MARSHALL AVENUE SHARED USE PATH CONNECTION

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Under the direction of:

Chittenden County Regional Planning Commission
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1.0 INTRODUCTION

In 2006, the Chittenden County Metropolitan Planning Organization (CCMPO), now merged with the Chittenden County Regional Planning Commission (CCRPC), under contract with Stantec, completed a feasibility study to evaluate ways to link the existing shared use path systems of South Burlington and Williston. The study was updated with additional existing condition information in 2010. The project area extends from the shared use path along Kennedy Drive in South Burlington to South Brownell Road in Williston, where a shared use path currently exists.

The 2006 study and 2010 Update contained the following sections: Project Background; Purpose and Need; Existing Conditions/Resources; Alternative Analysis; Preferred Alternative; and Cost Estimate.

The preferred alternative that was endorsed by the Town of Williston and the City of South Burlington generally follows the Kimball Avenue/Marshall Avenue corridor. This alternative received support as the least environmentally damaging practicable alternative (LEDPA) from the U.S. Army Corps of Engineers (USCOE) and the Vermont Agency of Natural Resources (VANR).

This study builds upon the previous studies and focuses on the Williston portion of the shared use path. The purpose of this study is to update land use and environmental data, determine any changes in existing conditions, confirm the previously preferred alternative remains preferred, develop a more detailed project design develop an updated cost estimate, and identify potential next steps to advance the project.

Figure 1 – Project Area Map (Source: Local Motion)
2.0  PROJECT PURPOSE AND NEED

The following project purpose and need statement updates the purpose and need statement from the 2006 study to reflect current conditions.

2.1  PROJECT PURPOSE

The purpose of this project is to provide a safe, visible, comfortable, convenient, and direct bicycle and pedestrian facility connecting existing and/or planned facilities in Williston and connecting to future facilities being planned in South Burlington. The project is to provide for pedestrians, and bicyclists of various ages and abilities, while maintaining safe and efficient vehicular conditions along Marshall Avenue.

2.2  PROJECT NEEDS

The project needs include:

1. Complete a missing bicycle facility link in the town and regional bicycle network. The City of South Burlington and the Town of Williston have developed extensive shared use path systems throughout their municipalities. However, there is no shared use path connecting the two systems. Developing a connection was the subject of a 2006 study, Shared Use Path Connection over Muddy Brook, that identified a shared use path along the Marshall/Kimball Avenue corridor as the preferred alternative. This corridor is also a component of the Cross Vermont trail, a multi-use, four season path across the width of Vermont. As properties along the Marshal Avenue/Kimball Avenue corridor have been developed sections of a share used use path have been constructed but gaps remain. The proposed Muddy Brook crossing project includes a shared use path. This project addresses the gaps in Williston to connect to South Burlington facilities.

2. Provide an inviting travel corridor that reinforces the Town’s and Region’s goals for pedestrian and bicycle mobility. The lack of connected bicycle and pedestrian facilities fail to provide residents and visitors with a safe and convenient active transportation corridor to link neighborhoods with commercial centers and workplaces.

3. Create a safe, comfortable, user-friendly, and desirable bicycle and pedestrian connection along Marshall Avenue for use by all age groups, experience levels, and purposes of trips. The current facility - the Marshall Avenue roadway - has vehicle speeds that result in challenging accommodations for pedestrians and bicyclists. It favors the higher speed movement of vehicles and discourages would-be commuters and recreational cyclists desiring to travel along Marshall Avenue. This connection would provide access to the regional bicycle network, commercial centers and workplaces and therefore it is expected to be used by a wide range of ages and abilities.
3.0 AREA CHANGES / DEVELOPMENTS

To identify pertinent area changes or developments, Stantec met with the Town of Williston and CCRPC staff, and field reviewed the project area. Based on this, the following sections describe the findings.

3.1 REGIONAL AND LOCAL PLANS AND STUDIES

Pertinent studies completed since the 2010 update include:

- 2018 Amended Williston Town Comprehensive Plan
- 2017 Active Transportation Plan, CCRPC
- I-89 Exit 12B Interstate Access Analysis Report
- Vermont Pedestrian and Bicycle Policy Plan – January 2008

Generally, these plans and studies recognize the benefit of planning and developing facilities for biking and walking. These benefits include:

- Provides More Transportation Choices - For those who are unable to drive or those who want to travel using bike/walk modes
- Enhances Economic Vitality - Increasing walkability can enhance economic vitality, for example Burlington’s Church Street
- Contributes to Safe Neighborhoods - More people on the streets can improve neighborhood safety
- Improves Local Air Quality - Improving bike and pedestrian connections could result in fewer cars and less air pollution
- Lowers carbon emissions - Fewer vehicles would reduce carbon emissions and combat climate change
- Lead to Better Health - Being more active lowers disease and obesity rates
- Saves Money - Human energy is less expensive than gasoline
- Enhances Social Equity - The young, old, and low income can all partake

In addition to these reasons, the public has identified walking and biking projects as transportation priorities - over more roads, efficiency and safety improvements and even transit.

The Amended Williston Comprehensive Plan states, “The overall objective of the town is to develop a comprehensive approach to transportation that emphasizes the safe and efficient movement of people and goods utilizing a variety of transportation modes that includes transit, pedestrian and bicycle facilities, paths and trails, as well as roads and highways for the movement of cars and trucks.” This plan includes Sidewalks, Paths and Trails and Connectivity of facilities as two of four important elements and priorities for transportation. The plan includes a map (Map 11) that shows the existing and proposed sidewalks and paths and includes a
3.2 ZONING/ DEVELOPMENTS

Based on discussions with Town staff, there were no pertinent changes to the zoning regulations for the project area since 2006. The following are completed or planned developments in the project area:

- At Marshall Avenue/Shunpike Road, northeast corner lot, corporate headquarters and truck refueling facility by Champlain Oil Company was constructed.
- At 1417 Marshall Avenue, Burlington Emergency and Veterinary Specialists constructed a new facility that included a 300 feet of shared use path along Marshall Avenue.
- Muddy Brook crossing culvert replacement on Kimball/Marshall Avenue is in the design and permitting phase and will include a shared use path contributing to this missing link in the regional bike ped network.
- Additional commercial buildings at Technology Park in South Burlington.
- New Williston Storage facility on Shunpike Road

There have been no significant development changes along South Brownell Road as it remains a mixture of residential and commercial development.

3.3 TRANSPORTATION FACILITIES

Since 2006 some of the pertinent transportation facility developments include:

- Construction of shared use path from Tilley Drive to Community Drive to Kimball Avenue. See Figure 2.
- Construction of approximately 2,300 linear feet of shared use path along Kimball Avenue at Technology Park between Potash Brook and Muddy Brook. See Figure 3.
- Installation of line striping on Kimball Avenue forming a delineated bike shoulder.
- Muddy Brook crossing culvert replacement on Kimball/Marshall Avenue is in the design and permitting phase and will include a shared use path contributing to this missing link in the regional bike ped network.
US Route 2 from Kennedy Drive to Taft Corners was resurfaced in 2019 and now includes an on-road bike lane/shoulder.

The Cross Vermont Trail Association (CVTA) continues to grow, seek funding, and develop improvements. CVTA has designated the Marshall Avenue corridor as part of the trail since it connects to adjacent shared use paths.

3.4 NATURAL / CULTURAL RESOURCES

Since 2006, the area has had no significant changes in the previously identified Natural/Cultural resources. The most environmentally sensitive area is the Class II wetland on the north and south side of Marshall Avenue between Leroy Road and Boyer Circle. Noteworthy updates to the natural/cultural resources include:

- There have been no significant changes to the wetlands in the project area. Based on a review of the Vermont Natural Resources Atlas, the mapped Vermont Class II wetland located on both sides of Marshall Avenue between Boyer Circle and Leroy Road remains, and a Vermont Advisory Wetland is located near the Shunpike Road intersection and extends upstream to the eastern end of Shunpike Road. All of these wetlands were identified in the 2006 study. A tributary to Muddy Brook is associated with the Advisory Wetland. Muddy Brook is located just west of the project area; this stream has a mapped ANR River Corridor. See Appendix B.

- The Vermont Wetland Rules were updated effective August 1, 2010, April 1, 2017, and again effective January 21, 2020. These updates included updated mapping, the addition of “presumptive” wetlands, clarifications, and more, but do not change the identification of wetlands located within the project area.
There are no stormwater impaired watersheds in the project area, but the Muddy Brook Tributary #4 and the tributary to Tributary #4 watersheds at the southeastern limits of the project area are on the 303(d) impaired watersheds list for elevated instream chloride levels. See Appendix B.

No Rare, Threatened, or Endangered (RTE) species are mapped within the project area, but all of Vermont is considered critical habitat for the state- and federal listed northern long-eared bat (Myotis septentrionalis). Trees and bridges provide potential habitat for this species. In addition, a state-significant natural community type – the wet sand-over-clay forest – is mapped on both sides of Marshall Avenue between Boyer Circle and Leroy Avenue in the vicinity of the mapped wetland. This community type is dominated by white pine (Pinus strobus) and red maple (Acer rubrum) with a dense shrub layer of huckleberry (Gaylussacia baccata) and highbush blueberry (Vaccinium corymbosum). It was identified during the 2006 study and was last surveyed by ANR in 2001. See Appendix B.

There are no priority wildlife habitat blocks or designated wildlife crossings mapped by ANR within the Project Area. The undeveloped portions of the project area provide general habitat for various woodland and suburban species, and the surrounding development reduces the value of the wildlife habitat. According to the Town of Williston, the mapped wet sand-over-clay forest is considered core habitat as a forested wetland, while this community type and the nearby Muddy Brook corridor are mapped by the Town as a wildlife travel corridor. This corridor was identified in the 2006 study.

The project area includes mapped Prime and Statewide Agricultural soils. See Appendix B.

The wetland assessment that was conducted within the preferred alternative project area on November 4, 2019 confirmed the presence of the two wetlands mapped by ANR. The following is a summary of these features.

Wetland A is the palustrine forested (PFO) wetland in the area mapped as a Class II wetland by ANR. Dominant vegetation includes red maple, balsam poplar (Populus balsamifera), red osier (Cornus alba), huckleberry, and sensitive fern (Onoclea sensibilis). Wetland A continues outside of the project area and is a Vermont Class II wetland with a regulated 50-foot buffer.

Wetland B is a palustrine scrub/shrub (PSS) wetland located south of Marshall Avenue near the Shunpike Road intersection. This wetland is associated with an unnamed tributary to Muddy Brook and is mapped as a Vermont Advisory wetland. Dominant vegetation includes broad-leaf meadowsweet (Spiraea latifolia), reed canary grass (Phalaris arundinacea), and narrow-leaf cattail (Typha angustifolia). This wetland extends outside of the Project Area and is associated with a stream as well as a wetland complex near Muddy Brook; it is likely a Vermont Class II wetland with a regulated 50-foot buffer. The wetland and stream corridor extend upstream to the eastern end of Shunpike Road culvert crossing.

Based on a review of the Conditional Use Determination (CUD) issued for Marshall Avenue construction in 1997, the Class II wetland and significant habitat type were recognized, and impacts were acknowledged at that time. The Town of Williston was required to place deed restrictions on the town-owned forested wetland parcel to preserve it as open space in perpetuity. The CUD condition N notes that “no additional disturbances... shall be allowed to the wetland or buffer zone in question.
including the removal of vegetation, filling, grading, draining, excavating, alteration of the flow of water or similar activities.” However, the Declaration of Conservation Restrictions for the property, Section III, states that the Town has the right to construct “…sidewalks and nonmotorized recreation trails.” See Appendix B.

• Based upon updated US Army Corps of Engineers regulations and mitigation requirements, it is likely that direct wetland impacts resulting from the project would require compensatory mitigation via payment into the Ducks Unlimited In Lieu Fee (ILF) account. For projects in the Champlain Valley, impacts are assessed at $180,194.54 per credit, and these may range from a 1:1 to 2:1 ratio. For example, a project with 20,000 SF of direct wetland impact may incur an ILF of $82,734 to $165,468.

• Based upon updated Vermont Wetlands Program application and impact fees, direct wetland impacts are assessed at $0.75/SF and buffer impacts are assessed at $0.25/SF. For a project with 20,000 SF of wetland impact, the fee would be $15,000, and for 15,000 SF of buffer impact, the fee would be $3,750, for a total impact fee of $18,750. An additional administrative fee of $240 is also required. Finally, the Vermont Wetlands Program may require additional compensatory mitigation for impacts to the rare habitat. According to Tina Heath of the Vermont Wetlands Program, these additional measures may include requiring the Town to seek additional conservation easement(s) on another property or properties that have the same contiguous natural community on site in order to protect the remaining functions of the wetland.

• There have been no updates to the cultural resources identified in the 2006 study. Based on that information, there are no historic resources located within the Marshall Avenue project area. Additional sensitive areas were identified in the vicinity of Muddy Brook and in the vicinity of the tributary to Muddy Brook at the northwestern end of the preferred path alignment. Phase 1 archaeological studies may be warranted in these areas.
4.0 PREFERRED ALIGNMENT ALTERNATIVE

In 2006, it was determined the preferred alternative to connect the existing South Burlington and Williston shared use paths was to construct a shared use path along Kimball and Marshall Avenue corridor, known as alignment A-B3 in the 2006 study. The Williston portion is from the Muddy Brook crossing and extending eastward approximately 3600 feet and connecting to an existing shared use path approximately 300 feet west of South Brownell Road. The shared use path is planned along the south side of Marshall Avenue since all the existing and planned shared use path segments along Marshall are on the south side and this planned path will connect them.

The 2006 study determined an on-road facility will not meet the project’s purpose and need and will not be sufficient for the majority of users. The 2006 study did consider the following alternative alignments for a shared use path:

1. The US Route 2-Williston Road corridor was discussed and discounted for the following reasons: reduced safety with higher traffic volumes, higher vehicle speeds and high frequency of drives/accesses to cross; difficulty and distance connecting to potential users from the south; impactful and costly crossing of Muddy Brook and limited land available.

2. Two off-roadway corridor alignments, known as Alternatives B1 and B2 in the 2006 study, generally turned south off Kimball Avenue at Community Drive, and then turned eastward to cross Muddy Brook and connected to Marshall Avenue. These alignments while providing a more natural setting required a new crossing of Muddy Brook and had greater impact to wetlands, conservation zones, existing ACT 250 permit conditions, and wildlife habitat resulting in a more rigorous, and likely longer, permitting process.

3. A combination of Shunpike Road-South Brownell Road corridors, known as Alternative C in the 2006 study, connected to the shared use path on US 2 Route. This alignment, while following existing roadways, impacted a Class III wetland on Shunpike Road, was less safe as it required seven street crossings and eighteen driveway crossings including a crossing of Marshall Avenue at Shunpike Road intersection with limited sight distance, and impacted the front yards and landscaping of 13 residences. The previously-identified Class III wetland is now likely considered a Class II wetland due to its association with a stream and connectivity to the Muddy Brook wetland system. As a result, this Alternative would have impacts to a Vermont-regulated wetland and its buffer.

Due to its greater safety benefits, fewer property impacts and lower costs, the alignment along the Marshall Avenue corridor, Alternative B3, was selected and endorsed as the preferred alternative. This alternative does impact a Class II wetland owned by the Town of Williston and requires avoidance and minimization measures. In 2006 the USCOE and VANR supported the B3 alignment as the least environmentally damaging practicable alternative (LEDPA).

Since 2006 there have been no significant changes to environmental resources, land use/developments, or transportation facilities that change the reasons that Alternative B3 is the preferred alternative. There have been some sections of the shared use path completed or planned by developments along the Marshall Avenue/Kimball Avenue corridor. It is expected without this project additional sections will be constructed as vacant land parcels are developed.
or existing developed parcels redeveloped. With this occurring and there being fewer gaps in the shared use path system, it is expected additional bicyclists and pedestrians will be using this corridor and will be utilizing the roadway shoulders where a shared use path is not completed. This preferred alternative continues to address the project’s purpose and need.

While there has been a shared use path connection of Tilley Drive to Community Drive since 2006, this connection does not change the preferred alternative. As conditions regarding the previously studied alternatives B1 and B2 have not changed, the preferred crossing of Muddy Brook remains along the Marshall/Kimball Avenue corridor, known as Alternative B3 in the 2006 study. A shared use path is a component of the planned Muddy Brook culvert replacement. This project is planned to connect to the Muddy Brook Crossing project to form a more complete connection of existing shared use path facilities.
5.0 PREFERRED ALTERNATIVE EVALUATION

A preferred alternative plan with contours for Marshall Avenue was developed utilizing existing LiDAR from Vermont Center for Geographic Information (VCGI) as a base. Right-of-way parcels, existing utilities, and drainage facilities from GIS databases were added to the base. Approximate wetland limits were added to the base plan based on field review and elevation contours. The typical section, as shown below from the 2006 study, which included a 10-foot buffer between the roadway and shared use path, was used to develop the preferred alternative plan as shown in Appendix A. This plan development included a 3-D model of the proposed shared use path on the south side of Marshall Avenue and approximate construction limits are shown in green.

Figure 4 Typical Shared Use Path Section

The western end of the shared path ties into the shared use path that is planned to be constructed with the replacement of the failed culvert at the Muddy Brook Crossing. Just to the east of the Marshall Avenue/Shunpike Road intersection is an existing 42-inch diameter culvert crossing Marshall Avenue. A culvert headwall is proposed on the culvert’s southern end to support the shared use path and minimize impact to the adjacent wetlands.

