks, biking to school would be a very interesting option.
831476	Our town school is at the TOP of a major hill. Except for those children who also live at the top of the hill (and can walk), self-powered (biking) transportation to school is simply not feasible in our town.

Strategy	E's	Advantages	Considerations	Resources
Walking and Biking Safety Curriculum and/or Assembly These lessons can be held in the fall to promote Walk to School Day. Guest speakers teach the students pedestrian and bicycle safety skills that they can use when walking and biking to school. Instruction as a part of school curriculum is also vital to ensuring on-going learning of bicycle and pedestrian safety and development of skills.	**Education, Encouragement**	• Assures all children learn bicycle and pedestrian safety skills • Establishes habits that benefit children throughout their lives, regardless of whether they currently walk or bike to school • Establishes consistent messages for young pedestrians and bicyclists • Provides a refresher for parents if take home materials are provided in conjunction with the assembly. It's never too late to correct bad habits. • Events can make learning fun, and help strengthen community ties with event organizers and participants.	• Best taught using a combination of methods, including one-time instruction (e.g. assemblies), multi-lesson classroom curricula, and skills practice (e.g. bicycle safety fairs). • Requires able and willing instructors • Should be age-appropriate • Bicycle safety education may require an outside instructor, e.g. a police officer.	• Walk Smart/Bike Smart Vermont! http://healthandlearning.org/documents/WalkSmartBikeSmartFINAL2008_001.pdf • National Highway Traffic Safety Administration Pedestrian Safety Lessons http://www.nhtsa.gov/ChildPedestrianSafetyCurriculum • WalktoSchool.org - Classroom activities that encourage walking and biking. www.walktoschool.org/eventideas/classroom.cfm • Willie Whistle - The National Highway Traffic Safety Association has created a video to help teach children pedestrian safety skills. http://www.nhtsa.gov/people/injury/willie/willie.zip • See Partner Resource CD for more materials

Strategy	E's	Advantages	Considerations	Resources
Continue to Participate in Walk to School Day Walk to School Day is a one-day event that celebrates walking and biking to school. Generally this event is scheduled for the first full week in October. Why not use this strategy multiple times a year?	**Education, Encouragement**	• Excellent kick-off event for Safe Routes to School program • Generates enthusiasm for walking and biking • Way to raise community awareness about safety issues • Can be as simple as a few kids and parents meeting to walk to school or very elaborate celebrations • Can be folded into studies of international cultures as it is an international event • Date is flexible- to be counted by the National Center for Safe Routes to school the event need only take place before Dec 1.	• Preparations for elaborate celebrations must begin several months in advance to allow time to identify partners, plan activities, and promote the event • Should provide bicycle and pedestrian safety information to children and parents • International Walk to School Day takes place in October but some schools organize multiple Walk to School Day (or "Walk and Roll Day") events over the course of the school year (e.g. one in the fall and one in the spring).	• U.S. Walk to School Day website (provides resources and event registration): www.walktoschool.org • International Walk to School Day website: www.iwalktoschool.org/ • Plan and promote your Walk to School Day event http://saferoutes.vermont.gov/sites/saferoutes/files/PDFs/How%20To%20-%20Special%20Events.pdf • Include students when it is too far or unsafe http://saferoutes.vermont.gov/sites/saferoutes/files/Including%20Students%20When%20It%27s%20Too%20Far%20or%20Unsafe%20VT.pdf • See Partner Resource CD for more materials
Frequent Walker/Bicyclist Program or Walking Wednesdays Track and reward students who walk and bicycle to school. Can be an individual competition or a competition among classes.	**Encouragement**	• Provides positive reinforcement for walking and bicycling. • Children respond to incentives. • Can include all students. • Can include walking and bicycling beyond the trip to school.	• Necessary to identify a coordinator. • Establish a simple record-keeping system. • Establish age-appropriate goals. • Consider giving rewards to parents as well, since parents are often involved in the commute to school.	• Frequent Walker Punch card template http://saferoutes.vermont.gov/sites/saferoutes/files/PDFs/VT_SRTS_Punchcard_v2_110825-1.png • Vermont Challenge: Walk Across America http://saferoutes.vermont.gov/sites/saferoutes/files/PDFs/The%20VT%20Challenge%20-%20Walk%20Across%20Vermont%21.pdf • Tips for creating a walking and bicycling route map http://saferoutes.vermont.gov/sites/saferoutes/files/PDFs/Tips%20for%20Creating%20Walking%20and%20Bicycling%20Route%20Maps.pdf • See Partner Resource CD for more materials

