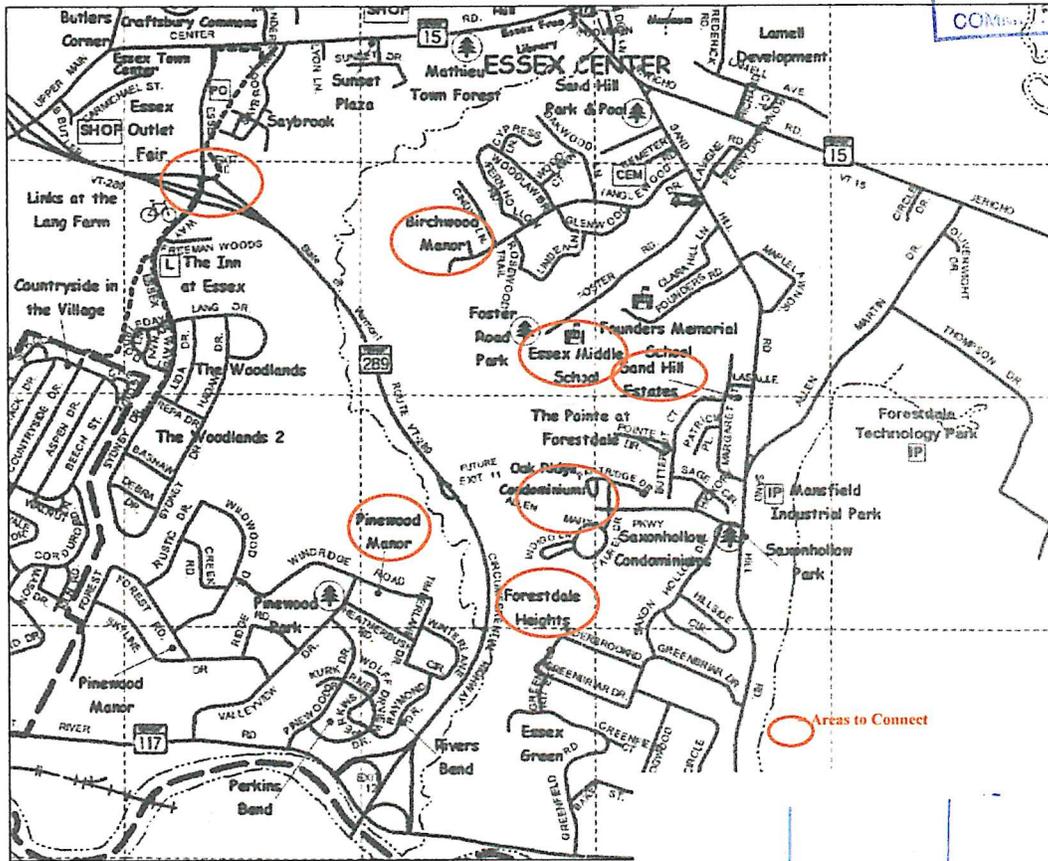


# Essex Pre - Scoping Study Report for a Non - Motorized, Multi-Use Pedestrian Crossing and Associated Trail of Vermont Route 289

March 2003

APR - 4 2003



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The Town of Essex, Vermont

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Start of New Path at Existing Bike/Pedestrian Path  
at Essex Way

Funding for this Study Provided by the Chittenden County Metropolitan Planning Organization

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## INTRODUCTION

### Project Overview

The Town of Essex desires to identify the issues associated with and possible options for a non-motorized, multi-use pedestrian crossing and associated trail to connect residential neighborhoods with the Essex Middle School via a crossing of Route 289, also known as the Circumferential Highway.

The Essex Trails Committee has been the driving force for trail development for the Town of Essex and they promoted this trail and potential connections. There is a strong desire to connect the Essex Town Center, the schools, and five identified neighborhoods: Tanglewood Heights, Foster Road, Allen Martin Parkway, Pinewood Manor and Forestdale Heights.

The Town received a grant from the Chittenden County Metropolitan Planning Organization (CCMPO) to fund this study. Lamoureux & Dickinson (L&D) was retained in July 2002 to study the potential for crossing options and associated trail connections over the segment of Route 289 bound by Essex Way/Exit 10 to the north and River Road/Route 117/Exit 12 to the south.

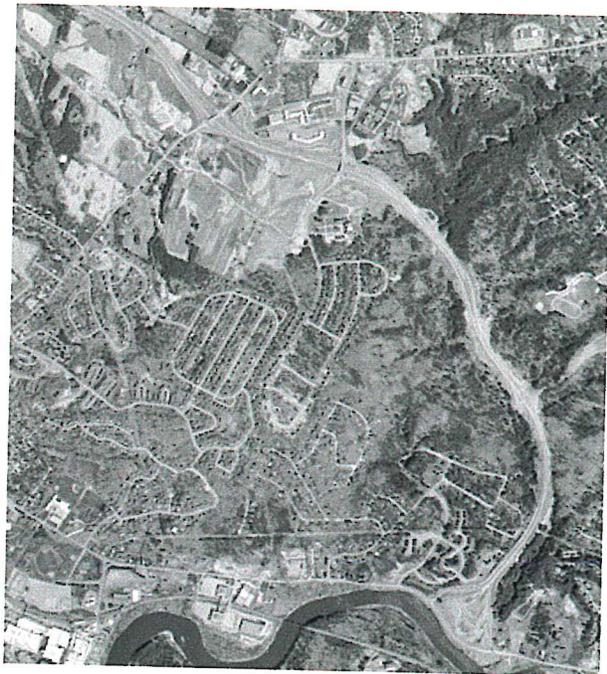


Figure 1: Study Area

When Route 289 was constructed through Essex, it disconnected several residential neighborhoods and the schools that once had established trails. While the Route 289 design plans were underway in the 1980's, the Town worked with the State to include a bicycle/pedestrian trail as part of the project. A proposed bicycle/pedestrian trail was soon abandoned by the State due to the costs of constructing Route 289.

However, it was a condition of the Act 250 permit for the Circumferential Highway to have a bicycle/pedestrian crossing and path. A culvert crossing with the shelf was constructed underneath Route 289 north of Exit 12. This 300 foot long culvert has no provisions for natural or other light to enter the culvert, thereby making access difficult.

## COMPATIBILITY WITH PLANNING EFFORTS

### **Town of Essex 2001 Town Plan**

L&D reviewed the *Town of Essex 2001 Town Plan* to determine what the long term planning is for providing pedestrian and bicycle routes. One of the overall goals for transportation is to "improve and increase the availability of alternative transportation modes such as paths, sidewalks, trails and public transportation..." The plan also acknowledges the desire to connect the neighborhoods and Essex Middle School along Route 289. The Proposed Bicycle and Pedestrian Network Plan shows several proposed bike paths within the study area.

The preferred Master Plan recommends a bridge crossing and trail connections to the Essex Middle School and Founders School, Essex Way and the Essex Town Center, and residential neighborhoods bordering Route 289. Therefore, the Master Plan meets the goals of the overall Town Plan.

### **Chittenden County Metropolitan Planning Organization (CCMPO) Regional Bicycle - Pedestrian Plan Update**

During the past year, the CCMPO worked to prepare an update to their Regional Alternative Transportation Master Plan. The Essex section documents existing and proposed bicycle and pedestrian facilities. The Town of Essex has approximately 69 miles of sidewalks that connect to sidewalks in Essex Junction in several locations, several segments of shared use paths, and 1.2 miles of bike lanes. The *Existing and Proposed Bicycle Facilities Plan*, which is a summary of Essex initiatives, identifies a proposed shared use path parallel to Route 289 from Route 117 to the Colchester town line. The *Existing and Proposed Pedestrian Facilities Plan*, also a summary of Essex initiatives, highlights a proposed shared use path/pedestrian trail to the future Allen Martin Parkway and Route 289 Exit 11 and extending to the Essex Middle School. The *Proposed Regional Network of On-Road Bicycle and Path Facilities* shows linkages to proposed shared use facilities parallel to Route 289 and Allen Martin Parkway. This plan supports studying the feasibility of a trail and crossing along Route 289 between Essex Way and Route 117.

### **Essex Trails Committee Trails Needs Assessment Survey**

The Essex Trails Committee distributed a Trails Needs Assessment Survey focusing on the trail network behind Essex Middle School in December 2002. Survey participants represent organizations using Essex Middle School fields (soccer, lacrosse, baseball, etc), Founders School and Essex Middle School students, and residents in surrounding neighborhoods. Of the 311 respondents, 44% support expanding the trail system to surrounding neighborhoods

and 53% have used the Essex Bike Path. This supports the desire to connect the Essex Middle School with surrounding residential neighborhoods. See Appendix C for survey results compiled by the Essex Trails Committee.

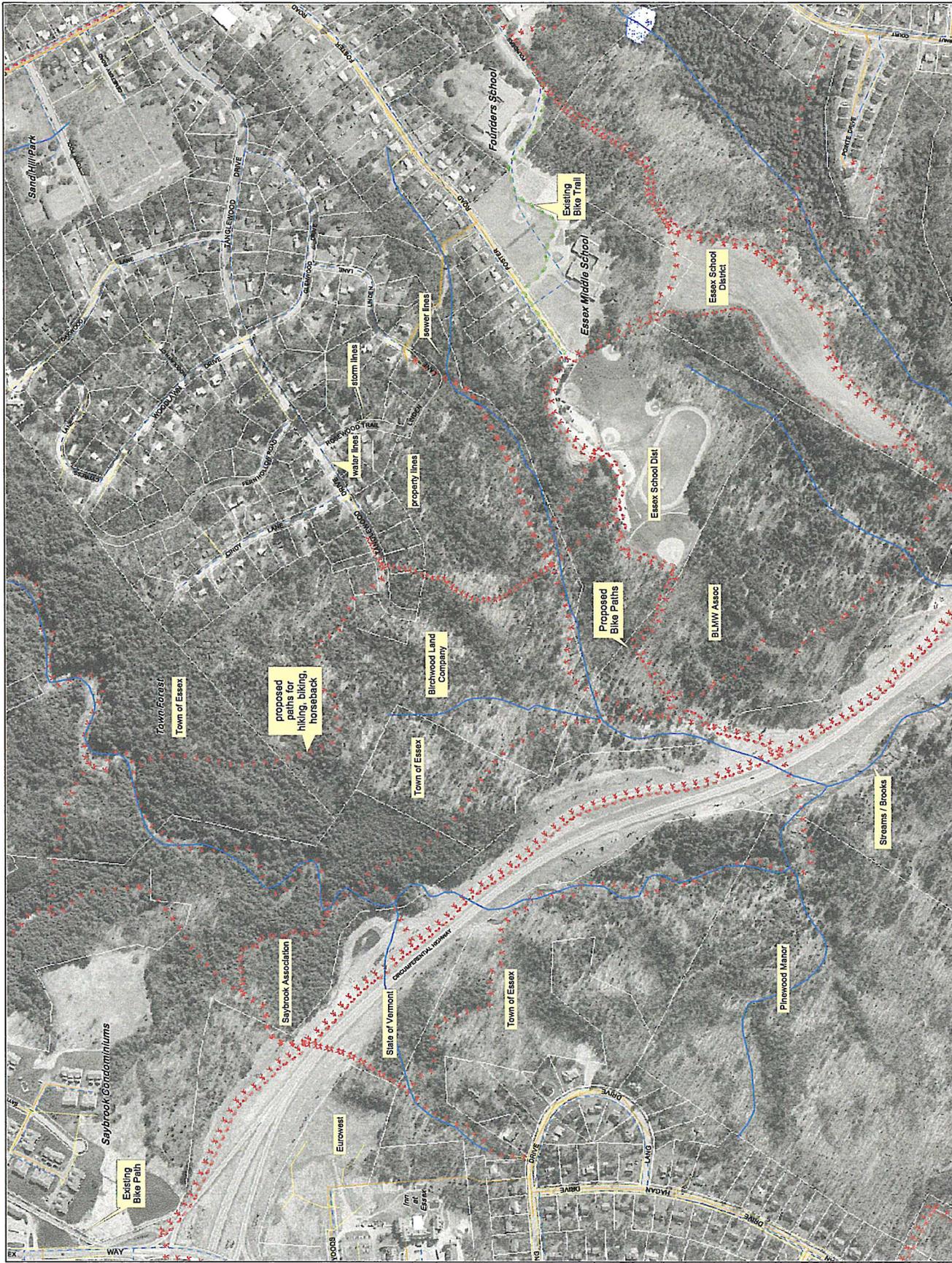
## EXISTING CONDITIONS

The GIS Coordinator for the Town of Essex prepared base plans with L&D's input using available town data, local GIS data, the Chittenden County Regional Planning Commission (CCRPC), the CCMPO, and VTrans. These base plans incorporated:

- Town tax maps/property ownership information;
- Roads and rights-of-way data;
- Topography/contours;
- Utilities: water, stormwater, power, etc; and
- Existing and proposed pedestrian and bicycle trails and facilities in the vicinity.

L&D led a kickoff meeting to make initial contacts with major stakeholders to understand the physical setting, solicit comment and identify issues. Some of the comments from this meeting are summarized below.

- Linking existing and proposed trails should be made.
- Proposed bike paths should be located in open areas, which are easier for police to patrol. There may be the possibility of bike patrols, however, cost would be an issue.
- Aesthetics will be an issue for an above grade crossing. A bridge would likely have to be an arch and it was recommended having some sort of covering or fencing/netting attached to it. A recycled bridge could be a possibility. There could be a contest for designing this bridge.
- A key concern for the Essex Town School District is that any trail must not impact future expansion capabilities for the Essex Middle School.
- Tunnels are just not the best alternative for a crossing; there are just too many concerns and potential problems, such as security.
- Trans Canada and New Hampshire both have trails bordering interstates within the rights-of-way. There could be controlled access to a trail by future Exit 11 and Essex Way.
- Route 289 is planned as a 4-lane highway. This should be taken into consideration.
- Allen Martin Parkway is planned as a future connection to Route 289 via Exit 11. The Town is interested in having this connection and has been pursuing it. This road



connection may become a reality in the next 10 years. A traffic light will be required at this intersection based upon the Act 250 permit conditions.

- Outdoor lighting of the trail was discussed and it was felt this should not be done as it will attract nighttime use, which could pose security and maintenance issues.
- It was recommended to have the trail near residential neighborhoods/roads for easy access. In the future, there could be parking areas and other access points along the trail.
- Another likely connection for a crossing/trail is between the Pinewood and Forestdale developments. Before construction of Route 289, there used to be walking path connections.
- It would be best to try to keep the trails on town or school owned land or individual neighborhood parcels to avoid the number of landowners the town would need to deal with in the future.

With these comments and issues, L&D reviewed the site, researched natural and cultural resource constraints, and studied potential options for crossings and trail connections.

### **Origins and Destinations**

The identified destinations important to consider within or near the study area include the Essex Middle School, the Essex Town Center, the Mathieu Town Forest, and the existing bike path at Essex Way. Potential key users of the pedestrian/bicycle trail would reside in adjoining neighborhoods to Route 289.

Presently, there are no direct appropriate routes or paths for bicyclists and pedestrians to access the identified destinations. They must use River Road/Route 117, Route 15, Sand Hill Road and Essex Way to travel between points.

### **Natural and Cultural Resources**

L&D identified natural resources from GIS, State Agency of Natural Resources (ANR) data and data/maps from the *Town of Essex 2001 Town Plan* that exist within the study area to gain an understanding of limitations before identifying potential crossing and path alignment options. Appendix B includes information referenced for natural and cultural resources.

The terrain between Essex Way/Exit 10 intersection and River Road/Route 117/Exit 12 intersections can be best described as rolling hills with steep topography and valleys with streams and wetlands. The grades in many locations are in excess of 20 percent, which will limit how and where trails can be placed within the study area.

### Water Bodies and Water Courses

There is one major watercourse within the study area: Alder Brook. The Winooski River borders River Road/Route 117 to the south. Alder Brook and tributaries traverse the study area in numerous locations and drain towards the Winooski River.

### Wetlands

There are several Class 2 wetlands within the study area. These wetlands are located near the Winooski River. There may be other Class 3 wetland areas surrounding Alder Brook and its tributaries. Further field analysis would need to be conducted to identify any such wetlands.

### Flora and Fauna

A review of the State ANR Natural Heritage Program GIS data indicates there are no identified rare and endangered species within the study area.

### Hazardous Waste Sites

A review of the State ANR Vermont Active Hazardous Site List, dated January 2003, of identified hazardous waste sites reveals there are no known sites within the study area.

### Historic/Archeological Resources

L&D reviewed the report *Contributions to Understanding Vermont Prehistory: The Chittenden County Circumferential Highway Archaeological Studies, 1983 – 2000*. This study involved the Circumferential Highway and abutting lands and there are no identified historic or archaeologically sensitive sites within the study area.

### Parks and Public Lands

Within the study area, there are several important parks and/or public lands. The Mathieu Town Forest borders the Tanglewood Drive neighborhoods. The Town owns two parcels south of Exit 12 that both border each side of the Route 289. These parcels are identified as Lang Farm Future Neighborhood Parks. Also, the town owns a small parcel of land bordering the Route 289 on the west just north of the Pinewood Manor developments, and a parcel that abuts the Allen Martin Parkway and Alderbrook Road, which is known as the Forestdale Natural Area.

The Essex School District owns the Essex Middle School, the Founders School and the Essex School District Recreation Fields lands. These border Foster Drive and Allen Martin Parkway.

The Circumferential Highway right-of-way varies in size between Exits 10 and 12. There are several areas that are fairly wide and provide opportunity for possible trail locations.

#### Deer Wintering Areas

There are possible deer wintering areas within the study area, as shown in the Chittenden County Regional Planning Commission 2001 Regional Plan. The path may not impact these areas, but they need further study.

#### Agricultural Lands

Agricultural lands are typically defined as lands with primary agricultural soils, forest soils, and/or secondary agricultural soils. A brief inspection of soils in this area indicate there may be statewide agricultural soils present. In the *Town of Essex 2001 Town Plan*, several parcels within the study area are identified as prime forestland. Most of these areas exist on town owned parcels and are considered for forestry, environmental and recreational uses. Further research and identification of agricultural and forestry soils present for the trail alignment should be done.

### **PROPOSED CROSSING OPTIONS**

Several key factors affect how and where a crossing could be located. Route 289 is designed as a four lane limited access highway. Due to the topography, locating a trail connection to the selected crossing was important. Alder Brook and tributaries run along Route 289. A crossing location may involve a long 250 to 350 foot span to accommodate these elements.

#### **Alternatives Considered**

L&D studied possible above, below and at-grade crossing options. The potential for an at grade crossing was considered for the future extension of the Allen Martin Parkway. At a minimum, this would involve a traffic light with pedestrian crosswalks and pedestrian lights. Route 289 is classified as a principal arterial roadway by the Vermont Agency of Transportation (VTrans) and has limited access points. L&D discussed this option with VTrans District #5 Transportation Administrator and he indicated it would most likely never be allowed. Also, it was felt that there are serious questions as to the safety of pedestrians crossing this roadway based upon the speeds that vehicles travel. Therefore, an at grade crossing is not a viable option.

There was the possibility of crossing Route 289 underground, with the potential for using the existing box culvert with the shelf. An underground crossing would require extensive grading and a box culvert or some other type of structure large enough to accommodate two

pedestrians with bicycles for safe passage. Also, there would need to be provisions so access could occur during seasonal high waters. The length of and adequate light for the underground crossing are critical for pedestrians and bicyclist to use it.

The existing box culvert north of Exit 12 is approximately three hundred feet (300') in length, fifteen feet (15') tall and has a three feet (3') wide shelf two feet (2') above the bottom of the culvert. The minimum standard sidewalk width is 5' and 10' for bicycles and other mixed uses. Presently, there is no provision for natural or other light within this structure. In times of seasonal high water, it was felt that this shelf would be underwater and prohibit safe crossing. A light source could be installed, but it would be expensive to run electric lines and safely install lights.

A new box culvert could be installed under Route 289 in a different location where lighting, length/distance, and seasonal high water could be addressed. The cost would be expensive to design and construct such a structure. Also, connecting it to the proposed trail network would be a challenge due to steep grades. And, there would still be concerns about the safety of children and adults using it. Thus, below grade options are not recommended.

An above grade crossing is the best alternative for crossing Route 289. There are several factors addressing where an above grade crossing should be located. First, it would need to be high enough to prevent conflicts with vehicles traveling on the highway: a minimum 16 foot clearance is needed. In addition, it must be located where a trail can access it without much difficulty. With these criteria, several options were examined.

Given the study area's difficult terrain, two different locations quickly evolved as the best crossing alternatives to consider. One possibility is near where the main branch of the Alder Brook crosses Route 289. However, this location is in an area that would be difficult to make trail connections. The second possibility is near the Pinewood Manor and Forestdale Heights neighborhoods that formerly had trail connections. The topography there is better for trail access.



Figure 3: Proposed location for non-vehicular bridge crossing over Route 289



# Proposed Bicycle/Pedestrian Path and Bridge Examples

Essex Pre-Scoping Study  
Essex Junction, Vermont  
February 2003



**Colchester Bike Path Bridge**  
Example of Steel Framed,  
Multi span Wood Deck Bridge



Wilmington Delta Beth Residence

### **Preferred Crossing**

After studying the topography, a potential crossing location was selected north of Exit 12 in close proximity to Winterlane Circle on the western side of Route 289. The proposed multi span bridge would be approximately three hundred feet (300') in length and consist of three one hundred foot (100') spans.

Different bridge construction options include a bridge with wood framing and decking, a bridge with wood decking and railings with steel framing, and a bridge with steel framing and railings with wood decking. A wood framed and decked bridge would involve higher costs because it will need to be sized to span three hundred feet (300') and will have more maintenance issues because of its durability. A steel framed and wood deck and railing bridge is often used for bike paths and is aesthetically pleasing and durable. Some of the historic bridges that are recycled through VTrans for use on bike paths are often steel framing and railings with wood decking.

Whatever material is selected for the bridge construction, it should be constructed so as to prevent people and objects from falling off. There are several ways this can be accomplished: a fully covered open mesh structure over the entire bridge, very high sides, and/or some type of security netting attached underneath it. Whatever is selected, it must be aesthetically pleasing. Several examples of bridges are shown in Figure 3.

### **PROPOSED TRAIL ALIGNMENT**

Proposed trail alignment options were studied to connect any bridge crossing with existing/proposed paths at Essex Way, the Essex Middle School and Founders School, and with as many major neighborhoods (Tanglewood Heights, Foster Road, Allen Martin Parkway, Pinewood Manor and Forestdale Heights).

Placement and design of trails within the study area must consider safe access and applicable standards specified by the Americans with Disabilities Act (Uniform Federal Accessibility Standards) and the draft Vermont Pedestrian and Bicycle Facility Planning and Design Manual. Some important considerations for the layout of the trail include ensuring 5% grades are not exceeded, the path width is at least eight feet (8') with ten feet (10') preferred, and areas of conflicts with vehicular traffic are avoided. There should be a shoulder at least two feet (2') wide and lateral clearance of three feet (3') wide each side of a ten foot paved path. In addition, a vertical clearance of eight to twelve feet (8' -12') for overhead obstructions is needed.

Several types of trails could be used. A crushed gravel path a minimum of eight feet (8') wide has a natural feel. An asphalt paved path eight to twelve feet (8' - 12') wide accommodates a larger variety of users than a gravel path. Aesthetically it has a different appearance within the landscape than a gravel path. However, it is recommended that this path be designed similar to the current Essex Bike/Pedestrian Path - a ten foot (10') wide asphalt paved path. If the town applies for state and federal funding, the path will need to meet specific bicycle/pedestrian standards probably requiring a minimum eight foot (8') wide asphalt path.

### Alternatives Considered

Various alternative trail alignments were analyzed for the study area. The possibility of having a trail parallel to Route 289 was studied. However, several limitations make this work difficult.

Because Route 289 is designed as a four lane highway, L&D had to look at areas beyond what directly abuts the constructed portions of the highway. This became problematic because of steep grades, gulleys and wetlands. In addition, numerous stream crossings and culvert extensions would be needed throughout the study area. Also, there are concerns about noise from the highway and desirability of riding and walking in close proximity to the highway. It became apparent that a parallel trail alignment is not a viable option to consider.

Another trail alignment considered includes connection to the Essex Town Center and the Inn at Essex on the west side of Route 289. Several other trail alignments were studied for both the west and east sides of Route 289. However, the topography is too steep and undulating requiring numerous switchbacks. Such alignments would involve major regrading and environmental impacts. Thus, these alignments are not recommended.



Figure 6: Tanglewood Drive today.



Figure 7: Foster Drive Cul-de-sac

### Preferred Trail Alignments

After considering various trail alignments, a main trail and alternate trail alignments were developed, as presented on the Master Plan in Figure 4 on Page 9. Both trail alignment options are approximately 13,000 feet long. They begin at the existing bike/pedestrian path at Essex Way and provide connections to the Mathieu Town Forest, Tanglewood Drive, Foster Road, Essex Middle School and Founders School properties, Allen Martin Parkway, Alderbrook Road and terminate at Winterlane Circle. The main benefit of this trail alignment is its linkage of residential neighborhoods with the Essex Town Center and the schools. Also, it could provide one large loop of about 2½ miles in length.

The main trail, shown in green on the Master Plan, starts at the existing Essex Way bike/pedestrian path and parallels Route 289 within the highway right-of-way for the first 1½ miles, where it then crosses Alder Brook. A large culvert or bridge is needed to cross Alder Brook.

The trail then crosses onto the southeast corner of the Saybrook Association lands and continues onto Town of Essex land. Two connector trails extend to the Mathieu Town Forest and the Town of Essex land. From here, the trail then heads east onto undeveloped Birchwood lands and a connector trail connects to the future extension of Tanglewood Drive.

From here, the trail traverses Essex School District lands and connects with the Foster Road cul-de-sac. Between Foster Road and Allen Martin Parkway, the trail remains on Essex School District lands. The trail is anticipated to be a grade-separated crossing: overpass or underpass, at the future extension of Allen Martin Parkway.



Figure 8: Allen Martin Parkway today

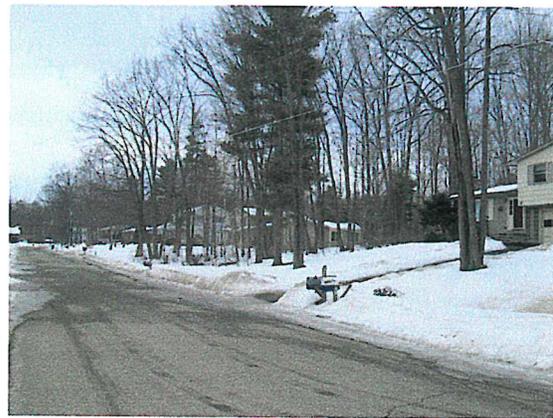


Figure 9: Connector trail to Alderbrook Road



Figure 10: Trail end location on Winterlane Circle

Once crossing Allen Martin Parkway, the trail travels onto lands owned by Forestdale Group, LLC then to the proposed bridge crossing within the Route 289 right-of-way. A connector trail would extend to Alderbrook Road, linking the Forestdale Heights neighborhoods. After the bridge crossing, the trail would end at Winterlane Circle and link the Pinewood Manor neighborhoods. The trail segment from the bridge crossing to Winterlane Circle is within the Route 289 right-of-way owned by VTrans.

The alternative trail, shown in blue on the Master Plan, delineates another potential route. It starts at the southern end of Essex Way within the Route 289 right-of-way and connects into the main trail just before entering onto Essex School District lands. This alternative route is suggested because it has less impact on the Birchwood Land Company land, but it has two stream crossings instead of one and it does not as easily access the Town Forest.

## **RIGHT-OF-WAY ISSUES**

There are several owners along the proposed main trail alignment. However, the Town of Essex, the Essex School District, and the State of Vermont are the major landowners. There are four other landowners that the Town would need to collaborate with to make the trail a reality. One landowner already expressed a desire to work with the Town.

## **ALTERNATIVES MATRIX**

An alternatives matrix was prepared for the preferred trail alignments. This matrix is broken into five areas: engineering, cost, impacts, local and regional issues, and required permits and clearances. See Figure 10.

### Engineering

Both trail alignment options would require some right-of-way acquisition. The total disturbed area for both alignment options is very similar: approximately 18 acres. There may be a utility conflict with the Champlain Water District (CWD) water line crossing Route 289 in the same general area as the proposed bridge crossing. The CWD water line impacts may be nonexistent and total area may be less, depending upon the final trail alignment to be determined during the conceptual plan development phase. Additional discussion should occur with CWD to obtain detailed specifications on the water line.

### Cost

Construction cost estimates for each trail alignment are based on current costs for a 10' wide

# Alternatives Analysis Matrix

## Essex Pre-Scoping Study

Essex Junction, Vermont

February, 2003

Category	Main Trail and Route 289 Crossing	Main Trail with Alternate and Route 289 Crossing
<b>Engineering</b>		
Right-of-Way Acquisition	Yes	Yes
Displacement of Structures	No	No
Utility Conflicts	Possibly CWD line near Rte 289 Crossing	Possibly CWD line near Rte 289 Crossing
Road Crossings	Yes: Tanglewood Drive, Allen Martin Parkway and Rte 289 Bridge	Yes: Tanglewood Drive, Allen Martin Parkway and Rte 289 Bridge
Total Disturbed Area	795,600 sf/18.3 acres	784,800 sf/18 acres
<b>Cost</b>		
Path: \$150/Linear Foot	\$1,989,000 (13,260 feet)	\$1,962,000 (13,080 feet)
Bridge: 3 Span/ ~300 feet long	\$600,000	\$600,000
Connectors: \$150/Linear Foot	\$660,000 (4,400 feet)	\$669,000 (4,460 feet)
<b>TOTAL ♦</b>	<b>\$3,249,000</b>	<b>\$3,231,000</b>
<b>Impacts</b>		
Wetlands**	Yes	Yes
Floodplains**	Yes	Yes
Fish & Wildlife	Possibly	Possibly
Rare, Threatened & Endangered Species	None	None
4(f) Public Lands	N/a	N/a
6(f) LWCF Lands	N/a	N/a
Hazardous Waste Sites/Materials***	No	No
Historic Structures**	N/a	N/a
Archaeological Resources #	No	No
Prime Agricultural/Forest Lands**	Yes: Forestlands	Yes: Forestlands
<b>Local and Regional Issues</b>		
Landowner Issues	Possibly, needs further investigation	Possibly, needs further investigation
Aesthetics and Safety Concerns	Road crossings will need pedestrian/bike traffic controls, Rte 289 scenic road will be enhanced	Road crossings will need pedestrian/bike traffic controls, Rte 289 scenic road will be enhanced
Conformance with 2001 Town Plan	Yes	Yes

asphalt trail. Trail construction, including earthwork, and storm drainage would amount to \$150/linear foot. The bridge cost is estimated for a new three span, steel framed, wood decked and railing bridge.

### Impacts

The impacts to natural and cultural resources are based on available information. There most likely are affected wetlands and flood plains, and possibly fish and wildlife impacts. There will be minimal impacts to forestlands identified in the *Town of Essex 2001 Town Plan*. Should the Town proceed forward with the project, field analysis should be conducted to better understand potential impacts to natural and cultural resources. Further contact with the State ANR regarding natural resource impacts should also be done.

### Local and Regional Issues

There may be landowner issues associated with trail alignment and related easements. Several sections of the trail and bridge traverse the Route 289 right-of-way. This state limited access highway prohibits pedestrians. The Town should contact VTrans regarding procedures for requesting limited access for the trail and bridge. It would be advisable to begin discussions with these affected landowners and the state soon to resolve any property related issues.

There will need to be pedestrian and bike traffic controls where the proposed trail crosses roadways, such as crosswalks and signage. One option that has been discussed and should be pursued further is to consider a separated grade for the trail at Allen Martin Parkway.

### Required Permits and Clearances

For either trail alignment, several permits would be required. Municipal projects that disturb less than 10 acres do not typically require an Act 250 permit. However, in this case, the total disturbed area for the trail should be greater than 10 acres. Therefore, an Act 250 permit would be required. Also, local permits should be obtained as is the Town's customary process for Town related projects.

If the trail is constructed in phases, an Act 250 permit may not be needed if a phase disturbs less than 10 acres. However, once the combined segments exceed the 10 acre disturbance limit, an Act 250 permit will most likely be required. This should be reviewed with the District #4 Act 250 Coordinator.

Because of the several crossings of Alder Brook and its tributaries, a series of permits associated with these crossings will be needed: Stream alteration permit, 401 Water Quality,

Army Corps of Engineers General Permit (404 COE Permit), State ANR Conditional Use Determination, and a Stormwater Discharge Permit.

An agricultural soils clearance most likely would be needed for the impacts to the forestlands.

## RECOMMENDED PHASING OF TRAIL

Due to the estimated cost of this trail, it is suggested this project be completed in phases. Three phases are recommended with connector linkages.

*Segment I: From Essex Way to Foster Road and the Essex Middle School.*

Main Trail: 6,000 feet	\$900,000.
Connectors: 2,300 feet	<u>\$345,000.</u>
Total Estimated Cost:	\$1,245,000.

Segment I crosses five properties: two private owners, the Town parcel, the Route 289 right-of-way, and the Essex School District.

*Segment II: From Foster Road to Allen Martin Parkway.*

Main Trail: 3,600 feet	\$540,000.
Connectors: 600 feet	<u>\$90,000.</u>
Total Estimated Cost:	\$630,000.

Segment II crosses on Essex School District properties.

*Segment III: From Allen Martin Parkway to Winterlane Circle.*

Main Trail: 3,500 feet	\$525,000.
Connectors: 850 feet	\$127,500.
Bridge: 300' span	<u>\$600,000.</u>
Total Estimated Cost:	\$1,252,500.

Segment III crosses four properties: two private owners, Town of Essex lands, and the Route 289 right-of-way.

A recommended phasing schedule is to begin with Segment I because it will connect the Essex Middle and Founders Schools and Tanglewood Drive neighborhoods to the existing bike path. Segment II will involve the least amount of right-of-way acquisition and the estimated costs are less than Segments I and III. However, Allen Martin Parkway currently ends east of the proposed trail, which could cause some difficulties. Segment III should be constructed following Segment II so it could connect to the schools.

## **PUBLIC INVOLVEMENT PROCESS**

### Town

Four meetings were held over a nine month period. Two meetings were held in August 2002 with local commissions, town staff and school officials to gather input on issues and desires associated with a crossing and related trails.

L&D held a public meeting on February 12, 2003 with the local commissions, town staff and school officials to present the crossing and trail alignment options and findings and gather input. This meeting was advertised in the local Essex newspaper, the Burlington Free Press and on the Town web site encouraging public participation. A final public presentation to the Select Board was conducted on April 7, 2003. Comments from these meetings are incorporated into this report and are summarized in Appendix A.

### Regional

#### *Chittenden County Metropolitan Planning Organization (CCMPO)*

L&D contacted Peter Keating, Senior Transportation Planner for the CCMPO about this project. Mr. Keating agreed this is a valuable study and recommends the Town request funding from the CCMPO to prepare a scoping report for this project.

#### *Chittenden County Regional Planning Commission (CCRPC)*

Ian McDougall, Planner with the CCRPC, felt it is great to link these areas and is in support of the project.

### State: VTrans

L&D discussed the preferred crossing option with Richard Ranaldo, VTrans Special Projects division, on March 14, 2002. Mr. Ranaldo felt the proposed crossing was in a decent location. He mentioned consideration should be given to clearance issues and inclusion of the four lane expansion.

On March 17th and March 25th, 2002, L&D discussed the preferred crossing option with VTrans District #5 Transportation Administrator, Dick Hosking. Mr. Hosking mentioned several items that should be considered during further study.

- The berm between Route 289 and Winterlane Circle is designed as a visual and sound barrier and a trail connection should not impact this.
- The bridge should be designed to keep snow machines off.
- Aesthetics and cost should be considered.

- Route 289 is a limited access highway and no pedestrians are allowed within the right-of-way. The Town will need to work with VTrans on procedures for gaining limited access for the trail and bridge crossing. A fence would most likely be required between the trail and highway.
- The Federal Highway Administration would also have to approve the trail and bridge within the Route 289 right-of-way.

L&D reviewed the proposed project with Amy Bell, Vtrans LTF Bike/Pedestrian Coordinator on March 25, 2003. She felt this is certainly a needed project. She made the following comments.

- The State historic bridge program bridges are mostly under one hundred feet in length. Therefore, using a historic bridge should not be considered for this project due to the large span crossing. Most likely a through truss bridge will be needed here.
- There is a similar bridge crossing that VTrans designed for Route 289 near the Allen Brook School.
- A gravel path a minimum of eight feet can be done and will meet ADA requirements.
- The State ANR has agreed to bridges instead of culverts when crossing rivers and streams.

**APPENDICES**

**Appendix A**  
Public Meeting Notes

**ESSEX PRE - SCOPING STUDY**  
Interview with School Officials Meeting Notes

Date: August 20, 2002

Attendees: Marty Waldron, Superintendent  
Ned Kirsch, Principal of Essex Middle School  
Brian DuPrat, Principal of Founders Memorial School  
Craig Lawrence, Essex Planner  
Erin Bralich, Essex Town Recreation and Grants Coordinator  
Gail Henderson-King, Lamoureux & Dickinson

Discussion:

**Introduction**

Ms. Henderson-King introduced herself and explained the purpose and goals of the Essex Scoping Studies project. She referred to a base plan that highlighted the study area and identified where the school property is located in relation to what could be possible. She explained that she wanted to be the School officials input as to where possible trail locations and crossing could be located and what thoughts, issues and concerns they may have about them.

**Comments**

There was a safety concern for unsupervised children using a trail that enters into the woods.

The woods are very secluded in that area of the property and issues of older children harming or threatening younger children could occur.

Yet, the proposed trail could be a great educational and recreational resource for the schools.

Trail would be better in open areas.

There was concern about liability issues: what would school be liable for? Who would be responsible for maintenance of the trail? The School Department has a very limited budget for any outdoor maintenance and wouldn't be able to handle this. It will be important to define roles and responsibilities for these issues.

The School envisions that if they ever want to expand in the future that access off of Allen Martin Parkway. They are concerned about the impact of this proposed trail on their future use of property and future access.

If the trail is outside of the School property, they don't have an issue.

Presently, there are lots of trails located in the woods, which are used regularly for school programs.

The Trout Pond is used in conjunction with the Lake Champlain Basin Program for educational programs. Trout Unlimited raise trout here, which school children are involved with this. They would prefer to not have the bike trail go near here because they don't want it to become well known which could result in people using it for fishing and affecting their agreement with Trout Unlimited.

If a police bike patrol happened in the morning and afternoon around the school schedule, this would alleviate their concerns about safety in the woods.

Outdoor lighting was suggested as an option for additional safety. It was felt that this wouldn't help and would most likely invite more problems at night.

Preferences for the type of trail were to have it paved if it part of a larger trail network. However, if not part of a larger trail network, gravel would be preferred. They would like to have a real "bike path" – 10' wide to AASATO standards.

A Recreation Trail on the school property is being proposed as a separate project, which the Town would apply for a grant to fund. This would be a loop trail on the school property and could be used for educational and recreational activities by the schools. It was felt that this as a good idea and would be able to get teacher support for this. Presently, there are several teachers that utilize the existing trails and pond on the property for GPS program, snowshoeing, cross-country skiing, orienteering, and science. In addition, the Essex Middle School does have an Industrial Arts program, which can contribute to the trail through bridge/sign construction. This proposal would need to be approved by the School Board before applying.

**ESSEX PRE - SCOPING STUDY**  
Interview with Local Officials Meeting Notes

Date: August 28, 2002

Attendees: Dawn Francis, Deputy Town Manager  
Herb Durfee, Community Development Director  
Erin Bralich, Park & Recreation Coordinator (For Mark Berry – P & R Director)  
Gary Smith, Conservation Committee  
David E. Demag, Police Department  
Leo Nadeau, Police Department  
David Rogerson, Planning Commission  
Craig Lawrence, Essex Planner  
Gail Henderson-King, Lamoureux & Dickinson

Discussion:

**Introduction**

Ms. Henderson-King introduced herself and explained the purpose and goals of the Essex Scoping Studies project. She referred to a base plan that highlighted the study area. She explained that she wanted to have input from town committee chairs and officials as to where possible trail locations and crossing could be located and what thoughts, issues and concerns they may have about them.

**Comments**

The Planning Commission is requiring Pinewood Manor subdivision to provide to trail connection. This scoping study project should try to connect to these trails.

Security is an issue for a below grade crossing. It was felt that a bike path located in open areas is easier for police to patrol and view.

For an above grade crossing, aesthetics is an issue. The bridge would most likely have to be an arch. There could be a contest for designing this bridge.

Tunnels are just not the way to go. There are just too many concerns and potential problems.

The idea of a bridge over Route 289 is fine. However, there are concerns about items being thrown onto the roadway from bridge. Recommend having some sort of covering or fencing/netting to catch items attached to the bridge.

There was a concern about the steep topography on the west side of Route 289 and how it might impact any bridge placement.

Trans Canada and New Hampshire both have trails bordering interstates within the interstate rights-of-way. There could be controlled access by future Exit 11 and Essex Way.

Route 289 is anticipated to be and planned for a 4-lane highway. This should be taken into consideration during this study. Would bridge have to account for the future 4 lane Circumferential Highway? Most likely!

Allen Parkway is planned as a connection to Route 289 (Exit 11). The Town is interested in having this connection and has been pursuing it. However, it will probably be a real possibility in the future, but probably not in next 10 years.

Traffic light will be required for the Allen Parkway/Route 289 intersection based upon the Act 250 permit conditions.

Are there any security issues? What about police bike patrols? While this is a possibility, they will need to pay for help. Don't rely on police patrols to control security issues.

There was a question as to why this pedestrian connection is needed. It is an Act 250 condition for the Circumferential Highway as well as the ease of getting to places: the new town center, the schools, and the two identified neighborhoods. The Trails Committee has been looking at these potential connections as they are driving this effort.

The most likely connection seems to be around the future Exit 11.

One major issue for this trail will be how to get pedestrian/vehicular systems to work together.

Seattle has an underground walkway system that does work. This might be a good example to look at further.

The Recreation Director has some comments that were submitted in a memorandum (attached to these minutes). One item he would like to see outdoor lighting be provided on the trail.

This was discussed further and people thought that the trail shouldn't have lighting. It was felt that the safety issue is minimized without lighting and attracting people to the trail.

Are there any issues with the existing bike path? There was a rash of vandalism along bike path where there is new construction nearby. Motorized abuse does happen every once in a while. However, both of these are minimal.

Snowmobile use could be a problem.

It was recommended to have the trail near residential neighborhoods/roads for easy access for police.

There was discussion regarding whether there would be any parking associated with either end of the path.

Distance from River Road to Essex Way is approximately two miles.

Another likely connection for a crossing/trail is between the Pinewood and Forestdale developments. Before the Circ Highway, there used to be connections here with walking paths.

Maybe there could be a path along or parallel with the Circ Highway. Trail along Circ Highway is perceived as having safety and political issues.

Recycled bridge could be a possibility. Aesthetics would be a concern with this type of bridge and it was felt that this would probably not fly with Essex residents.

It was felt that we should get the Trails Committee input, since they weren't able to attend this meeting.

Suggest a survey of Pinewood/Forestdale neighborhood residents as to whether they would use a trail and where best it could be located.

It was suggested to have two possible routes connecting the schools/Forestdale neighborhood with the New Town Center and Pinewood neighborhoods. Is there consensus for two crossings? Depends on where they would be. Realistically, it would be one centrally located by school property, possibly between exits 10 and 12.

It would be best to try to keep the trails on town or school owned land or individual neighborhoods in order to avoid the number of landowners that the town would need to deal with in the future.

If fuel costs escalate, trails could see more use/demand.

**ESSEX PRE - SCOPING STUDY**  
Presentation to Local Officials Meeting Notes

Date: February 12, 2003

Attendees: Herb Durfee, Community Development Director  
Craig Lawrence, Essex Planner  
David Ewell, Conservation Committee  
Dennis Lutz, Public Works Director  
Jerry Firkey, Zoning Administrator  
Leo Nadeau, Police Department  
Priscilla Kimberly, Trails Committee  
Greg Lyons, Trails Committee Chair  
David Rogerson, Planning Commission  
Gail Henderson-King, Lamoureux & Dickinson

Discussion

**Introduction**

Ms. Henderson-King introduced herself and explained the purpose and goals of the Essex Scoping Studies project. She presented the conceptual plan showing the proposed trail and crossing locations for a bicycle/pedestrian trail connecting the existing bike path at Essex Way to the Mathieu Town Forest, Tanglewood Drive, the Essex Middle School and Founders School, Allen Martin Parkway, Forestdale Heights, and Pinewood Manor neighborhoods. She explained how the trail met the five percent (5%) gradient requirements for bicycle use, was designed to be a ten foot (10') wide asphalt paved shared use path, and that an underground crossing presented too many problems. A sheet was handed out showing typical bridge and path details that are possible. Ms. Henderson-King explained a matrix that was prepared showing each trail option and the associated cultural, environmental, and permitting issues and costs.

**Comments**

What different funding options exist? The new governor has just put a hold on all VTrans funds for bike and pedestrian projects for the next fiscal year. The availability of federal and state funds may be limited over the next several years. One suggestion was to seek Town Center designation to allow the town to leverage more funding through grant programs.

Did the original Circumferential Highway include bridge crossing costs as part of it? It was explained that this wasn't due to the high costs of the highway and VTrans wouldn't include any additional funds.

There could be funding placed in the capital budget for this project. Dennis Lutz handed out his proposed capital budget expenditures for bike and pedestrian projects over the next several years. He explained that this project could be conceivably funded over several years and if a lot of the background information and work is done, this could help reduce the costs needed for construction.

It was discussed that preliminary work could be done, such as obtaining needed easements, maybe have the Youth Conservation Corp. (YCC) assist with construction and install a gravel path to be upgraded later. Everyone seemed to agree that the more preliminary work that could be completed, the more likely it might be that funding could be secured through grant programs.

Some questioned why the trail didn't just continue down to Route 117 since the bridge location was relatively close to this road anyway. It was countered that if this were to occur, it wouldn't allow for a loop in the trail system, and that people would be more likely to cut back through Pinewood Manor to get to the Town Center. One suggestion was to do both the bridge and extend to Route 117. It was recommended to mention this trail would be an alternate to using River Road (Route 117).

There exists a path easement at the end of Oakwood Lane to access the Mathieu Town Forest.

Are there any recommended destinations/overlooks along the trail? Maybe suggest locations for such amenities.

It is possible to have connections from Winterlane Circle and Allen Martin Parkway for parking area access.

Adjust the 'main trail' for Tanglewood Drive: the approved but undeveloped lots and road will stay as designed.

The Essex Police Department is looking at sharing bike patrols with Colchester Police Department. They would use Champlain College students.

The Police Department suggests markers along trail for safety. Uniform signage is important as well.

It is recommended to break out options/phases with costs. They should be prioritized.

The proposed trail is mostly on lands the Town and State own. Note that there are only several segments that are on private property.

It would be good to take photos of the existing conditions/connections for the trail and key them into plan.

Could there be VAST use? They could help with sharing maintenance costs.

Mention types of bridge options: wood, steel, and concrete.

It would be important to understand what existing easements the Town owns and the new ones it would have to obtain or deal with in order to make this trail a reality.

**Appendix B**  
Essex Trails Committee Trails Needs Assessment Survey

**ESSEX TRAILS COMMITTEE**  
**Trails Needs Assessment**

The purpose of this survey is to help make informed decisions about the trails behind the Essex Middle School. The Essex Trails Committee plans to apply for funding to improve these trails. Results from this survey will help the Committee determine which improvements (if any) the residents of Essex want.

The Essex Trails Committee, in conjunction with the Town of Essex, is conducting this survey. This survey will take about 5 minutes. Your participation is completely voluntary and your answers will be anonymous. You can discontinue the survey at any time or choose not to participate with no consequences to you. If you have any questions about the survey, please call Erin Bralich, Recreation and Grants Coordinator, at 878-1342. Thank you for your thoughtful responses to the following questions.

Please return this questionnaire by \_\_\_\_\_ via mail, or in drop boxes located at Founders Memorial or Essex Middle School main offices, or the Essex Town Office at 81 Main Street.

1. Did you know that there are trails behind Essex Middle School, with a trailhead at the end of the Foster Road near the ballfields and a trailhead near the "Prairie" Fields off of Founders Road? **Refer to the location map on the reverse side.**

Yes       No

2. Please check the number of times you used the trails behind the Essex Middle School in the past year.

0     1     2-5     5-10     10 +

If you have never used these trails, please explain why not? \_\_\_\_\_

3. For what use(s) do you use these trails? (Check all that apply)

- Walking
- Running
- Dog-walking
- Nature observation
- School sports
- School physical education classes
- School biology classes
- Mountain biking
- Snowshoeing
- Skiing
- Do not use these trails
- Other \_\_\_\_\_

4. If these trails were improved, what amenities would you like to see? (Check all that apply)

- Trail markers and signs
- Trail maps at intersections
- Nature interpretative signage
- Retain sand/dirt surface
- Apply pea-gravel surface
- Apply asphalt surface
- Expand trail system to surrounding neighborhood trails
- Improve drainage to control erosion
- Remove obstructions
- Smooth existing surface (remove bumps and roots)
- Other amenities \_\_\_\_\_

5. Would you use these trails more often if they were improved?

Yes       No

6. If funds were secured to improve the trails behind the Essex Middle School, would you be interested in a trail stewardship program (this type of program entails taking care of trails for public use through volunteer efforts)?

- Yes, I could assist in trail work for one day
- Yes, I could assist in trail work for a couple of hours
- Sorry, I am unable to help with trail work

7. How far do you live from the Essex Middle School?

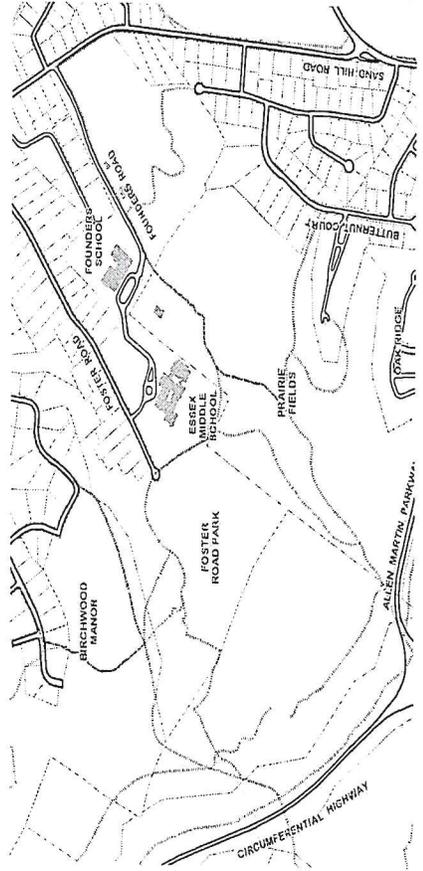
- Less than 1/2 mile
- 1/2 mile - 1 mile
- 1 mile - 2 miles
- More than 2 miles

8. Please mark the number of times you have used the following trails in Essex in the past year.

- Indian Brook Reservoir  0  1  2-5  5-10  10+
- Forestdale Technology Park (Saxon Hill)  0  1  2-5  5-10  10+
- Fort Ethan Allen  0  1  2-5  5-10  10+
- (Parade Grounds)  0  1  2-5  5-10  10+
- Bike Path  0  1  2-5  5-10  10+
- Private Trails in Essex  0  1  2-5  5-10  10+
- Other Trails in Essex  0  1  2-5  5-10  10+
- Trails Outside of Essex  0  1  2-5  5-10  10+

9. Why do you use the trails in question 8? (Check all that apply)

- Proximity to Home
- Proximity to Work
- Parking Facilities Provided
- Natural Scenery/Beauty
- Solitude
- High Visibility
- Paved Surface
- Unpaved Surface
- Exercise
- Provides Access to Destination
- Other \_\_\_\_\_



**THE FOLLOWING QUESTIONS ARE OPTIONAL AND YOUR RESPONSES WILL BE ANONYMOUS.**

10. Please specify by age group the number of members of your household.

- 0-4  5-10  11-18  19-30  30-55
- 55 & Over

11. Please specify by age group the number of members of your household that use trails in Essex.

- 0-4  5-10  11-18  19-30  30-55
- 55 & Over

12. Please specify by age group the number of members of your household that use the trails behind the Essex Middle School.

- 0-4  5-10  11-18  19-30  30-55
- 55 & Over

**IN THE FOLLOWING SPACE, PLEASE SHARE ANY OTHER CONCERNS OR COMMENTS ABOUT TRAILS AND/OR RECREATION IN THE TOWN OF ESSEX.**

Thank you!

First systematic look at the survey results:

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SOURCE

Value Label	Value	Frequency	Percent
	EMS	117	37.6
	FMS	15	4.8
	MAIL	172	55.3
	MISC	7	2.3
		-----	-----
	Total	311	100.0

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Q1 did you know there are trails

Value Label	Value	Frequency	Percent
yes	1	225	72.3
no	2	83	26.7
no answer	9	3	1.0
		-----	-----
	Total	311	100.0

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Q2 times used in last year

Value Label	Value	Frequency	Percent
0	0	107	34.4
1	1	25	8.0
2-5	2	87	28.0
5-10	5	39	12.5
10+	10	45	14.5
no answer	99	8	2.6
		-----	-----

Total 311 100.0

Q3WALK walking

Value Label	Value	Frequency	Percent
	0	150	48.2
	1	161	51.8
	Total	311	100.0

Q3RUN running

Value Label	Value	Frequency	Percent
	0	232	74.6
	1	79	25.4
	Total	311	100.0

Q3DOG dog walking

Value Label	Value	Frequency	Percent
	0	263	84.6
	1	48	15.4
	Total	311	100.0

Q3NAT nature observation

Value Label	Value	Frequency	Percent
	0	235	75.6
	1	76	24.4
		-----	-----
	Total	311	100.0

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 Q3SPORT school sports

Value Label	Value	Frequency	Percent
	0	257	82.6
	1	54	17.4
		-----	-----
	Total	311	100.0

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 Q3PHYS school phys-ed

Value Label	Value	Frequency	Percent
	0	215	69.1
	1	96	30.9
		-----	-----
	Total	311	100.0

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 Q3BIO school biology

Value Label	Value	Frequency	Percent
	0	290	93.2
	1	21	6.8
		-----	-----
	Total	311	100.0

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 Q3BIKE mountain biking

Value Label	Value	Frequency	Percent
	0	268	86.2
	1	43	13.8
		-----	-----
	Total	311	100.0

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 --  
 Q3SNOW snow shoeing

Value Label	Value	Frequency	Percent
	0	271	87.1
	1	40	12.9
		-----	-----
	Total	311	100.0

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 --  
 Q3SKI skiing

Value Label	Value	Frequency	Percent
	0	275	88.4
	1	36	11.6
		-----	-----
	Total	311	100.0

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 --  
 Q3NONE do not use these trails

Value Label	Value	Frequency	Percent
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0	262	84.2
1	49	15.8
		-----
Total	311	100.0

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Q30TH other uses

Value Label	Value	Frequency	Percent
	0	291	93.6
	1	20	6.4
		-----	-----
	Total	311	100.0

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Q4MARK trail markers

Value Label	Value	Frequency	Percent
	0	127	40.8
	1	184	59.2
		-----	-----
	Total	311	100.0

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Q4MAPS maps at intersections

Value Label	Value	Frequency	Percent
	0	182	58.5
	1	129	41.5
		-----	-----
	Total	311	100.0

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Q4NAT interpretive signage

Value Label	Value	Frequency	Percent
	0	263	84.6
	1	48	15.4
		-----	-----
	Total	311	100.0

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Q4DIRT retain sandy surface

Value Label	Value	Frequency	Percent
	0	206	66.2
	1	105	33.8
		-----	-----
	Total	311	100.0

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Q4GRAV apply gravel

Value Label	Value	Frequency	Percent
	0	297	95.5
	1	14	4.5
		-----	-----
	Total	311	100.0

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Q4PAVE apply asphalt

Value Label	Value	Frequency	Percent
	0	290	93.2
	1	21	6.8

-----  
 Total 311 100.0

-----  
 Q4XPND expand trail system

Value Label	Value	Frequency	Percent
	0	174	55.9
	1	137	44.1
	Total	311	100.0

-----  
 Q4DRAIN improve drainage

Value Label	Value	Frequency	Percent
	0	238	76.5
	1	73	23.5
	Total	311	100.0

-----  
 Q4OBSTR remove obstructions

Value Label	Value	Frequency	Percent
	0	219	70.4
	1	92	29.6
	Total	311	100.0

-----  
 Q4SMTH remove bumps

Value Label	Value	Frequency	Percent
	0	237	76.2
	1	74	23.8
		-----	-----
	Total	311	100.0

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Q40TH other amenities

Value Label	Value	Frequency	Percent
	0	294	94.5
	1	17	5.5
		-----	-----
	Total	311	100.0

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Q5 would you use more often

Value Label	Value	Frequency	Percent
yes	1	218	70.1
no	2	61	19.6
no answer	9	32	10.3
		-----	-----
	Total	311	100.0

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Q6 can you assist

Value Label	Value	Frequency	Percent
for a day	1	55	17.7
couple of hours	2	94	30.2
sorry	3	130	41.8

no answer	9	32	10.3
		-----	-----
Total		311	100.0

Q7 distance from EMS

Value Label	Value	Frequency	Percent
<1/2 mile	0	45	14.5
1/2-1 mile	1	49	15.8
1-2 miles	2	104	33.4
more than 2	3	104	33.4
no answer	9	9	2.9
		-----	-----
Total		311	100.0

Q8IBR Indian Brook Res

Value Label	Value	Frequency	Percent
0	0	75	24.1
1	1	43	13.8
2-5	2	82	26.4
5-10	5	44	14.1
10+	10	50	16.1
no answer	99	17	5.5
		-----	-----
Total		311	100.0

Q8FTP Saxon Hill

Value Label	Value	Frequency	Percent
0	0	158	50.8

Survey Results.txt

1	1	24	7.7
2-5	2	42	13.5
5-10	5	19	6.1
10+	10	19	6.1
no answer	99	49	15.8
		-----	-----
	Total	311	100.0

Q8FEA The Fort

Value Label	Value	Frequency	Percent
0	0	159	51.1
1	1	20	6.4
2-5	2	35	11.3
5-10	5	8	2.6
10+	10	14	4.5
no answer	99	75	24.1
		-----	-----
	Total	311	100.0

Q8BIKE Bike Path

Value Label	Value	Frequency	Percent
0	0	96	30.9
1	1	36	11.6
2-5	2	60	19.3
5-10	5	30	9.6
10+	10	39	12.5
no answer	99	50	16.1
		-----	-----
	Total	311	100.0

## Q8PRIV Private Trails

Value Label	Value	Frequency	Percent
0	0	128	41.2
1	1	19	6.1
2-5	2	42	13.5
5-10	5	20	6.4
10+	10	27	8.7
no answer	99	75	24.1
		-----	-----
	Total	311	100.0

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## Q8OTH Other in Essex

Value Label	Value	Frequency	Percent
0	0	96	30.9
1	1	29	9.3
2-5	2	51	16.4
5-10	5	26	8.4
10+	10	34	10.9
no answer	99	75	24.1
		-----	-----
	Total	311	100.0

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## Q8OUT Outside Essex

Value Label	Value	Frequency	Percent
0	0	83	26.7
1	1	20	6.4
2-5	2	81	26.0
5-10	5	32	10.3
10+	10	39	12.5
no answer	99	56	18.0
		-----	-----

Total 311 100.0

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 Q9HOME proximity to home

Value Label	Value	Frequency	Percent
checkmark	1	137	44.1
no mark	2	174	55.9
		-----	-----
	Total	311	100.0

-----  
 Q9WORK proximity to work

Value Label	Value	Frequency	Percent
checkmark	1	7	2.3
no mark	2	304	97.7
		-----	-----
	Total	311	100.0

-----  
 Q9PARK parking

Value Label	Value	Frequency	Percent
checkmark	1	33	10.6
no mark	2	278	89.4
		-----	-----
	Total	311	100.0

-----  
 Q9VIS high visibility

Value Label	Value	Frequency	Percent
checkmark	1	21	6.8
no mark	2	290	93.2
		-----	-----
	Total	311	100.0

-----  
 Q9SOL solitude

Value Label	Value	Frequency	Percent
checkmark	1	78	25.1
no mark	2	233	74.9
		-----	-----
	Total	311	100.0

-----  
 Q9NAT scenery

Value Label	Value	Frequency	Percent
checkmark	1	150	48.2
no mark	2	161	51.8
		-----	-----
	Total	311	100.0

-----  
 Q90TH other

Value Label	Value	Frequency	Percent
checkmark	1	51	16.4
no mark	2	260	83.6
		-----	-----
	Total	311	100.0

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 --  
 Q9DEST access to destination

Value Label	Value	Frequency	Percent
checkmark	1	54	17.4
no mark	2	257	82.6
		-----	-----
	Total	311	100.0

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 --  
 Q9EXER exercise

Value Label	Value	Frequency	Percent
checkmark	1	209	67.2
no mark	2	102	32.8
		-----	-----
	Total	311	100.0

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 --  
 Q9UNPAV unpaved surface

Value Label	Value	Frequency	Percent
checkmark	1	57	18.3
no mark	2	254	81.7
		-----	-----
	Total	311	100.0

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 --  
 Q9PAVE paved surface

Value Label	Value	Frequency	Percent
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checkmark	1	34	10.9
no mark	2	277	89.1
		-----	-----
	Total	311	100.0

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\*\*\*\*\* NOTE \*\*\*\*\*

The following fields have been "cleaned up" - this is not the raw data!!!

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Q10\_0 household members in age 0-4

Value Label	Value	Frequency	Percent
none	0	213	68.5
some	1	39	12.5
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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 --

Q10\_5 household members in age 5-10

Value Label	Value	Frequency	Percent
none	0	123	39.5
some	1	129	41.5
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

-----  
 --

Q10\_11 household members in age 11-18

Value Label	Value	Frequency	Percent
none	0	90	28.9
some	1	162	52.1
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

-----  
--

Q10\_19 household members in age 19-30

Value Label	Value	Frequency	Percent
none	0	219	70.4
some	1	33	10.6
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

-----  
--

Q10\_30 household members in age 30-55

Value Label	Value	Frequency	Percent
none	0	29	9.3
some	1	223	71.7
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

-----  
--

Q10\_55 household members in age 55+

Value Label	Value	Frequency	Percent
none	0	211	67.8

some	1	41	13.2
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

-----  
 --

Q11\_0 any trail users in age 0-4

Value Label	Value	Frequency	Percent
none	0	229	73.6
some	1	23	7.4
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

-----  
 --

Q11\_5 any trail users in age 5-10

Value Label	Value	Frequency	Percent
none	0	153	49.2
some	1	99	31.8
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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 --

Q11\_11 any trail users in age 11-18

Value Label	Value	Frequency	Percent
none	0	128	41.2
some	1	124	39.9
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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 --

Q11\_19 any trail users in age 19-30

Value Label	Value	Frequency	Percent
none	0	236	75.9
some	1	16	5.1
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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 --

Q11\_30 any trail users in age 30-55

Value Label	Value	Frequency	Percent
none	0	95	30.5
some	1	157	50.5
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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 --

Q11\_55 any trail users in age 55+

Value Label	Value	Frequency	Percent
none	0	226	72.7
some	1	26	8.4
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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 --

Q12\_0 EMS trail users in age 0-4

Value Label	Value	Frequency	Percent
none	0	240	77.2
some	1	12	3.9
no valid answer	9	59	19.0
	Total	311	100.0

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 --

Q12\_5 EMS trail users in age 5-10

Value Label	Value	Frequency	Percent
none	0	199	64.0
some	1	53	17.0
no valid answer	9	59	19.0
	Total	311	100.0

-----  
 --

Q12\_11 EMS trail users in age 11-18

Value Label	Value	Frequency	Percent
none	0	162	52.1
some	1	90	28.9
no valid answer	9	59	19.0
	Total	311	100.0

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 --

Q12\_19 EMS trail users in age 19-30

Value Label	Value	Frequency	Percent
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none	0	243	78.1
some	1	9	2.9
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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 --

Q12\_30 EMS trail users in age 30-55

Value Label	Value	Frequency	Percent
none	0	171	55.0
some	1	81	26.0
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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 --

Q12\_55 EMS trail users in age 55+

Value Label	Value	Frequency	Percent
none	0	234	75.2
some	1	18	5.8
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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 --

KIDS any kids in household

Value Label	Value	Frequency	Percent
none	0	38	12.2
some	1	214	68.8
no valid answer	9	59	19.0
		-----	-----

Total 311 100.0

ADULTS any adults in household

Value Label	Value	Frequency	Percent
some	1	252	81.0
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

TKIDS any kids using any trails

Value Label	Value	Frequency	Percent
none	0	65	20.9
some	1	187	60.1
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

TADULTS any adults using any trails

Value Label	Value	Frequency	Percent
none	0	70	22.5
some	1	182	58.5
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

EKIDS any kids using EMS trails

Value Label	Value	Frequency	Percent
none	0	104	33.4
some	1	148	47.6
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0

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EADULTS any adults using EMS trails

Value Label	Value	Frequency	Percent
none	0	145	46.6
some	1	107	34.4
no valid answer	9	59	19.0
		-----	-----
	Total	311	100.0