To the west of the Shunpike Road intersection the shared use path alignment shifts to be approximately 25 feet from the south edge of Marshall Avenue’s pavement. This allows the proposed path to tie into the 300 feet of shared use path constructed by the Burlington Emergency and Veterinary Specialists (BEVS) development at 1477 Marshall Avenue and provide a shared use path buffer from the roadway that can be considered for stormwater treatment, such as bio-retention swale/basin or infiltration swale/basin. For this area, right-of-way acquisition will be required from BEVS and FEDEX as the shared use path is up to 20 feet beyond the highway right-of-way.
West of BEVS the alignment shifts toward the roadway and a 4-foot minimum buffer from the shared use path to the roadway is proposed. This is to minimize impacts to existing electrical transformers and minimize property impacts and the need for right-of-way acquisition from FEDEX. This alignment requires replacing the existing roadside drainage swale with a closed drainage system consisting of inlets and pipes.

The shared use path crosses Leroy Road and includes crosswalk pavement markings, signs and detectable warnings and continues westward as it ties into 200 feet of completed 10-foot wide shared use path along Best Tile of Vermont property. Leroy Road traffic is stop controlled. The next parcel to the west of Leroy Road is owned by the Town of Williston. This parcel is primarily a conservation parcel that contains a Class II wetland. The wetland is generally at the existing roadway’s toe of slope, the roadway width is 30 feet and meets Town of Williston street standards, and Marshall Avenue is 3 to 4 feet above the wetland elevation. The shared use path crosses approximately 800 feet of this wetland and impacts are minimized by the following:

1. Reduced the green buffer strip between the path and roadway from 10 feet to 4 feet. This 4-foot buffer provides a safety separation of the shared use path users from traffic, a snow storage area, and a vegetated stormwater buffer between the roadway and the wetland. It is less than the 5 feet minimum indicated in the VTrans Pedestrian and Bicycle Facility Planning and Design Manual.

2. Steepen the slope from the shared use path to the wetland to a 2 (horizontal) :1 (vertical) slope, so as the slope width is approximately 6 feet. A typical slope is 4:1 for the safety of bicyclists.

A typical section illustrating these measures is shown in the following figure. These measures reduce the wetland impact, not including buffer area, to approximately 20,000 SF. The previous issued wetland permit #199501283, issued for the construction of Marshall Avenue included a condition that the work area in wetland areas be no more than 15’ beyond the proposed toe of slope of the roadway. The typical section in the wetland area widens the embankment by 14 feet so permanent disturbance is expected within the 15 feet. There is typically erosion control and/or protective fencing about 5 feet beyond the toe of slope and that would provide a temporary disturbance and would be restored after construction. It is important to note the Declaration of Conservation Restrictions associated with this permit, Section III, states that the Town has the right to construct “…sidewalks and nonmotorized recreation trails.”
MARSHALL AVENUE SHARED USE PATH CONNECTION

Figure 5 Shared Use Path at Wetlands

The wetland impacts associated with the Muddy Brook Crossing project are not included as that is a separate project which involves a needed culvert replacement and is seeking its own permit regardless of this project.

Reducing the existing roadway width and/or the proposed shared use path width was considered. The roadway width of Marshall Avenue in this area is already at the Town of Williston minimum street standard. Although the minimum shared use path width allowed by standards is 8 feet, that reduced width is rare and is less safe for users due to increased user conflicts with clashes between different path user skill levels and speed, such as pedestrians and bicyclists and overcrowding.

After crossing the wetland area, the shared path extends another 600 feet westward and connects to the existing shared use path 220 feet east of Marshall Avenue and South Brownell Road intersection. In this area a 4 to 10-foot wide buffer is provided between the roadway and shared use path and right-of-way acquisitions will be needed from 4 properties.

An update of estimated costs is as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Preferred Alternative</th>
</tr>
</thead>
<tbody>
<tr>
<td>SU Path Construction Costs</td>
<td>$ 1,200,000</td>
</tr>
<tr>
<td>Preliminary Engineering (15%)</td>
<td>$ 180,000</td>
</tr>
<tr>
<td>Wetland Mitigation</td>
<td>$ 100,000</td>
</tr>
<tr>
<td>Municipal Project Management (10%)</td>
<td>$ 120,000</td>
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<tr>
<td>ROW costs ($100,000/acre)</td>
<td>$ 20,000</td>
</tr>
<tr>
<td>Construction Engineering (10%)</td>
<td>$ 120,000</td>
</tr>
<tr>
<td>Total project costs</td>
<td>$ 1,740,000</td>
</tr>
</tbody>
</table>

A breakdown of these costs is shown in Appendix C.
5.1 POTENTIAL NEXT STEPS

In the past, as development along Marshall Avenue occurred, portions of the shared use path were constructed by the developments. This practice should continue, although there are no imminent developments permitted currently. As subdivisions may occur along Marshall Avenue, accommodating the eventual shared use path should be considered.

Assuming this project will be funded by state and federal funds, the typical next step in the process is to develop conceptual plans and complete the National Environmental Policy Act (NEPA) documentation, (i.e. Categorical Exclusion). To fund this work, the following funding sources may be possible:

- Local Development Impact Fees.
- VTrans Transportation Enhancements program.
- VTrans Bicycle and Pedestrian Program.
- Federal Earmark Legislation.
- CCRPC Transportation Planning funds.
Potential strategies to advance this project include:

- Conducting a Phase 1 archaeological investigation in the identified sensitive areas.
- Coordinating and integrating the path alignment with the undeveloped lots along Marshall Avenue in Williston.
- Pursuing the permitting of wetlands impacts between Leroy Drive and Boyers Circle early in the process.
APPENDIX B
Natural Resources
Marshall Ave SUP - Town Land
Vermont Agency of Natural Resources

Preferred Alternative Project Area

NOTES
Map created using ANR's Natural Resources Atlas

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. ANR 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.

December 12, 2019

Town Land: Williston Production Park

Legends:
- Designated Public Sites
- Dog Sled Trail
- Bike Trail
- Horse Trail
- Snowmobile Trail
- Wildlife Management Areas
- Fee ownership
- Non-fee interest
- Riparian Lands
- Other Managed Lands
- Access Area
- FWD miscellaneous property
- Fish Culture Station
- Conservation Camp
- Parcels (standardized)
- Parcels (non-standardized)
- Roads
- Interstate
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local
- Not part of function Classification System
- Waterbody
- Stream
- Town Boundary

WGS_1984_Web_Mercator_Auxiliary_Sphere
© Vermont Agency of Natural Resources

1" = 636 Ft. 1cm = 76 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

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Marshall Ave SUP - Hazardous Sites
Vermont Agency of Natural Resources

Preferred Alternative Project Area

NOTES
Map created using ANR's Natural Resources Atlas

December 12, 2019

THIS MAP IS NOT TO BE USED FOR NAVIGATION

LEGEND
- Hazardous Site
- Parcels (standardized)
- Parcels (non-standardized)
- Roads
  - Interstate
  - Principal Arterial
  - Minor Arterial
  - Major Collector
  - Minor Collector
  - Local
  - Not part of function Classification System
- Waterbody
  - Stream
- Town Boundary

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Conditional Use Determination
Section 8 - Vermont Wetland Rules

In the matter of:

Town of Williston
Williston Planning and Zoning
Williston Town Office
Williston, VT 05495

Application for the construction of a road through a Class Two wetland and buffer zone to connect Adams Park to Production Park.

Marshall Avenue Extension, Williston
File # 91-034

The Vermont Agency of Natural Resources received an application for a Conditional Use Determination from the Town of Williston through their representative, Wm. D. Countryman, representative for the Town of Williston, to construct a road connecting Marshall Avenue and Production Park. This application and all revisions of have been publicly posted and notice sent to all parties as required by Section 8.3 of the Vermont Wetland Rules. Comments were received from the Williston Conservation Commission during both notice periods.

Findings of Fact

After careful examination of this application, the Agency finds:

1. The Agency of Natural Resources received a complete application from Wm. D. Countryman, Environmental Assessment and Planning, representative for the Town of Williston for Conditional Use Determination #91-034 on October 6, 1995 and put on public notice through December 12, 1995. A revised application was accepted as complete on March 28, 1997 and put on public notice through April 18, 1997.

2. The wetland and adjacent 50 foot buffer zone are located west of South Brownell Road and south of Shunpike Road in Williston, Vermont. Two industrial parks abut the wetland; Production Park to the north and Adams Park to the south. Muddy Brook is located to the west of the wetland.

3. The subject property is owned or within a right-of-way controlled by the Town of Williston.
4. Catherine L. O’Brien, Assistant Wetlands Coordinator conducted a site visit to the subject property with Steve Znamierowski, Williston Zoning Administrator, on February 8, 1991. She conducted a number of additional site visits in 1995 and 1996 including one with Laura Eaton, U.S. Fish & Wildlife Service, and Marty Abair, Army Corps of Engineers, on May 2, 1995 and one with Dan, Leo and Patrick O’Brien of O’Brien Brothers Realty, David Spitz, Williston Town Planner, Arthur Gilman and Marty Abair on September 6, 1996. The Vermont Wetlands Office staff also made a joint site visit to the property to evaluate the wetland impacts.

5. The subject wetland is mapped as a Palustrine Forested wetland (PFOI/4Y) on the National Wetlands Inventory map and is designated as a Class Two wetland by the Water Resources Board in the Vermont Wetland Rules.

6. The wetland on the subject property is part of an approximately 45 acre wetland complex associated with Muddy Brook which abuts the end of this wetland, approximately 1000 feet distant. The portion of the wetland which would be impacted by this proposal is forested with a mix of red maple and hemlock. Near the eastern end of the wetland there is an understory of high-bush blueberry, leatherleaf, sheep laurel, and wild raisin shrubs. There is a prominent hummock and hollow microtopography. The hollows have little vegetation due to the presence of standing water for significant periods of time. The hummocks are vegetated with sphagnum moss and royal ferns. The hydrology in the western portion of the wetland is drier than the eastern portion. Hemlocks are the dominant species, with cinnamon fern and spinulose fern in the understory. The soils are fine sandy loam, underlain with very compact silt or clay.

7. The purpose of this proposal is to provide a connection between the existing Marshall Avenue and Shunpike Road (via Adams Park and Leroy Road) as a component of the town’s transportation plan. It will provide for through-traffic from Taft Corners, Brownell Road, and points south and east to Shunpike Road, Kimball Avenue, and points south and west. The town’s traffic analysis finds that this will alleviate congestion on U.S. Route 2 and Taft Corners.

8. This proposal involves paving a two-lane road with a traveled portion 30 feet wide, shoulders 2 feet wide, and 2:1 side slopes, each six feet wide, for a typical width of 44 feet. The road bed will be elevated two to three feet from the existing ground surface. There will also be an 8" water line buried 6' beneath the roadway. Two culverts will be placed to provide for equalization of water levels and for the passage of amphibians and small mammals. The road is designed to Town of Williston standards. The roadway length will be approximately 1150 feet. The proposal would result in the loss of 32,670 square feet of Class Two wetland and 10,379 square feet of buffer zone.
9. The applicant has submitted Conditional Use Determination application #91-034, and supplemental information including a 2/14/97 letter describing the proposed wetland mitigation measures and 5 attached exhibits, a draft copy of the "Declaration of Conservation Restrictions", a draft copy of the "Grant of Conservation Restrictions", a "Planting Plan for Wildlife Corridor Willis Property, Williston, Vermont", site plans entitled "Marshall Avenue Station 62 + 77 to Station 72 + 14" by Krebs & Lansing Consulting Engineers, Inc., dated 1/10/95, "Profile, Marshall Avenue" dated 1/10/95, and "Overall Site Plan, Production Park" dated 2/9/96 and last revised on 1/27/97.

10. The protected functions of the wetland in question include at least the following: water storage for flood water and storm runoff (5.1), surface and groundwater protection (5.2), wildlife and migratory bird habitat (5.4), hydrophytic vegetation habitat (5.5), open spaces and aesthetics (5.9) and erosion control through binding and stabilizing the soil (5.10).

11. The following functions are either not present or are present at such a minimal level as to not be protected functions: fisheries habitat (5.3), threatened and endangered species habitat (5.6), educational and research in natural sciences (5.7) and recreational value and economic benefits (5.8).

12. The forested wetland stores water in the hollows during periods of high water. A drainage ditch was constructed along the west side of the wetland with perpendicular ditches down to Muddy Brook. The top of the southern ditch currently has erosion problems. Fletcher Potter with the Natural Resources Conservation Service feels that the cone of depression from these ditches is narrow; that is, the water table is not significantly lowered from the ditches. There is no other outlet for water out of the wetland. The loss of storage will not have a significant increase in runoff out of the wetland and therefore will have minimal impacts to public safety or property downstream, to erosion or aquatic life habitat.

13. The forested wetland has the physical characteristics to provide water quality treatment. Now there is little opportunity present for the wetland to provide this function. Substantial amounts of trash blows into the forested wetland from the surrounding development. Runoff from the surrounding development is directed away from the parcel. Following development of the project, there will be some input of pollutants to the wetland, including sand, oil and petroleum products. The water from the road will be treated by grassed shoulders adjacent to the road, prior to its discharge into the wetland. As there is no outlet out of the wetland other than the ditches on the west side of the wetland, there will be minimal water quality impacts to Muddy Brook or the adjacent wetland complex.
14. The Muddy Brook wetland complex provides fisheries habitat, open space and aesthetics and erosion control functions. As there will be no impacts in the vicinity of this wetland complex, there will be no adverse impacts to these functions.

15. The forested portion of the wetland is estimated to be 45 acres in size originally but due to incremental fills for industrial development that occurred since 1986, the remaining wetland is approximately 20 acres in size. Laura Eaton with the U.S. Fish & Wildlife Service found 17 species of bird species within the forested wetland. Arthur Gilman found an additional 8 species of birds. She found that the wetland also provides the habitat for a number of small mammals, amphibians and snakes. She found that the forested wetland, field and brook are functioning as a unit that provides relatively functional habitat within an urbanizing landscape. The proposed project will divide the forested wetland. She states that the blueberry swamp in the eastern portion will be isolated from this unit and will be virtually useless as wildlife habitat. The forest will no longer be a contiguous 20 acre block but will become predominantly edge habitat. The construction of the road, combined with the previous impacts to this wetland, is likely to result in adverse impacts to the wildlife function. A number of measures are proposed to minimize the adverse impacts to this function (see finding 18 below).

16. The forested wetland community is an uncommon community within this portion of Vermont. Only one other similar community is known within Chittenden County. It therefore makes an important contribution to Vermont’s natural heritage and biodiversity. The proposed road will divide this community in half. This proposal is likely to have an adverse impact to the hydrophytic vegetation habitat function. Measures have been proposed to minimize the adverse impacts to this function (see finding 18 below).

17. The Conservation Commission raised concerns regarding the use of road salt on the new roadway. They recommended that a no or low salt application policy for the portion of the road passing through the blueberry swamp. Numerous studies have shown that road salt has adverse impacts on vegetation and can result in changes to the plant community (Effects of Road Deicing Salts on Wetlands, Mali and McBride, 1991).

18. An alternatives analysis was conducted to study alternative layouts for the Marshall Ave road connection and a “no-build” alternative. The analysis concluded that the proposed alignment has the least environmental impacts of the potential alignments and that the “no-build” option was not feasible for meeting the town’s traffic concerns.

19. To mitigate for any adverse impacts to the wildlife and migratory bird habitat or the hydrophytic vegetation functions, the applicant will acquire the 14+/- acre parcel containing the majority of the forested wetland. Conservation easements covering portions of three properties will protect in perpetuity the remainder of the forested wetland.
on these properties, the adjacent 50 foot buffer zone along the northern portion of the forested wetland, a wildlife corridor along Muddy Brook (average width of 150 feet) and a 100 foot wide conservation strip between the Muddy Brook corridor and the forested wetland. The 100 foot side strip will be planted to enhance its value. Additionally, the application states that at least two culverts will be placed under the new road to allow for the passage of amphibians. The site plans referenced above show only one of these culverts. The applicant will provided modified plans showing the location of the other culvert prior to the commencement of this project. These measures will minimize impacts to the protected functions.

20. If the project is constructed according to the specifications of the application and accompanying site plans, and the conditions of this Conditional Use Determination, the resulting wetland filling and alteration is not expected to result in any violations of the Vermont Water Quality Standards.

Conclusions of Law

Based on information provided by the applicant and their representatives in the application for Conditional Use Determination, the Agency of Natural Resources concludes:

Under Section 8 of the Vermont Wetland Rules, effective February 23, 1990, the Secretary may authorize conditional uses in a significant wetland or in its adjacent buffer zone. The Rules state that each Class Two wetland is presumed to serve all of the wetland functions identified in the Rules (Section 4.2b). Protected functions are distinguished from other wetland functions in Section 2.20, as those functions that make a wetland so significant they merit protection under these rules. Under Section 8.5a, the Secretary may only authorize a conditional use when it is determined that the proposed conditional use will have no undue adverse effect on the protected functions, unless the Secretary determines such impacts are sufficiently mitigated.

If there is an undue adverse impact on any of the protected functions, the proposed conditional use must first show that it cannot practicably be located on an upland portion of the site or on another site owned, controlled or available to satisfy the basic project purpose and then that all practicable measures have been taken avoid adverse impacts on the significant functions.