Strategy	E's	Advantages	Considerations	Resources
Traffic Enforcement (Staff/Crossing Guards) This can be an ongoing program for school staff and crossing guards. This works well if the school has an existing reward point program.	**Education, Enforcement, Encouragement**	• Crossing guards play an important role in helping children cross the street at key locations, reminding drivers of the presence of pedestrians, and making parents feel more comfortable about letting their children walk and bicycle to school. • Staff and crossing guards can also reward students who are "caught being good" by issuing School Reward Points.	• Requires some training and coordination with crossing guards	• Adult School Crossing Guard Guidelines (NCSRTS) http://guide.saferoutesinfo.org/crossing_guard/pdf/crossing_guard_guidelines_web.pdf • Florida School Crossing Guard Training Guidelines http://saferoutesinfo.org/program-tools/florida-school-crossing-guard-training-guidelines • Lessons from Florida's Crossing Guard Program http://saferoutesinfo.org/events-and-training/srts-webinars/lessons-floridas-crossing-guard-program • See Partner Resource CD for more materials

Strategy	E's	Advantages	Considerations	Resources
Bicycle Safety Fair This is a single-day event that promotes bicycle safety. At the bicycle safety fair, students can borrow bicycles or bring their own.	**Education, Encouragement**	• Events like bike safety fairs make learning fun and can help strengthen community ties with event organizers and participants. • At the bicycle safety fair students learn safety skills such as how to properly wear a helmet and how to behave while bike riding. The bicycle safety fair can also have a closed "test course" for the students to ride along. This helps the students to practice in a safe environment and gain confidence in their decision-making skills. • One possible partner for this is the local police department.	• Requires able and willing instructors • Should be age-appropriate • Bicycle safety education may require an outside instructor, e.g. a police officer. • These events require planning and materials to share with students	• Teaching a Bicycle Safety Fair in Vermont http://www.vtbikeped.org/what/VT_Safety_Fair_Curriculum.pdf • Bicycling Life page on bicycle safety fairs: http://www.bicyclinglife.com/SafetySkills/BicycleRodeo.htm • An organizer's guide to bicycle safety fairs http://www.bike.cornell.edu/pdfs/Bike_Rodeo_404.2.pdf • Easy steps to properly fit a bicycle helmet http://www.nhtsa.gov/people/injury/pedbimot/bike/EasyStepsWeb/
Walk Audit/Parent Surveys / Student tallies The team will meet annually (ideally in August before school starts) to review the accomplishments from the previous year and set new goals for the upcoming school year.	**Evaluation**	• Establishes baseline information on student travel behavior and perceived barriers to walking and biking • Helps determine existing needs • Helps determine success of SRTS efforts and identify needed adjustments	• Best to conduct initial surveys before SRTS measures have been implemented • Requires teacher buy-in and administrative organization • Getting parents to fill out and return surveys can be a challenge. Follow up is necessary. Consider a contest among classes for highest rate of return.	• Student In-Class Travel Tally Form: http://www.saferoutesinfo.org/resources/evaluation_student-in-class-travel-talley.cfm • Parent Survey Form: http://www.saferoutesinfo.org/resources/evaluation_parent-survey.cfm • Instructions for Survey Administration: http://www.saferoutesinfo.org/resources/evaluation_instructions.cfm • Instructions for Data Entry: http://www.saferoutesinfo.org/resources/evaluation_cover-sheets.cfm

