

## Appendix C – Project Summaries

### 1 Ascutney Bicycle Route

#### 1.1 Purpose

- ❖ To establish a safe bicycle connection from the village to the Weathersfield Town Forest.
- ❖ To improve access to recreational facilities.

#### 1.2 Existing Conditions

US Route 5 has varying conditions. North of Ascutney Park Road, the pavement on Route 5 is generally 27-28 feet wide in total, accommodating two 11-foot travel lanes and 2-3 foot shoulders on each side. The southbound shoulder is narrower than the northbound shoulder in places. The existing pavement conditions are fair. Traffic volumes are between 5,400 and 4,800 AADT<sup>1</sup> along this corridor.

Thrasher Road is paved (twenty-two feet in width) between US Route 5 and the I-91 overpass, and unpaved to the west of the overpass. The proposed access to the Town Forest would be on the west side of the I-91 overpass. The pavement is in good condition. Traffic volumes are 360 AADT<sup>1</sup>, but speeding can be a problem as the road is used as a short cut between US Route 5 and VT Route 131.



Figure 1: The proposed bike route would connect Ascutney Village to the Town Forest along US Route 5 and Thrasher Road.



Figure 2: Existing conditions on U.S. Route 5 south of Schoolhouse Road.



Figure 3: Existing conditions on Thrasher Road.

Due to very low traffic volumes, Schoolhouse Road is generally adequate for bicycles to use the existing roadway. However, during the times when students arrive to school and leave for the day can be very busy.

<sup>1</sup> Transportation Data Management System (VTrans) <http://vtrans.ms2soft.com/>

### 1.3 Options

- a) Widen shoulders to 4-5 feet in width on both sides of US Route 5 (generally between the library and Thrasher Road). This can be expensive, may involve right-of-way (ROW) issues, and it would limit the ROW width for providing a future sidewalk, if desired by the community. The town would likely need to seek a grant to help pay for the work. All aspects of this work would need to be approved by VTrans.
- b) Shared-lane markings are a low-cost option (see an example image in Figure 4). There are few of these currently on state highways in Vermont, but one does exist along VT Route 100 in the Mad River Valley. Generally, these are used on a small portion of a longer bicycle route as it passes through a village and where there is limited roadway width available. In this case, there is no bicycle route along US Route 5 on either side of the village of Ascutney, so this does not appear to be a reasonable application for this purpose.
- c) Repave US Route 5 to establish a smooth surface and modestly expand the shoulder to provide consistent 11-foot travel lanes and 3-foot shoulders. Establish a bicycle route, which would involve approval by VTrans for the town to install a few directional signs, such as D1-1c below which identifies the road as part of a bike route. It can also describe the destination (i.e. Town Forest) and indicate the number of miles to that destination. Improvements to Thrasher Road are probably not required, except for installing a few bicycle route signs. Speed enforcement may also be a consideration. This is a low-cost project for the town. Paving is not required to establish this bicycle route, but it would help by creating a smooth riding surface and establishing more consistent shoulder widths. This would require waiting until such time that VTrans will re-pave Route 5.
- d) An off-road trail or path could provide this connection and may have other benefits. However, trails may not be preferable for some people due to fears about personal safety. This would require efforts to work with landowners for approval to establish a path over private lands.
- e) Do nothing.



Figure 4: Example of a shared-lane (or "sharrow") marking.



### 1.4 Feasibility

Option C appears to be the best option to provide a bicycle route between Ascutney village and the Town Forest. If the town determines this project to be a priority, it is feasible. This would require a Section 1111 Permit to be issued by VTrans. As part of the application, the town would need to map out where the proposed signs would be installed, avoiding being too close to other existing signs. The town would also be expected to install and maintain the signs.

However, the biggest hurdle with Option C will be to wait until such time that VTrans can re-pave Route 5. The town should coordinate with VTrans to investigate if a future pavement project can incorporate a consistent 11/3 typical (i.e. two 11-foot travel lanes, two 3-foot shoulders).

