Waitsfield School District

SCHOOL TRAVEL PLAN

Promoting Walking & Biking to School

May 2010

Developed with federal transportation funds administered by the VTrans Safe Routes to School Program

Prepared by Becka Roolf, Going Green L3C
14 Winter St., Montpelier, VT 05602

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Appendices

Project Cost Estimate for Radar Speed Feedback Signs

Project Name: **Waltsfield Safe Routes to School**
Date: **May 10, 2010**

The following estimates costs to supply and install four solar powered radar speed feedback signs.

Project Cost

Description	Quantity	Unit	Unit Cost	Total Cost
Radar Speed Feedback Sign				
Speed feedback sign w/ 15" display	4	each	$ 5,000.00	$ 20,000.00
Solar array	4	each	$ 4,000.00	$ 16,000.00
Post, foundation, mounting hardware	4	each	$ 1,000.00	$ 4,000.00
Mobilization/Demobilization (10% of above)	1	ls	10%	$ 4,000.00
Total Cost				$ 44,000.00
10% Contingency				$ 4,400.00
Rounded Project Cost				**$ 49,000.00**

Unit costs are based on recent bid histories for similar scale projects.

Project Activity	**Estimated Cost**	**Notes**
Preliminary Engineering (PE) (Costs associated with planning, engineering/design, survey, permitting, public input and coordination) –	$7,500	Assumes 15% of estimated construction cost.
Right of Way (ROW) (Includes cost of appraisal, land acquisition and associated legal fees.)	$500	Assumes solar powered signs. Assume $1000 for permanent easements if signs are to be powered by aerial electric.
Construction (Construction and contingency)	$49,000	Assumes project will be bid as a stand-alone project. See attachment for cost breakdown.
Construction Inspection	$0	Assumes Town will oversee sign installation.
Administration (Cost associated with municipal oversight of the project, estimated to be a minimum of 10% of total PE, ROW and Construction phases.)	$6,000	Assume 10% of total PE, ROW and Construction costs.
Other (Please explain)	$0	
Total	$63,000	

Project Cost Estimate for Old County Road Re-alignment

Project Name: **Waitsfield Safe Routes to School**
Date: **May 10, 2010**

The following estimates costs to re-align Old County Rd. to a T-intersection with Main St. (VT 100)

Project Cost

Description	Quantity	Unit	Unit Cost	Total Cost
Old County Road Re-Alignment				
Bituminous pavement (assume 100' x 30' x 4" thick)	75	Tons	$ 150.00	$ 11,250.00
Subbase of crushed stone (assume 100' x 30' x 24" thick)	225	CY	$ 21.00	$ 4,725.00
Common excavation (assume 100' x 30' x 24" thick)	225	CY	$ 6.00	$ 1,350.00
Excavation of surfaces and pavement (assume 100' x 30' x 4" thick)	37	CY	$ 20.00	$ 740.00
Erosion control	1	LS	$ 2,000.00	$ 2,000.00
Traffic control	1	LS	$ 5,000.00	$ 5,000.00
Mobilization/Demobilization (10% of above)	1	ls	10%	$ 1,806.50
Total Cost				$ 26,871.50
20% Contingency				$ 5,374.30
Rounded Project Cost				**$ 33,000.00**

Unit costs are based on recent bid histories for similar scale projects and unit costs provided in the *Vermont Agency of Transportation The* "Orange Book" *for Local Officials, 2009-2011.* Some unit costs have been adjusted to account for limited project quantities.

Project Activity	**Estimated Cost**	**Notes**
Preliminary Engineering (PE) (Costs associated with planning, engineering/design, survey, permitting, public input and coordination) –	$8,500	Assumes 25% of estimated construction cost.
Right of Way (ROW) (Includes cost of appraisal, land acquisition and associated legal fees.)	$5,000	Assumes one (1) appraisal and permanent taking required. Assumes Town attorney will certify ROW acquisition and draft one (1) ROW document.
Construction (Construction and contingency)	$33,000	Assumes project will be bid as a stand-alone project. See attachment for cost breakdown.
Construction Inspection	$10,500	Assume 3 week construction duration.
Administration (Cost associated with municipal oversight of the project, estimated to be a minimum of 10% of total PE, ROW and Construction phases.)	$6,000	Assume 10% of total PE, ROW and Construction costs.
Other (Please explain)	$4,500	Cultural resource assessment and topographic survey
Total	$67,500	

Project Cost Estimate for Main Street (VT 100)/Old County Road Crosswalk

Project Name: **Waitsfield Safe Routes to School**
Date: **May 10, 2010**

The following estimates cost to paint school crosswalk across Main St. with MUTCD compliant signage and pave existing 5' x 60' path.

Project Cost

Description	Quantity	Unit	Unit Cost	Total Cost
Crosswalk and Concrete Sidewalk				
Common excavation (assume 1' x 5' x 60')	12	CY	$ 10.00	$ 120.00
Subbase of gravel (assume 6" x 5' x 60')	6	CY	$ 25.00	$ 150.00
Portland cement concrete sidewalk, 5" thick	35	SY	$ 50.00	$ 1,750.00
Detectable warning surfaces (2' x 5' at each sidewalk ramp)	20	SF	$ 55.00	$ 1,100.00
Crosswalk marking	40	LF	$ 6.00	$ 240.00
School letters (6 letters in each direction)	12	EACH	$ 17.00	$ 204.00
School crossing signs and posts	4	EACH	$ 250.00	$ 1,000.00
Traffic Control	1	LS	$ 1,000.00	$ 1,000.00
Mobilization/Demobilization (10% of above)	1	ls	10%	$ 556.40
Total Cost				$ 6,120.40
20% Contingency				$ 1,224.08
Rounded Project Cost				**$ 8,000.00**

Unit costs are based on recent bid histories for similar scale projects and unit costs provided in the *Vermont Agency of Transportation The* "Orange Book" *for Local Officials, 2009-2011.* Some unit costs have been adjusted to account for limited project quantities.

Project Activity	**Estimated Cost**	**Notes**
Preliminary Engineering (PE) (Costs associated with planning, engineering/design, survey, permitting, public input and coordination) –	$2,400	Assumes 30% of estimated construction cost.
Right of Way (ROW) (Includes cost of appraisal, land acquisition and associated legal fees.)	$500	Assumes no taking or easements required. Assumes Town attorney will certify ROW is owned by the Town.
Construction (Construction and contingency)	$8,000	Assumes project will be bid as a stand-alone project. See attachment for cost breakdown.
Construction Inspection	$0	Assumes Town will oversee construction.
Administration (Cost associated with municipal oversight of the project, estimated to be a minimum of 10% of total PE, ROW and Construction phases.)	$1,100	Assume 10% of total PE, ROW and Construction costs.
Other (Please explain)	$1,000	Cultural resource assessment
Total	$13,000	

Introduction & Goals

Introduction

Education, Encouragement, Enforcement, and Engineering combine together to create a successful Safe Routes to School Program. This school travel plan lays out the ways in which the Waitsfield Elementary School is promoting and plan to promote walking and bicycling to school.

The school travel plan also identifies infrastructure projects to improve routes for walking and bicycling to school, and serves as the basis of a potential infrastructure grant application.

This plan was developed as part of the school's participation in the VTrans Safe Routes to School (SRTS) Program.

Safe Route to School Team

Helen Kellogg	SRTS Coordinator, parent
Steve Gladczuk	Central Vermont Regional Planning Commission, parent
Sue Frechette	Mad Bikes, Mad River Valley Health Center
Dori Ross	Mad River Path Association
Kaiya Korb	School Principal
Sue Dillon	School Nurse
Bear Simmons	Parent Teacher Association, parent
Jennifer Stella	parent
Anne Marie Harmon	parent
Ellen Maxwell	parent
Kirstin Siebert	parent
Ray Drake	P.E. Teacher
Peter Laskowski	Town Constable

With input from Laura Brines (MRPA), David Cain (Valley Walk & Roll), Bobbi Rood (Valley Moves), Joshua Schwartz (Mad River Planning District), and Caitrin Noel (Friends of the Mad River).

School District & Community

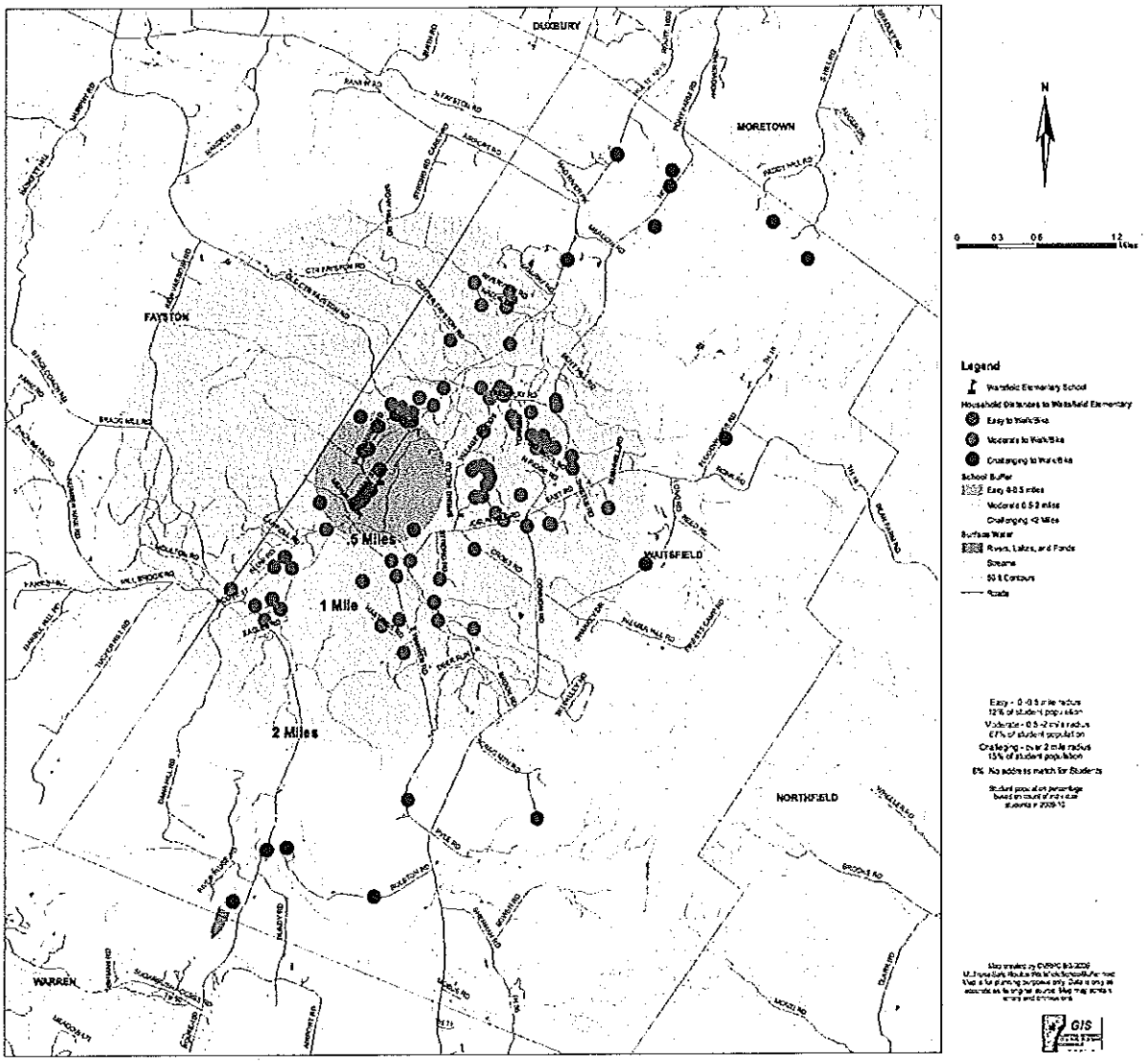
Waitsfield Elementary School serves the approximately 150 K-6 students living in Waitsfield, Vermont, a small town of approximately 1,700 residents in the Mad River Valley. About 20 pre-schoolers also attend the school. The elementary school is located on the north end of Waitsfield Village, directly on VT Route 100. The core of the village includes Main St. (VT Route 100), Bridge St., and smaller side streets.

Although Waitsfield is a rural community, the majority of students live within two miles of school, considered to be within walking / biking distance. The school is located well: within the town and along the backbone corridor of Route 100.

The below map from the Central Vermont Regional Planning Commission shows an estimated 12% of students living within a half-mile of school, and 67% living between a half-mile and two

miles of school as the crow flies. The parent survey corroborated this data, with over 14% of respondents reporting living within a half-mile of school, and an additional 62% reporting that they live between a half-mile and two miles of school.

Waitsfield School Commuting Choices for Students



Moreover, Waitsfield is a town that has a culture of physical activity. With two bike shops in town, an active bike club (road and mountain), several popular sporting events including the Mad River Century, the Mad Dash running race, a popular four-event "triathlon" (ski-run-bike-canoe/kayak), and the Green Mountain Stage Race (bicycle) – many parents are themselves athletes or regular runners, skiers, bicyclists, etc.

In the past few years, the Mad River Valley has hosted its own variation on "Way to Go Week" in the form of the Valley Walk & Roll Festival. Held each May to correspond to National Bike Week, the Walk & Roll Festival has a more of a slant toward active transportation than the statewide event does. Waitsfield has also a local version of the Copenhagen free bikes program. In this

small-town setting, so far, the bikes seem not to have suffered the vandalism and theft that has plagued similar free-bike programs even in nearby Montpelier.

Pre-Program Levels of Walking & Biking

The SRTS team estimated in their application to the VT Safe Routes to School Program that about 10% of students walk or bike to school in the fall and spring, and about 7% in the winter.

According to the 51 Waitsfield Elementary families that participated in the parent survey, the level may be slightly higher. The pre-program survey, collected online via survey monkey, indicated 4% walking to school and 10% biking to school.

On most days, how does our child arrive at school and leave for home after school?

Create Chart Download

	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 (skateboard, scooter, inline skates, etc.)	Response Count
Arrive at School	4.2% (2)	10.4% (5)	31.3% (15)	50.0% (24)	4.2% (2)	0.0% (0)	0.0% (0)	48
Leave for Home	6.4% (3)	8.5% (4)	27.7% (13)	53.2% (25)	4.3% (2)	0.0% (0)	0.0% (0)	47

More students were reported walking home (6%). Walking home is typically more popular than walking to school, as parents may drop their children off on the way to work; the kids then walk home at the end of the day. The drop in biking home from school may be due to topography; Waitsfield like many Vermont towns has the village and school along the river valley. The bike ride uphill home is often less attractive than the easy morning roll downhill to school.

Although Waitsfield did a pre-program classroom tally, it was not in standard format, and the school misplaced the results. As a result, it is not reported here.

Given Waitsfield's culture of physical activity, and the proximity of the majority of students within walking / biking distance of school, it is surprising that 50-53% of students are driven to / from school by parents. Families also reported atypically short times to get to / from school – with nearly 50% reporting times of less than five minutes.

Barriers to Walking / Biking

Traffic speed and traffic volume were the top concerns of Waitsfield parents, with 76% and 74% reporting these as concerns, respectively. Lack of sidewalks / paths and concerns about intersections/ crossings were strong secondary concerns with 55% each. Time and distance affect around half of the family's decisions, yet parents seemed reluctant to identify convenience of driving as related to their family's concern about time.