Strategy	E's	Advantages	Considerations	Resources
Walking School Buses/ Bicycle Trains Walking school buses and bicycle trains are adult supervised groups of students walking and/or bicycling to school.	**Education, Encouragement**	• Adult supervision on the walk to school • Can be loosely structured or highly organized • Can include a meeting point in a parking lot so children and parents who must drive can participate. • Adults can rotate who will lead each time.	• Need to identify routes where conditions support walking and there is sufficient demand for supervised walking • Requires parents willing to walk with children and learn about how Walking school buses are organized and conducted. • More organized structure requires considerable planning	• How to start a walking school bus or bike train http://guide.saferoutesinfo.org/walking_school_bus/pdf/wsb_guide.pdf
Drive Safe Campaigns Some parents are not aware of how their driving behavior can put walking students at risk. This teaches parents how their unsafe driving habits can put their children in danger.	**Education**	• Has the ability to positively effect change in and community around the school • Improves the safety of the walking environment • Good drivers can help to set the example for good behavior. This is especially true for helping to control speeds.	• This requires a person to organize and administer the campaign. • May not be effective at schools where parent/teacher organizations are weak • Law enforcement officers would be great at speaking at the campaign events. Sometimes, due to their heavy schedules that can be difficult to pin down. • A good way to contact parents is at back to school night and PTA meetings. Starting at the beginning of the year helps to prevent bad habits from starting. Law enforcement officers (or other teachers) can hold a brief assembly to explain the dangers of unsafe driving in school areas. • Law enforcement officers can provide a demonstration of how difficult it is to quickly stop a moving vehicle at 50, 40 and 30 mph. The National Center has information on how the speed of the vehicle can affect the severity of injury that the pedestrian experiences in a crash.	• Driving Around Schools: Keeping Children Safe http://apps.saferoutesinfo.org/lawenforcement/resources/driving_tips.cfm • Parents, Avoid Becoming a Traffic Hazard http://www.aaamidatlantic.com/FetchFile.ashx?id=e55bfa26-a70d-4e17-afde-073b86cc9975

Strategy	E's	Advantages	Considerations	Resources
Crossing Guard Appreciation Day Crossing guards help our children cross the road safely in the mornings and afternoons, in all weather conditions. Remind them that you appreciate their service and dedication. Students can create thank you cards that they deliver themselves during their walks home, or teachers and administrators can honor them formally during a school assembly.	**Encouragement**	• Maintains a positive relationship between the crossing guards and the school/community. • Can inspire crossing guards to continue to be reliable, safety figures. • Creates an opportunity to remind students why it is important to practice safe walking skills.	• Requires coordination between the crossing guards, school administrators and school instructors. • May require materials to create the thank-you cards. • Is most effective with newsletter and in-school announcements. • Relatively inexpensive strategy	• Active Transportation Alliance webpage for Crossing Guard Appreciation Day http://www.activetrans.org/crossingguard

APPENDIX H SNOW REMOVAL TOOLKIT

Prompt and effective snow, ice, and slush clearance on sidewalks along Safe Routes to School is critical for maintaining safe biking and walking conditions. Snow removal of bicycle and pedestrian accommodations that are designated school routes should be planned for. According to the VT Pedestrian and Bicycle Facility Design Manual Section 10.5.1, local policies should treat the clearance of snow from walkways as equally important as clearance of snow from roadways in order to maintain year-round accessibility.

Guidelines

The responsibility of all snow and ice clearance generally falls upon the property owner of the facility. A municipality's highway department is typically responsible for snow and ice removal on roads and sidewalks on public property. Private roads and sidewalks on private property are the responsibility of the property owner.

A clear, unobstructed pathway at a minimum of 48" wide should be provided on all sidewalks, curb ramps, and through crosswalks. Snow, slush, and ice should be cleared from sidewalks, to provide a clear path of 48", ideally, within 12 hours after a storm event. Designated portions of the roadway for bicycle use should also be cleared since, even in winter, some experienced bicyclists commute by bicycle.

Pedestrian walkways, curb ramps, and crosswalks or bicycle facilities should not be used for areas of snow storage. Additional consideration should also be taken to maintain adequate sight distances at all intersections and to prevent snow storage from building up too close to walkways.

Paved shared-use paths that are designated routes to school should be kept clear of snow so that students can walk to school year-round. Snow clearance is not a consideration for natural surface paths that are used for winter activities which also allow students to cross-country skiing or snow-shoe to school.

Recommendations

The following six basic recommendations can assist a community in developing a strategy to improve sidewalk snow and ice clearance.

1. Create a norm of snow and ice clearance through social awareness campaigns.
2. Identify a municipal point person for snow removal.
3. Determine priority sidewalks and paths for snow clearance.
4. Improve monitoring and enforcement.
5. Design sidewalks for easier snow removal.

6. Train municipal and private snow plowing personnel on the guidelines for pedestrian and bicycle facility clearance (i.e., 48" clear path and priority routes.)

Monitoring and Enforcement

There are three primary ways in which the clearance of sidewalks can be monitored and enforced;

1. Identify who monitors and enforces.
2. Define penalties and how they will be enforced.
3. Implement a social awareness campaign.