### **1.5 Cost Estimate**

Installing 6 to 8 bicycle route signs may cost approximately \$1,200 to \$1,600 for the materials.

### **1.6 Funding Options**

- a) Local funds, VTrans Paving Program

### **1.7 Implementation**

- 1) Weathersfield's TAC representative (currently vacant) or Town Manager will coordinate with the SWCRPC and VTrans about future plans to re-pave US Route 5.
- 2) Town Manager, or their designee, will coordinate with Brian McAvoy ([VTrans Permitting Services Unit](#)) at 802-498-8019 or [brian.mcavoy@vermont.gov](mailto:brian.mcavoy@vermont.gov).
- 3) Work with VTrans to prioritize US Route 5 to be swept clear of sand/debris.

## 2 Ascutney Pedestrian Facilities

### 2.1 Purpose

- ❖ To establish safe walking conditions along US Route 5 within the village: Phase 1 to connect the existing sidewalk by VT Route 131/12 to Schoolhouse Road, and Phase 2 to connect Schoolhouse Road to Thrasher Road.
- ❖ To improve access to recreational facilities.
- ❖ To make Ascutney look and function more like a village.

### 2.2 Existing Conditions

See the description of US Route 5 in the previous section as it relates to an Ascutney bicycle route.

There is a very short section of existing sidewalk at the northeast side of the intersection of US Route 5 and VT Routes 131/12. There are no sidewalks along most of the US Route 5 corridor. Pedestrian activity is common along between Ascutney Park Road and Schoolhouse Road. A student was injured around 2008 in a car/pedestrian crash near the library.

When making traffic signal improvements at the VT Route 131/12 and US Route 5 intersection a few years ago, VTrans installed pedestrian crossing signals at the eastern approach, but they are not active at this time. VTrans has a policy of generally allowing new pedestrian crosswalks only when it connects one sidewalk to another sidewalk. The crossing signals were installed with the understanding, at that time, that once the town or property owner constructed a sidewalk along the southeast side of the intersection by Ascutney Place, a crosswalk could be installed and VTrans would activate the crossing signals.

With the exception of the times when students arrive to school and leave for the day, Schoolhouse Road is generally adequate for pedestrians to walk along the edge of the existing roadway.

### 2.3 Options

- Construct a sidewalk along US Route 5 between the existing sidewalk near the library and Thrasher Road. Consider developing the sidewalk in phases based upon priorities and cost factors. Variants of this option include different types of materials for both the surface (i.e. concrete, asphalt, aggregate) and the curbing (i.e. granite, concrete, asphalt). The sidewalk



Figure 5: Phase 2 of the proposed US Route 5 sidewalk would connect Schoolhouse Road to Thrasher Road.



Figure 6: Phase 1 of the proposed US Route 5 sidewalk would connect the existing sidewalk by the Ascutney House to the Town Offices, then cross the street and connect to Schoolhouse Road.

and curbing would provide safe walking conditions as well as contributing to making Ascutney look more like a village.

- b) An off-road trail or path might provide a similar walking facility. It is possible for a trail or path to accommodate both walking and bicycling (see Option d for an Ascutney bicycle route). However, there would need to be extensive outreach to affected property owners to make this project a reality.
- c) Do nothing.

## 2.4 Feasibility

A similar idea for sidewalks in Ascutney was evaluated by DuBois and King in 1997. See the resulting *Ascutney Village Sidewalk Conceptual Alignment Analysis* for more detail. The town was awarded design and construction funding from VTrans in 1998, but the project was terminated about a year later due to concerns about the cost of maintenance. Some conceptual design work was completed at that time. However, it has been so long that it should be re-evaluated again to make sure the project in its present form is feasible, and to verify what design standards and permits may apply. The source of the funds used to design and construct the facility may influence aspects of the project (e.g. design standards, project feasibility, total project costs, timelines). While outreach in fall 2017 showed strong support for sidewalks and streetscape enhancements, an effort should be made to gauge public support for this project before seeking implementation.

## 2.5 Cost Estimate

Planning-level cost estimates have been prepared to help evaluate different materials and funding sources. Accomplishing the project without VTrans funding will help to keep the project costs lower and allow for a much quicker implementation timeline.

- a) **Phase 1** – VT 131/12 to Schoolhouse Road (1,700 LF)
  - 1) 5 foot concrete sidewalk and granite curbs
    - VTrans grant-funded<sup>2</sup>: (\$239/LF+) \$590,000
    - Locally funded: (\$99/LF+) \$202,000
  - 2) 5 foot aggregate sidewalk and granite curbs
    - VTrans grant-funded: (\$143/LF+) \$356,000
    - Locally funded: (\$59/LF+) \$120,000
- b) **Phase 2** – Schoolhouse Road to Thrasher Road (2,200 LF)
  - 1) 5 foot concrete sidewalk and granite curbs



Figure 7: Existing sidewalk in front of the Ascutney House. The inactive pedestrian crossing signals are visible in the background.



Figure 8: Existing crosswalk that connects Ascutney Park Road to the Proctor Free Library.

<sup>2</sup> Sidewalk cost estimates are based upon [Report on Shared-Use Path and Sidewalk Unit Costs](#) (VTrans, 2014). For VTrans grant-funded sidewalks, routine additional costs were also included: 10% project management, 20% engineering, 2% ROW/legal, and 15% for construction oversight. For locally-funded projects, an additional 10% was added for engineering and 10% for project management/oversight.

- VTrans grant-funded: (\$239/LF+) \$773,000
- Locally funded: (\$99/LF+) \$262,000
- 2) 5 foot aggregate sidewalk and granite curbs
  - VTrans grant-funded: (\$143/LF+) \$463,000
  - Locally funded: (\$59/LF+) \$156,000

## 2.6 Funding Options

- a) Local funds, capital reserve funds, Capital Budget and Program, [Bicycle and Pedestrian Program](#)

## 2.7 Implementation

- 1) Selectboard may wish to facilitate a public meeting or conduct a survey to evaluate public support for raising funds and/or seeking a grant for this project.
- 2) Consider hiring an engineering consultant to review project feasibility, prepare a more detailed project scope and budget, and provide guidance on how to proceed.
- 3) Town Manager might solicit assistance from the SWCRPC to assist in preparing a funding application.
- 4) Consider building a sidewalk by Ascutney Place in order to establish a pedestrian crosswalk and activate the pedestrian crosswalk signals at the intersection of Routes 5, 12 and 131.
- 5) Explore whether the Fire District should apply for grant funds.



Figure 9: Option A would start where the existing sidewalk ends in front of the Ascutney House and continue along Route 5 to connect to Schoolhouse Road and beyond.



Figure 10: The proposed sidewalk would be along the western side of the roadway (on the left of this picture) once north of the Town Offices.

## 3 Perkinsville Wastewater Solutions

### 3.1 Purpose

- ❖ Evaluate cost-effective solutions for the present septic issues in Perkinsville.

### 3.2 Existing Conditions

There is presently no public wastewater system in Weathersfield. All houses and businesses in the Village of Perkinsville are served by all private wells and on-site septic systems, although there are several shared systems. Many of the septic systems are aging and have little room for replacement systems. Aging or failing septic systems and limited room for replacement systems poses a significant threat to the viability of the buildings in Perkinsville and for the Village itself. An engineering study is needed to evaluate options to address the wastewater needs in Perkinsville.

In the past, connecting Perkinsville to Springfield's wastewater system has been discussed. There is currently discussion of Springfield extending their public wastewater system to serve the Hartness State Airport. That may present an opportunity to further connect to Perkinsville. However, the expense to do so may prove to be cost-prohibitive. There are newer technologies that may prove to be more cost-effective. (See the Wastewater Solutions document in Figure 12 for more information.) An engineering assessment is the best place to start to evaluate options.

### 3.3 Options

- Conduct an engineering analysis of wastewater solutions for Perkinsville.
- Do nothing.

### 3.4 Feasibility

The purpose of the study is to evaluate the project scope, cost and feasibility of appropriate wastewater solutions.

### 3.5 Cost Estimate

Engineering assessments often cost around \$30,000. However, since the core area of Perkinsville is relatively small and compact, it may be possible to complete an assessment for a lower cost, perhaps \$20,000 to \$25,000.

### 3.6 Funding Options

- [Clean Water State Revolving Fund](#), [Vermont Planning Advance Program](#), [Municipal Planning Grant](#)

### 3.7 Implementation

- The Town of Weathersfield and Village of Perkinsville might discuss the best way to proceed and should coordinate on the decided course of action.



Figure 11: The approximate area within Perkinsville to evaluate wastewater solutions.

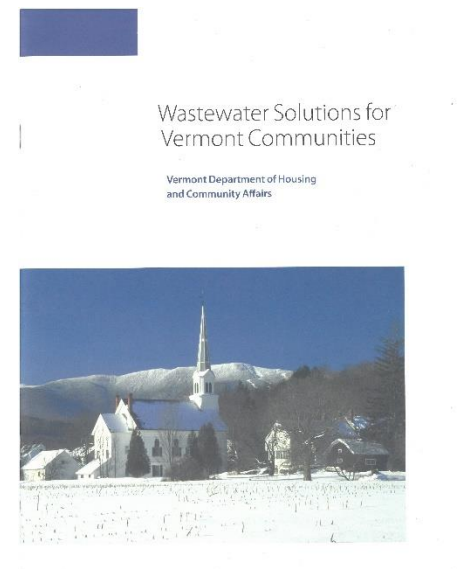


Figure 12: See the above publication on the VT Department of Housing and Community Development [website](#) for more information.

## 4 Perkinsville Pedestrian Accommodations with Connections to Recreation Facilities

### 4.1 Purpose

- ❖ To establish safe walking conditions along VT Route 106 within the Village of Perkinsville.
- ❖ To improve access to recreational facilities.

### 4.2 Existing Conditions

Roadway widths vary along VT Route 106 in Perkinsville. There are two 11-foot wide travel lanes and the shoulders on either side range from 1 foot to 5 feet wide. The roadway is especially narrow in the vicinity of The Green. Historic buildings are set very close to the roadway. About 31% of the parcels in Perkinsville are less than ½ acre in size. A few buildings are within about 10 to 15 feet from the edge of the roadway, meaning a sidewalk would be very close to a few existing homes.

There is a shoulder about 4-5 feet in width along the western side of VT Route 106 between Quarry Road and High Street. Quarry Road, High Street and Upper Falls Road experience low traffic volumes and slow speeds, which may make walking without sidewalks adequate.

The intersection of VT Route 106, Quarry Road and Maple Street presents some challenges for making a pedestrian connection to Hoisington Fields. The intersection has been a concern for traffic safety due to limited sight distances for many years. Maple Street and Quarry Road approach Route 106 at odd angles. Vertical and horizontal curves on Route 106 heading northbound into Perkinsville limit sight distances. The hill and existing vegetation at the southwest corner of the Quarry Road/Route 106 intersection also limits sight distances. Along the west side of Route 106 and south of Quarry Road, constraints for a sidewalk include a small hill, sloping upwards towards a stone wall, mature trees and a home. Further south by Hoisington Fields, the shoulder on the west widens to accommodate a paved drainage swale.

Starting at the access to the dam from VT 106 at the north end of the Village, there are remnants of a discontinued road that run parallel to the Black River. There are places where an old foot path/fishing access are discernable. An old road, which is now used as a trail, begins where Old Center Street ends. The trail connects into the existing trail networks in the North Springfield Dam recreational facility, although there is one stream crossing that is an issue. It appears that someone at some point in time built a make-shift foot bridge; it is impassable at this time. It might be possible to establish a rustic

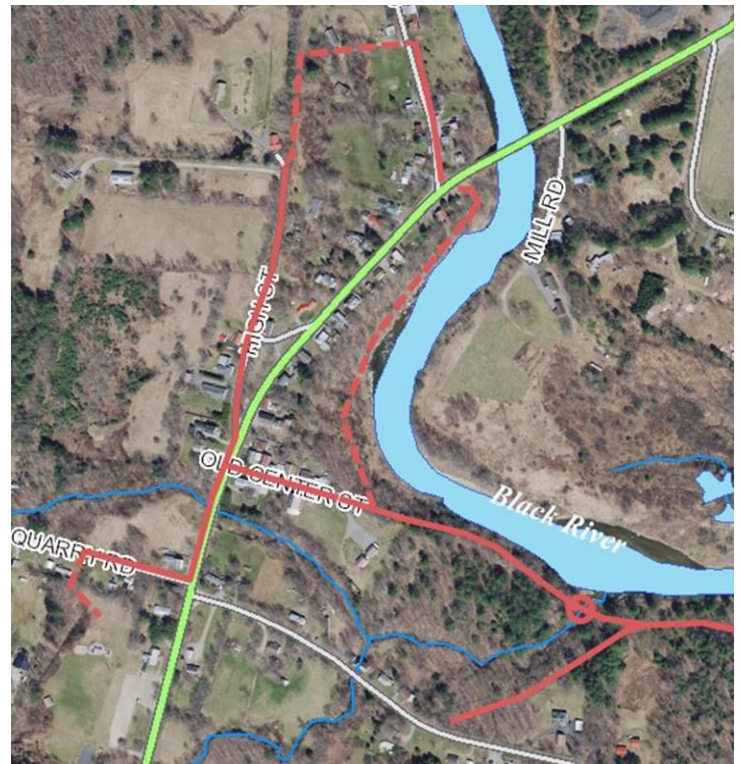


Figure 13: Potential walking routes around Perkinsville are shown above. Solid lines represent walking along the shoulders of existing roads or along existing trails. Dashed lines represent possible walking path connections. A red circle shows where a stream crossing is needed.



Figure 14: Views of the Black River from the end of the dam access off of VT Route 106 at the north end of Perkinsville.

hiking path to connect the dam access to the existing trail by Old Center Street. However, a stream crossing would also be needed in order to make a connection to the trails in the recreational facility.

### 4.3 Options

Options to address this situation include:

- a) Construct a sidewalk along VT Route 106 from Hoisington Fields to the bridge at the north end of Perkinsville. Especially if funded through VTrans, sidewalks would be expensive to design and build. There are a few constraints to consider (e.g. right-of-way, front yard impacts, slopes, stone wall, drainage).
- b) Establish a walking network consisting of a combination of trails and on-road facilities. This would take advantage of existing trails, establishing new trail connections along discontinued roads and private property (if property owners will allow), and along existing roadways (i.e. VT Route 106 from Quarry Road to High Street, and along High Street). This concept will need further evaluation, but it appears to be feasible as long as right-of-way and permitting do not pose significant problems. A 1.25 mile loop could be established providing access through the village to Hoisington Fields and the North Springfield Dam facility. If additional treatment is desired along the VT 106 shoulder, consider testing some options by using some “tactical urbanism” techniques – see this [website](#) for more information. A variant of this option would involve constructing a short section of sidewalk along Route 106 between Quarry Road and High Street.
- c) Do nothing.

### 4.4 Feasibility

Pedestrian facilities in Perkinsville were evaluated for the Town and Village in 2002. For more detail, see the *Pedestrian Facilities and Traffic Calming* report prepared by Infrastructure in September 2002. At that time, sidewalks were considered to be feasible. However, there are some notable constraints. Constructing sidewalks would be expensive and would impact the existing historic homes that are set close to the edge of VT Route 106.

Option B appears to be the most feasible option. It takes advantage of existing low volume, low speed roadways for much of the walking network. Building walking trails to connect these road segments would impose only very minor impacts. It would however require permission from a number of landowners to make it a reality. The walking path along the Black River would follow an existing fishing access trail and continue along an old road alignment. It would require working with the US



Figure 15: A foot path extends from the existing dam access down to the Black River.



Figure 16: “Tactical urbanism” refers to short-term, low-cost solutions. Often these techniques are a great way to test out design ideas, before investing in permanent facilities. This photo shows temporary bike lanes that Local Motion established as a demonstration at the 2018 Vermont Walk Bike Summit.

Army Corps as much of the path would be on their land. There is sufficient space for a trail to be established that is outside of the flood hazard area, with the exception of the stream crossing area at the bottom of the Old Center Street trail. There are a few locations where the trail alignment needs to be carefully considered where the old road washed out and where there is a steep bank to negotiate in order to connect with the Old Center Street trail. In general, it appears to be a feasible project.



*Figure 17: At the end of Old Center Street a path to the recreational area begins at the sign that reads, "Path to Dog Hollow Foot Bridge".*

#### 4.5 Cost Estimate

The cost depends upon a number of factors. If the trail can be built with mostly volunteers, it can be accomplished for very little money. The cost to build recreational trails can vary. One recent estimate provided by Sinuosity through the Town of West Windsor indicated a cost of \$25,000 to \$30,000 per mile to build recreational trails. Option B involves constructing a total of about 2,400 feet of walking trails. If trail construction cost \$30,000/mile, it might cost about \$15,000 to build the trails proposed under Option B. In addition, certain funding sources may require professional assistance for design and permitting, which could cost a few thousand dollars in addition to the construction cost.

If constructing an approximately 530 foot long sidewalk along VT Route 106 between Quarry Road and High Street is desired to ensure pedestrian safety, the estimated cost is as follows:

- a) VT 106 from Quarry Road to High Street (530 LF)
  - 1) 5 foot concrete sidewalk and granite curbs
    - VTrans grant-funded<sup>3</sup>: (\$239/LF+) \$187,000
    - Locally funded: (\$99/LF+) \$63,000
  - 2) 5 foot aggregate sidewalk and granite curbs
    - VTrans grant-funded: (\$143/LF+) \$112,000
    - Locally funded: (\$59/LF+) \$38,000

#### 4.6 Funding Options

- a) Local funds, capital reserve funds, Capital Budget and Program, [Recreational Trails Program](#), [Bicycle and Pedestrian Program](#)<sup>4</sup>

#### 4.7 Implementation

- 1) Work with the Trails Committee and consider hiring a design consultant to help to layout the future trail locations.
- 2) Identify how future trail maintenance should occur.
- 3) Begin to have discussions with property owners about allowing a trail to cross their land.

<sup>3</sup> Sidewalk cost estimates are based upon [Report on Shared-Use Path and Sidewalk Unit Costs](#) (VTrans, 2014). For VTrans grant-funded sidewalks, routine additional costs were also included: 10% project management, 20% engineering, 2% ROW/legal, and 15% for construction oversight. For locally-funded projects, an additional 10% was added for engineering and 10% for project management/oversight.

<sup>4</sup> The Bicycle and Pedestrian Program's small-scale project category may be an option for lower cost projects that do not have complications

- 4) Seek volunteers and/or grant funding to build the trails.
- 5) Create a map to inform people about the walking route.
- 6) Add language to the Town Plan and Zoning Bylaws as appropriate to identify the desire for sidewalks within the Village. Require site plans to provide right-of-way or easements for future sidewalks along VT Route 106.