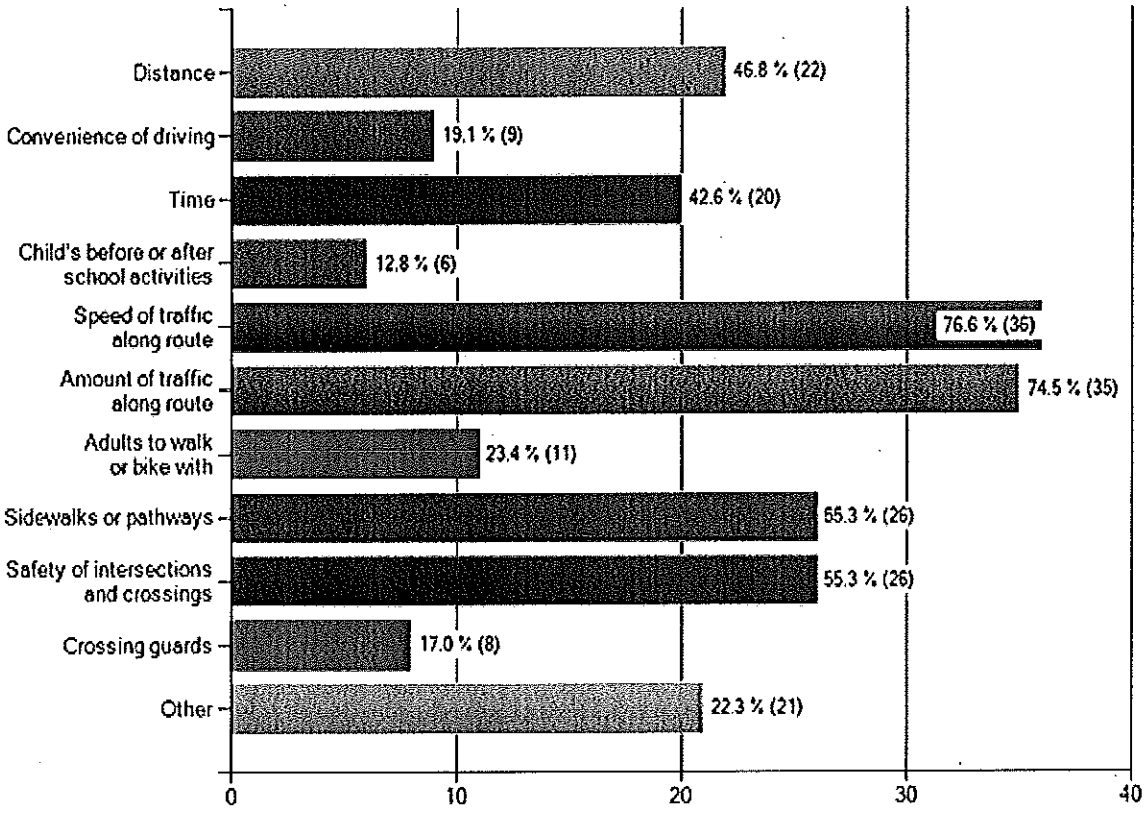
Waitsfield's rural dirt roads and the busy corridor of Route 100 present challenges to parents who want to encourage or allow their children to walk or bike to school. Fast traffic and blind curves/hills create potential hazards. Route 100, with high-speed commuter traffic between towns, is a straight shot through Waitsfield Village – and too many of the motorists passing through the village do not slow to village speeds throughout the village.

The northern end of the village, where the school is located, is particularly problematic. Since this area is less developed than the village core, many motorists begin to accelerate on the way out of

town. Heading into town, many motorists neglect to slow down for the village until they are already past the school.

Route 100 in the village has a sidewalk along the east side (only). The sidewalk will be extended further south in the village, and reconstructed throughout the village, likely in the 2010 or 2011 construction season. A short section of sidewalk on Bridge St. connects Main St. to the covered bridge. The rest of the town lacks sidewalks.

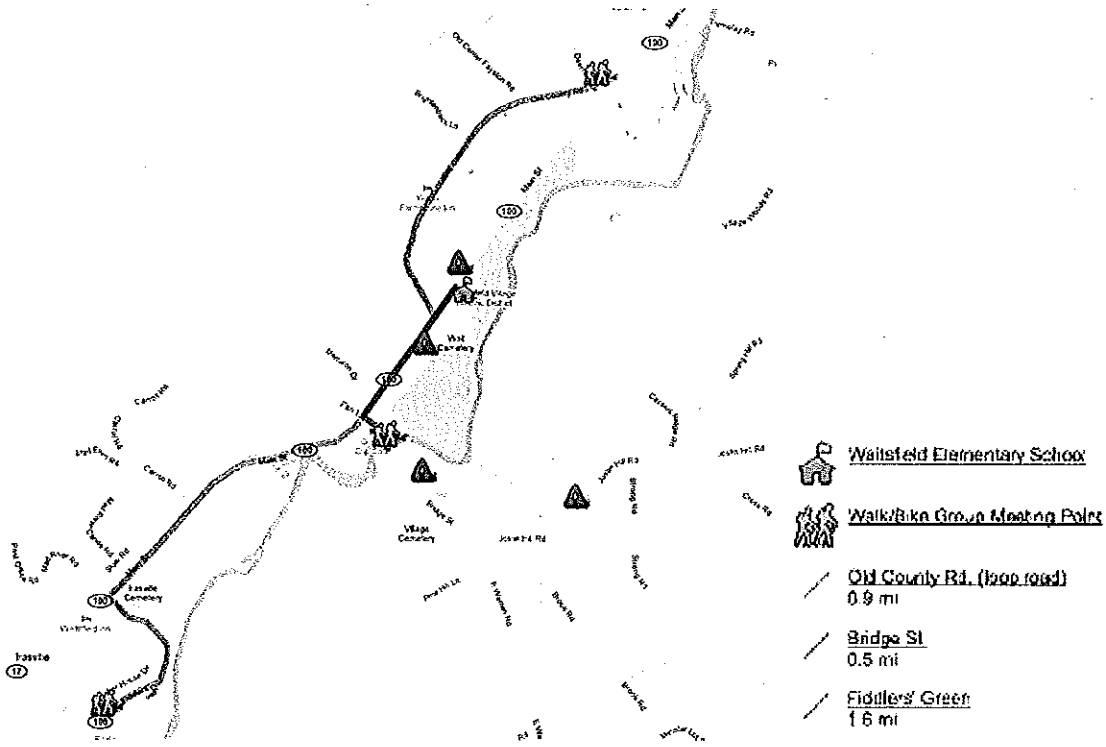
Which of the following issues affected your decision to allow, or not allow, your child to walk or bike to/from school? (check all that apply)



Routes to School

At the beginning of the Safe Routes to School program, the Waitsfield SRTS team decided to activate a park & walk program that would also serve some students living directly along the routes.

Three walking / biking routes were identified and promoted for supervised walking/biking groups during International Walk/Bike to School Week in October 2009:
Covered Bridge to School. *Starting on the east side of the covered bridge on Bridge St., this route uses village sidewalks to cover the 0.5 miles to school.*
Old County Road (aka Loop Road) to School. *Starting at the northern end of the Old County Road, this route has students walking/biking on the side of this fairly low volume road.*
Fiddlers' Green via the Mad River Path to School. *From Fiddlers' Green, this walking-only route uses the Mad River Path to bypass the sidewalk-less Irasville section of Route 100. Upon joining with Route 100 near the southern end of the Slow Road, the route uses a worn-path along the side of the road until meeting the village sidewalk. From Bridge St. north, this route overlaps the Covered Bridge route, using the sidewalk.*



One area of Waitsfield not directly served by these routes, yet with a clear concentration of students, is the Joslin Hill / Spring Hill area.