Strategy	Advantages	Considerations	Resources	Actions
Wide Paved Shoulders Wide paved shoulders are created by striping a roadway to provide space for a shoulder and a travel way for motor vehicles. Wide paved shoulders can be created by adding pavement to one or both sides of the paved roadway or by narrowing travel lanes. Current Vermont State Standards recommend ten-foot minimum travel lanes for state and local roads.	• Provide room for pedestrians when there is no sidewalk or other facility. • Provide a clear space for bicyclists that is separated from the motor vehicle travel way. • Research has shown that by narrowing travel lanes, motor vehicle speeds might also be reduced.	• Lane markings need to be bright and maintained to clearly delineate the motor vehicle travel lane. When lane markings fade, the travelway for motor vehicles appears to be wider, which tends to encourage motorists to travel at higher speeds. • When adding pavement to widen the roadway and accommodate shoulders, the base material for the shoulder needs to be integrated well with the base material under the existing road to minimize the potential for pavement cracking and settling that would create hazardous conditions for bicyclists and motorist. • The *Vermont State Standards* provide detailed information on appropriate travel lane and paved shoulder widths for different classifications of state roads. These standards also provide a guide for appropriate lane and shoulder widths for town roads. • Other considerations include right-of-way, drainage, grading, existing signs and structures, and utilities.	• Vermont State Standards http://www.aot.state.vt.us/progdev/standards/statabta.htm	• For town roads, start with discussions with the appropriate, Selectboard, Board of Trustees, or City Council (municipal legislators) and town officials, such as road commissioner and/or town engineer to determine the municipality's policies on travel lanes widths. Provide background information on the benefits of narrower travel lanes for speed reduction and safer conditions for pedestrians and bicyclists. • Review shoulder widening proposals with municipal officials. If sufficient pavement exists, suggest conducting an experiment with temporary striping to provide wider shoulders. • Follow up the experiment with feedback and request for comments from municipal officials and community.

Strategy	Advantages	Considerations	Resources	Actions
Speed Feedback Signs Speed feedback signs, either temporary or permanent, show motorists how fast they are traveling as calculated by radar.	• Speed feedback signs tend to slow motorists and remind motorists of the posted speed limits.	• Speed feedback signs on state roads must follow the State's placement guidelines for state roads. Installing a feedback sign requires a highway access permit from the State. • Permanent signs may be appropriate at school zones; elsewhere temporary signs, set up for short periods at various locations, can be more effective.	• *Guidelines for the Use of Radar Speed Feedback Signs on the State Highway System* http://www.aot.state.vt.us/documents/3014_Guidelines_on_the_Use_of_Radar_Speed_Feedback_Signs.pdf • *Classification of Vermont Roads* http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/	• Review the State's speed feedback sign guidelines to be sure the proposed location is acceptable. • Contact the municipality to determine the appropriate person to contact regarding the placement of speed feedback signs, either temporary or permanent. Check with the local police or sheriff to see if they have a portable trailer that can be used on a temporary basis as a trial. • Contact the responsible party to understand their process for the placement of speed feedback signs and whether the sign should be temporary or permanent. Follow the process for installation of the speed feedback sign. • If a temporary feedback sign was installed, review the results with the municipality to determine if it has been successful. If successful, suggest the municipality install a permanent speed feedback sign. • Permanent feedback signs are an eligible use for SRTS funds. Check with the regional planning commission about this and other potential funding sources.

Strategy	Advantages	Considerations	Resources	Actions
High-visibility Crosswalks High-visibility crosswalks are roadway markings designating a location for pedestrians to cross a roadway. High-visibility crosswalks are typically in locations that are convenient to pedestrians and visible to motorists. High-visibility crosswalks must be installed with reflective durable material.	• Crosswalks provide notification to both pedestrians and motorists to where pedestrians may be crossing the roadway. • Pedestrians have the right-of-way when in a crosswalk and motorists are supposed to stop their vehicles until the pedestrian has cleared the roadway.	• Pedestrians should assume that a motorist may not see them or stop. • Crosswalks should have a receiving facility, such as a path, sidewalk, or adequate shoulder for use by pedestrians on either end. • Crosswalks may be marked with different striping patterns but the most common pattern is the ladder style. Further considerations may be needed for crosswalks at unsignalized intersections and at mid-block locations to determine if the crosswalk is warranted. • Crosswalks are not appropriate for every location as they may give the pedestrian a perceived sense of safety that may not exist.	• *Vermont Pedestrian and Bicycle Facility Planning and Design Manual* http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html • Vermont's *Guidelines for the Installation of Crosswalk Markings and Pedestrian Signing at Marked and Unmarked Crossings* http://www.aot.state.vt.us/progdev/sections/highway%20info/DocumentsRoadwayPages/TrafficOpsCrosswalk%20Guidelines%202004.pdf*Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations* http://www.fhwa.dot.gov/publications/research/safety/04100/04100.pdf • *Classification of Vermont Roads* http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/	• For all classifications of roadways, state and local, consult with the regional planning commission about the appropriateness of the proposed location for a crosswalk. • Follow-up with the municipal road commissioner, planner, or engineer to seek their guidance and support. • For non-state roads, after gaining appropriate endorsements, work with the appropriate local official or employee to get the high-visibility crosswalk installed in the proper and safe location. • For state roads, work with the regional planning commission to get a formal study to determine if a crosswalk is warranted and safe.