The Agency determines that the proposed conditional use described in the Findings of Fact and in Conditional Use Determination application #91-034 will result in adverse impacts to the wildlife and migratory bird habitat and hydrophytic vegetation habitat functions of the Class Two wetland and associated buffer zone on this subject property. The Agency determines that the applicant did satisfactorily demonstrate that there were no practicable
alternatives for Marshall Avenue Extension that would satisfy the basic project purpose and have a less environmental impact. The Agency further determines that the proposed mitigation measures will minimize impacts to the wetland functions and values to the extent necessary to achieve no net undue adverse impacts.

Decision

The Vermont Agency of Natural Resources finds, that on the basis of the information provided in the application for Conditional Use Determination, there is reasonable assurance that the proposed conditional use will have more than a minimal adverse effects on several of the protected functions of the significant wetland on this property, but finds that these impacts were sufficiently mitigated to achieve no net undue adverse effects. This Conditional Use Determination is therefore approved with the following conditions:

A. All activity must be carried out consistent with the proposal in Conditional Use Determination Application #91-034 and all submittals listed in Finding of Fact #9 above.

B. Prior to any earthwork or vegetation removal, the applicant or their representative, shall install a snow fence at the limits of disturbance along both sides of the road, as shown on the above referenced site plans, in the wetland and buffer zone to prevent clearing or the operation of heavy equipment outside of the approved limits of disturbance.

C. Following the installation of the snow fence, the applicant shall notify the Vermont Wetlands Office in writing at least one week prior to the commencement of vegetation removal or any earthwork so that a site inspection can be performed.

D. The applicant or their representative shall install a continuous line of silt fence prior to any construction at the edge of the proposed work in the wetland and 50 foot buffer zone and shall be regularly maintained. Sediments shall be cleaned out when they have reached half the height of the fence, and before major predicted rainfall events. Removed sediments shall be disposed of in a stable, upland area outside the 50 foot buffer zone. All disturbed soils shall be seeded and mulched immediately following final grading. All sediment barriers shall be removed following the successful establishment of vegetation.

E. Restrictions shall be placed on the deed for the 14 +/- acre parcel in order to preserve it as open space, in perpetuity (with the exception of that area impacted by the roadway construction) as described in the “Declaration of Conservation Restrictions”. The applicant shall submit a final, signed copy of this document to the Vermont Wetlands Office for review and written approval prior to any clearing or earthwork on this project. These deed restrictions shall be duly executed and recorded with the Williston Town Clerk. The applicant shall supply the Vermont Wetlands Office with a copy of correspondence with the Town of Williston certifying that the restrictions have been recorded.
F. Restrictions shall be placed on the deed for the O'Brien Brothers/Forest Park Realty parcel in order to preserve the wildlife corridor along the east side of Muddy Brook, the 100 foot wide conservation strip, and the 50 foot buffer zone from the northernmost wetlands on the permittee’s property as open space, in perpetuity as described in the “Grant of Conservation Restrictions”. The applicant must submit a final, signed copy of this document to the Vermont Wetlands Office for review and written approval prior to any clearing or earthwork on this project. These deed restrictions shall be duly executed and recorded with the Williston Town Clerk. The applicant shall supply the Vermont Wetlands Office with a copy of correspondence with the Town of Williston certifying that the restrictions have been recorded.

G. Prior to commencement of the project, the applicant shall provide the Vermont Wetlands Office with a modified site plan showing the location of at least two 24 inch diameter culverts within the wetland crossing. One culvert will be in the location shown on the site plans and the second culvert shall be in a location deemed most suitable for amphibian passage.  

H. The applicant, or their representative, shall stabilize, seed and mulch, the portion of the ditch located within the 100 foot wide conservation strip which is currently unstable and subject to erosion.

I. The upper edge of the wildlife corridor along Muddy Brook and both edges of the 100 foot wide conservation strip shall be marked with a row of cedar trees, spaced no more than 10 feet apart, to clearly delineate the preserved area.

J. The planting of the conservation strip shall be prior to or concurrent with the construction of the road. The plantings shall be monitored for three years following their planting as described in the "Monitoring Plan for Mitigation Travel Corridor - Marshall Avenue - Williston, VT”. All diseased or dying plants shall be replaced. Reports shall be submitted to the Vermont Wetlands Office as described in the above referenced document. The conservation strip and the corridor along Muddy Brook shall be left to vegetate naturally following the monitoring period. No clearing or other disturbances shall be allowed within these areas.

K. No woody vegetation will be cleared along the road outside of the limits of clearing, except for dead or dying branches overhanging the road which present a safety hazard.

L. Road salt (sodium chloride) shall not be allowed to be used on the section of the road through the wetland and buffer zone. The applicant shall install road signs at the outer edges of the buffer zones on both sides of the wetland which state that the use of road salts is prohibited. Calcium chloride may be used in moderation on this section instead to prevent icy conditions.

M. The applicant, or their representative, shall be responsible for annually removing all trash within the wetland and adjacent 50 foot buffer zone. All such trash removal shall be done manually.

N. No additional disturbances, other than as specifically permitted by this decision, shall be allowed to the wetland or buffer zone in question including the removal of vegetation, filling, grading, draining, excavating, alteration of the flow of water or similar activities.
O. The applicant shall have this Conditional Use Determination recorded in the land records of the Town of Williston for all affected lands. The applicant shall supply the Vermont Wetlands Office with a copy of correspondence with the Town of Williston certifying that the restrictions have been recorded.

P. Within 30 days upon completion of the proposed work in the wetland and buffer zone, the applicant or their representative shall supply the Vermont Wetlands Office with a letter certifying that the project was constructed in compliance with the conditions of this determination. Noncompliance with this condition shall make this decision void.

Q. All proposed activities in the wetland and adjacent 50 foot buffer zone, carried out in compliance with Condition A, must be completed within 3 years of the date of this determination.

R. The applicant shall monitor the portion of the wetland within 50 feet of either side of the road in question annually during early July for five years following construction for the nuisance plant species purple loosestrife (Lythrum salicaria) and common reed (Phragmites australis). All nuisance plants found shall be pulled by hand and disposed of by burial or burning in a non-wetland location.

2. The Agency maintains continuing jurisdiction over this project and may at any time order remedial measures be taken if it appears likely that adverse impacts to the protected functions and values will occur.

3. This Conditional Use Determination does not relieve the applicant of responsibility to comply with any other applicable federal, state, and local laws, regulations, and permits.

4. By acceptance of this Conditional Use Determination the applicant agrees to allow representatives of the Department of Environmental Conservation access to the property covered by the Conditional Use Determination, at reasonable times, for the purpose of ascertaining compliance with the Vermont Wetland Rules and the Vermont Water Quality Standards.

5. The Department, by issuing this Conditional Use Determination, accepts no legal responsibility for any damage direct or indirect of whatever nature and by whomever suffered arising out of the project described.

Canute E. Dalmasse, Commissioner
Department of Environmental Conservation

by: Wallace McLean
Director, Water Quality Division

Dated at Waterbury, Vermont
this 2nd day of May, 1997.
DECLARATION OF CONSERVATION-RESTRICTIONS

KNOW ALL PERSONS BY THESE PRESENTS that the Town of Williston, a Vermont municipal corporation situated in the County of Chittenden and State of Vermont, on behalf of itself and its successors and assigns, and pursuant to Chapter 34 of Title 10 of Vermont Statutes Annotated does hereby impose perpetual conservation restrictions on that parcel of land situated in the Town of Williston, County of Chittenden and State of Vermont, described in Schedule A attached hereto and incorporated herein (the "Property")

The conservation restrictions hereby imposed consist of covenants on the part of the Grantor to do or refrain from doing the several acts set forth below. It is hereby acknowledged that these covenants shall constitute a servitude upon the Property and run with the land in order to conserve and preserve the Property for present and future generations largely in its natural condition.

I. Purposes of Conservation Restrictions

1. The Property is a natural wetlands area which provides significant habitat for fish, wildlife and plants and has substantial value as a natural, scenic and educational resource.

2. Preservation of the Property will yield a significant public benefit.

3. Preservation of the Property is consistent with federal, state and local governmental conservation policies.

4. The Grantor recognizes the natural, scenic, aesthetic and special character of the Property and has the purpose of conserving the natural values of the Property by the imposition of conservation restrictions on, over and
across the Property, which shall conserve the wetland values of the Property, conserve and protect the special animal, fish and plant populations thereon, and prevent the use or development of the Property for any purpose or in any manner which would conflict with the maintenance of the Property in its current natural, scenic and wetland condition for this generation and future generations.

5. "Natural, scenic, aesthetic and wetland condition" shall, without limiting the generality of the terms, mean the condition of the Property at the time of this Declaration as evidenced by reports, photographs, maps and scientific documentation possessed, (at present or in the future) by the Grantor, the State of Vermont and/or the United States of America.

II. Restricted Use of the Property

The restrictions hereby imposed upon the Property, and the acts which the Grantor shall do or refrain from doing, are as follows:

1. There shall be no temporary or permanent building or structure of any kind erected, placed or maintained on the Property.

2. The Property shall remain in its existing natural state.

3. There shall be no draining, dredging, filling, grading, or alternation of the water flow or cutting, clearing, or removal of vegetation on the Property, nor shall there be any changes in the topography of the land.

These perpetual conservation restrictions shall run with the land and shall be enforceable against all future owners and tenants of the Property in perpetuity and may be amended or modified only with the approval of the U.S.
Army Corp. of Engineers and the Vermont Agency of Natural Resources, or in the event that such agencies are no longer in existence, the appropriate successor federal and state agencies vested with such similar powers and duties.

III. Permitted Uses of the Property

Notwithstanding the foregoing, Grantor, and its successors and assigns, shall have the right to construct, maintain, repair and replace Marshall Avenue, so-called, in the general location depicted on a plan entitled "Overall Site Plan, Production Park, Shunpike and So. Brownell Roads, Williston, Vermont" by Krebbs and Lansing Consulting Engineers, Inc. dated February 9, 1996, last revised February 24, 1997 and recorded in Map Slide 491/A of the Town of Williston Land Records, along with the necessary utilities and other appurtenances including, but not limited to sidewalks and nonmotorized recreation trails.

IV. Miscellaneous Provisions

1. Grantor shall transfer the conservation restrictions herein declared only to a State of Vermont Agency of Natural Resources; United States of America, Army Corp. of Engineers; or a qualified conservation organization that agrees to enforce the conservation restrictions of this Declaration.

2. In the event the conservation restrictions herein imposed may be extinguished by eminent domain or other legal proceedings, Grantor shall be entitled to any proceeds which pertain to the extinguishment of such rights and interests.
3. In any deed conveying an interest in all or part of the Property, Grantor shall make reference to the conservation restrictions herein declared and shall indicate that such restrictions are binding upon all successors in interest in the Property in perpetuity.

4. The term "Grantor" shall include the successors and assigns of the Town of Williston.

IN WITNESS WHEREOF, the Town of Williston, by and through its Town Manager, William Dugan, has hereunto set its hand this 30 day of \text{MAY}, 1997.

IN THE PRESENCE OF: \\

\text{STATE OF VERMONT} \\
\text{CHITTENDEN COUNTY, SS.}

At Williston, Vermont, this 30 day of \text{MAY}, 1997, William Dugan, Town Manager and Authorized Agent of the Town of Williston, personally appeared, and he acknowledged this instrument, by him sealed and subscribed, to be his free act and deed and the free act and deed of the Town of Williston.

Before me, \text{Nathaniel K. Snyder} \\
Notary Public 2101999
SCHEDULE A

Being a parcel of land comprising of 13.91 acres, more or less, as depicted on a plan entitled "Boundary Survey: Property to be Transferred from Daniel J. O'Brien and Leo O'Brien, Jr. to the Town of Williston" prepared by Krebs and Lansing Consulting Engineers, Inc. dated February 24, 1997, and recorded as Map Slide 492A of the Town of Williston Land Records.

APPENDIX C
Cost Estimate
CCMPO Shared Use Path Crossing Muddy Brook  
South Burlington - Williston  
DH # 6320020.08

Cost Summary Estimate  
Prepared By: GAE  
04/08/2020  
Checked By: 
Revised By: 

Preferred Alternative  
Cost Summary Breakdown by Municipality

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<th>Preferred Alternative</th>
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<tr>
<td>Construction Engineering (10%)</td>
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Total project costs $1,707,000
**Construction Cost Estimate**

Prepared By: GAE 4/8/2020  
Checked By: 
Revised By:

**Preferred Alternative - Muddy Brook Tributary Crossing to S Brownell Road**

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Say $1,250,000
Introduction

Greg Edwards introduced all participants via Skype and shared his screen to provide an agenda and project mapping. Greg gave a brief history of the project as included in the meeting invitation:

The Town of Williston is pursuing the development of a Shared Use Path along Marshall Avenue, from the South Burlington town line to South Brownell Road. This facility was initially scoped and discussed with ANR and ACOE in 2006. At that time, the project alternatives were discussed at the VTrans June 2006 Agency Coordination Meeting. It was concluded that an alignment along Marshall Ave was the LEDPA and the project would advance that alternative.

The Town is now positioning to pursue funding for the final design and construction and is advancing the conceptual design. Stantec has updated the plan of Shared Use Path and determined the approximate temporary and permanent wetland impacts as follows: 20,000 SF of wetland impact, and 15,000 SF of ANR buffer impact. Please note that these impacts are estimates and official wetland delineations have not been updated.

For the Town’s planning purposes we would like to review the project with you and understand what guidance you may have as we advance the project.

- Mike Adams noted that the road (Marshall Ave) is relatively new (built in the 1990s?) and that when the road was constructed, there were concerns about wetland impacts, particularly to the forested wetland area (located between Leroy Ave and Boyer Circle).

- Tina Heath asked how the LEDPA was determined. She asked to see the other alternatives that were studied. Greg shared his screen to show the Alternatives that were studied in the 2006 Scoping Study. Tina noted that there is a state-significant “wet sand over clayplain forest” community mapped in the wetland, and the state would want to see avoidance and minimization measures in that area. She noted that the parcel is owned by the Town of Williston and wondered about its

Stantec to provide others with a copy of the 2006 Scoping Study including meeting notes re: alternatives.

Williston to provide information on any conservation restrictions.
Item:

- Mike Adams asked why the Shunpike Road route was not selected, and asked if there were other ways to get from Kimball Ave to South Brownell Road.

- Sean Neely noted that the 2006 meeting notes state that there are a lot of residences along Shunpike and that there would be private property impacts as well as safety concerns/conflicts with the path and side drives.

- Mike Adams stated that he would want to see narrowing of the path or the green strip in the vicinity of wetlands to show avoidance and minimization.

- Tina Heath asked to see information on how the project was reviewed with respect to avoidance/minimization as well as safety, and may want to see an update to the LEDPA determination since it’s been more than 15 years since the original study. VT Wetland regulations have changed since then. Given the estimate 20,000 SF of wetland impact, the Wetlands Program would likely require compensation, with particular concern about the state significant community type. They may ask the town to conserve other parts of the community.

- Mike Adams noted that the Corps would require compensation. He asked for clarification on funding. Bruce Hoar noted that the town would seek grant funding and there would likely be state and federal funds to design and construct the path.

- Mike Adams asked about a typical section. Greg Edwards showed the plan with a typical 10’ path and 10’ greenbelt, with a reduction to a 4’ greenbelt in the vicinity of the wetland. He noted that the 10’ path is “standard.” Mike then asked what is really needed for bike/pedestrian conveyance since he has observed that most cyclists stay on the road and don’t use shared use paths. Greg explained that fill slopes can be made steeper in areas to reduce the width of impacts.

- Christine Forde noted that the town was looking for some assurance that the project was “permittable” and could be advanced, and that they would want to know if it would not be allowed before spending more money on it.

- Bruce Hoar added that there was a lot of work done as part of the 2006 Scoping Study, and that we can share that information to help explain how the project arrived at its current status.

- Stantec will provide the 2006 Scoping Study and typical sections to regulatory personnel.

The meeting adjourned at 2:20pm.
The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

**Polly Harris**

Phone: 802-497-6407  
polly.harris@stantec.com

c. Cc List
Shared Use Path
Connection over
Muddy Brook

South Burlington - Williston, Vermont

December 21, 2006

Feasibility Study
The preparation of this document was financed jointly by the eighteen municipalities in Chittenden County and the Chittenden County Transportation Authority; the Vermont Agency of Transportation; and the United States Department of Transportation, Federal Highway Administration, and Federal Transit Administration.

Submitted by:
55 Green Mountain Drive
So. Burlington, VT 05403
(802) 864-0223
CCMPO Board

Robert Penniman, Jericho – Chair   Michael O’Brien, Winooski – Vice Chair
Jeff Carr, Essex – Secretary-Treasurer   Scott Johnstone, Executive Director

Gerard Mullen, Bolton
Andy Montroll, Burlington
Jeff McDonald, Charlotte
Marc Landry, Colchester
Andrea Morgante, Hinesburg
Richard Moulton, Huntington
Dale Arango, Essex Junction
Kenneth Nolan, Milton
Virginia Clarke, Richmond

Phil Beliveau, St. George
Jim Dudley, Shelburne
Jim Condos, South Burlington
Marc Maheux, Underhill
George Gerecke, Williston
Tom Buckley, Westford
Dawn Terrill, Vermont Agency of Transportation

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Bernadette Ferenc, Administrative Assistant
Christine Forde, Sr. Transportation Planner
Peter Keating, Sr. Transportation Planner
Scott Johnstone, Executive Director

David Roberts, Transportation Planner
Susan Smichenko, Sr. Transportation Planner
Daryl Benoit, Transportation Planner

Project Committee

Amy Bell, VTrans
Neil Boyden, Town of Williston
Lou Bresee, City of South Burlington
Christine Forde, CCMPO

George Gerecke, Town of Williston
Bruce Hoar, City of South Burlington
David Jacobowitz, City of South Burlington
Ben Rose, Town of Williston

This study is the result of the support and strong interest of the Project Committee Members. Much of the background, history, local input, existing conditions, and consensus documented in the study is attributed to the Committee member's involvement. The study's quality and success is due to their contributions.
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1.0 Introduction

1.1 Project Background

Over the last ten years, the City of South Burlington and the Town of Williston have made great strides in developing shared use path networks. In South Burlington this network has included a shared use path along Kennedy Drive connecting to the Dorset Street / Cairns Recreation Area system and beyond. Future planned South Burlington shared use paths include connecting the Kennedy Drive path to a planned VT Route 15 path via Airport Drive / Airport Parkway.

The Town of Williston has shared use paths now connecting the Williston Village and the Taft Corners areas. This existing system includes a shared use path along Marshall Ave. extending to South Brownell Road. Future plans include extending a path from Taft Corners westward along US Route 2 to South Brownell Road.

The CCMPO Regional Bicycle Pedestrian Plan Update, dated August 28, 2003, states the following:

♦ This plan recommends a regional network of on-road bicycle facilities and shared use paths to provide high quality connections between communities and to major activity centers.

♦ A shared use path network should compliment, not replace, an on-road facility network.

Linking path systems is a shared interest of South Burlington and Williston, as well as the Cross Vermont Trail Association. This organization is creating a four season, multi-use trail across Vermont for public recreation and alternative transportation by connecting primarily existing facilities. The trail spans the state from Burlington to Wells River. It builds on the concept generated by the 1989 Chittenden County Greenway Plan which calls for an inter-municipal recreation and alternative transportation path roughly parallel to US Route 2 (through Burlington, South Burlington, Williston, Richmond, and Bolton). A draft plan of this trail is shown in the Appendix A.

One challenge in creating a shared use path link in this project area is the crossing of Muddy Brook. In 2001, the Town of Williston retained a consultant to research alternatives for linking these paths. This research focused on various crossings of Muddy Brook and limited alternative alignments to an area between Boyer Circle and Leroy Drive as seen on the existing conditions plan. Based on this limited research,
an alignment along the Williston Distribution Center and Gregory Supply property line provided the highest score in an evaluation matrix.

In July 2005, the CCMPO contracted with Dufresne-Henry (DH) to work with a project committee and develop alternative alignments for a shared use path connecting the existing Williston and South Burlington shared use paths. These services focus on determining the preferred alternative that would be pursued for future funding, design, permitting, and construction.

1.2 Project Area

The project area extends from Kennedy Drive in South Burlington to South Brownell Road in Williston and from I-89 to US Route 2-Williston Road. This area includes three (3) major east-west transportation corridors; US Route 2 / Williston Road, Kimball Ave. / Marshall Ave., and I-89 as shown on the project location plan (see below). This plan is provided by permission of Map Adventures and shows the existing shared use path and bicycle facilities in the area. These facilities are shown in red.

Muddy Brook and Potash Brook generally flow south to north in the project area. An east / west shared use path connector requires crossing these waters. Flood plains, wetlands, natural areas and wildlife habitat are associated with these waters. A full description of existing conditions is provided in subsequent sections.
2.0 Project Purpose and Need

Through working with the project committee and soliciting input at the local concerns meetings the following project purpose and need statement was developed.

2.1 Project Purpose:

The purpose of this project is to provide a non-motorized connection of existing shared use paths in Williston and South Burlington and bridge a gap in the existing interregional and statewide path network. This includes a preferred alternative for crossing Muddy Brook.

2.2 Project Needs:

The project needs include:

- Providing a separation from motor vehicle traffic.
- Providing a design for “basic and children bicyclists”.
- Providing accessibility from local street systems.
- Considering future land use or planned developments.
- Minimizing resource impacts.
- Contributing to a through-connection while providing an opportunity to access local businesses.
- Minimizing the frequency of intersection and driveway crossings.
3.0 Existing Information / Conditions and Resources

To assist with identifying and evaluating alternative path alignments, team members researched and reviewed available information, solicited input from project committee members and regulatory agencies, met and/or discussed the project with major stakeholders and property owners, and field reviewed the project area. This field review included biking the major highway corridors, recording conditions, and taking numerous photographs. The following sections detail the results of these efforts.

3.1 Regional and Local Plans

Pertinent plans collected and reviewed include:

1. CCMPO 2025 Chittenden County Metropolitan Transportation Plan: Adopted January 19, 2005

Generally, these plans emphasize the importance and value of pedestrian and bicycle facilities. Linking the South Burlington and Williston shared use path is specifically mentioned in all plans. Mapping in these plans indicates a link along Kimball Ave. / Marshall Ave. and a Community Drive / Marshall Ave. connection.

3.2 Existing / Proposed Land Uses / Zoning

The local comprehensive plans indicate the area's zoning is primarily commercial and industrial. Pockets of residential land use exist along US Route 2-Williston Road; Shunpike Road, South Burlington and Williston; and South Brownell Road.

The US Route 2-Williston Road corridor is fully developed, primarily with commercial businesses having individual accesses. The land use does transition to open and residential properties east of Industrial Ave. towards Williston.
The Kimball Ave. / Marshall Ave. corridor has been subdivided and developed over the last 15 years. Major subdivided parcels, including Technology Park in South Burlington and Forest Park Realty lands in Williston, have existing ACT 250, local zoning, and environmental permits, establishing many conditions. Some of the permit conditions associated with these include:

- Shared Use Path Easements
- Wetland buffer zones
- Conservation zones
- Wildlife corridor

Pertinent conditions are shown on the "Existing Conditions" Plan. Through discussions with the ACT 250 coordinator, Peter Kiebel, this project should consider obtaining its own ACT 250 permit. This may eliminate the need to amend all the existing ACT 250 permits of affected properties. The existing permit conditions will need to be considered and addressed.
Figure 2: Existing Conditions Plan
3.3 Transportation Facilities

3.3.1 Bicycle / Pedestrian Facilities

The City of South Burlington has had a formal Recreation Path Committee since 1991. This committee's scope includes sidewalks and trails and they have identified existing and proposed bicycle and pedestrian facilities. The Town of Williston has also planned sidewalks, paths and trails, many associated with the new development over the last ten years. The project areas existing facilities are shown on the "Existing Conditions" plan. The facilities include:

- A shared use path along Kennedy Drive connecting to South Burlington's network and beyond
- Sidewalk along much of US Route 2-Williston Road and Kimball Ave.
- A shared use path along Marshall Ave. connecting to Taft Corners and Williston Village
- A planned shared use path along US Route 2-Williston Road from Tafts Corners to South Brownell Road
- Sidewalk along most of South Brownell Road

3.3.2 Roadways

Major roadways in the project area include US Route 2-Williston Road, Kimball Ave., Marshall Ave., Shunpike Road, and South Brownell Road.

Characteristics of these are in the table below:

<table>
<thead>
<tr>
<th>Area Roadway Characteristics</th>
<th>Roadway</th>
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<tbody>
<tr>
<td>Classification</td>
<td>Arterial</td>
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<tr>
<td>Posted Speed (mph)</td>
<td>35 - 40</td>
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<tr>
<td>AADT (vpd)</td>
<td>11,000 - 24,000</td>
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<tr>
<td>Trucks %</td>
<td>5 - 10 %</td>
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<tr>
<td>Road Width</td>
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<td>ROW Width</td>
<td>67'</td>
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<td>Curbed</td>
<td>Yes</td>
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<tr>
<td>Accesses/Mi</td>
<td>&gt;50</td>
</tr>
<tr>
<td>Aerial Utilities (from edge/curb)</td>
<td>2' - 10'</td>
</tr>
</tbody>
</table>

Figure 3: Existing Roadway Conditions
As a principal arterial, US Route 2-Williston Road, in the segment from Kennedy Drive to Industrial Ave., has over 20,000 vehicles per day. This area varies from 4 lanes to 2 lanes and is fully developed with primarily commercial properties. Most properties have an access drive, creating frequency of drives greater than 50 accesses/mile.

The Kimball Ave. / Marshall Ave. corridor is a two-lane collector connecting Kennedy Drive to South Brownell Road and VT Route 2A beyond. This corridor parallels US Route 2-Williston Road providing an alternative for through route and access to the developing commercial / industrial properties within the corridor. Traffic approaches 10,000 vehicles/day with approximately 10% trucks. The roadway width is 32 feet and is curbed in South Burlington. Pavement markings in the South Burlington portion includes 3-foot shoulder for bicyclists. Left turn lanes exist at the Kennedy Drive and the Shunpike Road approaches. In these areas the three lanes use the full curb-to-curb width and minimizes the shoulder width. The Williston 2000 Comprehensive Town Plan indicates Marshall Ave. is a designated truck route.

Shunpike Road is a collector connecting South Brownell and Marshall Ave., providing access to a pocket of residences and newer commercial developments. Shunpike Road is a narrower roadway with lower posted speed, less traffic, and narrower ROW than Marshall Ave. It features a large undeveloped lot on the north side, with more development and drives on the south side.

South Brownell Road is similar to Shunpike Road with a narrower roadway, narrower right-of-way width, and less traffic, approximately 5,000 vehicles/day. South Brownell Road land use transitions from residential at the north end to commercial closer to Marshall Ave. The result is greater than 50 accesses/mile.

### 3.3.3 Transit Facilities / Routes

The Chittenden County Transit Authority Transit Route, known as the "Williston" route, services the project area. It's route, shown below, includes Kimball Ave., Community Drive, and Marshall Ave. Marked bus stops are shown on the "Existing Conditions" plan.
3.4 Natural / Cultural Resources

3.4.1 Waterways / Streams / Floodplains

The project is located in two watersheds: Potash Brook and Muddy Brook. Potash Brook is located within a stormwater impaired watershed and is subject to Vermont's Stormwater Management rule. This means when expanding impervious area, greater than one acre, the stormwater treatment shall meet ANR's standards and a stormwater discharge permit is required. Although Muddy Brook is not a stormwater impaired watershed, expansion of impervious area beyond one acre in the Muddy Brook watershed, would require a Stormwater discharge permit.

There are floodplains along these streams. The "Existing Conditions" plan shows the limits of the floodplains. The floodplains limits are based on GIS mapping and are general. Actual floodplain limits associated with a crossing would need to be identified through FEMA mapping and analysis during subsequent design phases.

3.4.2 Wetlands

Through the extensive development and permitting already completed in the area, many wetlands have been mapped and have been subject to Corps of Engineers (COE) and State of Vermont Wetland permitting.

An environmental consultant reviewed many of the existing permits and field reviewed the proposed alternative alignments areas. A report of these efforts is included in the Appendix C. The approximate limits of the pertinent wetlands are shown on the "Existing Condition" plan. The majority of these are Class II wetlands requiring any construction within 50 feet to have a Conditional Use Determination from Vermont Agency of Natural Resources and a COE wetlands permit.
3.4.3 Wildlife and Wildlife Habitat
Past permits have identified the large forested wetland crossed by Marshall Ave. as a wildlife resource including the establishment of a wildlife corridor between the wetland complex and Muddy Brook. This corridor is shown on the "Existing Conditions" plan.

One ACT 250 land use permit regards the wetlands, forests, and scrub land along Muddy Brook as a wildlife corridor. Land use permit #4C0648-26 issued March 4, 1999 to Forest Park Realty for the development of the area now occupied by Gregory Supply restricts activities in the area referenced as an "ANR Buffer Zone." This permit described areas below the 330 foot contour and an 80 to 200 foot buffer zone along Muddy Brook as a "Conservation Zone." The findings of fact #46 of the land use permit states "the conservation restriction on the deeded conservation zone along Muddy Brook prohibits and cutting, cleanup or removal of vegetation in the wetlands and their buffer areas."

3.4.4 Rare, Threatened, and Endangered Species
No rare or protected species were identified in the field. Research of ANR's database and knowledge from past numerous studies performed in the area has not noted any findings.

3.4.5 Agricultural Lands
Mapped soil types in the project area includes many types of "prime" and "statewide" importance as described by the 2003 Farmland Classification Systems for Vermont Soils. A listing and location of these types is in the appendix. Soils of prime or statewide importance meeting the standards for Prime Agricultural Soils in criteria 9B of ACT 250 and Executive Order 52-80 are subject to a determination that the land is a size capable of supporting or contributing to an economic agricultural operation. Location, accessibility and current land use are also considered. Given much of the area is developed or permitted for development, agricultural potential is minimal.

3.4.6 Historic Resources
A review of the National Register and State Register files and a site visit revealed four buildings in the area of the alternative alignments, that are listed on the Vermont State Register and appear eligible to be on the National Register. These are all located on US Route 2-Williston Road at it's intersection with South Brownell Road. These are shown on the "Existing Conditions" plan and a full Historic Resource Identification report is in Appendix D.

3.4.7 Archaeological Resources
A review of the State files, experience with previous studies in the area, and a field review provided numerous archeological sensitive areas. These are shown on the "Existing Conditions" map. Many are located adjacent to Muddy Brook and Potash Brook. Alternatives located in these areas will require further field investigations to determine the potential for impact to archaeological resources.
3.4.8 **Land and Water Conservation Fund Projects (LWCF)**

A review of the State of Vermont LWCF projects from 1965 to 2004 indicates no projects along the potential alternative alignments. A history of LWCF projects is in the appendix.

3.4.9 **Hazardous Waste Sites / Facilities**

The ANR listing of hazardous waste sites and facilities include numerous properties in the project area. The majority of sites are along US Route 2-Williston Road. Pertinent sites include: Technology Park; Ryder Transportation; Alling Industrial Park and Shunpike Road Property on Shunpike Road; and O'Brien's Town and Country Store and Champlain Oil on South Brownell Road. The area's sites as shown on ANR's website are included in the appendix.
4.0 Alternative Alignments

4.1 Shared Use Path Design Criteria

Based on pertinent standards and references, applicable shared use path design criteria is tabulated below. These references include:

- Vermont Pedestrian and Bicycle Facility Planning and Design Manual
- AASHTO Guide for the Development of Bicycle Facilities

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<th>Parameter</th>
<th>Value / Type</th>
<th>Reference</th>
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<tr>
<td>Roadway separation</td>
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<td>5 feet (min); 10 feet (preferred)</td>
<td>Pg. 5-9</td>
</tr>
<tr>
<td>Curbed</td>
<td>4 feet (min)</td>
<td>Pg. 5-9</td>
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<tr>
<td>Side slopes</td>
<td>1:3 (max) or barrier</td>
<td>Pg. 5-9</td>
</tr>
<tr>
<td>Recovery area</td>
<td>3-5 feet (preferred)</td>
<td>Pg. 5-14</td>
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<tr>
<td>Lateral clearance</td>
<td>2 feet (min); 3 feet (preferred)</td>
<td>Pg. 5-14</td>
</tr>
<tr>
<td>Vertical clearance</td>
<td>8 feet (min); 10 feet (preferred)</td>
<td>Pg. 5-14</td>
</tr>
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<td>Profile Grades:</td>
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<td>or 5-6% up to 800 feet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or 7% up to 400 feet</td>
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<td></td>
</tr>
<tr>
<td>or 8% up to 300 feet</td>
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<td></td>
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<td>or 9% up to 200 feet</td>
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<td></td>
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<td>or 10% up to 100 feet</td>
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<td></td>
</tr>
<tr>
<td>or 11% up to 50 feet</td>
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<td>Cross slope</td>
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<td>or 30 mph (grades &gt;4%)</td>
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<tr>
<td>Horizontal Alignment</td>
<td>100 feet radius (20 mph)</td>
<td>Pg. 5-21</td>
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<td>or 225 feet radius (30 mph)</td>
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</tr>
<tr>
<td>Stopping Sight Distance</td>
<td>(0% grade)</td>
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<td>or 120 feet (20 mph), k&gt;10</td>
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</tr>
<tr>
<td>or 220 feet (30 mph), k&gt;30</td>
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<td></td>
</tr>
</tbody>
</table>

Figure 5: Design Criteria Table
4.2 **Shared Use Path Typical Section**

By applying the design criteria and referencing VTrans Standard details, a typical section was developed. This typical section indicates a 10 foot wide bituminous concrete paved path. In the instance the path is adjacent to a roadway, a minimum 10-foot green strip separation is desired. In allowing areas, greater separation should be considered. A barrier would be provided in areas the path is supported by a retaining wall or steep slope. Fencing may be required to separate the path from sensitive environmental areas or private properties.

![Figure 6: Typical Section: Shared Use Path](image)

These typical sections are utilized to evaluate the costs, impacts and feasibility of the alternative path alignments.

4.3 **Alternative Alignments**

The project committee, comprised of major stakeholders, reviewed much of the existing conditions and information, and discussed many alternative corridors and alignments connecting the South Burlington and Williston shared use path networks. The US Route 2-Williston Road corridor was discussed and discounted from further evaluation for the following reasons: high traffic volumes; limited land available; high frequency of drives/accesses; difficulty and distance connecting to potential uses from the south; and a separate US Route 2-Williston Road corridor study will consider the pedestrian and bicycle needs along the corridor.

Connecting to Hinesburg Road and Old Town Farm Road was also discussed. This alignment was not as central to potential users, required a path construction along Hinesburg Road, and crossed undeveloped and environmental sensitive areas such as the Potash Brook corridor.

Four alternative alignments were discussed and advanced for evaluation. All alternatives had a common section, designated as "Alternative A" on the "Alternative Location Plan."
Figure 7: Alternative Location Plan
4.3.1 Alternative A

This alternative easterly extends along the southern side of Kimball Ave. from Kennedy Drive to the eastern end of Community Drive. It includes the following features:

- A path separated generally 10 feet or greater from Kimball Ave, allowing for landscaping in the created green strip.
- A signalized protected crossing from Kennedy to Kimball Ave.
- An unprotected crossing of Old Town Farm Road and Community Drives (2), requiring a stop condition for path users, and signing and/or crossing design highlighting path users to motorists.
- A crossing of Potash Brook, requiring construction within the buffer zone of a Class II Wetland. Wetland impact is minimized by constructing a path supporting retaining wall on the existing sloping embankment.
- An existing 67 to 100 foot right-of-way minimizing the need for additional permanent right-of-way.
- An alignment along existing shared use path easements associated with the Technology Park subdivision and between Community Drive.
- An existing curb and drainage system along Kimball Ave., minimizing the costs for additional drainage.
- Existing archaeological sensitive areas requiring field testing/investigation.
- An impaired Stormwater watershed, Potash Brook, requiring Stormwater treatment. Given the project's linear nature, much treatment is anticipated through grassed swales.
- Alignment may be integrated with future development in the area of Community Drive.

Since this alternative is common to all, its costs, benefits and cumulative impacts are included with the subsequent alternative descriptions and evaluations.
4.3.2 Alternative B1:

The Alternatives B1 begins at the Kimball Ave./Community Drive intersection and extends southerly 2200 feet along Community Drive. Once reaching the southern limit of Community Drive it turns easterly, circumvents an existing pond, and crosses existing undeveloped open field and eventually Muddy Brook. Once in Williston, it follows an existing shared use path easement across the property occupied by Gregory Supply and then connects to an existing shared use path on Leroy Road. This existing path ends at Marshall Ave., and new construction is required along Marshall Ave., approximately 2000 feet to the existing path near the Marshall Ave./South Brownell Road intersection.

This alternative combined with Alternative A includes the following features and impacts:

- A path separated approximately 10 feet from Community Drive, allowing for landscaping in the created green strip.
- An existing drainage system on Community Drive, minimizing the cost for drainage.
- A crossing of Muddy Brook and conservation zone, requiring an approximately 140 foot span bridge to clear the existing floodplain and provide wildlife passage.
- Right-of-Way needs are minimized by using existing easements. Total ROW needs for Alternative A-B1 is 1.0 acres.
- Wetland impacts totaling approximately 0.40 acres (Alternative A-B1)
- Some construction within a "conservation zone" designated by previous permitting.
- Alignment avoids an existing "wildlife corridor."
- A portion is located in existing undeveloped areas and not adjacent to existing highways.
- Existing archaeological sensitive areas requiring additional field testing/investigation.
- A 60 foot existing right-of-way along Community Drive, requiring additional property acquisition. Total ROW needs for Alternative A-B1 are 1.0 acres.
- Five street crossings and four drive crossings.
- A total path length of 11,000 feet and project cost of $3,350,000 for Alternative A-B1.
4.3.3 Alternative B2

This alternative, similar to B1, provides an alignment off the area roadways and uses existing shared use path easements on private property. It begins at the Kimball Ave./Community Drive intersection and extends southerly paralleling Muddy Brook along an existing shared use path easement, for approximately 2000 feet. Once reaching the alternative B1 alignment, it turns easterly and crosses Muddy Brook at the same location as alternative B1. Then the alternative crosses a "Town of Williston" owned property, consisting of primarily a class II wetland. After reaching Marshall Ave., it parallels Marshall Ave. approximately 1000 feet connecting to the existing path near the Marshall Ave./South Brownell road intersection.

This alternative, combined with Alternative A, includes the following features:

- A path mostly off the area's existing roadway corridors.
- A crossing of Muddy Brook, a conservation zone, requiring an approximately 140 foot span bridge, to clear the existing floodplain and provide wildlife passage.
- Right-of-Way needs of approximately 0.7 acres for Alternative A-B2, limited by using existing easements and Town of Williston property.
- Wetland impacts totaling approximately 0.70 acres including Class II wetlands on Town of Williston property.
- Some construction within a "conservation zone" designated by previous permitting.
- A portion located in existing undeveloped areas and not adjacent to existing highways.
- Existing archaeological sensitive areas requiring additional field testing/investigation.
- Five street crossings and one drive crossing (Alternative A-B2).
- A total path length (Alternative A-B2) of 10,300 feet and a project cost for this length of $3,280,000.
4.3.4 Alternative B3

Alternative B3 extends along the southern side of Kimball Ave. and Marshall Ave. connecting to the existing path near the Marshall Ave./South Brownell Road intersection. This alternative, combined with Alternative A, includes the following features and impacts:

- A path separated approximately 10 feet from Marshall Ave. allowing for landscaping in the created green strip.
- Six street crossings and two drive crossings.
- A crossing of Muddy Brook, requiring construction into the buffer zone of a class II wetland. Actual wetland impact is avoided by constructing a path supporting retaining wall on existing sloping embankment.
- A 67 foot existing right-of-way along Marshall Ave. with some easements for undeveloped properties in Williston. Total ROW needs for Alternative A-B3 is 0.9 acres.
- Wetland impacts totaling approximately 0.2 acres, primarily the class II wetland on Town of Williston property.
- Existing archaeological sensitive areas requiring additional field testing/investigation.
- May require relocation of some existing ground mounted transformers.
- Alignment may be integrated with future development along Marshall Ave.
- A total path length (Alternative A-B3) of 9,500 feet and a project cost for this length of $3,230,000.
4.3.5 Alternative C

Alternative C extends from the east end of Alternative A easterly approximately 1,000 feet along Kimball Ave., crossing Muddy Brook to the Marshall Ave./Shunpike Road intersection. The alternative crosses Marshall Ave. and extends easterly 3,100 feet along the north side of Shunpike Road to South Brownell Road. It then turns north along the west side of South Brownell Road following an existing sidewalk. The path extends 1,200 feet along South Brownell Road, crosses US Route 2 at an existing signalized intersection and connects to a planned shared use path along US Route 2. This planned path provides an eventual connection to the existing Williston Path System at Tafts Corners. This alternative, combined with Alternative A, includes the following features and impacts:

- A path primarily following existing area roadways.
- A path separated from Shunpike Road by a 10 foot green strip and behind existing aerial utilities.
- A path separated from South Brownell by two to five feet widens existing sidewalk to 10 feet impacting five to seven existing large trees and front yards of numerous residents.
- A crossing of Muddy Brook, requiring construction into the buffer zone of a class II wetland. Actual wetland impact is avoided by constructing a path supporting retaining wall on existing sloping embankment.
- A 50 foot existing right-of-way width along Shunpike Road and South Brownell Road. Total ROW needs for Alternative A-C is 1.5 acres.
- Wetland impacts totaling approximately 0.10 acres, primarily class III wetland on Shunpike Road.
- Existing archeological sensitive areas requiring additional field testing/investigation.
- Seven street crossings and eighteen drive crossings.
- A total path length of 10,800 feet and a project cost of $3,510,000 for Alternative A-C.
4.3.6  *Alternative Evaluation Matrix*

To readily compare alternatives, the evaluation matrix is provided below.

<table>
<thead>
<tr>
<th>Item</th>
<th>A-B1</th>
<th>A-B2</th>
<th>A-B3</th>
<th>A-C</th>
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<td>(10%)</td>
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<td>yes</td>
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<td>yes</td>
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<td>404 COE Permit</td>
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<td>yes</td>
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<td>CUD - (ANR wetlands)</td>
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<td>Stormwater Discharge</td>
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<td>Lakes and Ponds</td>
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<td>more difficult</td>
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<td>longer</td>
<td>shorter</td>
<td>longer</td>
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</table>

*Figure 8: Evaluation Matrix*
4.4 Public Participation / Meetings

In an effort to provide a public process resulting in strong project support, the following were steps taken for developing the Feasibility Study and a preferred alternative:

- Establishing a project committee of major stakeholders
- Conducting 3 project committee meetings soliciting input and guidance
- Holding a Local Concerns Meeting on August 23, 2005, noticed by a mailing to over 400 property owners in the project area and the major stakeholders, as well as posting on the CCMPO website and local newspapers.
- Contacting major landowners along the proposed alignment and soliciting their input
- Conducting an Alternatives Presentation Meeting on February 7, 2006. Noticed similar to the Local Concerns Meeting.
- Meeting with the Williston Conservation Commission seeking their endorsement of the preferred alternative on March 15, 2006.
- Meeting with the South Burlington Natural Resources Committee on April 6, 2006 seeking their endorsement of the preferred alternative.
- Attending the May 1, 2006 Williston Selectboard Meeting seeking their endorsement of the preferred alternative. The Selectboard indicated the Alternatives B1 and B2 were more desirable due to being separated further from the existing roadways.
- Attending the May 15, 2006 South Burlington City Council Meeting seeking their endorsement of the preferred alternative.
- Attending a VTrans resource coordination meeting. This included the Corps of Engineers and Vermont Agency of Natural Resources to seek their input on the alternatives.
- Attending the October 6, 2006 Williston Selectboard Meeting seeking their endorsement of the preferred alternative. The Selected board indicated they preferred the off Kimball Avenue alignments, B1 and B2, but if these are not feasible they support the adjacent to Kimball Avenue alternative, B3.

The input and comments received during these steps is documented in Appendix F. This process produced the alternatives to evaluate, contributed to their evaluation, and resulted in the endorsement of Alternative A-B3.

4.5 Preferred Alternative

Based on public input, the alternative evaluation, resource agency input, and the need to balance benefits, impacts, and costs, the preferred alternative is A-B3. This alternative generally follows the Kimball Ave./Marshall Ave. corridor, connecting the South Burlington and Williston existing shared use path networks.

During the selection of the preferred alternative, much discussion focused on the benefits provided by Alternatives B1 and B2. These alignments are generally off adjacent roadways and were viewed to provide the user a better experience as it passes through more natural environments. While recognizing this benefit, Alternative B3 is the preferred alternative for the following reasons:
• Alternatives A-B1 and A-B2 provide greater impact to wetlands, conservation zones, ACT 250 permit conditions, and wildlife habitat resulting in a more rigorous, and likely longer, permitting process.
• Alternative A-3 was supported by the COE as the least environmentally damaging practicable alternative (LEDPA). This is a permitting requirement of the COE 404 permit and enhances support for the successful clearance permits from other resource agencies.
• Alternative C provides greater right-of-way impacts due to the existing narrower roadway right-of-ways along Shunpike Road and South Brownell Drive.
• Alternative C provides significant impacts to the front yards of the residences along South Brownell Drive, requiring the likely removal of several existing trees.
• Alternative C is less safe due to the numerous driveway crossings and the required crossing of Marshall Ave. the Shunpike Road intersection.
• Alternative A-B3 is more centrally located providing greater connectivity to potential origin and destinations along the route.
• Alternative A-B3 is the shortest construction length and lowest cost.

A breakdown of costs by municipalities for Alternative A-B3 is shown in the table below.

<table>
<thead>
<tr>
<th>Item</th>
<th>S. Burlington</th>
<th>Williston</th>
<th>Total</th>
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<tr>
<td>Length (LF)</td>
<td>5,500</td>
<td>4,000</td>
<td>9,500</td>
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<td>Construction Costs</td>
<td>$1,386,000</td>
<td>$791,000</td>
<td>$2,177,000</td>
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<tr>
<td>Preliminary Engineering (20%)</td>
<td>$277,000</td>
<td>$158,000</td>
<td>$435,000</td>
</tr>
<tr>
<td>Municipal Project Management (10%)</td>
<td>$139,000</td>
<td>$79,000</td>
<td>$218,000</td>
</tr>
<tr>
<td>ROW Costs ($100,000/acre)</td>
<td>$47,000</td>
<td>$28,000</td>
<td>$75,000</td>
</tr>
<tr>
<td>Construction Engineering (15%)</td>
<td>$208,000</td>
<td>$119,000</td>
<td>$327,000</td>
</tr>
<tr>
<td>Total project Costs</td>
<td>$2,057,000</td>
<td>$1,175,000</td>
<td>$3,232,000</td>
</tr>
<tr>
<td>Rounded Project Costs</td>
<td>$2,060,000</td>
<td>$1,170,000</td>
<td>$3,230,000</td>
</tr>
</tbody>
</table>

In the instance Alternative A-B3 is pursued, the next step in the project development is developing conceptual plans and completing the NEPA documentation process. Considerations during this process include:

• Conducting a Phase 1 archaeological investigation in the identified sensitive areas.
• Conducting a soils investigation, particularly in the areas of the Potash and Muddy Brook crossings to determine the feasibility of existing soils to support retaining walls.
• Evaluating the benefits, reduced costs and reduced impacts of reducing the green strip and path separation from the roadway from ten (10) feet to five (5) feet in sensitive areas such as the Potash and Muddy Brook crossing areas.
• Coordinating and integrating the path alignment with the proposed developments on the Technology Park lots fronting Kimball Ave. and on the undeveloped lots along Marshall Ave. in Williston.
• Pursuing the permitting of wetlands impacts between Leroy Drive and Boyers Circle early in the process.

These early steps may facilitate a more successful and timely developed project.
Appendices

Appendix A - Cross Vermont Trail Map
Appendix B - Project Costs
Appendix C - Environmental Resources
Appendix D - Historical Resources
Appendix E - Archeological Resources
Appendix F - Meeting Minutes and Comments
Map prepared by:
Cross Vermont Trail Association, Inc.,
March 2005

NOTE: This map is for informational purposes only.
All CVT route information on this map is in DRAFT form.
Appendix B

Project Costs
## Cost Summary Estimate

Prepared By: GAE  1/26/2006  
Checked By:  
Revised By:  

<table>
<thead>
<tr>
<th>Item</th>
<th>A-B1</th>
<th>A-B2</th>
<th>A-B3</th>
<th>A-C</th>
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<td>Construction Costs</td>
<td>$2,242,000</td>
<td>$2,219,000</td>
<td>$2,177,000</td>
<td>$2,309,000</td>
</tr>
<tr>
<td>Preliminary Engineering (20%)</td>
<td>$448,000</td>
<td>$444,000</td>
<td>$435,000</td>
<td>$462,000</td>
</tr>
<tr>
<td>Municipal Project Management (10%)</td>
<td>$224,000</td>
<td>$222,000</td>
<td>$218,000</td>
<td>$231,000</td>
</tr>
<tr>
<td>ROW costs ($100,000/acre)</td>
<td>$104,000</td>
<td>$66,000</td>
<td>$75,000</td>
<td>$157,000</td>
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<tr>
<td>Construction Engineering (15%)</td>
<td>$336,000</td>
<td>$333,000</td>
<td>$327,000</td>
<td>$346,000</td>
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</table>

**Total project costs**  
$3,354,000  $3,284,000  $3,232,000  $3,505,000

**Rounded Project Costs**  
$3,350,000  $3,280,000  $3,230,000  $3,510,000

### Preferred Alternative  
Cost Summary Breakdown by Municipality

<table>
<thead>
<tr>
<th>Item</th>
<th>S. Burlington</th>
<th>Williston</th>
<th>Total</th>
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<tbody>
<tr>
<td>Construction Costs</td>
<td>$1,386,000</td>
<td>$791,000</td>
<td>$2,177,000</td>
</tr>
<tr>
<td>Preliminary Engineering (20%)</td>
<td>$277,000</td>
<td>$158,000</td>
<td>$435,000</td>
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<tr>
<td>Municipal Project Management (10%)</td>
<td>$139,000</td>
<td>$79,000</td>
<td>$218,000</td>
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<tr>
<td>ROW costs ($100,000/acre)</td>
<td>$47,000</td>
<td>$28,000</td>
<td>$75,000</td>
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<tr>
<td>Construction Engineering (15%)</td>
<td>$208,000</td>
<td>$119,000</td>
<td>$327,000</td>
</tr>
</tbody>
</table>

**Total project costs**  
$2,057,000  $1,175,000  $3,232,000

**Rounded Project Costs**  
$2,060,000  $1,170,000  $3,230,000
Alternative A - Along Kimball Ave., Kennedy to Community Drive

- Length: 5000 ft
- Width: 10 ft bit surface
- Surface: 2 in bit concrete
- Subbase: 12 in subbase of dense graded crushed stone
- Drainage: Minor existing curbing and drainage
- Extra items: Retaining wall at Potash Brook Crossing
  - Length 250 ft
  - Ave height 10 ft
  - total area 2500 SF

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
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<th>Unit Price</th>
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</table>

Alternative B1 - Along Community Drive to Leroy to Marshall to S. Brownell

- Length: 6000 ft
- Width: 10 ft bit surface
- Surface: 2 in bit concrete
- Subbase: 12 in subbase of dense graded crushed stone
- Drainage: Minor drainage
- Extra items: Bridge Crossing Muddy Brook
  - Length 140 ft
  - width 12 ft
  - total area 1680 SF
- Wetland Mitigation
  - area 10000 SF

<table>
<thead>
<tr>
<th>Item</th>
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<td><strong>$1,177,014</strong></td>
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</table>
Alternative B2 - Community Drive to Marshall to S. Brownell

Length: 5300 ft  
Width: 10 ft bit surface  
Surface: 2 in bit concrete  
Subbase: 12 in subbase of dense graded crushed stone  
Drainage: Minor drainage  
Extra items: Bridge Crossing Muddy Brook  
  Length: 140 ft  
  Width: 12 ft  
  Total area: 1680 SF  
Wetland Mitigation  
  Area: 10000 SF

<table>
<thead>
<tr>
<th>Item</th>
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<td>Bridge</td>
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<td><strong>$1,153,731</strong></td>
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</table>

Alternative B3 - Marshall to S. Brownell

Length: 4500 ft  
Width: 10 ft bit surface  
Surface: 2 in bit concrete  
Subbase: 12 in subbase of dense graded crushed stone  
Drainage: Minor drainage  
Extra items: Retaining wall at Muddy Brook Crossing  
  Length: 400 ft  
  Ave height: 12 ft  
  Total area: 4800 SF  
Wetland Mitigation  
  Area: 5000 SF

<table>
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<th>Item</th>
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</table>
Alternative C - Community drive to Shunpike to S. Brownell to US 2

- Length: 5800 ft
- Width: 10 ft bit surface
- Surface: 2 in bit concrete
- Subbase: 12 in subbase of dense graded crushed stone
- Drainage: Minor drainage

Extra items: Retaining wall at Muddy Brook Crossing
- Length: 300 ft
- Ave height: 15 ft
- total area: 4500 SF

Wetland Mitigation
- area: 0 SF

<table>
<thead>
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<th>Unit Price</th>
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<td></td>
<td>$1,244,170</td>
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</tr>
</tbody>
</table>
**Alternative A - Along Kimball Ave., Kennedy to Community Drive**

| Length:   | 5000 FT |
| Existing ROW width: | 100 FT |
| Ave additional width needed: | 5 FT |
| Total Acres: | 0.47 |

**Alternative B1 - Along Community Drive to Leroy to Marshall to S. Brownell**

| Length:   | 3000 FT |
| Existing ROW width: | 0 - 60 FT |
| Ave additional width needed: | 10 FT |
| Total Acres: | 0.57 |

Note: Much of the alignment uses existing easements

**Alternative B2 - Community Drive to Marshall to S. Brownell**

| Length:   | 1000 FT |
| Existing ROW width: | 0 - 60 FT |
| Ave additional width needed: | 10 FT |
| Total Acres: | 0.19 |

Note: Much of the alignment uses existing easements or Town property.

**Alternative B3 - Marshall Ave. to S. Brownell**

| Length:   | 1000 FT |
| Existing ROW width: | 67 FT |
| Ave additional width needed: | 10 FT |
| Total Acres: | 0.19 |

Note - Assumed existing easement from Shunpike to Leroy along Marshall Ave

**Alternative C - Community drive to Shunpike to S. Brownell to US 2**

| Length:   | 5300 FT |
| Existing ROW width: | 60 FT |
| Ave additional width needed: | 10 FT |
| Total Acres: | 1.00 |
Alternative A - Along Kimball Ave., Kennedy to Community Drive

- Length: 200 FT
- Ave width wetland impacted: 0 FT
- Total Acres: 0.00

Alternative B1 - Community Drive to Leroy to Marshall to S. Brownell

- Length: 1400 FT
- Ave width wetland impacted: 15 FT
- Total Acres: 0.40

Note: Much of the alignment uses existing easements.

Alternative B2 - Community Drive to Marshall to S. Brownell

- Length: 1500 FT
- Ave width wetland impacted: 25 FT
- Total Acres: 0.71

Note: Much of the alignment uses existing easements or Town property.

Alternative B3 - Marshall to S. Brownell

- Length: 1100 FT
- Ave width wetland impacted: 10 FT
- Total Acres: 0.21

Alternative C - Community drive to Shunpike to S. Brownell to US 2

- Length: 300 FT
- Ave width wetland impacted: 20 FT
- Total Acres: 0.11
## Alternative Evaluation

<table>
<thead>
<tr>
<th>Item</th>
<th>A-B1</th>
<th>A-B2</th>
<th>A-B3</th>
<th>A-C</th>
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<tr>
<td>Construction Costs</td>
<td>$2,242,000</td>
<td>$2,219,000</td>
<td>$2,177,000</td>
<td>$2,309,000</td>
</tr>
<tr>
<td>Preliminary Engineering (20%)</td>
<td>$448,000</td>
<td>$444,000</td>
<td>$435,000</td>
<td>$462,000</td>
</tr>
<tr>
<td>Project Management (10%)</td>
<td>$224,000</td>
<td>$222,000</td>
<td>$218,000</td>
<td>$231,000</td>
</tr>
<tr>
<td>ROW costs ($100,000/acre)</td>
<td>$104,000</td>
<td>$66,000</td>
<td>$75,000</td>
<td>$157,000</td>
</tr>
<tr>
<td>Construction Engineering (15%)</td>
<td>$336,000</td>
<td>$333,000</td>
<td>$327,000</td>
<td>$346,000</td>
</tr>
<tr>
<td><strong>Rounded project costs</strong></td>
<td>$3,350,000</td>
<td>$3,280,000</td>
<td>$3,230,000</td>
<td>$3,510,000</td>
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<td><strong>Crossings:</strong></td>
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<td>5</td>
<td>6</td>
<td>6</td>
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<td>2</td>
<td>18</td>
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<td><strong>Impacts:</strong></td>
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<td>Streams/Floodplain</td>
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Appendix C

Environmental Resources
Greg Edwards, P.E.
Dufresne-Henry, Inc.
P.O. Box 2246
South Burlington, VT 05407-2246

Subject: CCMPO Shared Use Path

Dear Greg,

I investigated the environmental constraints along the proposed routes of the CCMPO Shared Use Path in Williston and South Burlington, and offer the following evaluation.

Wetlands (Williston). The largest wetland in the project area is a forested Class Two wetland crossed by Marshall Avenue (marked “A” on Enclosure 1). This complex has been the subject of many Conditional Use Determinations, both for the roadway itself and for at least a half dozen commercial developments. This wetland extends easterly along Marshall Avenue nearly to Boyer Circle, ending as essentially a ditch between the roadway and development in the Adams Industrial Park to the south. It should be noted that one CUD required the establishment of a wildlife corridor (“C”) between the wetland complex and Muddy Brook, in an area with two potential shared use path alignments. The evergreen plantings of pine, spruce and cedar are evident on the air photo.

Wetland “B” on Enclosure 1 is a detention basin at the end of a large warehouse; Wetland “C” is a broad ditch/detention basin extending from Leroy Road southerly to and through the wildlife corridor. Beavers are active at the southern end of this ditch, and have impounded a narrow pond in the vicinity of the proposed path crossing and the evergreen plantings mentioned above. There is a corresponding basin to the north of Leroy Road beyond Gregory Supply.

Another large Class Two wetland complex (“D” on Enclosure 2) lies to the north of Gregory Supply, extending to the north beyond Shunpike Road. The southern end of this wetland lies in the area of a potential crossing of Muddy Brook. The crossing site itself is characterized by upland conditions on both banks, but because the wetland begins just downstream, the path crossing would likely fall within the wetland’s buffer zone. The wetland includes a portion of an area now maintained as lawn as well as a wet hillside supporting an alder thicket. To the north, this wetland is crossed by Shunpike Road, where the culvert openings extend out 30 feet from the roadway. There appears to be enough room, using headwalls, to build the path to be built impacts to the wetland.
Another wetland ("E") extends along a tributary to Muddy Brook in the vicinity of the intersection of Marshall Avenue and Shunpike Road. Although the part of this wetland on the other side of Marshall Avenue ("F") has been treated in the past as a Class Three wetland, a CUD was required for development of the field adjacent to Wetland E (Burlington Foods CUD #96-418) so there is a protected 50-foot buffer zone around it.

Shunpike Road crosses the upper end of Wetland F just west of the intersection with South Brownell Road (see Enclosure 3). On the side with the potential path alignment, this wetland is essentially a broad ditch dominated by cat-tails.

**Wetlands (South Burlington).** In addition to the potential alignments you indicated on the 11 x 17 copy of the photo, I also walked the "20' easement for recreation path to the City of So. Burl." that was indicated on the Technology Park plan from Shunpike Road to the Interstate right-of-way. I have drawn the approximate route of this easement in blue on Enclosures 2 and 4. Wetlands along this easement include two areas of ground water discharge in the meadow east of the Green Mountain Power Substation ("G" and "H" on Enclosure 2) and the outlet to the Technology Park pond and three drainage swales to the south, all shown on Enclosure 4. Also shown on Enclosure 4 is a floodplain scrub forest along the southern portion of Muddy Brook nearest Interstate 89. Both potential CCMPO crossings of Muddy Brook appear to be in areas suitable for bridges, although the southern crossing lies between two wetlands (one on each side) that should be avoided.

Both ponds at Technology Park are Class Two wetlands, so any potential alignment within 50-feet of them would require a Conditional Use Determination. An area of wet meadow adjacent to the larger pond ("I" on Enclosure 6) would be considered Class Two as well; it appears to occupy part of the right of way for an un-built extension of Community Drive as well as areas proposed for the Shared Use Path.

The only other wetland areas encountered on the South Burlington portion of the project lie along the western section of Community Drive and at the Potash Brook crossing on Kimball Avenue ("J" and "K" on Enclosure 5), both Class Two wetlands.

**Rare, Threatened and Endangered Species.** No rare or protected species were noted in the field, nor have any been found during previous studies at the many projects we have performed in this area over the past 20 years.

**Wildlife & Wildlife Habitat.** As noted above, wildlife habitat has been an issue in the forested wetland at Marshall Avenue. Additionally, the wetlands, forests and scrub land along Muddy Brook has been regarded by the Agency of Natural Resources as a wildlife corridor (Finding of fact #49 of Land Use Permit #4C0648-26), and there are restrictions on activities in that area (see below). I believe the plantings between the Marshall Avenue wetland and Muddy Brook was a requirement in the Marshall Avenue CUD to provide cover for wildlife moving between the two areas.
Agricultural Lands. The 2003 Farmland Classification Systems for Vermont Soils describes the importance of the following soil types mapped for the project area in the Chittenden County Soil Survey:

Soils of “Prime” importance:

**HnA**, Hinesburg Fine Sandy Loam, 0-3% slopes. Open fields along the northwestern end of Marshall Avenue; also a small area at the intersection of Marshall Avenue and Shunpike Road.

**HnB**, Hinesburg Fine Sandy Loam, 3-8% slopes. Kimball Avenue at its intersection with Shunpike Road and adjacent to the east bank of Potash Brook. Also an area at the northwestern end of Community Drive.

Soils of “Statewide” importance:

**AdA**, Adams and Windsor Loamy Sands, 0-3% slopes. Level areas of Shunpike Road between South Brownell Road and Muddy Brook, and a section at the easterly end of Kimball Avenue.

**AdB**, Adams and Windsor Loamy Sands, 5-12% slopes. At the west end of Kimball Avenue near Old Farm Road and Kennedy Drive.

**BLa**, Belgrade and Eldridge Soils (the “Marshall Avenue” wetland and adjacent lands)

**Cv**, Covington Silty Clay The section of Wetland K on Enclosure 5 that crosses Community Drive.

**Ewa**, Enosburg and Whately Soils, 0-3% slopes. Kimball Avenue just west of Potash Brook crossing.

**ScA**, Scantic silt loam, 0-2% slopes. The terrace occupied by Gregory Supply. The only undeveloped sections are the terrace edge at the northern end, the open area at the south end, and the established wildlife corridor.

**VeB**, Vergennes Clay, 2-6% slopes. Most of the area occupied by Technology Park.

Soils of Prime or Statewide importance meet the standard for Primary Agricultural Soils in Criterion 9B of Act 250, subject to a determination of whether such land is of a size capable of supporting or contributing to an economic agricultural operation. Location, accessibility and current land use are also considered. With the exception of the potential routes through the “Marshall Avenue” wetland and connections through the Gregory Supply parcel and across Muddy Brook to Community Drive, all potential routes are adjacent to existing streets. It is likely that roadway construction in these areas has compromised the conditions that once made the area important for agriculture. The undeveloped land south of Gregory Supply is mapped as Scantic silt loam, a soil type of Statewide importance, but since the area was part of an area issued a land use permit for topsoil extraction in the 1980’s, the agricultural potential there is marginal. Finally, the Belgrade and Eldridge soils in the wetland near Marshall Avenue are in an area reserved for conservation, and, in any event are too wet for agriculture.
Land Use Restrictions. Land Use Permit #4C0648-26, issued 4 March 1999 to Forest Park Realty for development of the area now occupied by Gregory Supply restricts activities in an area referred to as the “ANR buffer zone.” Paragraph 13 of the permit describes it as including the 50-foot buffer zone around the wetland at the northern lot (Wetland “D” on Enclosure 2), everything below the 330-foot contour on the west of the central lot, and lands referred to as the “Conservation Zone” on the southern lot. The Conservation Zone is an 80 to 200 foot buffer zone along Muddy Brook deeded to the Town of Williston in 1997 “requiring the land to remain in its natural condition in perpetuity.” Finding of Fact #46 of the Land Use Permit states that “The conservation restrictions on the deeded Conservation Zone along Muddy Brook prohibit any cutting, clearing or removal of vegetation in the wetlands and their buffer areas in the Conservation Zone.”

As indicated in our phone conversation this morning, this area has a complex regulatory history – Land Use Permit #4C0648-26 itself was originally an amendment to one numbered #4C0444 issued for topsoil extraction on the Gregory Supply lot, but was renumbered because it was more logical to make it an amendment of an existing 1987 permit for the industrial park to the east. The CCMPO Shared Use Path may involve amendments to these and other land use permits. In addition, any impacts to wetlands resulting from project may also involve amendments to existing state and federal wetland permits. There have been six or more Conditional Use Determinations issued for projects in the immediate area. The Corps of Engineers permits include one for the Gregory Supply parcel under the Vermont General Permit #58, and several under provisions of the old Nationwide 26 Permit for areas to the east. I am not familiar with permits for activities on the west side of Muddy Brook.

Sincerely,

[Signature]

Errol C. Briggs

ECB/s
Encls.
State of Vermont
Land & Water Conservation Fund (LWCF) Projects from 1965 - 2004

Revised September 2004
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Appendix D

Historical Resources
October 3, 2005

Scott Newman
Vermont Agency of Transportation
Technical Services Division
National Life Building
Montpelier, Vermont 05602-0501

Re: CCMPO Shared Use Path Connection over Muddy Brook
Williston – South Burlington
Historic Resource Identification

Dear Mr. Newman,

This Historic Resource Identification Report will assist the Vermont Agency of Transportation (VTrans), the Chittenden County Municipal Organization (CCMPO), and the Federal Highway Administration (FTA) with compliance under Section 106 of the National Historic Preservation Act. Project review has been conducted according to the standards set forth in 36 C.F.R., regulations established by the Advisory Council on Historic Preservation to implement Section 106. The purpose of this report is to identify historic buildings, structures, districts, landscapes and settings that may be affected by this project.

The Historic Resource Identification Report will be prepared in two phases. The initial phase identifies historic resources in a broadly defined project area, as the Alternative(s) for the shared use path have not been determined. A second letter report will evaluate the selected alternative(s) and discuss any potential impacts to historic resources. A final clearance letter for Section 106 will be drafted by VTrans upon completion of an archaeological investigation.

INTRODUCTION

The purpose of this letter report is to identify historic resources on or eligible for listing on the National Register of Historic Places (NR) within the project’s Area of Potential Effect (APE), “the geographic area within which the project may cause changes to the character of or the use of the historic properties” [36 CFR 800.2(c)]. The determination of National Register eligibility follows the guidelines established in National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation, published by the National Park Service.

This report has been prepared for Dufresne-Henry, Inc of South Burlington, and will assist the towns of Williston and South Burlington, the CCMPO, the FTA, and the Vermont Agency of Transportation with compliance with Section 106 of the National Historic Preservation Act of 1966 and its amendments.
National Register and Vermont State Register (SR) files were reviewed to identify listed sites located within the project area. A site visit was made on September 21, 2005, at which time photographs were taken. Additional buildings over 50 years old were identified on-site and also evaluated for eligibility for the National Register.

PROJECT DESCRIPTION

The proposed project is located in the towns of Williston and South Burlington, generally in an area bordered by Interstate 89 on the south, US Route 2 on the north, VT Route 2A on the east and Kennedy Drive on the west. The purpose of the project to provide a shared use path connection over Muddy Brook, the boundary between the two towns. Alternatives for the shared use path have not been identified. Potential alignments that follow existing roads as well as cross over open land are shown on the enclosed orthophoto and include:

1. Kimball Avenue from its intersection with Kennedy Drive in South Burlington east to the Y-intersection of Shunpike Road and Marshall Avenue in Williston;
2. The Community Drive loop off Kimball Avenue in South Burlington;
3. Shunpike Road in Williston, from Kimball Avenue to South Brownell Road;
4. South Brownell Road from Shunpike Road to US Route 2;
5. Marshall Avenue in Williston from Kimball Avenue to South Brownell Road; and
6. Potential overland alignments that begin at the southeast corner of Community Drive and head east towards an existing bike path that connects to Marshall Avenue and overland to Marshall Avenue.

DESCRIPTION OF THE RESOURCES

The historic resource survey for the project was conducted on both sides of the following roads:

1. Intersection of Kennedy Drive and Kimball Avenue. The historic resource survey was conducted along intersecting roads for a distance of approximately 400 feet.
2. Kimball Avenue from Kennedy Drive to the Y-intersection of Shunpike Road and Marshall Avenue.
3. Intersection of Kimball Avenue and Shunpike Road (west) in South Burlington. The historic resource survey was conducted north along Shunpike Road for a distance of approximately 400 feet.
4. Community Drive loop in South Burlington
5. Shunpike Road from the Y-intersection at Kimball Avenue to South Brownell Road.
6. South Brownell Road from Shunpike Road to US Route 2
7. Intersection of South Brownell Road and US Route 2. The historic resource survey was conducted along intersecting roads for a distance of approximately 400 feet.
8. Marshall Avenue from the Y-intersection of Kimball Avenue to South Brownell Road
9. Intersection of Marshall Avenue and South Brownell Road. The historic resource survey was conducted along intersecting roads for a distance of approximately 400 feet

1. Intersection of Kennedy Drive and Kimball Avenue. No historic resources were identified.

2. Kimball Avenue from Kennedy Drive to the Y-intersection of Shunpike Road and Marshall Avenue. No historic resources were identified.
3. Intersection of Kimball Avenue and Shunpike Road (west) in South Burlington.

Building #1. The c. 1850 Greek Revival style house on the west side of Shunpike Road, approximately .15 mile north of Kimball Avenue is listed on the State Register (SR 0414-4). Although the house retains historic form and massing, slate roof and brick end chimneys, it does not appear to be individually eligible to the National Register due to alterations. The alterations include installation of vinyl siding and replacement windows, removal of an historic Colonial Revival period front porch, construction of the incompatible porch above the front door and importantly, and the installation of contemporary glass panels and entry door in place of the Greek Revival door and door surround. Photos 1 and 2.

4. Community Drive loop in South Burlington. No historic resources were identified.

5. Shunpike Road from the Y-intersection at Kimball Avenue to South Brownell Road. Two structures over 50 years old were identified on Shunpike Road east of Kimball Avenue.

Building #2. The form and massing of the main block of this house on the south side of Shunpike Road suggest that it may have been constructed in the 19th century, but the architectural integrity of the building has been compromised by the construction of several non-historic additions including the large garage, the installation of synthetic siding, replacement sash and the non-historic bay window on the façade. Therefore the house is not eligible to the National Register. Photo 3.

Building #3. The L-shaped massing and the 2/2 wooden sash on the west elevation of the house on the north side of Shunpike Road suggest that it was probably constructed in the second half of the 19th century. The house does not appear eligible to the NR due to the installation of synthetic siding and non-historic window openings, construction of the exterior brick chimney on the south gable end, and the alteration of the porch across the façade of the south eave elevation. Photo 4.

6. South Brownell Road from Shunpike Road to US Route 2.

Building #4. The house in the southwest quadrant of the intersection of Shunpike Road and South Brownell Road is listed on the SR (Williston 0417-66). In 1983, when the c. 1847 Greek Revival style house was listed on the SR, it featured an intact Queen Anne/Colonial Revival style porch with turned half-posts and a flared, shingled half-wall. The porch has been replaced with a non-historic enclosed porch that nearly obliterates the front and south elevations of the buildings. In addition, a concrete block exterior chimney has been constructed against the south gable elevation. Therefore the house does not appear to be eligible to the NR. Photo 5.

Building #5. The two-story gable front Greek Revival period house on the west side of South Brownell Road is listed on the SR as part of the Kirby Farm (SR 0417-67). Although several of the agricultural buildings associated with the farm are still standing, the historic form and massing of the house have been compromised. The rear section of the house appears to be new construction, and by itself, is not out of scale with the historic sections. But a single story shed addition constructed against the south elevation, apparently as an extension of the L-shaped Colonial Revival period porch, projects beyond the wall plane of the main block, thus significantly altering the historic massing. The Greek Revival period front door and door surround have apparently also been seriously altered because the space originally filled by sidelights and single leafed door is now filled with a double-leaved door.
with large strap hinges. The combination of the form and massing changes, the installation of replacement sash, and the alteration of the historic front door make the house ineligible to the NR. The agricultural buildings do not appear individually NR eligible. Photos 6 – 8.

Building #6. The brick house on the west side of South Brownell just south of US Route 2 is listed on the SR (0417-68). The house does not appear to be eligible to the NR due to the addition that has been constructed against the south eaves elevation. An exterior porch visible in the SR photo was apparently removed when the addition, which is nearly as large as the historic section, was built. It appears that the primary entry has been re-located from the east gable of the historic block to the east eave elevation of the non-historic block. Photos 9 and 10.

7. Intersection of South Brownell Road and US Route 2

Building #7. The State Register survey form (SR 0417-129) for the c.1920 Colonial Revival style house on the north side of US Route 2, approximately 400 feet west of South Brownell Road, states that the building is a Sears and Roebuck mail order house. The house retains its historic form, massing, clapboard siding, windows and window openings, front door and interior Colonial Revival porch. The house, and its associated c.1920 garage, appears eligible to the National Register for its statewide significance. Photo 11.

Building #8. The 1938 Tudor Revival style house and associated garage and shed on the north side of US Route 2, immediately west of the intersection of Route 2 and South Brownell Road, are listed on the SR (0417-130). The house retains its historic form and massing, as well as materials and is a good example of an early 20th century architectural style that is uncommon in Vermont. The property appears to be eligible to the NR for its statewide significance. Photo 12.

Building #9. The Vernacular style house in the NE quadrant of the intersection of US Route 2 and South Brownell Road is listed on the SR (0417-131). The original section of the house appears to have been constructed c.1910. The wing additions with enclosed Colonial Revival porches probably date from the 1920s. Although the building is now covered with vinyl siding, it retains its evolved historic form and massing, as well 2/1 and 6/1 sash windows. The house therefore appears marginally eligible to the NR for its local significance. Photo 13.

Building #10. The Dutch Colonial Revival style house on the north side of US Route 2 east of South Brownell Road is listed on the State Register (SR 0417-132). The State Survey form for the building reports that the original section of the house was constructed c.1880, that the building was enlarged c.1900, and heavily remodeled in c.1945 in the Dutch Colonial style. Dutch Colonial architecture was very popular in much of the U.S. at the time but rarely used in Vermont. The house retains historic form, massing, pedimented entry hood, and 8/8 and 3/3 sash windows and appears eligible to the NR with statewide significance. Photo 14.

8. Marshall Avenue from the Y-intersection at Kimball Avenue to South Brownell Road. No historic resources identified.

9. Intersection of Marshall Avenue and South Brownell Road. No historic resources identified.
Summary

Four properties in the area of the potential alignments, building #s 7, 8, 9, and 10, all located on US Route 2 at its intersection with South Brownell Road, are listed on the Vermont State Register and appear eligible to the National Register.

Please let me know if you need additional information. If the Vermont Agency of Transportation concurs with this determination, please sign on the line provided below.

Thank you.

Sincerely,

Mary Jo Llewellyn
Historic Preservation Consultant

CONCUR:

Scott Newman, VAOT Historic Preservation Coordinator

Date

cc: Greg Edwards, P.E.
Dufresne-Henry, Inc.
   Historic E and N elevations. Note vinyl siding, replacement sash,
   non-historic porch, contemporary replacement door and surround.

2. View NW, South Burlington SR 04114-4, Shumpike Road. Note
   historic form, massing, slate roof, brick chimneys. Note
   replacement sash and non-historic front porch.

3. View SW, house on south side of Shumpike Road in Williston.
   House has lost historic form and massing due to various additions,
   and materials, including contemporary bay on facade.

4. View NW, north side of Shumpike Road in Williston. Note 2/2
   wooden sash, synthetic siding, new window openings, non-historic
   exterior chimney on gable end.
5. View NW, Williston SR 0417-67, South Brownell Road. The form of the Greek Revival house has been seriously impeded by the addition of the non-historic enclosed porch.

6. View W, Williston SR 0417-67, South Brownell Road. Note replacement sash, contemporary addition that projects out beyond wall of main block, non-historic replacement front doors.

7. View SW, Williston SR 0417-67, South Brownell Road. Note non-historic shed-roofed addition, replacement sash, non-historic doors in former Greek Revival style door opening.

8. View NW, Williston 0417-67, South Brownell Road. Note several non-historic additions that together seriously alter the historic form and massing of the house.
9. View SW, Williston SR 0417-68, South Brownewell Road, showing front (east) and north elevations of original block. Note replacement sash.

10. View NW, Williston SR 0417-68, South Brownewell Road, showing front and south elevation of historic block and large non-historic ell on south elevation, with relocated primary entry.


Appendix E

Archeological Resources
Archaeological Resources Assessment for the
Proposed South Burlington-Williston Shared-Use Path, Chittenden County, Vermont

Prepared for:
Dufresne-Henry, Inc
55 Green Mountain Drive
P.O. Box 2246
South Burlington, VT 05407

Prepared by:
John G. Crock, Ph.D.

Consulting Archaeology Program
University of Vermont
Report No. 451
March, 2006
Archaeological Resources Assessment for the Proposed South Burlington-Williston Shared Use Path, Chittenden County, Vermont

Study Goal

The goal of an archaeological resources assessment (or “review”) is to identify portions of a specific project area that have the potential for containing prehistoric and/or historic sites. This is to be accomplished through a “background search” and a “field inspection” of the project area. Reference materials were reviewed following established guidelines. Resources examined include the National Register of Historic Places (NRHP) files; the Historic Sites and Structures Survey; and the USGS master archaeological maps that accompany the Vermont archaeological inventory. Relevant town histories and nineteenth-century maps also were consulted. A total of five possible shared-use path alternatives were assessed for their potential to impact significant cultural resources as part of the present study (A, B1, B2, B3, and C). This work was required to comply with Section 106 of the National Historic Preservation Act, as amended, given that the project will be supported, in part, by federal transportation funds.

Known Precontact Archaeological Sites

The Area of Potential Effect (APE) of the proposed Williston-South Burlington Path alternatives cross several archaeologically sensitive areas within a region that contains a high density of known precontact Native American sites (Figure 1). These sites are associated with Potash Brook, Muddy Brook and the divide between these two drainages. Within a mile of the project area (1.6 km), archaeological sites ranging the full span of Vermont’s Native American past have been discovered, dating from the Paleoindian period to the Late Woodland period, ca. 9,500 B.C. to A.D. 1600. As a result of known site locations and the Vermont Division for Historic Preservation’s (VDHP) predictive model for locating precontact era archaeological sites, portions of the project area have the potential to contain as-yet-undiscovered sites. The predictive models used by archaeologists to identify sensitivity are, in large part, water based.

Potash Brook flows north along the western side of Technology Park before heading westward, entering the lake just south of Queen City Park. Muddy Brook flows northward from Shelburne Pond in Shelburne, Vermont, and passes through the project area on the eastern side of Technology Park, across Kimball Avenue and Williston Road, ultimately entering the Winooski River east of Burlington International Airport. The density and distribution of sites associated with these waterways reflects their long-term importance as transportation corridors for people and wildlife and as locations where useful plant resources would have been concentrated. The high density of sites within the vicinity of the project area also reflects the intensity of compliance-related archaeology that has been conducted here over the last two decades.

Numerous areas within and adjacent to the project area have been studied previously. In some cases, identified sites have been studied through the Phase II evaluation stage and found to be not significant. This “previously reviewed” status applies to the sites directly along the proposed path alternative B2 that follows the western side of Muddy Brook, along the eastern side of Technology Park.
Historic Euroamerican Site Potential

There are no known historic archaeological sites or properties listed on the National Register of Historic Places within or adjacent to the limits of the proposed development. Historic maps indicate that no residential structures existed within or adjacent to the project area until relatively recently. As a result, the project is highly unlikely to have an impact on significant sites dating to the historic period.

Field Inspection

A field inspection of the proposed path alternatives was conducted by the UVM CAP in December, 2005. In addition to the previously reviewed sensitive areas/known archaeological sites within the proposed project's APE, a total of six archaeologically sensitive areas were identified that will be affected by one or more alternatives. The known sites, previously studied areas and newly defined archaeologically sensitive areas within the immediate vicinity of proposed path alternatives are discussed below, by alternative.

*Alternative A: South side of Kimball Avenue between Kennedy Drive and the eastern side of Technology Park*

A total of three areas sensitive for precontact Native American sites were identified with the APE of Alternative A. Two of the areas (Areas 1 and 2) are located on the south side of Kimball Avenue, on west and east sides of a small tributary of Potash Brook (see Figure 2). Known sites VT-CH-429 and VT-CH-430 were located to the north on the other side of Kimball Avenue. The sensitive areas extend approximately 30 m west and east of the tributary stream and southward into the open field adjacent to the roadway, west of the wooded area and proposed future roadway outlet, opposite an office park entrance. Depending on the width of potential impacts in this portion of the project area beyond the existing corridor of disturbance associated with Kimball Avenue, an Archaeological Phase I Survey may be necessary to determine the presence/absence of sites if Alternative A is chosen.

The third area within the APE of Alternative A, Area 3 (see Figure 2), is located on the south side of Kimball Avenue, on the eastern side of the Potash Brook crossing. Sensitive Area 3 includes a triangular shaped area east of the existing box culvert. Known sites VT-CH-130 and VT-CH-255 are located to the north on the other side of Kimball Avenue and VT-CH-76 was located in the immediate vicinity, partially or completely destroyed during the construction of Kimball Avenue. Sensitive area 3 extends southward and includes the level terrace adjacent to the brook. Depending on the width of potential impacts in this portion of the project area beyond the existing corridor of disturbance associated with Kimball Avenue, an Archaeological Phase I Survey may be necessary to determine the presence/absence of sites if Alternative A is chosen.

*Alternative B1: East Community Drive, Across Muddy Brook to Leroy Road*

One area sensitive for precontact Native American sites was identified with the APE of Alternative B1. Sensitive area 6 (see Figure 2) includes the project APE on the eastern side of the Muddy Brook crossing, southeast of Technology Park. Area 6 extends
eastward from the brook and includes property not previously disturbed by recent development. Area 6 is also within the APE of alternative B2. An archaeological Phase I survey likely will be necessary to determine the presence/absence of archaeological sites within Area 6 if Alternative B1 is chosen.

*Alternative B2: South from Kimball Avenue along the West side of Muddy Brook, Crossing to Connect with Marshall Avenue*

As mentioned above, the APE of Alternative B2 includes archaeologically sensitive Area 6 (see Figure 2), and an archaeological Phase I survey likely will be necessary to determine the presence/absence of archaeological sites within Area 6 if Alternative B2 is chosen. Alternative B2 also crosses over several known sites located on the western side of Muddy Brook that were investigated as part of archaeological studies undertaken for Technology Park (Mandel et al. 2002). These include sites VT-CH-873, VT-CH-874, VT-CH-875, and VT-CH-876. Only the northernmost site, VT-CH-873 (see Figure 1), is directly on the Alternative B2 alignment. Deposits at these sites ranged in age from the Late Archaic period to the Middle-Late Woodland period, ca. 400 B.C.-A.D. 1600. Based on the results of Phase II site evaluations, these sites were not determined to be significant and therefore, the areas studied were cleared for development. As a result, the archaeological concerns for Alternative B2 are limited to archaeologically sensitive Area 6.

*Alternative B3: South Side of Marshall Avenue*

The APE of Alternative B3 includes two archaeologically sensitive areas, Area 4 and Area 5 (see Figure 2). These areas are located on the southern side of Marshall Avenue on the western and eastern sides of a Muddy Brook tributary, opposite the Shumpike Road intersection. The two areas extend west and east from the existing culvert disturbance and southward to include the area adjacent to the stream. Depending on the width of potential impacts in this portion of the project area beyond the existing corridor of disturbance associated with Marshall Avenue, an Archaeological Phase I Survey may be necessary in these areas to determine the presence/absence of sites if Alternative B3 is chosen.

*Alternative C: North Side of Shumpike Road and West Side of South Brownell Road*

No archaeologically sensitive areas were identified within the APE of Alternative C.

**Conclusions and Recommendations**

Based on a review of known site files and the field inspection the five proposed shared-use path alternatives studied include a total of six archaeologically sensitive areas. These areas have the potential to contain significant precontact Native American archaeological sites. As a result, archaeological Phase I Survey work may be necessary if alternatives A, B1, B2 or B3 are selected. The amount of work necessary will be dependent on how much previously undisturbed land will be impacted by path construction. If the path is built within the limits of existing disturbance associated with built roadways, then the need for archaeological investigations will be reduced. This study did not include any staging areas that may be necessary during project construction.
These areas should be restricted to areas of existing disturbances. If necessary, a separate review of staging areas may be necessary.

References Cited

Mandel, G. J Crock, and C. Knight
Figure 1. USGS map showing the location of known precontact Native American archaeological sites within and nearby the South Burlington-Williston Shared Use Path project area.
Figure 2. Map of project area and existing roadways showing the location of the six archaeologically sensitive areas identified within the area studied.
Appendix F

Meeting Minutes and Comments
Edwards, Greg

From: Christine Forde [cforde@ccmpo.org]
Sent: Wednesday, October 18, 2006 10:51 AM
To: Eric Scharnberg; Ben Rose; Bruce K. Hoar; nboyden; finnegank@willistontown.com; chapin@localmotion.org; David Jacobowitz; Tom Hubbard; Bresee, Lou; greg@crossvermont.org; Greg Edwards
Cc: George Gerecke
Subject: Muddy Brook Crossing

On October 16 the Williston Selectboard sort of endorsed the preferred alternative for the Muddy Brook Path project. They still prefer the off Kimball alignments, but if none of those are feasible they support the adjacent to Kimball alternative.

The most recent draft report is dated May 15, 2006. I have lost track of who has seen that report and who has commented. I made comments as did Lou. Anyone else interested is welcome to review and comment on the report. Let me know and I will arrange with Greg to get you a copy, if you don’t already have one.

Thanks for all your good work on this project. We do need to talk about next steps.

Christine

Christine Forde, AICP
Senior Transportation Planner
Chittenden County Metropolitan Planning Organization
30 Kimball Avenue, Suite 206
South Burlington, VT 05403
phone: 802-660-4071 ext. 13
fax: 802-660-4079
email: cforde@ccmpo.org

10/31/2006
MEMORANDUM FOR The Files

SUBJECT:  VT Agency of Transportation
          Highlights of 28 June 2006 Coordination Meeting

1.  On 28 June 2006, the following individuals met in the VT Agency of Transportation's offices in Montpelier, Vermont:
   a. Marty Lefebvre – Corps of Engineers
   b. Chris Brunelle - VTDEC
   c. Glenn Gingras – VTrans
   d. John Lepore - VTrans
   e. Craig DiGiammarino- VTrans
   f. Duncan Wilkie - VTrans
   g. Alan Quackenbush – VTDEC
   h. Christine Forde – Chittenden County Metropolitan Planning Organization
   i. Bruce Hoar – South Burlington Department of Public Works
   j. Don Allen – VTrans – LTF
   k. Beth Alafat – EPA
   l. Chris Brunelle – VT DEC
   m. Kevin Viani – VTrans
   n. Polly McMurtry – VTrans Policy & Planning
   o. Leo Roy – VHB
   p. Jonathan Armstrong – VTrans
   q. John Narowski – VTrans
   r. Bill Neidermyer – USFWS
   s. Pete Walker – VHB
   t. Matt Montgomery – EIV
   u. Amy Bell – VTrans
   v. Greg Edwards – Stantec
   w. Randy Christenson - Stantec

2.  This was the bi-monthly resource agency/VTAOT coordination meeting. Highlights of the meeting follow.

City Center (South Burlington)

This project is in the conceptual design phase and has not been discussed at a previous resource coordination meeting. Vanasse Hangen
Brustlin (VHB) discussed the project's scope which at this point would involve analysis of the direct environmental impacts of only Market Street and an internal road network. It was clarified that the Market Street and City Center components needed to be addressed as one project as the roadway portion was not a stand-alone issue. The study area and scope of the project are still questionable, and it is clear that the project will result in both indirect and cumulative impacts as currently proposed. The EA for the project is proposed to only address impacts of the City Center itself as indirect impacts. VHB was reminded that the City is well aware that an alternatives site analysis is necessary, that a study area has already been defined, that criteria for an alternatives analysis have been developed, and that the Highway Methodology will apply to this project. On a positive note, the City Center has been redesigned to avoid much of the Tributary 3 wetland. They are also considering a different alignment for Market Street. Improvements to the White Street/Williston Road intersection are also being considered. VHB was advised that White Street improvements can proceed as a separate project.

Next action: Review previously defined study area and alternatives criteria with VHB and applicant.

Project Manager: Don Allen  
don.allen@state.vt.us
VHB Contact: Greg Bakos  
gbakos@vhb.com
VHB Contact: Pete Walker  
PWalker@VHB.com

**Knapp Airport Improvements**

David Guadalupe gave an overview of this project, which involves the construction of a parallel taxiway on RW 17/35, a terminal apron area reconstruction and expansion, and reconfiguration of RW 5/23. RW 5/23 will be reconstructed shorter and narrower to address both airport safety concerns resulting from conflicts with RW 17/35 and to reduce the amount of impervious surfaces to approximately 6 acres of new impervious surface. The taxiway will impact a small area of wetlands and both a CUD and a Section 404 permit will be required. The amount of excess fill to be generated from this project is unknown at this time, but a disposal area will be sought out prior to seeking final permit approvals.
CENAE-R-61 (1145b)
MEMORANDUM FOR The Files
SUBJECT: VT Agency of Transportation
Highlights of 28 June 2006 Coordination Meeting

Next action:
   a) define amount of wetland impacts and obtain permits
   b) define stormwater needs and obtain permits
   c) determine quantities of fill to be generated for disposal purposes

Project Manager – Scott Fortney  scott.fortney@state.vt.us
Design Consultant - David Guadalupe  dguadalupe@hta-nh.com

S. Burlington / Williston Shared-Use Path Connection over Muddy Brook

The project is to develop an east-west Shared-use path connecting the existing Williston and South Burlington shared-use path systems. The project area is from Kennedy Drive in the City of South Burlington to South Brownell Road in the Town of Williston. A project committee has developed and evaluated alternative alignments. Greg Edwards and Randy Christensen presented their findings. The state and federal agencies concluded that either Alternative “B3” or C can be the LEDPA, but that “C” could be ruled out because of safety concerns over conflicts between the path and side drives.

Next action: Develop Conceptual Plans for the LEDPA alternative(s)

Edwards, Greg  GEdwards@Stantec.com
Amy Bell  Amy.bell@state.vt.us

3. The next coordination meeting will be held on 9 August 2006.

Lefebvre
Senior Project Manager
Meeting Notes

Bi-Monthly Resource Coordination Meeting
CCMPO South Burlington-Williston Shared Use Path Connection over Muddy Brook / FILE 6320020.08

Date: June 28, 2006
Place/Time: National Life Building, Montpelier, VT / 12:00 PM
Attendees: Greg Edwards, Stantec
Randy Christensen, Stantec
Christine Forde, CCMPO
Bruce Hoar, City of South Burlington
Amy Bell, VTrans
John Lapore, VTrans
John Nerowski, VTrans
John Armstrong, VTrans
Marty Lefebvre, Corp of Engineers
Allen Quackenbush, VT ANR Wetlands
Chris Brunelle, VT ANR Stream Alterations
Distribution: Attendees

Meeting Purpose
To review the Shared Use Path alternative alignments and solicit input from the Corp of Engineers, ANR, and VTrans.

Item:
After presenting the various alignment alternatives and associated level of protected environmental resource area impacts, the following items were discussed.

1. The forested wetland adjacent to Marshall Avenue at the eastern end of this project is subject to an existing wetland-related permit. This permit prohibits impacts to the established 100-foot wildlife corridor connecting the wetland to Muddy Brook. This is also a condition of an existing ACT 250 Land Use Permit. In addition, the conservation buffer along Muddy Brook was also established through the permitting process, and cannot be impacted without violating the existing permit.

2. It was pointed out the primary project purpose is connecting two existing shared-use systems. It would be very difficult to justify the additional impacts of Alternatives B1 or B2 when compared with Alternative B3 or C, which accomplish this purpose. It was repeatedly
pointed out to the agencies by the project team that Alternatives B1 and B2 would provide greater aesthetic and educational value while minimizing wetland impacts using an elevated boardwalk structure. In the case of Alternative B2, segmenting the wetland for the wildlife corridor was a very concerning impact. The agencies were united in stating that any impact to the wildlife corridor would be a violation of existing permits, and should not be considered a viable alternative.

3. Alternatives B2 and B3 do result in impacts to the wetland adjacent to Marshall Avenue. The need and value of providing an elevated boardwalk for wetland impact minimization adjacent to the roadway in this area was discussed. Recognizing the extent of impacts on the function and values of this wetland adjacent to the roadway is limited. The value of this additional expense may not be justified. Minimizing impacts to the wetland may include reducing the separation from the roadway to the proposed shared use path.

4. To improve the aesthetics and experience for shared use path users of Alternative B3, it was recommended the design be coordinated with property owners of undeveloped parcels to vary its separation from the roadway and the typical 10-foot separation provides great opportunity for landscaping with trees and shrubs to provide a greater sense of separation.

5. It was recognized the safety concerns and property impacts of Alternative C contribute to not pursuing this alternative. Although from a resource impact perspective, it is a viable alternative.

6. In the instance an ACT 250 permit is required, it was pointed out the flood plain impacts, the potential for stream migration due to alluvial soils, and repairing buffer impacts will need to be evaluated. ANR has specific guidelines for this evaluation. These impacts are of greater concern with Alternatives B1 and B2 given they include a new crossing of Muddy Brook. Given the intent is to provide a structure spanning the floodplain, these concerns may be readily addressed.

7. Regarding stormwater treatment from the shared use path, there was general agreement that a path-side vegetated swale would be sufficient to address the stormwater permitting for the project.

Based on the report provided and the meeting's discussions, the regulatory agency supported Alternatives A-B3 or Alternative A-C to be carried forward. It was indicated they appreciated the community’s desire for Alternatives B1 and B2, but given their impacts when compared with other alternatives, they did not support pursuing them. The agencies were quite insistent that pursuit of B1 or B2 would be met with opposition during the permitting process since it was clear to them that a less environmentally damaging alternative was available to the project.
The meeting adjourned at 12:30 PM.
The foregoing is considered to be a true and accurate record of all items discussed. If any discrepancies or inconsistencies are noted, please contact the writer immediately.

STANTEC CONSULTING SERVICES INC.

Gregory A. Edwards, P.E.
Principal, Transportation
gedwards@stantec.com
To: Williston Selectboard

From: Christine Forde, CCMPO Senior Transportation Planner

Date: September 12, 2006

Subject: Williston-South Burlington Bicycle/Pedestrian Path over Muddy Brook

On May 1, 2006 a plan for building a bicycle/pedestrian path between Williston and South Burlington was presented to the Williston Selectboard. Following a project development process, which included local representation and public involvement, Alternative A-B3 was selected as the preferred alternative (see attached map and description).

At the Selectboard meeting Williston requested that the permitability of Alternatives B1 and B2 be further evaluated. Selectboard members considered Alternatives B1 and B2 to be more desirable.

The project was presented at a Bi-Monthly Resource Coordination Meeting, which includes representation from the Army Corps of Engineers, the Agency of Natural Resources and Vermont Agency of Transportation. The resource agencies indicated that pursuing Alternatives B1 or B2 would meet with opposition during the permitting process since a less environmentally damaging alternative (B3) was available (see attached minutes of Resource Coordination Meeting).

As a result, the Williston Selectboard is again being asked to review the proposed project and reconsider endorsing Alternative A-B3 as a preferred alternative.

If the Selectboard does endorse the project, the next steps in the development process would be to develop conceptual plans for the preferred alternative and develop a funding plan with South Burlington. Conceptual plan development could be funded with CCMPO planning funds.

Following is a brief summary of the project develop process followed by this project to date:
At the request of Williston and South Burlington, a feasibility study was initiated in the Spring of 2005 to evaluate a bicycle/pedestrian connection between Williston and South Burlington.

The study was funded with federal planning funds accessed through the Chittenden County Metropolitan Planning Organization (CCMPO).

A Steering Committee was established to provide input to CCMPO and Stantec, the consultant hired to perform the study. The Steering Committee consisted of representatives from Williston, South Burlington, the Vermont Agency of Transportation (VTrans) and regional trails groups. Williston representatives included Neil Boyden and Ben Rose.

Two Public Meetings were held to give members of the public an opportunity to comment on the project. Meetings were held at CCMPO’s offices on Kimball Avenue, which is in the study area. Meetings were held in August 2005 and February 2006. 400 property owners were mailed notices of each meeting and notices were printed in the Burlington Free Press.

The project was presented to the Williston Conservation Commission in March 2006. The Conservation Commission endorsed Alternative A-B3.

The project was presented to the Williston Selectboard on May 1, 2006. The Williston Selectboard requested that further coordination be made with resource agencies regarding feasibility of the project given environmental constraints in the area.

The project was presented to the Bi-Monthly Resource Coordination Meeting at the Vermont Agency of Transportation. Represented at that meeting were the Army Corps of Engineers and the Agency of Natural Resources. Minutes of that meeting are attached to this memo.

On Monday, September 18 results of the Resource Coordination Meeting were presented to the Williston Selectboard.
### Meeting Minutes

**Meeting:** Alt. Presentation Meeting  
**Meeting Date:** 02/07/06  
**Project No.:** 6320020.08

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**Shared Use Path Connection over Muddy Brook**  
**Williston - S. Burlington, Vermont**

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#### Dufresne-Henry, Inc.

55 Green Mountain Drive, P.O. Box 2246  
South Burlington, Vermont 05407  
Tel: 802-864-0223 Fax: 802-864-0165  
e-mail: finitial.lastname@dufresne-henry.com

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#### Team Meeting

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<th>Date</th>
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<th>Next Meeting</th>
<th>Next Time</th>
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<th>Attendee</th>
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| 2/7/06  | 7:00 pm | 8:30 pm | TBD          | TBD       | Greg Goyette  

#### Attended By

<table>
<thead>
<tr>
<th>CCMPO:</th>
<th>Christine Forde</th>
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<tbody>
<tr>
<td>S. Burl:</td>
<td>Bruce Hoar, Lou Bressee, David Jacobowitz</td>
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<tr>
<td>Williston:</td>
<td>Neil Boyden, Ben Rose</td>
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<td>Others:</td>
<td>See attached list</td>
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#### Copies To

All attendees on attached sign in sheet.

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**If content contained within is not complete, accurate, or in context, please notify Dufresne-Henry of such discrepancy within ten (10) days of this record.**

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#### Meeting Purpose:

The purpose of the meeting is to present and solicit public comment on alternative shared-use path alignments.

---

#### Comment # | Public Comment/Questions

1 | Any initial reaction from the permitting agencies regarding their preferred alternative?  
Response: Although an alternative has not officially been endorsed by the permitting agencies, the Army Corps of Engineers will view impact to a wetland located along an existing roadway more desirable than impact to a wetland located in an undeveloped area. Feedback from permitting agencies will be solicited before a preferred alternative can be endorsed.

2 | Andy Barker: As a potential commuter on this path, Alternative A-B3 appears to be most desirable due to shorter distance, more direct route, fewer street and drive crossings than other alternatives.

3 | Chris Hill: Will also use the path to ride to work, and therefore Alternative A-B3 is his preferred alternative for same reasons mentioned by Mr. Barker.

4 | Brooke Statchard: Also prefers Alternative A-B3 because it is most direct for commuting and will have less wetland impact than the “off road” alternatives.

5 | Lou Breese pointed out the portion of the path contained in Segment A that crosses in front of Technology Park along Kimball Avenue will be built by Technology Park.

6 | Neil Boyden: The Town of Williston already owns easements for portions of the path contained in Segment B3. Therefore, ROW impacts for B3 will be less than that presented.

7 | Lou Breese: Given the 20’ +/- height of the retaining walls planned to minimize wetland
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<td>8</td>
<td>Ben Rose: While Alternative A-C appears to be the shortest path, it does not appear to be practicable due to ROW impacts and numerous driveway crossings.</td>
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<td>Amy Bell: A probable construction schedule and costs divided out by municipality should be contained in the scoping report. ROW impacts should be quantified as number of property owners impacted instead of area impacted.</td>
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<td>NAME</td>
<td>AFFILIATION</td>
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<td>Ben Rose</td>
<td>Cross Vermont Trail AIC</td>
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<td>Christopher Hill</td>
<td>Heritage Flight</td>
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<td>Scott Mayo</td>
<td>Earl's Cyclery</td>
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<td>Greg Goyette</td>
<td>Dufresne-Henry</td>
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<td>David Jacobowitz</td>
<td>S. BURL, Rec Path</td>
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<td>Andy Barker</td>
<td>Ben &amp; Jerry's</td>
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<td>S. BURL, P. W.</td>
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<td>Brooke Scatchard</td>
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<td>Neil Bower</td>
<td>Town of Williston</td>
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<td>Amy Bell</td>
<td>VTrans</td>
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<td>S BURL Rec Path</td>
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<td>Chapin Spencer</td>
<td>Local Motion</td>
</tr>
</tbody>
</table>
Hi,

I'm not able to attend the meeting tonight, but I would like to submit my comments. I'm a Burlington resident who works on Community Drive (off Kimball Ave) in South Burlington. I bike commute about 20% of the time and drive my own car the other time. A few comments:

1. Looking at the on-line map, it seems like no improvements to Kimball Ave are planned between Community Dr and Kennedy Dr. I think this needs to be addressed as part of the project. Currently, there is no bike path or even shoulder in the area. My vote for this area would be a separate ped/bike path in this area away from Kimball Ave.

2. I would vote for either of the bike/ped only crossings over Muddy Brook, not the shared path crossing on Kimball Ave. I think it's safer and a kinder experience for cyclists.

Daniel Scheidt
**Meeting Minutes**

**Shared Use Path Connection over Muddy Brook**  
**Williston – S. Burlington, Vermont**

**Dufresne-Henry, Inc.**  
55 Green Mountain Drive, P.O. Box 2246  
South Burlington, