

### ADDISON COUNTY REGIONAL PLANNING COMMISSION

### EXCHANGE STREET PEDESTRIAN PLANNING AND FEASIBILITY STUDY

#### MIDDLEBURY, VERMONT



August 2012

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Exchange Street was envisioned at its conception in the early 1970s as a true industrial park of manufacturing facilities with exclusively passenger vehicle and truck access. Little consideration at the time was given to pedestrians or bicyclists. Since then, 45 businesses have occupied property along the corridor varying in use from manufacturing to health care, commercial to professional offices, primary education to retail. As Exchange Street has diversified from its original plan, the public's perspective on alternative modes of transportation has changed and the need has developed for a safe corridor offering pedestrian and bicycle access to these businesses.

The **purpose** of this project is to improve pedestrian/bicyclist access and safety, encourage non-motorized travel to businesses along the Exchange Street corridor, and connect the area to the Town's pedestrian walkway network and downtown.

Exchange Street functions as a corridor from downtown Middlebury to many businesses north to Route 7. It is, however, ill-suited to pedestrian and bicyclist travel due to narrow shoulders, high speeds, and heavy truck traffic (See Table 1). Walking this section of roadway is intimidating to most pedestrians. There is a **need** for construction of a new facility offering safe and convenient pedestrian access up Exchange Street that would promote non-motorized access to the area and enhance the convenience of public transportation by providing safe connections from bus stops to area businesses and downtown. It would also provide the opportunity for employees working at businesses in the area to walk during breaks.

Location	AADT*	Truck AADT	Posted Speed	85th % Speed
North of r.k. Miles at CCTA Stop (NB / SB)	5,200	460	25 mph	33 mph / 32 mph
1/4 Mile North of Elm St. at MacIntyre (NB / SB)	4,400	340	25 mph	37 mph / 37 mph
Just West of Bridge School (EB / WB)	2,700	440	40 mph	41 mph / 42 mph

\*Annual Average Daily Traffic (AADT) is a Non Seasonally-Adjusted number of vehicles passing on a typical day, collected by ACRPC

Table 1: Traffic Volumes and Speed along Exchange Street in Middlebury.

The goal of this study is to take the first steps toward determining the feasibility and scope of a new pathway. The study considers available alternatives for providing bicycle and pedestrian access to the Exchange Street corridor, identify constraints and obstacles that must be overcome, estimate project costs, and outline what will be necessary to move the project to construction.

The project area lies entirely within the Town of Middlebury, and follows Exchange Street from the intersection with Elm Street to the south to its northern junction with Route 7. For this study, the Street has been broken into three "Segments." Each segment has different right-of-way characteristics and physical challenges which are described in the following section. The plans showing these segments are included in Appendix A.

Addison County Regional Planning Commission (ACRPC) has completed a preliminary evaluation of vehicular and pedestrian traffic within the project corridor. Their work has been included in Appendix B for reference and utilized in our considerations and recommendations.

#### Segment 1 (Elm Street to Elderly Services)

Segment 1 is the area from the intersection with Elm Street to the access drive to Elderly Services and is defined by a narrow 32-foot Right of Way (ROW). The posted speed limit is 25 mph. Construction of a walk in this area is constrained by the narrow ROW, existing utilities, and the proximity to Greg's Meat Market, private residences, and r.k. Miles lumber yard.

The southernmost portion of Segment 1 provides some significant challenges to the development of a path, from Elm Street to r.k. Miles. On the west side, Greg's Market is only 24 feet off the road centerline and just 12-feet off the edge of the traveled way. This 12-feet is occupied by private parallel parking spaces owned by Greg's which double as truck unloading space, two utility poles and a storm water catch basin. Construction of a walkway in this zone would require the loss of the parking spaces, relocation of at least one utility pole, and reconstruction of the storm water system to accommodate a change in the drainage pattern. As you progress farther north, the area opens into lawns, providing more flexibility in design. However another pole relocation and additional storm water work would likely be necessary.



Greg's Parking (Segment 1) - Parallel parking on West side, looking South to the Elm St. intersection.

The southernmost eastern side of Exchange Street is occupied by lawn and drives. The closest

structure that will impact the design is a porch on the front of house No. 58 which is 7-feet off the edge of pavement. Moving north, there is also a deep drainage swale along No. 58's road frontage to the southerly line of r.k. Miles. This swale would need to be

replaced with storm water piping and additional drainage structures would need to be added to allow installation of a walk in this area.

Moving northward in Segment 1, r.k. Miles occupies both sides of Exchange Street. The main customer parking area for the store on the east side fronts on the roadway and has a wide curb cut. Employees and customers make frequent trips between the facilities, crossing the road on foot (for more detail, see Appendix B, Table 4 "Exchange St. & r.k. Miles Lumber Yard Intersection Count, Middlebury, VT  $\sim$  2012"). The location of a utility pole at the southwest corner of the main store building would require a sidewalk to be shifted away from the existing edge of pavement. Due to the pole's current proximity to the existing building, relocating this pole would be problematic. An existing hydrant and chain link fence on the west side of Exchange Street are also relatively close to the edge of pavement and will likely require relocation if the walk is located on this side of the roadway.

#### Segment 2 (Elderly Services to MacIntyre Services)

Segment 2 begins at the point where the ROW widens to 40-feet at the Elderly Services drive and extends past Middlebury Self Storage to the east and Champlain Valley Plumbing and Heating to the west. Exchange Street is bounded on the west by the fence line along the edge of the r.k.. Miles yard and on the east by a deep ditch line in front of the Self Storage. Utility poles run up the east side of the road. Stormwater sheet flows off the roadway to the shoulders and into ditch lines which an existing storm water collection system discharges to the east. Land uses in this segment include an elderly day care, self storage facility, and a fuel delivery/ gas station. Elderly Services has internal walking paths for its participants.

Middlebury Self Storage hosts an informal Park and Ride for the CCTA LINK Express bus stop across the road. While there is no formal crosswalk at this location, bus pickup/drop-off times are in the morning (6:10 am and 7:10 am) and in the evening (5:55 pm and 6:35 pm), respectively before and after the higher volume daytime passenger vehicle and truck traffic. However the location of the parking and the southbound bus stop across the street still results in a fair amount of pedestrians crossing the road. (During a 14 August, 2012 count by the ACRPC, the CCTA Link Express was observed to arrive at 7:07am having 1 passenger drop-off and 0 pick-ups, however the passenger drop off walked down the western side of the road and did not immediately cross the street. The 16 August, 2012 count observed a



CCTA Bus Stop (Segment 2) - Looking south from the second R.K. Miles entrance

6:05 pm arrival, dropping off 8 passengers and picking up 1, all of which utilized the Park & Ride at Middlebury Self-Storage across the street.)

According to traffic data collected by ACRPC during the summer of 2012 and field observations, the 85th percentile speed increases northbound from 33 mph at the CCTA LINK Express stop near r.k. Miles to 37 mph at the MacIntyre Services (or Auto Paint Plus) site located on 260 Exchange St., 1/4 north of Elm Street (see Appendix B, Tables 2 and 3). As the posted speed limit for this location is 25 mph, the Town may want to evaluate traffic calming strategies for this section of roadway.

#### Segment 3 (MacIntyre Services North to Route 7)

Segment 3 starts north of Champlain Valley Plumbing and Heating and comprises the rest of Exchange Street north to Route 7. This Segment has a 50-foot or greater ROW and long sight distances. The posted speed limit increases to 40 mph for the balance of the roadway north. There is a significant mix of uses along this stretch of roadway ranging from medical and professional offices to industrial/manufacturing, to a fitness center and primary school. A number of the manufacturing facilities have a retail/visitor component as well. Many of the industrial and manufacturing properties create relatively high truck traffic volumes as illustrated in the ACRPC data included in Appendix B. Trucks are especially high in volume coming and going from the Cabot plant and businesses off Mainelli Drive.



Segment 3 - Typical road section.

Utility poles are located along the east side of the roadway until a point north of Cabot, then cross to the west side of Exchange Street for the balance of the roadway north to Route 7. Some poles in the southern portion of this segment are well outside of the ROW, however, progressing north, they get closer to the traveled way and limit options for walk placement. Storm water runoff from Exchange Street sheet flows across

the road shoulders into ditch lines and onto the abutting properties. Design of a path in this Segment must consider its impact to storm water conveyance off Exchange Street. Preliminary investigations indicate that there are regulated wetlands that may impact walkway design.

Based on an informal report of ridership by Addison County Transit Resources buses, there is a relatively high level of use by patrons of the counseling and medical services in Catamount Park, Vermont Sun, and the medical offices at 1330 Exchange Street. They have identified the need for safe pedestrian access and bus stops at Catamount Park.

The Project Team took advantage of our historical work in the area on numerous abutting parcels. South Mountain Survey compiled these past surveys and assembled a preliminary ROW map from Elm Street to Route 7. Utilizing this information, Otter Creek Engineering was then able to locate a number of monuments along the ROW, and using survey grade GPS equipment, overlaid the ROW information onto aerial photography. While this boundary work is preliminary and subject to further work in future phases of the project, it provides an accurate assessment of how the proposed walks relate to the existing ROW and where walk, construction, and grading easements will likely be necessary.

As noted earlier, the Exchange Street ROW varies along its length. Beginning at Elm Street in the South, the ROW is narrowest at 32-feet (Segment 1 on the drawings). North of r.k. Miles Lumber Yard, it widens to 40-feet for 470-feet near the northern boundary of Champlain Valley Plumbing and Heating (Segment 2). After this point it widens to 50-feet (Segment 3), however, our preliminary boundary information indicates that it is not a consistent 50-feet, and actually varies between 50 and 56-feet. At the southern boundary of the Cabot Creamery plant, the ROW transitions to a consistent 50-foot width until the intersection with Route 7.

Another condition that was evident as a result of this Right of Way investigation was that the existing traveled way is not centered within the ROW limits, but rather strays from side to side along its entire length.

The inconsistent width and location of the roadway within the ROW pose challenges for the development of a sidewalk design that is functional yet minimizes the need for easements. The typical cross-sections for the path/roadway must provide safe and pleasant pedestrian access, facilitate snow removal from both the roadway and walk, and minimize costs by avoiding excessive fills and the need for roadway relocations. Based on our analysis, securing walk and grading easements, as well as temporary construction easements from numerous property owners is critical to the development of a viable project. The need for easements is understandably greater in the southern Segments 1 and 2 where the ROW is narrower. Easements in Segment 3 are necessary due to the location of the road within the ROW. The need for grading easements along the entire project length is subject to final design.

#### Natural Resources

#### Wetlands

Brad Wheeler of Wheeler Environmental Services observed the proposed project area/alignments and noted a number of wet areas that will require further review and possible permitting, subject to field surveys and final design. Some wet areas may be classified as manmade wet swales which are non-jurisdictional. There are a number of other areas that would likely be classified as either Class 1 or Class 2 wetlands under the Vermont Stormwater Rules and/or as Jurisdictional Wetlands under Army Corp regulations. The proposed typical sections being considered should minimize impacts to wetlands and the need for permitting is not anticipated to be an insurmountable obstacle to the project moving forward.

#### Lakes/Ponds/ Rivers/Streams

There are no lakes or rivers adjacent to the project area. A small storm water pond is located on Pond Lane off Mainelli Drive, however, this is well removed the project area and will not be impacted by the proposed walk. Minor streams and drainage courses traverse the project site, however, no work would be necessary within stream beds and they could be easily protected with proper erosion control measures.

#### Floodplains

Based on the Federal Emergency Management Agency's Flood Insurance Rate Maps, there are no floodplains or floodways located in proximity to this project. (Refer to Appendix E).

#### **Endangered Species**

Natural resources were investigated utilizing the "Environmental Interest Locator" program located on the Vermont Agency of Natural Resources' (ANR) website. The "layers" for endangered species, storm water permits, and hazardous waste sites were overlaid onto the project. Copies of the project area maps with the appropriate layers are included in Appendix C.

According to the ANR map, one type of endangered plant and another type of threatened plant were found on Chipman Hill to the east, and along the Otter Creek to the West. Neither of these occurs close enough to Exchange Street to be impacted by the proposed sidewalk project.

#### Agricultural Lands

The "Web Soil Survey" (WSS) made available by the United States Department of Agriculture - Natural Resources Conservation Service was utilized to investigate Farmland/Soils Classifications. According to this survey, there are occurrences of "Prime" agricultural soils along Exchange Street, such as Armenia stony loam and Nellis stony

loam (See Appendix D). These areas are, however, already utilized for purposes which preclude agriculture, therefore the construction of the proposed path will not adversely impact viable agricultural soils.

#### **Hazardous Waste Sites**

There are also multiple hazardous waste producing and disposal sites along Exchange Street. A copy of the Environmental Interest Locator Map for hazardous waste sites is included in Appendix C. Given the nature and location of the sites and the type of construction proposed, it is not anticipated that the sidewalk project will be adversely impacted by them.

#### **Cultural Resources**

#### Historic and Archaeological

The entire corridor has been previously disturbed by construction of the roadway, placement of fill and the installation of underground utilities including storm drains, sanitary sewer, and water mains. The proposed path will result in relatively shallow excavations in previously disturbed areas and therefore will not have significant impacts to any potential historical or archaeological resources.

#### **Architectural**

The proposed path will not have significant impacts to any structures. There are no structures of significant historical significance in the corridor.

#### **Public Lands**

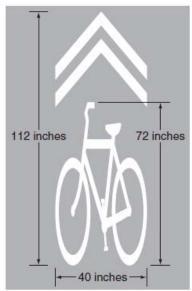
Public lands in the area are limited to the Exchange Street ROW, therefore the proposed path will not adversely impact public lands or investment.

A number of alternatives were considered for the location of the path along Exchange Street. Consideration was given to ROW widths, conflicts with existing utilities, environmental impacts, maintenance (including snow removal), existing property uses, and pedestrian needs. Drawing sheet number 5 in Appendix A illustrates four of the typical road/walk cross-sections considered. For illustrative purposes, the ROW widths indicated in the cross sections are based on the roadway being centered on the ROW. As noted in the discussion about right of way in Section 3.0 of this report, the traveled way actually shifts back and forth across the ROW. The existing pavement width varies along the project length; on average it ranges from 24 to 26 feet. The travel lanes are painted at approximately 11 feet, however, provision for one foot from the fog line to the edge of pavement is inconsistent.

All path construction must conform to several design standards including the Americans with Disabilities Act Accessibility Guidelines and the Vermont Pedestrian and Bicycle Facility Planning and Design Manual (assuming the project receives funds from the Vermont Agency of Transportation). Design attention must be given to the width and grade of the path, surface materials, design and layout of crosswalks and construction of ramps at roadway and drive crossings.

Based upon our field investigations and conceptual designs, it was determined that the alternates which had a wider typical cross section to provide for bike lanes or a shared use path not only resulted in the need for additional ROW acquisition, but also required significantly more fill, resulting in more wetlands impacts, additional utility relocations (power poles and hydrants), and additional drainage improvements. As a result of this assessment, we recommend a combination of the narrower Type A and Type B paths indicated on the Typical Sections in Appendix A.

Since separate bicycle lanes or shared paths aren't practical without significant additional investment and impacts to private property, utilities and wetlands, we recommend the addition of Shared Lane Markings ("Sharrows") painted on roadway in Segments 1 and 2, as a means to provide improved protection for bicyclists. These markings should start immediately after the



Shared Lane Marking (Sharrow) - Figure 9C-9, MUTCD, 2009

intersection with Elm Street and continue north, spaced at intervals of 250 feet (as described in the 2009 Edition of the MUTCD, Section 9C.07). Additional road signage such as "Bicycles May Use Full Lane" signs may also be considered during final design.

Sharrows are not recommended for roadways with speed limits greater than 35 mph, such as the northern Segment 3. Provisions for dedicated bike lanes and shared paths were considered for this Segment, however, physical and right-of-way constraints make them impractical. One

means of improving bicycle safety is to clearly stripe eleven foot travel lanes with centerline markings and fog lines. Varying road widths and the condition of the edge of pavement and shoulder make the zone on the back side of the fog line inconsistent in width and quality, however, future paving operations could improve upon this situation. While a one foot wide paved shoulder area is not an approved bicycle accessway (the minimum recommended bike shoulder width is 4 ft according to the Vermont Pedestrian Facility Planning and Design Manual), the Town may consider this as a means to improve bicycle safety as an alternative to Type C and D Sections.

While painted crosswalks are suggested for the r.k. Miles parking area and at street crossings, as described in the following text, we do not suggest marking crosswalks at all driveways that the sidewalk will cross. While it was considered, this poses a maintenance issue with the Town of Middlebury Public Works and is not consistent with its current practices elsewhere in town.

Of course "no build" is always an option. The Town of Middlebury must prioritize its many capital needs and consider where sidewalk and path improvements provide the greatest benefits to residents and property owners. Pedestrian access along Exchange Street has always been desirable and as land uses in this corridor evolve, it will likely become a higher priority.

#### Segment 1 (Elm Street to Elderly Services)

This segment of the path proved to be the most challenging area due to the narrow ROW (32-feet), the proximity of existing structures, and relatively high traffic volumes. As a result of these challenges we recommend a Type A typical path section which includes a concrete curb and five-foot concrete sidewalk and has the narrowest cross section. A significant amount of consideration was given to the location of the walk from Elm Street to the Elderly Services Drive. Both sides of the road have challenges.

The west side of the ROW and adjacent property is occupied by parallel parking spaces/delivery zone for Greg's Market. There are also utility poles with multiple utilities on them. Locating the walk along this edge of the roadway would require the elimination of the existing parking spaces and likely the relocation of the utility poles. The addition of curbing along this side would also necessitate modifications to the street drainage. An easement from Greg's Market may be difficult to secure given the high volume use of these parking spaces.

In contrast, the eastern side of the roadway is occupied by lawn, and there are no utility poles from Elm Street to r.k. Miles. The walk would need to be constructed in close proximity to the front porch of house #58 Exchange Street, and would need to cross r.k. Miles wide curb cut and parking. The existing roadside ditch would also need to be piped to provide room for a sidewalk.



Figure A: Space Limitations at Greg's Market, Facing North.



Figure B: Space Limitations at Greg's Market, Facing South.

Figures A and B graphically illustrate the relationship between the existing traveled way and the limit of the Town's ROW. As noted, the northbound travel lane is wide in this area, and given the truck traffic and proximity to the intersection, it is not recommended that it be narrowed as a means of minimizing the need for easements.

Based on this analysis, our recommendation is to construct a concrete curb and sidewalk on the eastern side of the roadway, subject to the ability to obtain easements. Not only is this orientation more feasible from a constructability perspective, it also avoids dropping pedestrians into the center of the confusing Elm Street/Exchange Street/Seymour Street intersection and Gregs Market parking. This intersection is noted in police records and in the ACRPC report (Appendix B) as a "High Crash Location." The walk would extend from the eastern Elm Street sidewalk to the front of r.k. Miles then cross Exchange Street to the west. We recommend crossing at r.k. Miles in order to match the recommended alignment in Segment 2, as well as to provide a crosswalk that will offer some pedestrian protection for customers and staff of the Lumber Yard. A painted walk is recommended across the r.k. Miles curb cut to provide clearer definition to the edge of roadway and the travel path for pedestrians.

Because this area is spatially constrained and offers no areas for bicyclists to travel in a separate lane, shared lane markings are recommended, starting 40 ft from the intersection with Elm Street and continuing North. In addition, a "Bicycles May Use Full Lane" sign should be installed shortly after the intersection, followed by "Share the Road" signs which could continue the entire length of Exchange Street for northbound and southbound traffic.

Easements would be required for the proposed sidewalk along its entire length in Segment 1.

#### Segment 2 (Elderly Services to MacIntyre Services)

Segment 2's 40-foot R.O.W provides slightly more space than Segment 1, however, based on the limited space available we continue to recommend a Type A walk with curb until the northern limit of Segment 2. In addition to the benefit provided to r.k. Miles of a crossing near their entrance, this alignment also avoids the need to modify the road side storm water collection system between Elderly Services and Middlebury Self Storage as well as conflicts with utility poles along the eastern side of the road.

Construction easements and possibly sidewalk easements would be necessary for this section of path. The existing chain link fence along the r.k. Miles storage yard would likely need to be relocated.

To further protect bus passengers using the CCTA LINK Express bus service, which stops at the northern r.k. Miles driveway, the Town/Addison County Transit Resources may consider constructing a bus shelter in this area. The enclosed alignment drawings show a future bus shelter with bicycle racks on the eastern side of the road, abutting the Park and Ride area at the Middlebury Self Storage. A shelter at this location would require modifications to existing stormwater swale and culverts as well as easements from Middlebury Self Storage and/or Elderly Services.

#### Segment 3 (MacIntyre Services North to Route 7)

The widening of the ROW at the beginning of Segment 3 provides greater flexibility with the pathway design, however, because the roadway is not centered within the ROW, some easements for construction will still be necessary.

Segment 3 is proposed as a 5-foot bituminous concrete path located approximately 5-feet off the edge of the existing pavement (Type B). Field measurements indicate that the path may be constructed in this zone with limited utility impacts or significant grading issues. Subject to final design, adjustment to the greenbelt width and compromises in clear zone requirements will limit the need for utility relocations. To avoid the need for extensive drainage



r.k. Miles (Segment 2) - Fenceline looking north from r.k.Miles driveway.

improvements, the typical cross section in Segment 3 would retain the existing roadway cross-slope to allow sheet flow over the path and maintain the existing drainage patterns.

Beginning at the terminus of Segment 2, Champlain Valley Plumbing and Heating, the path would continue down the west side of Exchange Street to Catamount Park. This alignment avoids conflicts with deep ditch lines along the east side of the road. At Catamount Park, the design includes two ACTR bus pull offs to provide safe drop zones for north and south bound buses, and a cross walk. The Town/ACTR may want to also construct bus shelters at these locations, as shown on the alignment drawings.

North of Catamount Park to Mainelli Drive, there are few physical obstacles and it would be reasonable to construct the path on either side of the roadway. The concept drawings indicate two alternative routes in this area running along the east and west side of Exchange Street. The preferred alternative (Alternative One) brings the sidewalk up the eastern side of Exchange Street to avoid crossing the heavy truck traffic coming and going from the Cabot plant and the northern portion of the Industrial Park. Both Alternates are viable and comparable in costs, however, and the ultimate decision may lie in the need for easements. A crosswalk at Mainelli Drive is recommended for both alternatives to provide access to the businesses to the north.

From Mainelli Drive to the professional offices at 1440 Exchange Street and the Bridge School, the preferred route is up the eastern side of Exchange Street. This alignment avoids existing utility poles, ledge outcrops and relatively steep embankments. A crosswalk to the entrance to the Bridge School on the West side of Exchange Street may be added to the final project, although Further design consideration should be given to the inclusion of a crosswalk at the Bridge School and its safety given its relatively proximity to the Route 7 intersection. The current conceptual plans stop short of the Route 7 intersection. The area from the proposed path terminus to Route 7 would be challenging to construct due to the steep embankments on both sides of the road. Feedback during project meetings also suggests that it would best be constructed this possible last section of path as part of anticipated Route 7 intersection improvements.

Construction and grading easements may be necessary from a number of property owners along Segment 3. Assuming the preferred Alternative One, sidewalk easements would be necessary from Catamount Park, Casella Waste Management and Champlain Valley Equipment.



Segment 3 - Typical section, Looking North towards Catamount Park

#### SECTION 6.0 - PRELIMINARY PROJECT COST ESTIMATE

Based upon the conceptual path cross sections, proposed alignments, field observations, and our experience with similar construction projects, Otter Creek Engineering has prepared the following preliminary opinions of project costs. As the design for the walk is developed, it will be important to confirm assumptions made in this analysis and update the budget as necessary.

In preparing these estimates, we have utilized the conceptual plans and field observations to estimate fill quantities. Actual quantities are subject to topographic surveys and proposed grading plans.

Our Construction Pricing is based upon a combination of published cost from the Vermont Agency of Transportation and our experience with recent similar projects. Material cost, economic factors and bidding climate will have an impact on the ultimate project costs.

Our estimate includes design and survey consulting fees for the project based on guidelines from the Vermont Agency of Transportation for path projects. We have also included a budgetary number for other professional services including attorney's fees for the preparation of easements. At this time we have not included any costs associated with land or easement purchase. This assumption should be considered as the project moves forward based upon preliminary discussions with land owners.

Finally, our estimate includes a 15% contingency added to the overall project cost to account for unknown conditions and cost inflation.

The following tables outline our project cost estimates. The assumption has been made that the work would proceed as one large project, however, it could be easily broken into phased segments. Our recommended budget for the overall project is approximately \$680,000.

As discussed in other sections of this report, the middle portion of Segment 3 could be located on either side of Exchange Street. Our cost analysis provides a comparison of the two alternatives.

The following tables also provide a comparison of concrete versus bituminous asphalt concrete for the Segment 3 portion of the path. The savings anticipated with the use of bituminous concrete, as recommended, is estimated at approximately \$67,000.

#### TOWN OF MIDDLEBURY, VERMONT EXCHANGE STREET BICYCLE/PEDSTRIAN PLANNING AND FEASIBILITY STUDY PROJECT COST ESTIMATE

Item No.	Description	<u>Unit</u>	Est. Qty.	<u>(</u>	Cost/Unit	<u>I</u>	tem Total	A	<u>Total</u> lternative 1		<u>st</u> Iternative 2
Construc	tion Costs									-	
1	Type A Sidewalk (Concrete Curb with 5 foot w	ide Conc	rete Wall	()							
	Segment 1	L.F.	480	\$	65.00	\$	31,200.00	\$	31,200.00	\$	31,200.00
	Segment 2	LF.	325	\$	65.00	\$	21,125.00	\$	21,125.00	\$	21,125.00
								\$	52,325.00	\$	52,325.00
2	T D C: 1 H (5 ( - / : 1 D: / : - C - /	. 337 1	0.0								
2	Type B Sidewalk (5 foot wide Bituminous Cond			•	26.00	•	217 602 00	•	217.602.00		
	Segment 3 (Alternative 1)	LF.	6,047	\$	36.00		217,692.00	\$	217,692.00	c	211 022 00
	Segment 3 (Alternative 2)	L.F.	5,887	\$	36.00	Ф	211,932.00	\$	217,692.00	\$ \$	211,932.00 211,932.00
	Note: Cast-in-place concrete increases the unit cost for Type B Sidewalk by \$11.00 per l.f.							Ψ	211,052.00	Ψ	211,992.00
2	Corres Estimate of Eth										
3	Gross Estimate of Fill	CV	24	•	10.00	¢.	640 00	c	649.00	c	649.00
	Segment 1	C.Y.	36	\$	18.00	\$	648.00	\$	648.00	\$	648.00
	Segment 2	C.Y.	36	\$	18.00	\$	648.00	\$	648.00	\$	648.00
	Segment 3 (Alternative 1)	C.Y. C.Y.	672	\$ \$	18.00		12,094.00 17,661.00	\$	12,094.00	•	17 661 00
	Segment 3 (Alternative 2)	C.1.	981	Ф	18.00	Φ	17,001.00	\$	13,390.00	\$ <b>\$</b>	17,661.00 18,957.00
	Note: Segment 1 and 2: Average one half to or	ne foot of	fill back si	de e	of concrete o	urb	and concre	1800	The section of the se	Ψ	10,937.00
	Segment 3: Average one foot average fill										
	City E										
4	Silt Fence		400		2.00	•	4 440 00		4 440 00	•	4.440.00
	Segment 1	L.F.	480	\$	3.00	\$	1,440.00	\$	1,440.00	\$	1,440.00
	Segment 2	L.F.	325	\$	3.00	\$	975.00	\$	975.00	\$	975.00
	Segment 3 (Alternative 1)	L.F.	6,047	\$	3.00		18,141.00	\$	18,141.00	•	45 444 00
	Segment 3 (Alternative 2)	L.F.	5,887	\$	3.00	\$	17,661.00	Φ.	20.554.00	\$	17,661.00
								\$	20,556.00	\$	20,076.00
5	Drainage Improvements										
	Storm Drain (Segment 1)	LF.	70	\$	75.00	\$	5,250.00	\$	5,250.00	\$	5,250.00
	Catch Basin (Segment 1)	Ea.	1	\$	5,000.00	\$	5,000.00	\$	5,000.00	\$	5,000.00
	Remove Headwall (Segment 1)	Ea.	1	\$	1,000.00	\$	1,000.00	\$	1,000.00	\$	1,000.00
	,				2			\$	11,250.00	\$	11,250.00
2											
6	Relocate Existing Hydrants	_	120				10 500 00	181			
	Relocate Hydrants (Segments 1 & 3)	Ea.	3	<b>&gt;</b>	3,500.00	\$	10,500.00	\$	10,500.00	\$	10,500.00
								\$	10,500.00	\$	10,500.00
7	Relocate Fence										
	Relocate Fence (Segment 2)	L.F.	125	\$	40.00	\$	5,000.00	\$	5,000.00	\$	5,000.00
								\$	5,000.00	\$	5,000.00
-											
8	Bus Pull Off Area	CM	20	•	120.00	•	2 770 00	•	2 770 00	•	2 770 00
	Pavement, Base, Subbase Gravels	S.Y.	29	\$	130.00	\$	3,770.00	\$	3,770.00	\$	3,770.00
								\$	3,770.00	\$	3,770.00
9	Bus Shelter and Bike Racks										
	Segment 2	Ea.	1	\$	17,000.00	\$	17,000.00	\$	17,000.00	\$	17,000.00
	Segment 3	Ea.	2	\$	17,000.00	\$	34,000.00	\$	34,000.00	\$	34,000.00
								\$	51,000.00	\$	51,000.00
10	Heility Dala Dalacetions										
10	Utility Pole Relocations	TC	1041	•	£ 000 00	•	£ 000 00	•	5 000 00		
	Guy Pole Relocation (Segment 3)	L.S.	1	\$	5,000.00	\$	5,000.00	\$ \$	5,000.00	¢	
								•	5,000.00	\$	
11	Painted Crosswalk										
	Segment 1	L.F.	160	\$	10.00	\$	1,600.00	\$	1,600.00	\$	1,600.00
	Segment 3	L.F.	130	\$	10.00	\$	1,300.00	\$	1,300.00	\$	1,300.00
								\$	2,900.00	\$	2,900.00

#### EXCHANGE STREET BICYCLE/PEDSTRIAN PLANNING AND FEASIBILITY STUDY PROJECT COST ESTIMATE

						A	lternative 1	<u>A</u>	lternative 2
12	Shared Use Markings & Signs								
	Shared Use Markings (Sharrows)	Ea.	10	\$ 100.00	\$ 1,000.00	\$	1,000.00	\$	1,000.00
	"Bicycles May Use Full Lane" Sign (2 @ 30" x 30"	SqFt	12.5	\$ 20.00	\$ 250.00	\$	250.00	\$	250.00
	"Share the Road" Plaque (6 @ 18" x 24")	SqFt	18	\$ 20.00	\$ 360.00	\$	360.00	\$	360.00
	Square Sign Post (8 ft high)	L.F.	64	\$ 10.00	\$ 640.00	\$	640.00	\$	640.00
						\$	2,250.00	\$	2,250.00
13	Traffic Control								
	Segment 1	L.S.	1	\$ 3,000.00	\$ 3,000.00	\$	3,000.00	\$	3,000.00
	Segment 2	L.S.	1	\$ 3,000.00	\$ 3,000.00	\$	3,000.00	\$	3,000.00
	Segment 3	L.S.	1	\$ 18,000.00	\$ 18,000.00	\$	18,000.00	\$	18,000.00
						\$	24,000.00	\$	24,000.00

#### TOTAL CONSTRUCTION COSTS

\$ 419,633.00 \$ 413,960.00

Note: Substitution of bituminous concrete Type B sidewalks with cast-in-place concrete increases the unit cost for Type B Sidewalk by \$11.00 per L.F., and increases construction cost by \$66,517 for Alternative 1 and \$64,757 for Alternative 2.

#### Professional Services

1	Design Engineering and Permitting Assistance (20% of construction cost)	\$ 84,000.00	\$ 83,000.00
2	Resident Engineering (20% of construction cost)	\$ 84,000.00	\$ 83,000.00
Subto	tal	 587,633.00	\$ 579,960.00
Conti	ngency 15%	\$ 88,144.95	\$ 86,994.00
Attori	ney Fees	\$ 5,000.00	\$ 5,000.00
TOTAI	PROJECT COSTS	\$ 680,777.95	\$ 671,954.00

Note: This estimate is preliminary and based on quantity take-offs and recently constructed projects. Design and Resident Engineering estimates are based on percentages recommended by VTrans for bicycle/pedestrian path projects.

Based upon our experience with the local and state permitting process, it is anticipated that the proposed path, in the alignments outlined in this study, will require the following permits and/or further regulator review:

- 1. Vermont Agency of Natural Resources (VT ANR) General Permit (Erosion Prevention and Sediment Control) These permits are required for all construction projects with construction activates that will have more than one acre of land disturbance during construction. The permitting program is "risk" based, in which a questionnaire is used to assess the potential impacts to State Water Quality. There are two levels of the general permit program and these are low and medium risks. We have performed a preliminary assessment of the project corridor and anticipate that the project will qualify as a "low" risk site, however, if through the course of final design, it is determined that a medium risk permit is necessary, we do not anticipate that permitting requirements would be onerous. The permit will be publicly warned for 10 days and carries a fee based on the risk category.
- 2. Wetlands Impacts VT ANR and the US Army Corp of Engineers regulate wetlands. It is anticipated that wetland impacts may be limited based on the currently proposed project scope and limited to minor fill for side slopes. A number of areas will be within the wetland buffer defined by the Vermont rules, however, given site constraints and the limited alternatives available in these areas, we do not believe permitting will be a significant hurdle provided appropriate erosion controls are implemented.
- 3. **Storm Water Discharge Permit** The proposed project consist of less than one acre of new impervious area, which is the trigger for storm water permitting. Based on experience with past similar projects, we do not anticipate that a permit from VANR will be required.
- 4. Vermont Act 250 We have reviewed the project with the Act 250 District Coordinator to determine the Commission's jurisdiction over the project. Based upon the extent of the proposed work, the project itself does not trigger Act 250 review. Some of the abutting properties are subject to Act 250 permits, however the District Coordinator has determined that even if the project encroaches on these jurisdictional properties the walk would not constitute a material change and therefore not require review under the law.
- 5. **Vermont Agency of Transportation** In the event the Town elects to extend the path to the Route 7 intersection, a permit will be necessary for work within the State of Vermont Highway ROW.

Maintenance requirements for the proposed pathway are consistent with other pedestrian walks throughout Town. While this new walk will increase the Town's inventory for maintenance and snow plowing, it will not place an undue burden on the Public Works Department.

The project as proposed will include concrete curb and sidewalks in Segments 1 and 2 and bituminous concrete walks in Segment 3. While concrete walks typically have a longer life cycle than bituminous concrete, we are of the opinion that bituminous concrete is an appropriate material for Segment 3 given the character of this portion of the roadway and the upfront capital cost savings. With a properly designed and constructed sub-base this material will hold up very well over time.

Consideration was given in the evaluation of the typical roadway section for snow removal. The Public Works Department prefers sidewalks buffered from the roadway by a green belt to provide space for the road plows and sidewalk plow to deposit snow. Unfortunately, given space constraints, this is not a practical alternative in Segments 1 and 2. A green belt is however provided along the entire length of Segment 3.

It is anticipated that abutting property owner will maintain the green buffer between road and walk in Segment 3, however, periodic mowing may be necessary where the frontage is not developed. Presumably this can be incorporated into the Town's roadside mowing program.

#### SECTION 9.0 - PROJECT TIME LINE

A critical component of the project moving forward is securing necessary easements from abutting land owners and securing necessary funding. Should the Town seek funding through the Vermont Agency of Transportation, it is important that the appropriate protocols be followed for contact with property owners.

It is anticipated that design, right of way approval and permitting for the project will require approximately 12 to 18 months to complete. Actual construction could be completed in one construction season.

Pedestrian and bicycle access along Exchange Street has been discussed by the Town of Middlebury for a number of years as land uses in the Industrial Park have diversified and biking and walking have become more and more popular. Developing new pathways in developed areas can be challenging with right of way limitations and physical obstacles such utilities and grading issues.

This feasibility study considers options available to the Town of Middlebury for the construction of a pathway along Exchanged Street. Our recommendations provide a cost effective approach to meeting the pedestrian needs along this corridor while minimizing the need for utility relocations and limiting the need for easements from abutting land owners. Subject to the ability of the Town to secure the necessary easements, we see this as a very viable project for the community.

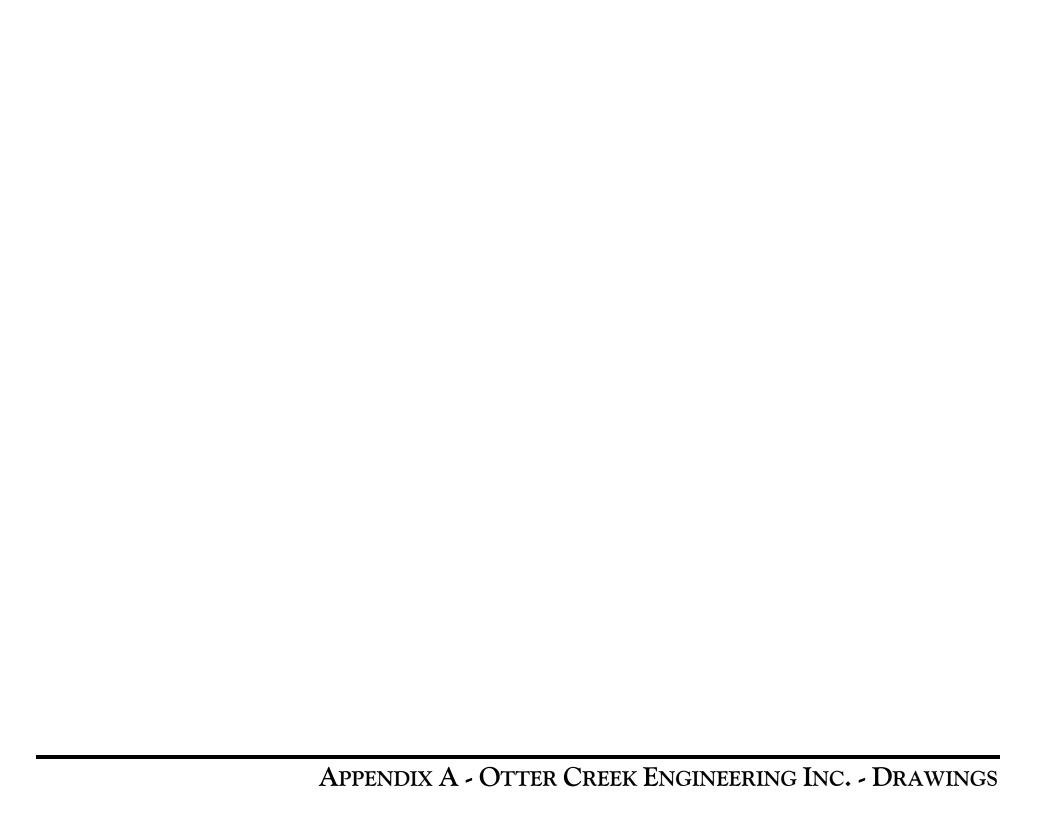
In short, Otter Creek Engineering's recommendations include construction of a concrete curb/sidewalk from Elm Street to MacIntyre Services and then transitioning to a bituminous concrete walk with a grassed buffer to the Bridge School at the northern limit of the project area. The improvements would incorporate crosswalks at key locations and bus pull-offs for the local public transportation.

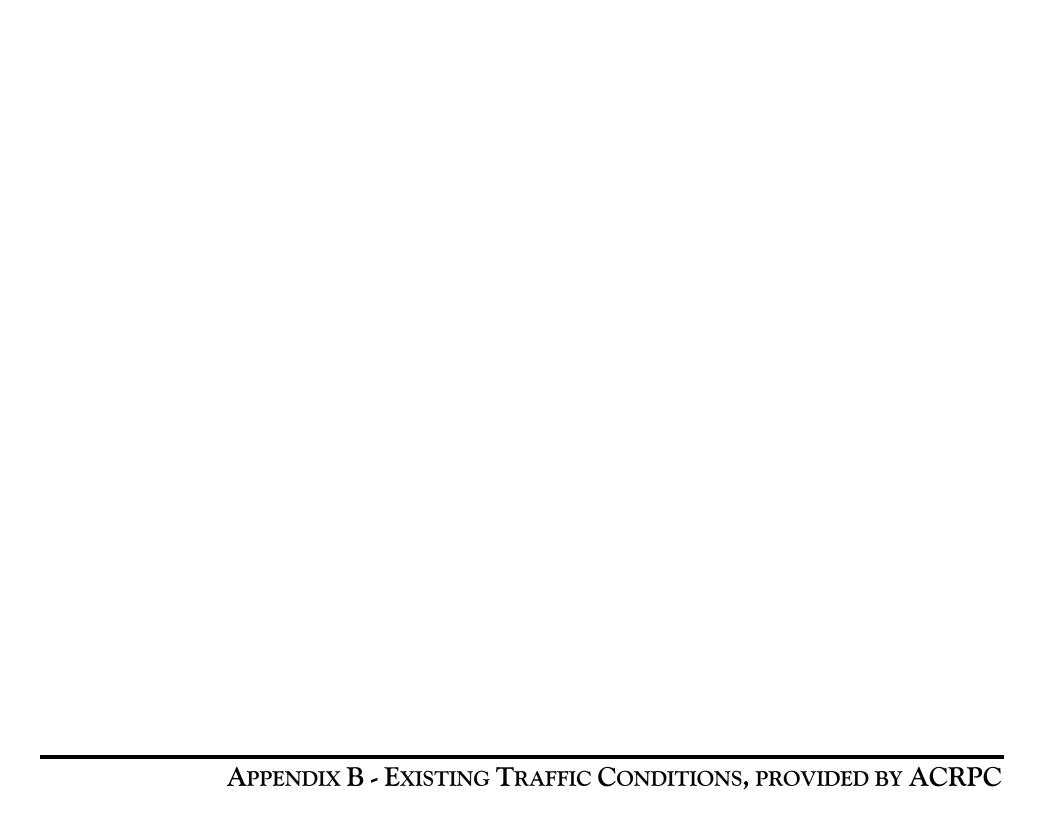
This project could easily be phased, south to north as funding is available and easements are obtained.



Unnamed Pedestrian Traveling along unmarked shoulder of Exchange Street.

- Middlebury Public Works Specifications. Essex Junction, Vermont: Lamoureux, Stone & O'Leary Consulting Engineers, 1994. Print.
- U.S. Department of Transportation. Federal Highway Administration. *Manual on Uniform Traffic Control Devices for Streets and Highways*. 2009.
- Vermont Pedestrian Facility Planning and Design Manual. Vermont Agency of Transportation, 2002. Print.





#### Addison County Regional Planning Commission Exchange Street Pedestrian Planning Study

#### **Existing Traffic Conditions**

The paved width of Exchange St. currently averages between 24 and 26 feet. Paved or unpaved shoulders are minimal or non-existent throughout most of the study corridor so pedestrians may have difficulty walking along the side of the road because of uneven surfaces. Bicyclists and pedestrians are therefore both forced to occupy the edge of the paved travelway.

According to July 2012 ACRPC automatic traffic recorder (ATR) count data, the Annual Average Daily Traffic (AADT) on Exchange St. increases in the southbound direction from a non-seasonally adjusted 2,700 vehicles per day at the northern end (just west of the Bridge School) to 5,200 vehicles per day to at the southern end (near the r.k. Miles lumber yard). Truck traffic is significant within the corridor averaging from 340 to 460 trucks per day (See Attached Figure "ATR Installations & Traffic Data for Exchange Street..." for more detail).

The Vermont State Standards (VSS) recommend 11 foot lanes and 3 foot shoulders for two-lane rural collectors with an AADT over 2,000, for all design speeds. This equates to an overall road width of 28 feet. Nevertheless, Exchange Street pavement width was measured by ACRPC staff at four locations along the corridor (the three ATR traffic count setup locations listed in **Table 1**, and one location just south of Catamount Park), each location measured a roadway width varying between 24'-25', with shoulders varying between 0" - 2'5" in width.

Table 1. Width of Roadway, Lanes & Shoulders along Exchange St.

Location	AADT*	Total Width	Travel Lane	Shoulder
North of r.k. Miles at CCTA Stop (NB / SB)	5,200	24' - 25'	10' 6" <b>/</b> 10' 5"	2' 5" <b>/</b> 0' 7"
1/4 Mile North of Elm St. at MacIntyre (NB / SB)	4,400	24' - 25'	10' 3"/ 10' 3"	1' 9" <b>/</b> 1' 2"
Just South of Catamount Park (NB / SB)	•	24' - 25'	11' 10" <i>[</i> 12' 5"	0' 0" <b>/</b> 0' 0"
Just West of Bridge School (EB / WB)	2,700	24' - 25'	10' 4" <b>/</b> 9' 0"	1' 8" <b>/</b> 1' 9"

<sup>\*</sup>This Annual Average Daily Traffic (AADT) is Not Seasonally-Adjusted number of vehicles passing on a typical day

**Tables 2-4** indicate the posted speed along the corridor varying from 25 mph at the southern terminus of Exchange St. to MacIntyre Fuels/Auto Paint Plus on 260 Exchange Street, to the posted 40 mph speed limit sign just west of the Bridge School. Where the 85<sup>th</sup> percentile speed captured west of the Bridge School exceeded the speed limit by 1-2 mph (See **Table 4**), the 85<sup>th</sup> percentile speed captured south of the 25 mph speed transition zone at r.k. Miles exceeded the speed limit by 7-8 mph (see **Table 2**).

Table 2. Exchange St. North of r.k. Miles at CCTA

Posted Speed : 25 mph	NB Direction	SB Direction
85th Percentile Speed	33 mph	32 mph
10 mph Pace Speed	25-34 mph	24-33 mph
Average Speed	27 mph	26 mph

Table 3. Exchange St. 1/4 Mile North of Elm St.

Posted Speed : 25	NB	WB
mph SB / 40 mph NB	Direction	Direction
85th Percentile Speed	37 mph	37 mph
10 mph Pace Speed	28-37 mph	29-38 mph
Average Speed	31 mph	28 mph

Table 4. Exchange St. West of Bridge School

Posted Speed : 40 mph	EB Direction	WB Direction
85th Percentile Speed	41 mph	42 mph
10 mph Pace Speed	32-41 mph	34-43 mph
Average Speed	32 mph	34 mph

The Attached Figure "ATR Installations & Traffic Data for Exchange Street Middlebury, Vermont ~ 2012" maps the locations where traffic volumes and speed data were captured within the Exchange Street corridor.

Additionally an intersection count was conducted for three two-hour periods (7-9am, 11-1pm, and 4-6pm) during 14-16 August 2012 at the Exchange St. &r.k. Miles lumber yard intersection. **Table 5** indicates the level of bicycle and pedestrian activity in proportion to other modes of travel.

Table 5. Exchange St. & R.K. Miles Lumber Yard Intersection Count, Middlebury, VT ~ 2012

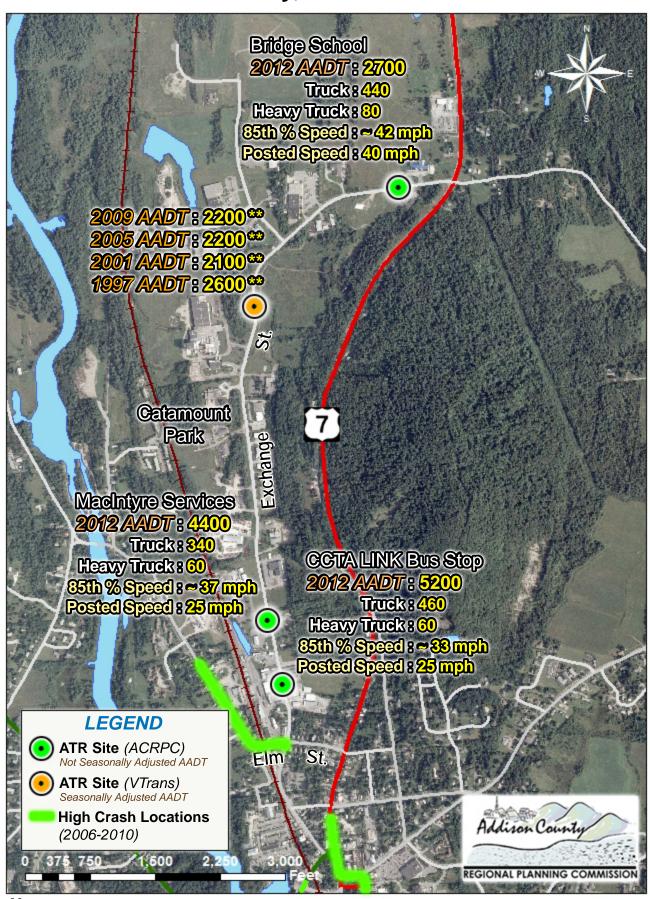
Time Period	Pedestrians	Bicycles	Auto	Trucks	Shuttle	Total
Morning (7-9am): Thu 16 Aug	9	6	709	70	21	815
Early Afternoon (11am-1pm) : Tue 14 Aug	30	15	1074	72	17	1208
Late Afternoon (4-6pm): Tue 14 Aug	36	4	796	29	11	876
Percent Modal Share	2.6%	0.9%	89.0%	5.9%	1.7%	

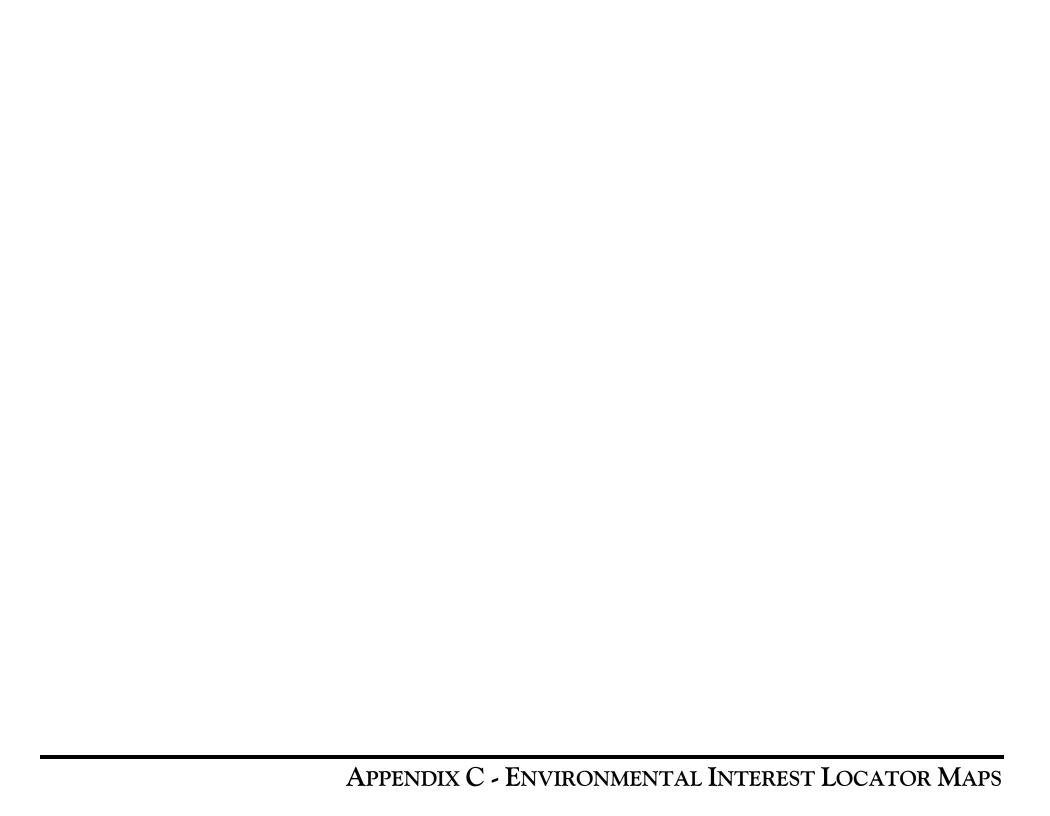
#### **Crash Data**

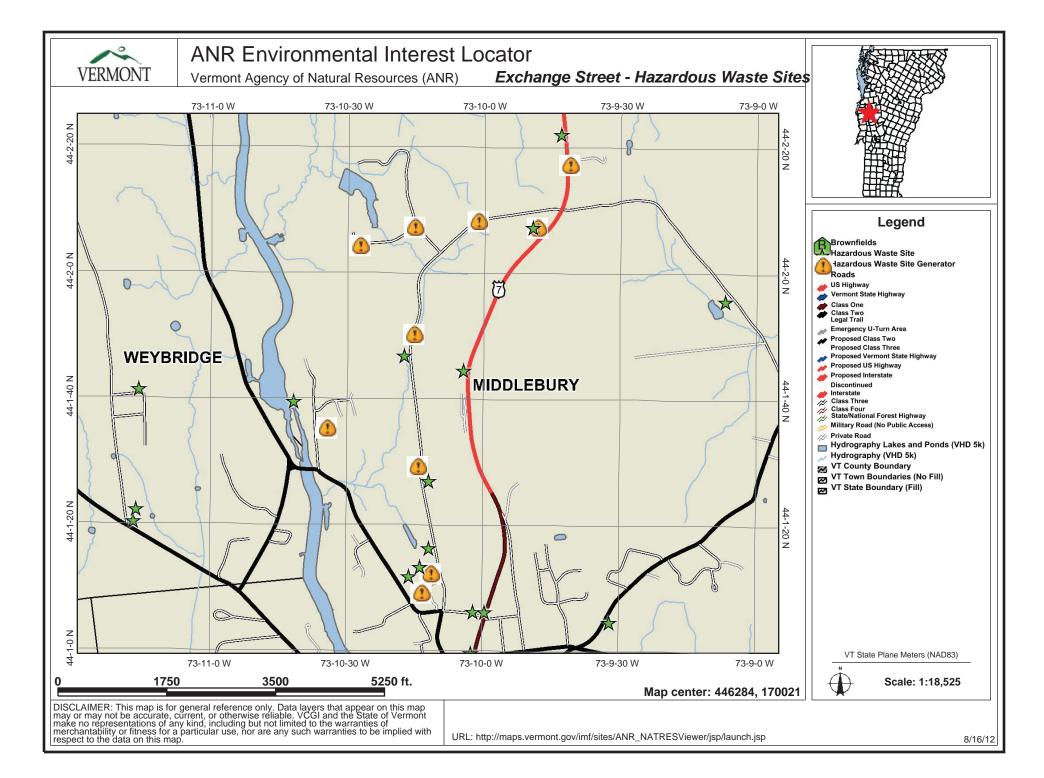
The Vermont Agency of Transportation (VTrans) "Town Highway Crash Listing: Non-Federal Aid Highways-Local" report a "Vehicle on Pedestrian" crash on Exchange Street occurring on 20 Jan 2011 at 12:06 pm, which resulted in a 'Possible Injury'. There were no further details on location or circumstances regarding this crash. The Middlebury Police Department records report a "Vehicle on Bicycle" crash on Exchange Street at the Manelli Road intersection occurring on 26 Jul 2011 at 4:26 pm, which resulted in the bicyclist being "transported by MVAA to Porter Hospital, with complaints of head, shoulder, leg injuries". The report concluded that the crash resulted from inattention of the (auto) driver.

The Middlebury Police Department records tally a total of 22 crashes (of all types) occurring on Exchange St. between Jan 2010 through Aug 2012 (with no detail on injuries or fatalities). The VTrans crash records lists a total of 46 crashes (of all types) occurring on Exchange St. between Jan 2012 through Dec 2011, with only two injuries and no fatalities.

### ATR Installations & Traffic Data for Exchange Street Middlebury, Vermont ~ 2012





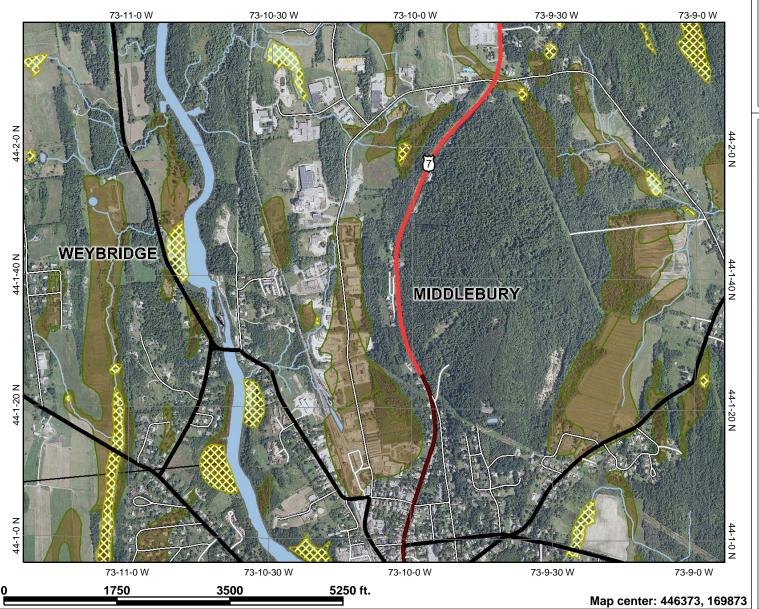


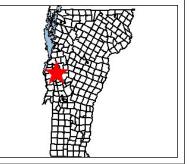


#### ANR Environmental Interest Locator

Vermont Agency of Natural Resources (ANR)

#### **Exchange Street Wetland Areas**







Legend

Proposed Class Two **Proposed Class Three** 

Proposed Vermont State Highway Proposed US Highway

Proposed Interstate Discontinued

Interstate
Class Three Class Four State/National Forest Highway

Military Road (No Public Access)

Wetland Advisory Layer: Class 3 Wetlands

#### VSWI

Class 1 Wetland

Hydrography Lakes and Ponds (VHD 5k)

Hydrography (VHD 5k) VT County Boundary

**Hydric Soils** 

Hydric Soils VT Town Boundaries (No Fill) NAIP Color Orthophotos 2009

VT State Boundary (Fill)

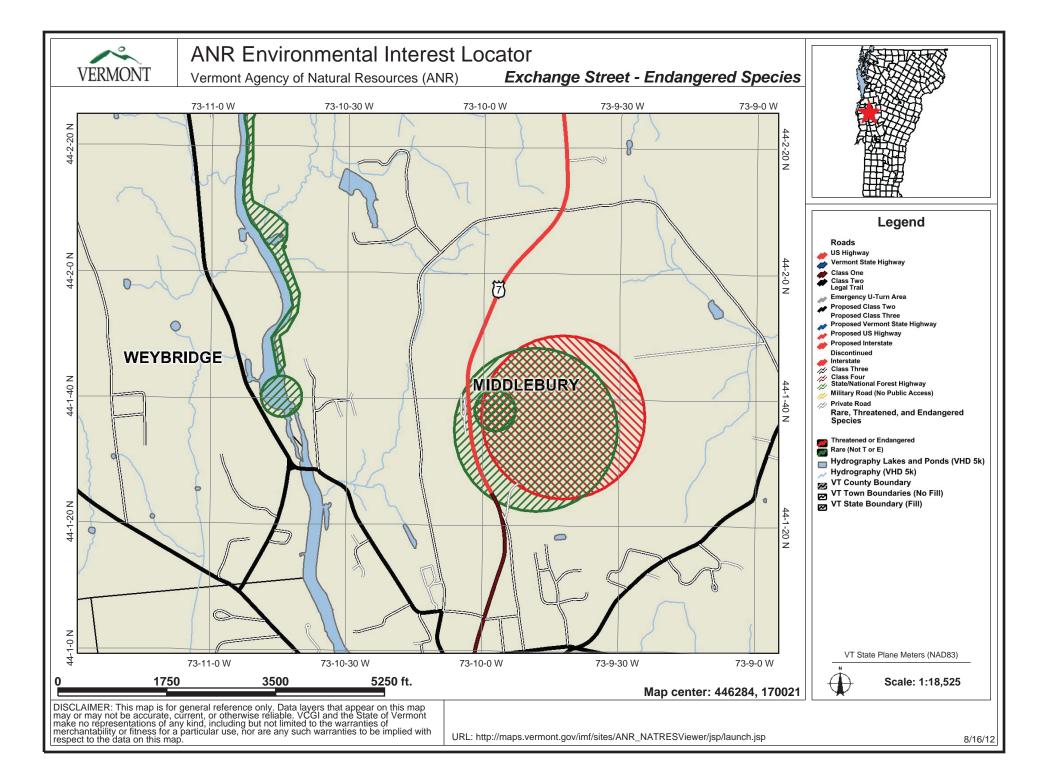
VT State Plane Meters (NAD83)

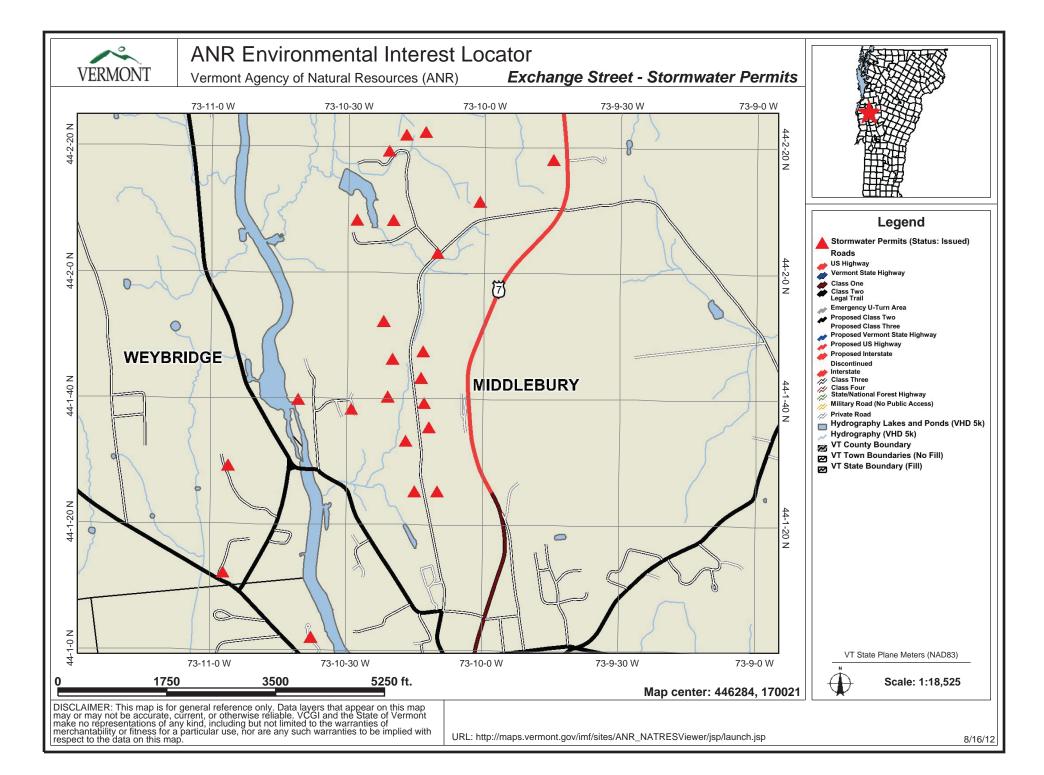


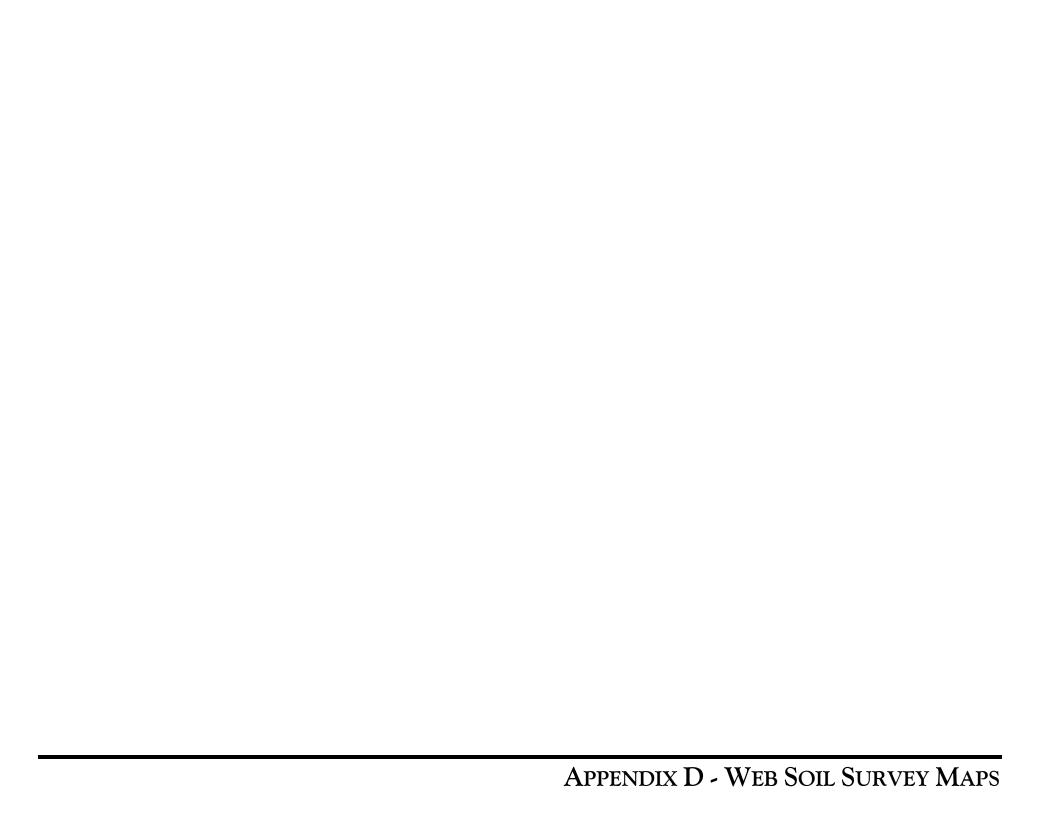
Scale: 1:17,844

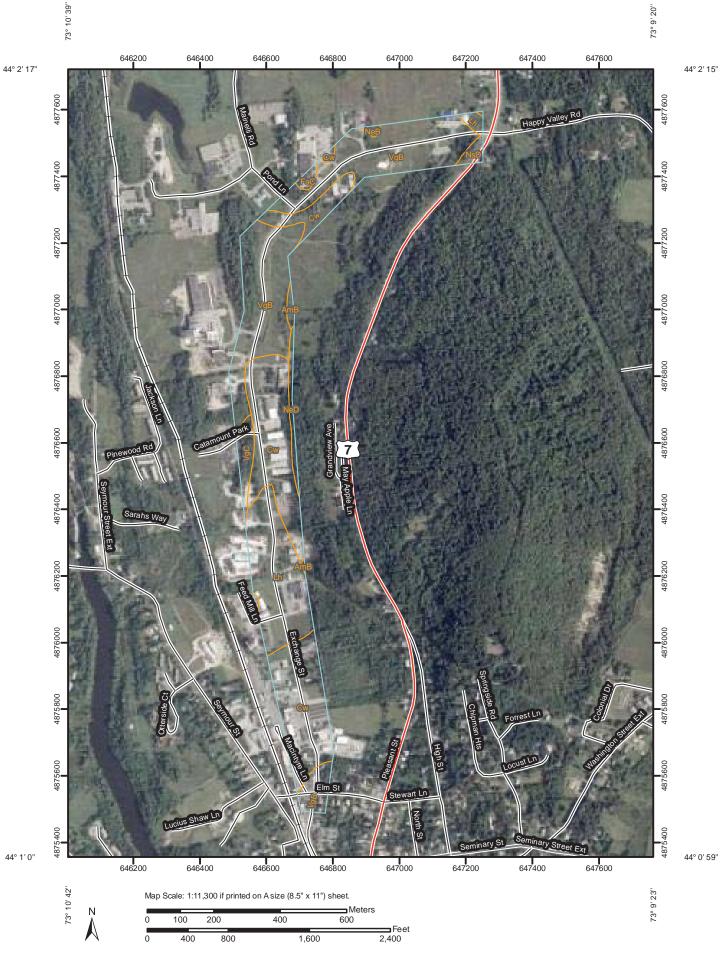
DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. VCGI and the State of Vermont make no representations of any kind, including but not limited to the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

URL: http://maps.vermont.gov/imf/sites/ANR\_NATRESViewer/jsp/launch.jsp









# MAP LEGEND

## Area of Interest (AOI)

Very Stony Spot

Wet Spot Other

Area of Interest (AOI)

Soil Map Units Soils

## Special Point Features

Borrow Pit Blowout X

Short Steep Slope

Other

\ \

Political Features

Special Line Features

Gully



Closed Depression

**Gravel Pit** 

**Gravelly Spot** 

Landfill

Lava Flow

Marsh or swamp

Miscellaneous Water Mine or Quarry

Perennial Water

Rock Outcrop

Saline Spot Sandy Spot Severely Eroded Spot

Slide or Slip

Sinkhole

Sodic Spot

Stony Spot

Spoil Area

Cities Nater Features

Streams and Canals

Rails **Transportation** ŧ

Interstate Highways US Routes

Major Roads

Local Roads

## MAP INFORMATION

Map Scale: 1:11,300 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:15,840.

Please rely on the bar scale on each map sheet for accurate map measurements.

Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov Coordinate System: UTM Zone 18N NAD83 Source of Map: Natural Resources Conservation Service

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Version 14, Jan 19, 2010 Addison County, Vermont Soil Survey Area: / Survey Area Data: Date(s) aerial images were photographed: 8/19/2003; 8/20/2003

imagery displayed on these maps. As a result, some minor shifting The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background of map unit boundaries may be evident.

#### **Map Unit Legend**

Addison County, Vermont (VT001)						
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI			
AmB	Amenia stony loam, 0 to 8 percent slopes	0.6	0.6%			
Cw	Covington and Panton silty clays	33.2	35.6%			
FaC	Farmington extremely rocky silt loam, 5 to 20 percent slopes	0.7	0.7%			
Lh	Livingston clay	16.3	17.4%			
NeB	Nellis stony loam, 3 to 8 percent slopes	0.3	0.3%			
NeD	Nellis stony loam, 15 to 25 percent slopes	1.5	1.6%			
NsD	Nellis extremely stony loam, 15 to 50 percent slopes	1.0	1.0%			
VgB	Vergennes clay, 2 to 6 percent slopes	37.5	40.2%			
VgC	Vergennes clay, 6 to 12 percent slopes	2.4	2.6%			
Totals for Area of Intere	st	93.4	100.0%			

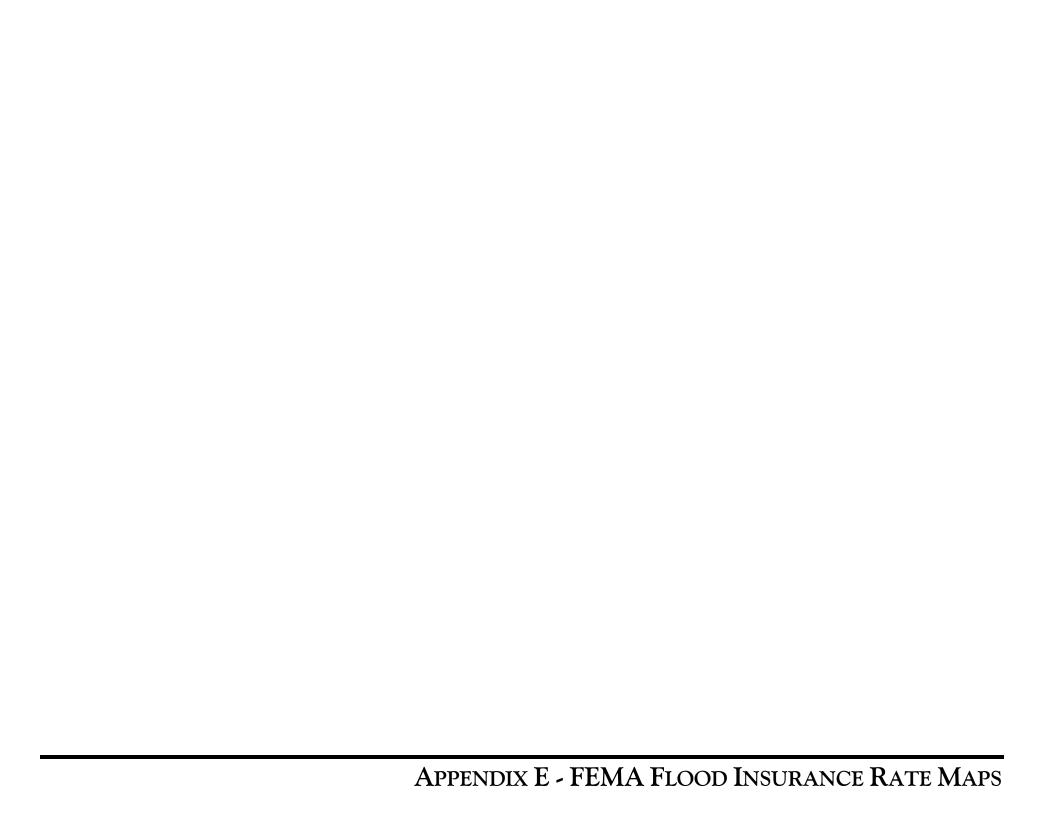
#### Report—Prime and other Important Farmlands (VT)

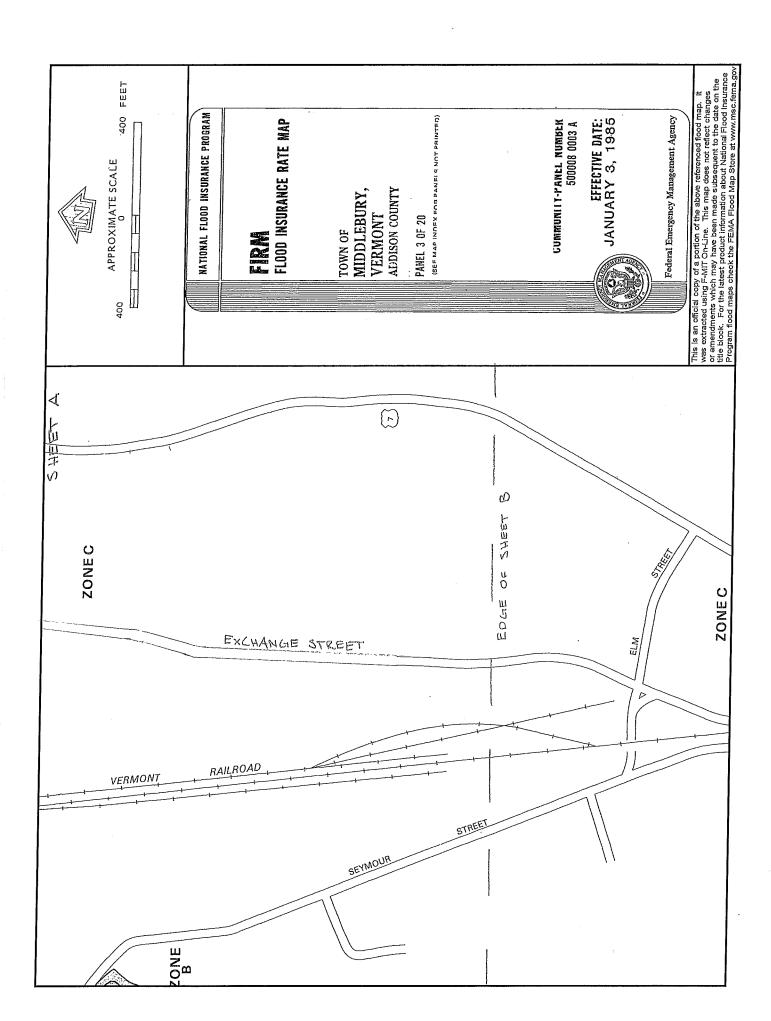
This information is intended to be used in making Important Farmlands and Vermont Act 250 Primary Agricultural Soils Evaluations. These ratings are based on the USDA-NRCS report "Farmland Classification Systems for Vermont Soils", revised June 2006.

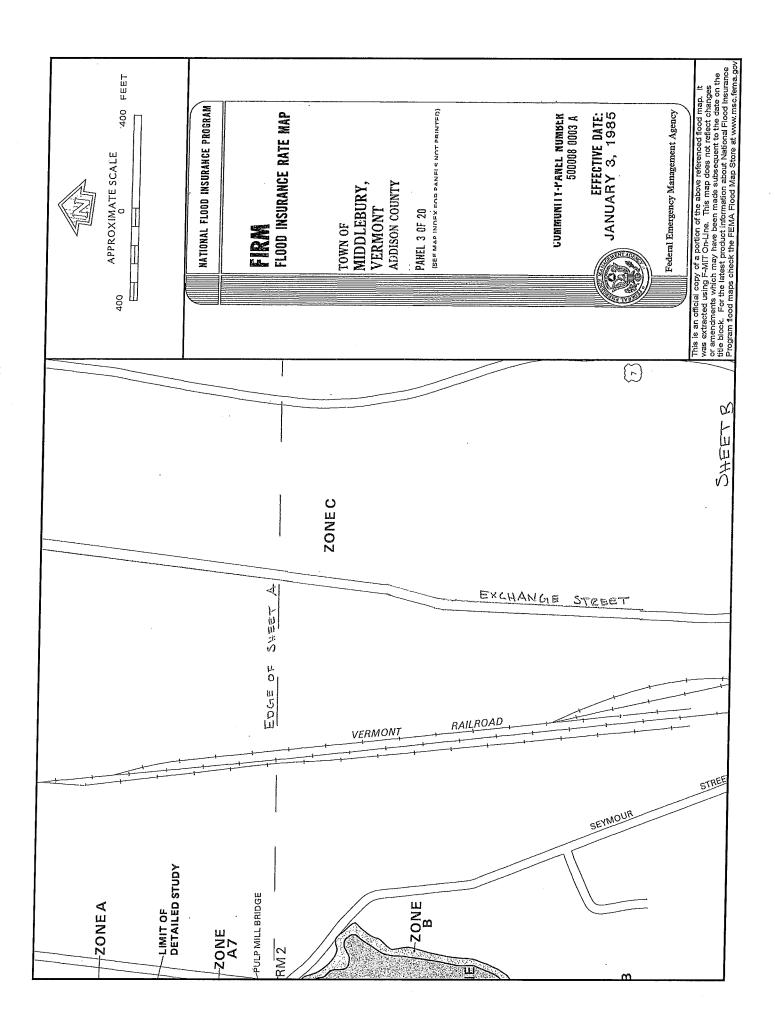
Prime and other Important Farmlands (VT)– Addison County, Vermont							
Map Symbol	Map Unit Name	Vermont Important Farmland Rating	Vermont Agricult ural Value Group				
AmB	Amenia stony loam, 0 to 8 percent slopes	Prime	3				
Cw	Covington and Panton silty clays	Statewide (b)	6d				
FaC	Farmington extremely rocky silt loam, 5 to 20 percent slopes	NPSL	8e				
Lh	Livingston clay	NPSL	10				
NeB	Nellis stony loam, 3 to 8 percent slopes	Prime	1				
NeD	Nellis stony loam, 15 to 25 percent slopes	NPSL	8				
NsD	Nellis extremely stony loam, 15 to 50 percent slopes	NPSL	11				
VgB	Vergennes clay, 2 to 6 percent slopes	Statewide	6				
VgC	Vergennes clay, 6 to 12 percent slopes	Statewide	7				

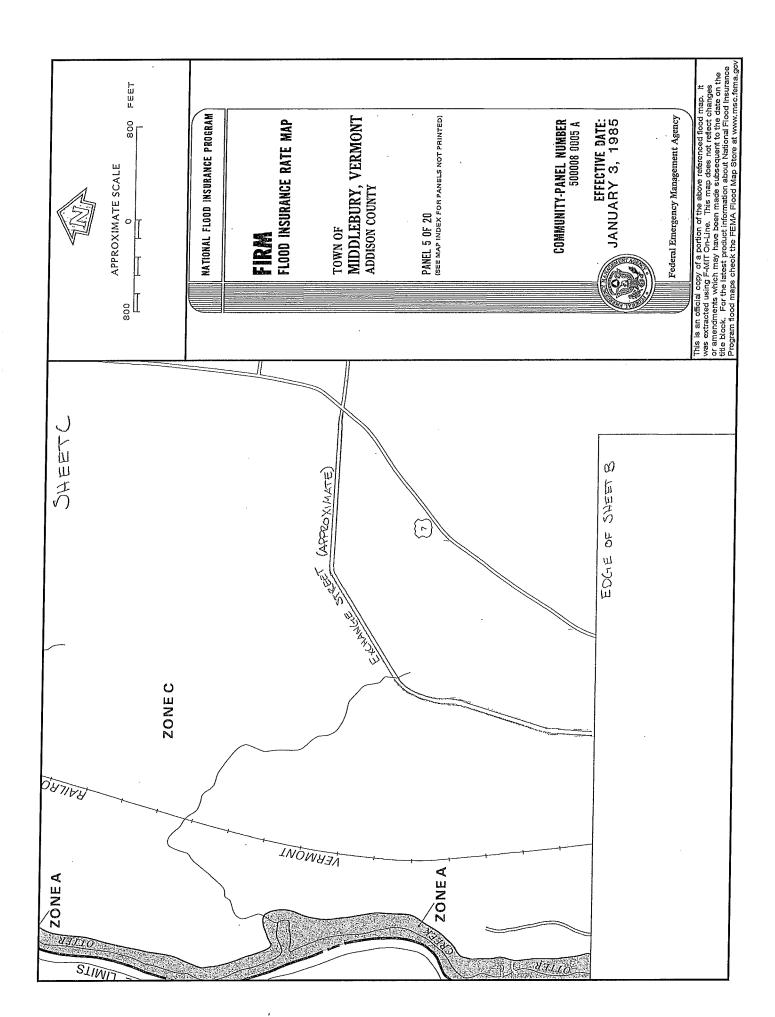
#### **Data Source Information**

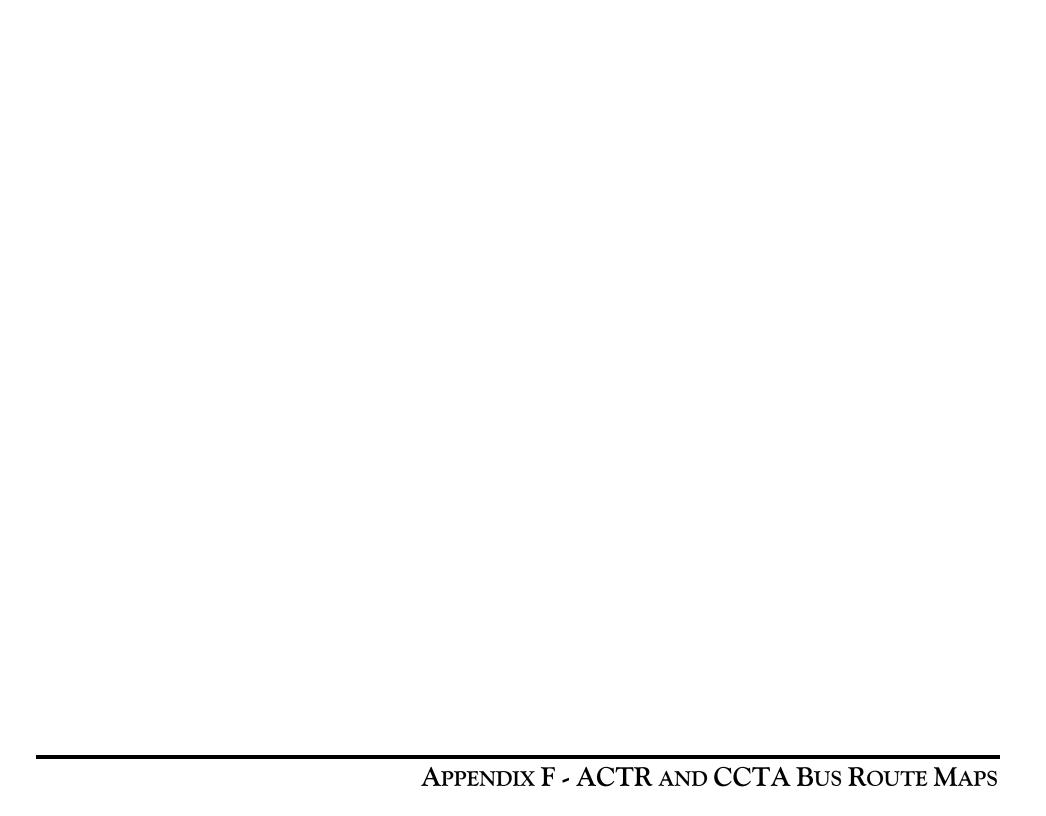
Soil Survey Area: Addison County, Vermont Survey Area Data: Version 14, Jan 19, 2010



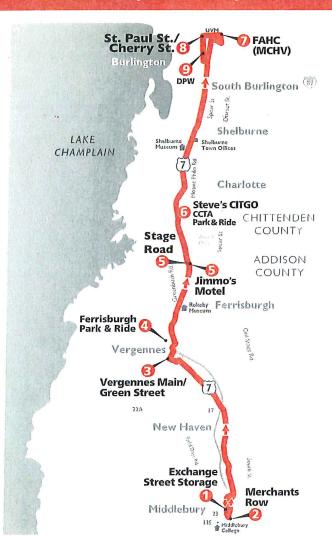


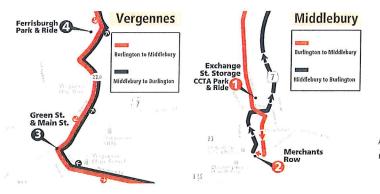




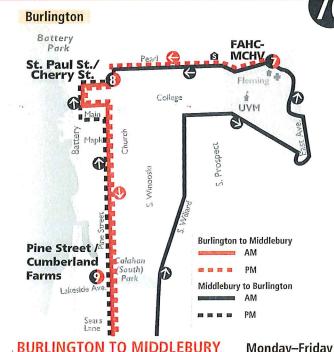


#### **Middlebury LINK Express**





#### **OPERATES WEEKDAYS ONLY**



BUNCHNGTON TO MIDDLEBOKT Monday-Frida									
FAHC /	MCHV	St. Paul St. / Cherry St.	Pine St./ Cumberland Farms	Steve's CITGO	Stage Road	Ferrisburgh Park & Ride	Verg. Main/ Green St.	Exchange St Storage	Merchants Row
_		Γ.ΟΓ	F.10		F.2F	F. 42	F.4C	C.10	C.1 F*
-	-	5:05	5:10	-	5:35	5:42	5:46	6:10	6:15*
AM -	-	6:05	6:10	_	6:35	6:42	6:46	7:10	7:15*
PM 4:	40	4:50	4:58	R	5:29	5:37	5:40 <b>*</b>	5:55	6:00*
5:	20	5:30	5:38	R	6:09	6:17	6:20	6:35	6:40*
R The bus will stop by request only.									

MIDDLE	BURY '	TO BUR	LINGTON	Monda	ay–Friday
a s	, <u>i</u> i.	용		٠. ټو	pu

Exchange St. Storage	Merchants Row	Verg. Main/ Green St.	Ferrisburgh Park & Ride	Jimmo's Motel	Steve's CITGO	EAHC / MCHV	St. Paul St. / Cherry St.	Pine St./ Cumberland Farms	
6:10	6:15*	6:40	6:43	6:50	6:58	7:39	7:45	7:50	5
ам 7:10	7:15*	7:40	7:43	7:50	7:58	8:39	8:45	8:50	
PM 5:55	6:00*	6:20	C	6:30	-	_	7:05	7:15	
6:35	6:40*	7:00	C	7:10	-	-	7:45	7:55	

The bus will stop at Ferrisburgh Park & Ride by phone-in request only. Please call 864-2282 before 5:00 p.m. to request a pick-up.

<sup>\*</sup> This stop meets ACTR buses, allowing passengers to transfer.