	Advantages	Considerations	Resources	Actions
Shared-use Paths Shared-use paths are separate facilities for non-motorized users such as bicyclists and pedestrians. Typically these facilities have their own right-of-way rather than sharing a right-of-way with a roadway.	• Provides a safe place for non-motorized users that are typically separated from motor vehicles. • Shared-use paths appeal to users of all different skill levels, particularly those with basic or beginner skills.	• Shared-use paths should typically be a minimum of ten feet wide and paved with asphalt. • Guidelines for the construction of shared-use paths can be found in the *Vermont Pedestrian and Bicycle Facility Planning and Design Manual.* • Further considerations are needed at intersections of the shared-use path and roadways to ensure safety for all users.	• *Vermont Pedestrian and Bicycle Facility Planning and Design Manual* http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html	• Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the proposed shared-use path. • Work with municipal partners to engage the regional planning commission with the project in terms of funding or other support for an initial alignment study to determine the appropriate shared-use path alignment and end points. This study will help the community understand where the shared-use path may be located as well as the issues that will need to be addressed, the types of permits that will be needed, and the potential cost for developing the shared-use path as proposed. This study, done with community input, will help the community decide if they want to proceed further with the project. • If the community wishes to continue to pursue a shared-use path, work with the municipal partner to understand potential funding sources and the various requirements involved in obtaining them.

Strategy	Advantages	Considerations	Resources	Actions
Bicycle Routes/ Bicycle Pedestrian Warning Signs Bicycle route signs are officially designated routes for bicyclists through municipalities; they are typically used to focus bicycle travel onto roadways most suited for it. Bicycle and/or Pedestrian present warning signs (with an image of a bicycle and a pedestrian) provide a notice to motorists, that bicyclists or pedestrians are likely to be present.	• Bicycle route signs assist bicyclists in determining the best route for their travel. • Warning signs raise safety conditions for bicyclists due to greater awareness by motorists of bicyclists on the road.	• The number and location of bicycle routes and signs should be carefully studied by the community prior to implementation. Measures should be taken to reduce sign clutter. • Bicycle route signs and warning signs must meet the guidelines provided in the *Manual on Uniform Traffic Control Devices* (MUTCD). • In cases where there are on-road sections of bicycle connecting nearby trails, where a bike lane ends or a paved shoulder is reduced at a bridge, a "Share the Road Sign" may be appropriate. The "Share the Road" sign should be used to indicate a relatively brief special condition.	• *Vermont Pedestrian and Bicycle Facility Planning and Design Manual* http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html • *Manual on Uniform Traffic Control Devices, latest edition (MUTCD),* http://mutcd.fhwa.dot.gov/kno_2009r1r2.htm	• Review guidelines provided in the latest edition of the MUTCD to make sure signs are compliant. • Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the creation of bicycle routes. • Follow the recommendations of the local official or employee as to the appropriate way to proceed, which could include: - Presenting the idea to the municipal legislators; - Implementing existing recommendations in a bicycle plan for the community; - Undertaking the development of a bicycle plan for the community to make sure that the specific recommendations still work within the context of the entire municipality; and - Working with the regional planning commission.

Strategy	Advantages	Considerations	Resources	Actions
Sidewalks Sidewalks are paths separated from other roadway users along the sides of the roadway reserved for pedestrians.	• Sidewalks provide a relatively safe location for pedestrians along the sides of a roadway. • They help to separate other roadway users and pedestrians within the same right-of-way.	• The availability of sufficient right-of-way to install sidewalks, including the travel way for vehicles and standards for sidewalk width, must be assessed. • Sidewalks are most effective when they include a buffer from the paved surface of the road that is at least five feet wide. • When sufficient right-of-way is not available for a buffer, a curb can provide some degree of separation between the roadway and the sidewalk. • Other considerations include drainage, grading, existing signs, structures, and utilities. • Sidewalks can be constructed of various materials including concrete, asphalt, or stone dust.	• *Vermont Pedestrian and Bicycle Facility Planning and Design Manual* http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html • *Designing Walkable Urban Thoroughfares: A Context Sensitive Approach* (Institute of Transportation Engineers - Publication #RP 036A) http://www.ite.org/emodules/scriptcontent/orders/ProductDetail.cfm?pc=RP-036A-E	• Review the State's *Pedestrian and Bicycle Facility Planning and Design Manual* to determine the appropriate dimensions based on roadway classification. • Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the proposed sidewalk. • Work with municipal partners to determine the appropriate sidewalk location based on available right-of-way. • Review the sidewalk location to determine if any additional issues will need to be addressed, the types of permits that will be needed, and the potential cost for developing the proposed sidewalk. This review, done with community input, will help the community decide if they want to proceed further with the project. • If the community wishes to continue work on the proposed sidewalk, work with the municipal partners to understand potential funding sources and the various requirements involved in obtaining them.

Strategy	Advantages	Considerations	Resources	Actions
School Zones A school zone is an identified location on the roadway abutting a school which extends several hundred feet in each direction. It is identified with signs and pavements markings and sometimes includes a reduced speed zone.	• School zones increase motorists' awareness to look for students on or near the road and to drive with more caution.	• The creation of a school zone typically needs the approval of the municipality, either from the Selectboard, Board of Trustees, or City Council, unless they have passed on this approval to the road commissioner. • School zones created on state roads need VTrans approval. • Sight distances and other roadway conditions should inform the location of signs and pavement markings noting the limits of the school zone, within MUTCD guidelines. • With few exceptions, school zones are located on the roadway adjacent to the school's main entrance. • Must comply with State sign laws and laws for setting speed limits.	• *Manual on Uniform Traffic Control Devices, latest edition (MUTCD),* http://mutcd.fhwa.dot.gov/kno_2009r1r2.htm • Refer to *Vermont Statute 23, Section 1007* for guidance on assigning local speed limits http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=23&Chapter=013&Section=01007	• Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the proposed school zone. • Discuss the creation of a school zone with local Selectboard, Board of Trustees, or City Council to gain their support. • For a school zone on a state road, work with municipal officials and/or the regional planning commission to contact VTrans to propose a school zone. • Work with the municipal planning office, road commissioner, administrator, or other municipal officials to determine the specific limits of the school zone and the methods to be used to notify motorists of its presence, including signage, warning lights during arrival and dismissal times, pavement markings, or other methods. • Work with municipal partners to determine the most appropriate way to provide funding for the notifications as appropriate and work with them to secure funding.

Strategy	Advantages	Considerations	Resources	Actions
Road Signs Road signs provide information on road conditions, direction, advisories, or mandatory actions. Road signs may be regulatory, warning, or guide signs.	• Signs notify road users about road conditions, other users, regulations, or conditions that may not be immediately apparent. • Many signs are not typically an expensive installation and can be approved and installed quickly.	• The number and type of existing signs can influence the effectiveness of new signs. Sign "clutter" can diminish the impact of new signs. • Permanent signs can become part of the background and their perception by regular road users can diminish over time. • Changing conditions, such as temporary flashing lights or periodic flags, can help to continually draw attention to a sign. • Adding new signs to a local road typically needs the approval of the municipality, either from the Selectboard, Board of Trustees, or City Council, unless they have passed on this approval to the road commissioner. • Signs added to state roads need VTrans approval. • Any proposed signage must meet the guidelines provided in the *Manual on Uniform Traffic Control Devices* (MUTCD).	• *Vermont Pedestrian and Bicycle Facility Planning and Design Manual* http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html • *Manual on Uniform Traffic Control Devices, latest edition (MUTCD),* http://mutcd.fhwa.dot.gov/kno_2009r1r2.htm • *Classification of Vermont Roads* http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/	• Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the placement of new signs. • Discuss the placement of new signs with local Selectboard, Board of Trustee or City Council to gain their support. • Work with the municipal planning office, road commissioner, administrator, or other municipal officials to determine the appropriate place for the signs while meeting guidelines provided in the MUTCD. • If proposed on a state road, work with the municipal officials and the regional planning commission to contact VTrans to gain their approval and any necessary permitting for the proposed sign s.