At the start of the Safe Routes to School program, many parents expressed interest in a path network with a bicycle/pedestrian bridge over the Mad River to connect this area to school without using roads at all. With some minor analysis, however, it was concluded that such a route would encounter challenging terrain as well as considerable expense and permitting challenges to build a bridge.

Instead, several families in the area realized that kids could use existing backyard connections to walk to the school bus stops, in some cases cutting quite a few minutes off the school bus trip to school. Also, the school principal was able to rearrange the bus route slightly to create a more efficient journey to school. Although not directly enabling students to walk directly to school, both of these changes have improved the journey to school and helped to reduce parent driving to school.

Goals of Waitsfield SRTS

The Waitsfield Safe Routes to School team identified several goals for the program, and discussed that some of the goals may conflict with each other. That is, some families may have their lowest environmental footprint by simply riding the bus, not walking or biking at all. Even for these families, walking or biking to school at least some of the time has other benefits in terms of life learning, decision-making skills, and individual health.

In their adult lives, children from Waitsfield may become walking or bicycling commuters in other settings; childhood is an appropriate time to foster healthy habits and walking/biking skills toward future transportation choices.

The overarching goal of the Safe Routes to School program is to increase safety for walking and bicycling. Additionally, the team identified the below reasons why promoting walking and bicycling is important to the Waitsfield community:

1. To reap the educational benefits of energized children arriving at school awake and ready to learn.
2. To build the constituency in support of infrastructure changes. The family-friendly perspective may help to convince a larger base of supporters to support paths, walking trails, and access to private lands.
3. To foster youth mobility and appropriate levels of independence, to promote health and physical activity, and to help students develop healthy life habits.
4. To support Waitsfield's sense of community.
5. To teach environmental stewardship and to make choices to protect the environment.
6. To reexamine Waitsfield's bus system, toward considering smaller buses or more time-efficient routes.

Action Matrix - 2009-10 School Year

5 Es Integrated in Chronological Order			
Fall 2009	Evaluation	Pre-program parent surveys, online survey.	SRTS Coordinator
Sept. 2009	Education	Training in WalkSmart / BikeSmart safety instruction.	SRTS Coordinator
Sept. 2009	Evaluation	Traffic counts including speeds	Regional Planning Commission
Sept. / Oct. 2009	Education	WalkSmart instruction, K-2 focus	School staff
Oct. 2009	Encouragement	Walk/Bike Challenge Week	SRTS team, parents, school staff
Oct. 2009	SRTS Team Mtg	Team meeting to discuss Education, Encouragement, Enforcement aspects of SRTS	All
Oct. 2009	Education	School newsletter article emphasizing the health and learning benefits observed by school staff during the Walk/Bike Challenge Week	SRTS Coordinator, school staff
Nov. 2009	Encouragement	The week of November 2, begin a weekly, morning-only walking / biking program, using the three routes developed during the Walk/Bike Challenge. • Bridge St. (throughout the school year, including winter) • Loop Rd. (throughout the school year, including winter) • Fiddlers' Green (until snowpack makes impassable) *Provide parent support with 5 volunteers needed each morning: one walking leader per route, crossing assistance at Route 100 / Wait House and at Route 100 / Bridge St. Develop a buddy system of every-other-week volunteers.*	SRTS team, parent volunteers
Thurs., Nov. 19, 2009	SRTS Team Meeting	Team meeting to discuss Engineering (infrastructure) aspects of SRTS	All
Thurs., Jan. 21, 2010	SRTS Team Meeting	• Discuss Winter Walking Promotion feasibility? • Lay groundwork for crosswalk, health center connecting sidewalk	All
Feb. 20-Mar. 2 • Winter Break			

Thurs. Mar. 11, 2010	SRTS Team Meeting	Tentative Agenda: • Review School Travel Plan, prepare for application to Infrastructure Grant • Plan for Spring Events - April kickoff to weekly event	All
Last week of March	Education	BikeSmart in-classroom bike safety sessions, with short review of walking safety (WalkSmart)	
April	Enforcement	*Ask the police to position the radar speed cart on Route 100 as a spring reminder.*	Sheriff
Thurs. Apr. 8, 2010	SRTS Team Meeting	Tentative Agenda: • Review Grant Application • Plan for May Week-long Promotion • Hold Crossing Guard Training	All
April	Enforcement	Begin volunteer school crossing guard program	SRTS team, parents
April	Engineering	Construction of sidewalk "landings" on either side of Route 100.	
April 17 – April 25 • Spring Break			
May	Encouragement	Weeklong Challenge as part of Valley Walk & Roll Festival.	
May-June	Encouragement	Weekly walking promotion - Springtime Walking Wednesdays, beginning the week after the Challenge Week. Crossing guards provided at Bridge St. and Route 100 / Old County Rd. / Route 100.	
May	Education	Bicycle Safety Fair (bicycle rodeo), during Valley Walk & Roll Festival	
May	Encouragement	Bike Swap, during Valley Walk & Roll Festival	
June 11 • Last Day of School (tentative)			

2010-11 School Year & Beyond

At each SRTS Team Meeting, it is recommended to review upcoming events on the matrix.			
Early August	Encouragement	Determine who crossing guards and walking/biking group leaders are for 2010-11, update parent outreach flyers for start of school year.	SRTS Coordinator
School Begins			
Late August	Education / Encouragement	Send home walking/biking flyer in start of school packet	School, SRTS Coordinator
Late August / early Sept.	SRTS Team Mtg	Team meeting at very start of school year to plan for International Walk/Bike to School Challenge.	All
Sept. – Nov.	Encouragement	Weekly walking promotion from early September through Thanksgiving break.	SRTS Team, SRTS Coordinator
Sept.	Evaluation	Conduct classroom tallies, using the forms created by the National Center for SRTS; send in for computer scanning.	SRTS Coordinator, Classroom teachers
Sept.	Education	WalkSmart classroom presentations, especially grades K-2	SRTS Coordinator, PE Teacher
Sept.	Education	PE Teacher to attend the Vermont SRTS Training & Conference, mid September	PE Teacher
Oct.	Encouragement	International Walk/Bike to School Day, special full-week Challenge. (see www.iwalk.org for date)	SRTS team, walking group leaders
Oct.	SRTS Team Mtg	Team meeting to debrief from International Walk / Bike to School Challenge Week and touch base on winter ideas.	All
Thanksgiving Break (end of November)			
Nov.- Dec.	Encouragement	End of fall program acknowledgement, prizes, etc.	SRTS team, walking group leaders
December Break (end of December)			
Jan.	SRTS Team Mtg	Team meeting to prepare / organize for winter walking program	All
Jan. – Mar.	Encouragement	*Winter walking program – Bridge St. and Loop Road Routes only. Try it once for the season, once a month, or weekly. Start small/doable and build interest/capacity.*	SRTS Team, walking group leaders

Winter Break (end of February)			
early Mar.	SRTS Team Mtg	Team meeting to assess winter walking promotion and to organize for spring walking/biking program.	All
late March	Encouragement	*Spring kick-off for walk/bike to school events – Newsletter notices, etc.*	SRTS Team
late March	Education	*BikeSmart classroom lessons, Grade 2-4*	SRTS Coordinator, P.E. Teacher
April	Enforcement	*Ask the police to position the radar speed cart on Route 100 as a spring reminder.*	Sheriff
April – June	Encouragement	*Weekly walking promotion through the spring, crosswalks staffed with volunteer crossing guards.*	SRTS Team, walking group leaders
April or May	Education	BikeSmart On-Bike, Grades 3-4	P.E. Teacher
Spring Break (third week April)			
April or May	SRTS Team Mtg	Team meeting to determine end of year celebrations, plan for continuation to next school year, and update this matrix for the following year.	All
May	Encouragement	Week-long Challenge promotion for Valley Walk & Roll Festival	SRTS Team
May	Encouragement	Bike Swap, part of Valley Walk & Roll	
May	Education	Bicycle Skills Day / Bicycle Safety Fair	*SRTS Team*
late- May	Evaluation	Conduct classroom tallies, using the forms created by the National Center for SRTS; send in for computer scanning.	SRTS Coordinator, Classroom teachers
Jun.	Encouragement	End of School Celebration, including recognitions in incentive contests.	School, SRTS Team
June 11 • Last Day of School (tentative)			

In continuing to develop the program for each subsequent year, the team is encouraged to consider:

- What did the team learn from the previous year of the program?
- What can be done to make things run more smoothly?
- What programs can be taken to the "next level" and how to do this?
- Are there parts of the program that worked very well, and should be repeated?
- How to keep the concept "fresh," and volunteers energized?
- Are there any potential safety concerns, and what can be done to alleviate those?
- Without the education/encouragement funding from VTrans, how will the team obtain incentives for the program? *Possibly ask the PTO to provide a small amount of funding for incentives?*
- What is the best way to transfer coordinating and leadership positions from one "generation" of parents to the next?

Fall 2009 Program Assessment

Walk/Bike Challenge in Waitsfield · How did it go?

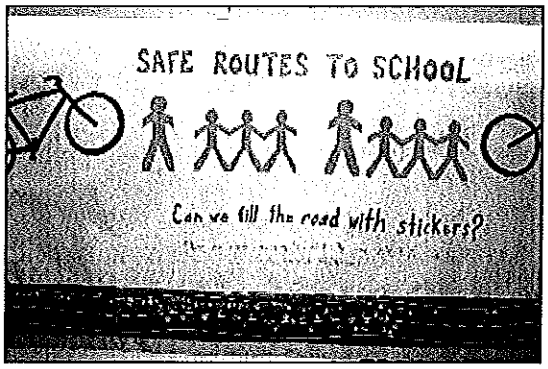
Notes from SRTS team meeting, October 15, 2009

To kick off the Safe Routes to School Program, the Waitsfield SRTS team created a challenge week for the entire first week in October, the week of International Walk/Bike to School Day. Families signed pledges to participate either on their own or on one of three supervised walking routes starting from the Loop Road, the covered bridge on Bridge St., or Fiddlers Green. Supervision was also provided for the walk back home. Compared to a normal week, the parking lot / drop-off zone was nearly deserted, although some parents did still drive to school.

Generally, the SRTS team was enthusiastic about the program, and offered these insights and suggestions.

PLUSES

+ Kids arrived at school awake and ready to learn.
+ Fun.
+ Less traffic in the school parking lot, safer drop-off area due to fewer motor vehicles.
+ Flexible: lots of choice for families to pick their days to participate within the week.
+ Crossing guard at the loop road.
+ Fewer unsupervised children in the school before the school day starts.
+ Alternative to bus riding for some students.



CHANGES

Δ Some parents requested a stronger message as to why walking or biking to school should be promoted.
Δ Clarify logistics and communication for afternoon pick-up, if that is to be continued.
Δ Create a list of participants, especially for afternoon walking / biking leaders. These leaders did not always know which students were supposed to be walking or biking. Chaos!
Δ Recognize those who ride the bus.
Δ Promote walking for middle schoolers, too? Some families reported feeling torn between walking elementary school children and driving their middle school children to catch the bus at the elementary school.
Δ Determine if there is a way to allow a bus drop-off near the covered bridge, ongoing. Miramar Ski Club is not a useable ongoing location because it is privately owned.
Δ Clarify communication to parents about the bus routing especially regarding the Bridge St. drop-off.

School Crosswalk on Route 100

General Wait House / Old County Road

The Agency of Transportation (VTrans) must approve and stripe the crosswalk across Route 100. The Agency has very specific criteria for crosswalks on state highways. School crossings receive special consideration.

As of early 2010, Waitsfield was considering a volunteer-based effort to construct a short section of sidewalk on the west side of Route 100 in order to obtain approval for a crosswalk. Below are notes related to that volunteer-based effort. In the Spring 2010, the Town of Waitsfield gave blessing to the project and determined that the project could be funded/constructed by the Town. As a result, many of the notes below are now dated in approach.

Crosswalk Notes developed Winter 2010

Preliminary Research: The Waitsfield SRTS team had preliminarily thought to connect with the Mad River Path Association, which was designing/implementing a path crosswalk across Route 100 in the southern end of the village, near the Slow Road.

However, there may be some important differences between the path crossing and the school crossing. Notably, the school crossing will directly link to existing town sidewalks. The Americans with Disabilities Act (ADA) has different standards for sidewalks and trails. Detectable warnings (truncated domes) are recommended at trail crossings, but are required at sidewalk crossings: http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks216.htm

The fact that the crossing at the Wait House/Old County Rd. connects to the town sidewalks makes it less likely it would be able to use the "informal" crossing requirements of a trail, as far as ADA goes.

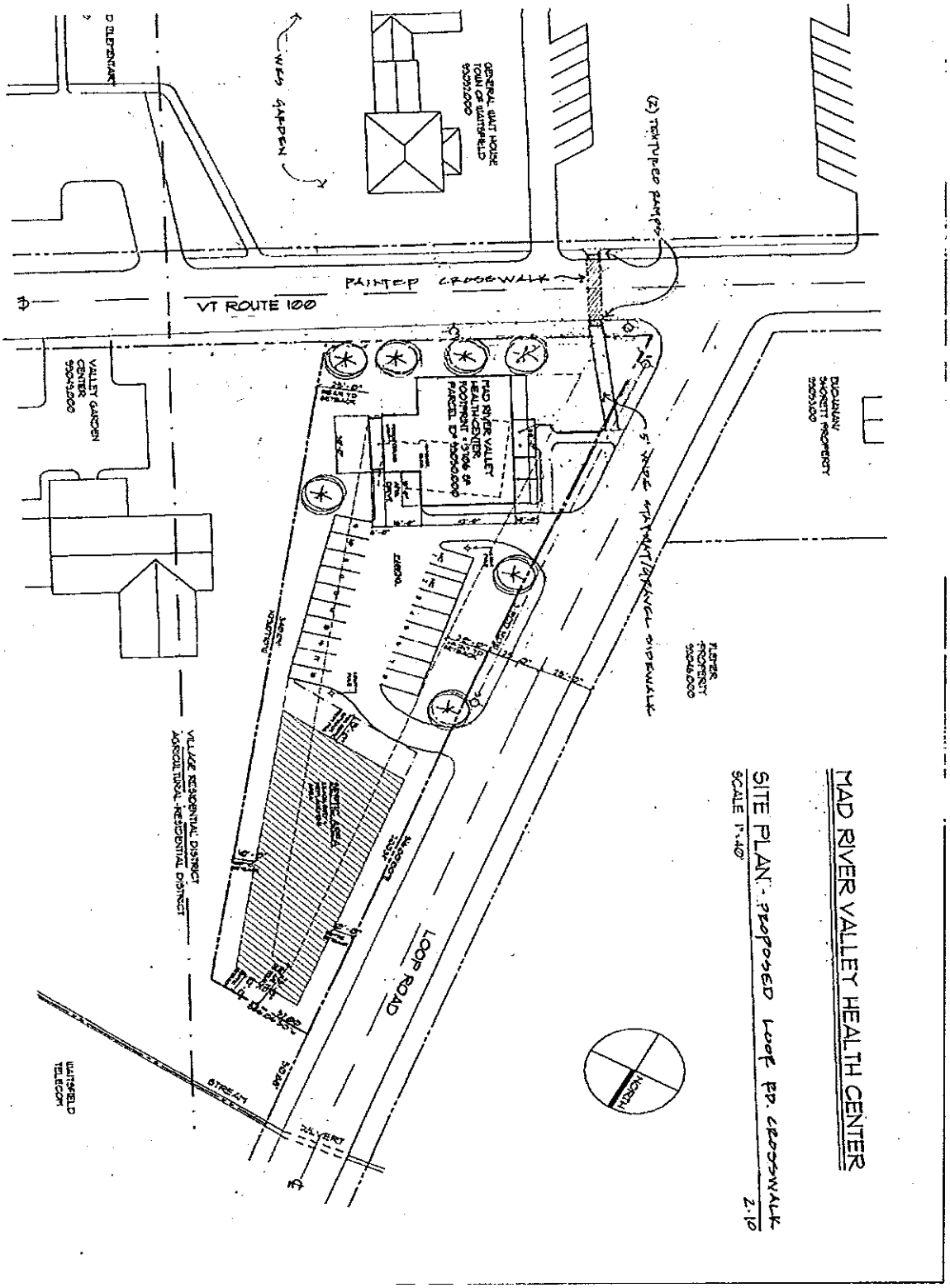
Connection to the sidewalk project:
The below drawing is from the Health Center site plan. If this design is selected, the crosswalk ramp location on the east side of Route 100 should be reconciled with the location in the engineering plans completed by Bannon Engineering for the Waitsfield sidewalk project, to be constructed in 2010 (or after the water project is done). The crosswalk connection on the east side of the road was added in the last round of revision, according to Mark Bannon of Bannon Engineering (8/31/09).

The full set of plans for the Waitsfield sidewalk project appears on the Town of Waitsfield website:
http://www.waitsfieldvt.us/transportation/sidewalks.cfm

Added to the plans is a concept sketch of the possible sidewalk "landing area" that could be constructed at the Health Center.

- It may be possible to construct this area as a stone dust trail with donated materials, constructed by volunteers.
- Or, it may turn out to be desirable to build this short section of sidewalk with SRTS funds.

- Some combination of the two designs may be possible, with a short-term stone dust trail constructed by volunteers being replaced in the long-term by a professionally-constructed sidewalk. The stone dust trail could be constructed to form the base of the eventual sidewalk.



2.10
PROPOSED LOOP RD. CROSSWALK

ESTIMATE OF COSTS:

NOTES: 5-6" DRAIN ROCK = 6 YRDS. @ $30/YRD.
3" STONE FINES = 3 YRDS. @ $46/YRD.
TEXTURED RAMP(S) = $80/SQ.

(6) YRDS. DRAIN ROCK	$180
(3) YRDS. STONE FINES	$138
(2) 10 SQ. TEXTURED RAMP	$1600
FILTER FABRIC	$100
	$2018 MATERIAL
(X 1.5)	$3027 LABOR
	$5045 PROJECT TOTAL

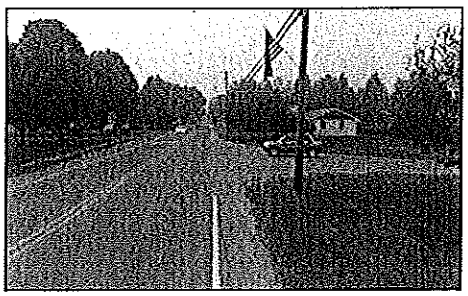
Key questions:

- Where exactly will the crosswalk and landings go?
- How will the project meet specs for:
    - Sight distance?
    - Width of sidewalk or "trail" landing? 5' minimum
    - Grades on the approaches to the crossing?
    - Utility poles (hard to relocate), signs (easier to relocate), vegetation?
    - Drainage, especially for winter when pooled water will become ice?
    - Detectable warnings (truncated domes) on the ramps?

East Side (Wait House):

Current Conditions: On the east side of the road, the green strip between the sidewalk and the road is currently a raised berm. This grade will be changed as part of the larger sidewalk project, and a permanent landing pad with detectable warning (truncated domes) will be installed.

Possible Improvements: If the SRTS group wants to construct a landing pad in order to get a crosswalk before the sidewalk project is constructed, the east side project would consist of digging a 5' (minimum) wide pathway out of the berm, lining this pathway with landscape (filter) fabric, and surfacing with a well-packed crushed stone. The stone should probably be rolled for compaction, and careful attention to drainage would be needed.

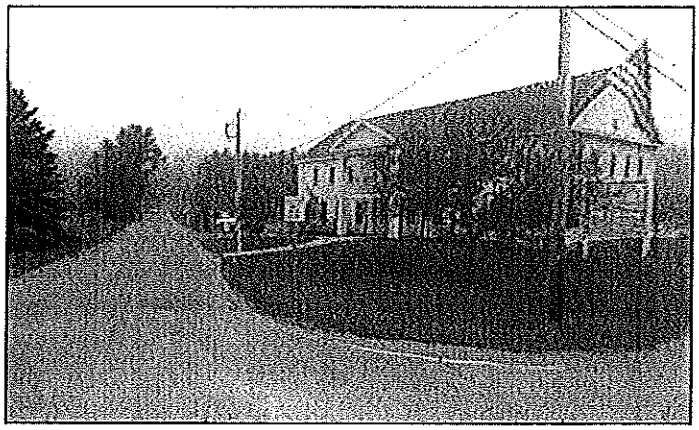


Long-Term Improvement: This area will be professionally constructed (or reconstructed) by the sidewalk project, when that is built.

West Side (Health Center):

Current Conditions: On the west side, the Health Center sidewalk connects between the front door of the health center and the parking lot. A utility pole is near the corner of the Old County Rd. and Route 100. An ornamental tree sits in a slight depression, and the health center's sign is just north of the tree.

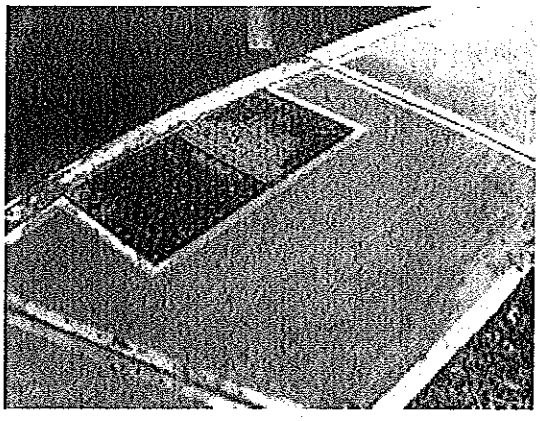
Possible Improvement: The SRTS group could potentially construct a landing-pad section of stone-dust sidewalk parallel and contiguous to the Old County Road surface. Some small amount of fill might be needed to keep the 5' wide walkway level. The project would consist of digging a pathway out of the sod, leveling to provide sheet drainage toward the tree/depression, lining with landscape (filter) fabric, and surfacing with a well-packed crushed stone.



Long-term Improvement: A volunteer-built stone-dust path could be upgraded to a professionally-constructed sidewalk possibly using SRTS funds.

Detectable Warnings / Truncated Domes:

These cast iron cast-in-place panels were installed in Winooski as part of the large downtown renovation project.



Any potential volunteer-based project is complicated by the likely requirement to include detectable warnings (truncated domes). These are areas with raised bumps that indicate the sidewalk ramp to visually impaired – they can be detected with a cane. They also are colored to provide contrast with the surrounding sidewalk.

VTrans maintains a list of approved products for truncated domes. There is a preference for the iron panels (as pictured left), due to durability especially in Vermont winters with frequent sidewalk snowplowing. Several other products failed in on-the-ground testing.

The iron products are installed into the sidewalk as the concrete is setting.

Next steps for a volunteer-based project:

1. Discussion with VTrans – given the two interrelated processes below, determine who in VTrans are the key players, and solicit their combined/coordinated input. (Possibly Jon Kaplan, Amy Gamble, Aimee Pope, Wayne Gammell – others?) Steve Gladczuk from Central Vermont Regional Planning Commission (also a parent at Waitsfield Elementary) may have already made this connection.
2. Develop a budget, including a decision on how to deal with the detectible warnings.
3. Fundraise as needed or seek donated materials.
4. Apply for permit to work in the state route right-of-way.
   This is called a Highway Permit, and more information is available at
   http://www.aot.state.vt.us/TechServices/Documents/Utilities/PermitPackage/GeneralHighwayPermitApplicationInfo030609.pdf
5. Construct the "landing" sidewalk/path project.
6. Request VTrans to stripe a crosswalk at this location. Below are the criteria for a school crossing, from the 2004 VTrans guidance on crosswalks. The Waitsfield location should easily meet all criteria, provided that #2 can be met.

   The full guidance document is available at:
   http://www.aot.state.vt.us/Progdev/Documents/TrafficOperations/Crosswalk_Guidelines2004.pdf

   > *4.1.1 Criteria for installation:*
   >
   > All of the following criteria should be met prior to installing a crosswalk.
   >
   > 1. The speed limit is 40 mph or less, and;
   >
   > 2. A sidewalk or adequate shoulder for use by pedestrians (as determined by traffic volumes, adjacent land uses and other site specific considerations) exists on both sides of the roadway approach, and;
   >
   > 3. There is not another crosswalk across the same roadway within 60 m (200 ft), and;
   >
   > 4. Adequate sight distance (equal to or exceeding the stopping sight distance for the posted speed) is available in both directions. At a minimum, a driver must be able to see either the crosswalk or the school crossing sign. It is recommended that sight distance be measured from the driver's perspective to the outer edges of the traveled lanes, to ensure that an approaching driver can see a pedestrian at any point in the crosswalk within the traveled way.
   >
   > There is no minimum pedestrian volume for a school crossing.
   >
   > It is recommended that a trained crossing guard be present at the times when there is crossing activity by students.

7. Work with VTrans to stripe the crosswalk.

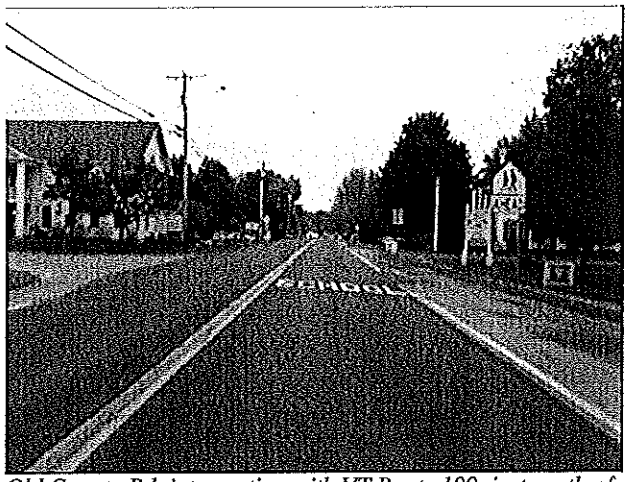
Please note that the school may likely be able to establish a crossing guard at this location even without the striped crosswalk. If the above timing does not work out, or it is decided that the project should wait to be professionally constructed, the SRTS team can still move forward with a crossing guard program, even without the crosswalk.

Engineering: Infrastructure Needs

Waitsfield Elementary School is located on the north end of Waitsfield Village, at the north end of the town sidewalk along VT Route 100. The sidewalk does not extend further north.

1. **Crossing of Vermont Route 100:** Establishing a marked crosswalk near the school from the east side of VT Route 100 to the west side is important for several reasons.

First, an estimated 20-30 students live along the Old County Road or the Old Fayston Rd. Although these roads do not have sidewalks, children and parents commonly walk along the roadsides, and parents have expressed that they consider these roads to be reasonable to walk along even in the winter. Second, the crossing would help to reinforce the north village as a walkable part of town. Third, the crossing would connect the village sidewalk to two other important resources on the west side of the road: the Mad River Valley Health Center and town soccer fields. As part of this project, a short section of sidewalk would be constructed at the Mad River Valley Health Center along the Old County Road.

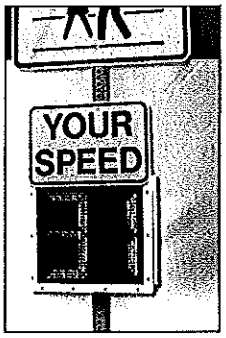


Old County Rd. intersection with VT Route 100, just south of Waitsfield Elementary School

NEXT STEPS:
Apply to the VTrans SRTS Infrastructure program for construction of the above improvements.

Item: Marked crosswalks, associated signs, short sidewalk connection.
Cost: Approximately $5,000-10,000.
Funding: 100% federal SRTS funds, competitive grant application.

2. **Radar Speed Feedback Signs:** Radar speed feedback signs are most needed on the way into and out of the village area, where the streetscape does not provide sufficient cues for drivers travel at village speeds. Additionally, the SRTS team identified two additional locations for radar speed signs and/or pedestrian-activated flashing lights to remind drivers to slow down on the rural roads on the east side of the Mad River. Radar speed signs, because they are interactive, are more effective at slowing drivers than normal street signs. These signs are a permanent installation similar to the radar speed cart used by the Sheriff.



Add radar speed feedback signs at the following locations, as shown on the map below,

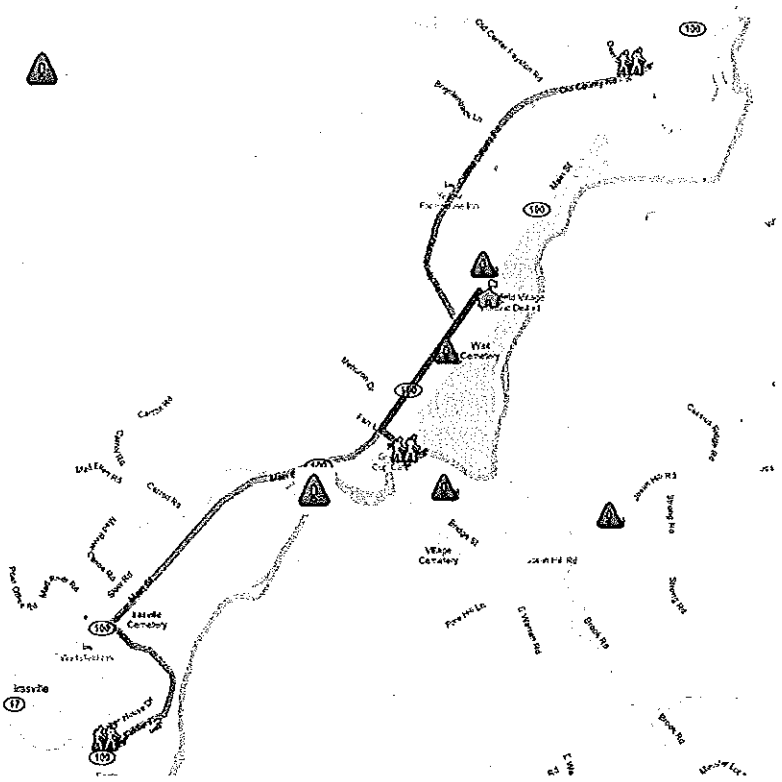
- Vermont Route 100, southbound, just prior to passing Waitsfield Elementary School.
- Vermont Route 100, northbound, just prior to the southern intersection of the Old County Road (near Health Center / Wait House).
- Vermont Route 100, northbound, heading toward Bridge St.
- Bridge Street, on the east side of the river.
- Joslin Hill Road, near the curve in the road.

Note that VTrans has new guidelines as of January 2009 on the use of Radar Speed Feedback signs on state highways:
http://www.aot.state.vt.us/documents/3014_Guidelines_on_the_Use_of_Radar_Speed_Feedback_Signs.pdf

NEXT STEPS.

1. Apply to the VTrans SRTS Infrastructure program for construction of the above improvements.
2. Ask the Waitsfield Selectboard to petition VTrans to set a school speed zone in the village, reducing the speed limit from 30 mph to 25 mph near the school, *as part of the installation of the radar speed signs.*

Item: 5 Radar Speed Feedback Signs, solar package
Cost: Approximately $6,000 – 8,000 per sign
Funding: 100% federal SRTS funds, competitive grant application



3. Improve alignment of the southern end of the Old County Road to create a safer and more functional intersection with Route 100. Square up this junction in order to improve sight distances, decrease motor vehicle travel speeds, and reduce exposure of crossing bicyclists and walkers to traffic.

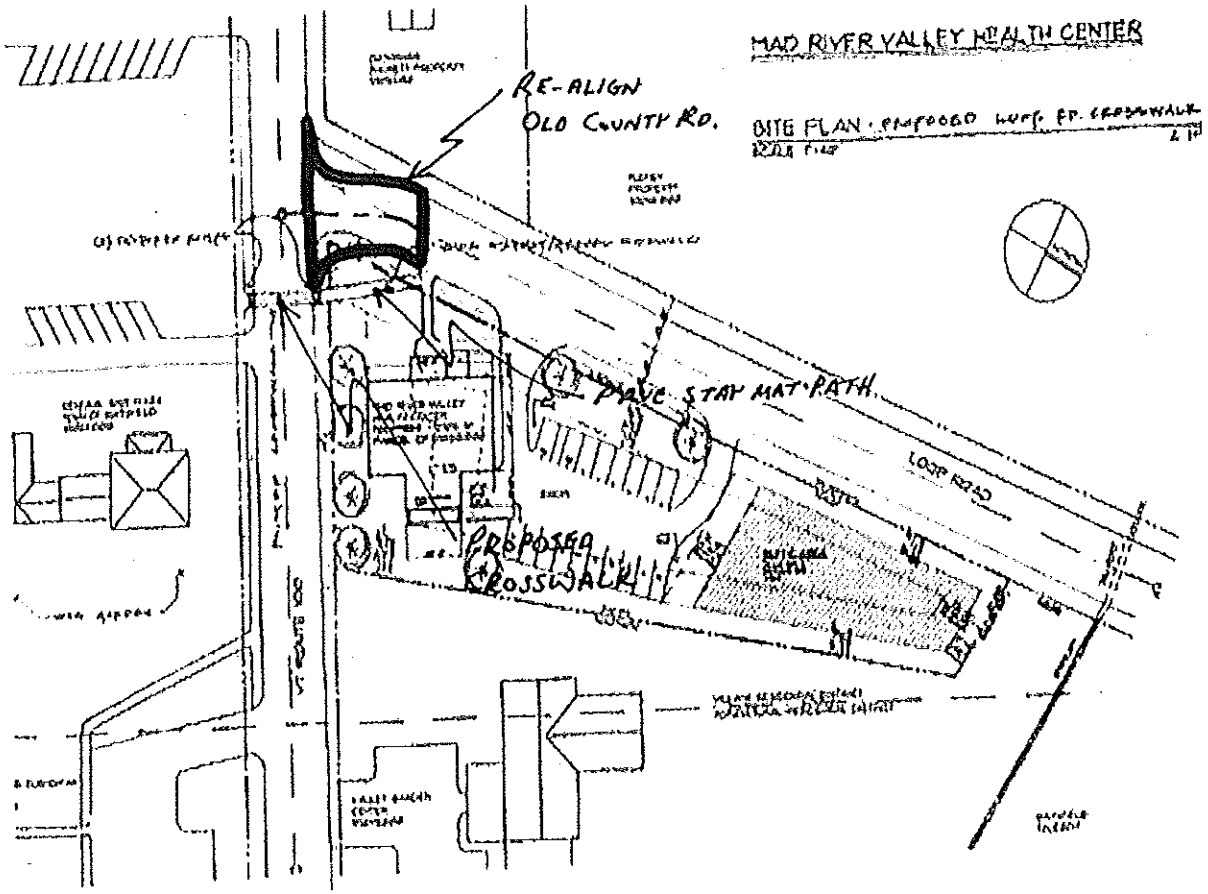
The angle of this intersection has been of concern to the community for many years. The Waitsfield Zoning Board of Adjustment included a condition in the approval of the Mad River Valley Health Center's permit approval in June 2004 to accommodate the needed right-of-way. This intersection is of particular concern due to truck traffic to/from Waitsfield Telecom. The current geometry of the intersection does not encourage motorists turning right off the Old County Road onto Route 100 to come to a complete stop.

See concept sketch, next page.

NEXT STEPS:

- Apply to the VTrans SRTS Infrastructure program for construction of the above improvements.

Item: Realignment of the intersection
Cost: Approximately $67,500 per engineer's estimate, see Appendix.
Funding: 100% federal SRTS funds, competitive grant application



4. Extend the Mad River Path north to connect a route to school to Tremblay Rd. Depending on landowner support, a path extension might either:

a. stay on the east side of Route 100,
b. stay closer to the road or closer to the river, or
c. cross to the west side of Route 100 to connect to the northern end of the Old County Road as a reasonable route to school.

The Mad River Path in Waitsfield is a simple mown path along farm fields, placed with landowner permission on private land.

The Mad River Path north of Tremblay Rd. provides a model for a simple mown path along the river with landowner permission.

NEXT STEPS:

- Ask landowners along these potential routes whether they would be willing to open their lands to a one-time "trial" use during the Valley Walk & Roll Festival?
- Continue to work with the Mad River Path Association to extend this section of trail, as appropriate.

Appendix 1: History & Background of SRTS

The Safe Routes to School (SRTS) movement started in the 1970s in Odense, Denmark, to address disturbing trends in traffic incidents involving students walking or bicycling to school. In the early 1990s, walking and bicycling advocates initiated a similar program in the United Kingdom, and the program then spread to other countries around the world. Pilot programs in the U.S. were initiated in the late 1990s in California and Massachusetts. Interest then spread across the country, with some states initiating programs using state funding sources. In Vermont, a pilot program was conducted from 2004-2006 with regional funding from the Chittenden County Metropolitan Planning Organization.

The national Safe Routes to School program began in 2005, when Congress incorporated funding for Safe Routes to School into the federal transportation bill (SAFETEA-LU), with small population states like Vermont receiving a minimum of $1 million per year for five years. SRTS provides 100% federal funds, with 10%-30% of each state's allocation going to education and encouragement, and the remaining 70-90% to infrastructure projects.

The VTrans Safe Routes to School Program began in earnest in the spring of 2006, by soliciting schools to participate in education and encouragement activities. Another round of schools was selected in 2008, and a third round in 2009. Waitsfield Elementary School was a part of this third round.

Schools that are participating in any round of the education and encouragement activities are eligible to apply for infrastructure grant funds, so long as the school is actively continuing to promote walking/biking to school. These grants, also administered by VTrans, provide 100% federal funds to key improvements identified in the School Travel Plan. No local match is required. In the 2007 grant round, VTrans accepted applications for projects up to $250,000, and awarded a total of $1.4 million.

The 2010 infrastructure grant round was announced in February 2010, with a letter of intent due March 15 and the full application due in May. A total of $1 million is available, with the maximum award of $250,000. About 75 communities will be eligible to apply for infrastructure funds in 2010.

While VTrans currently has remaining funds to award based on the federal allocation from SAFETEA-LU (2005-2009), a future and additional grant rounds awaits the new federal transportation bill. As of February 2010, federal transportation funds are operating under a continuing resolution.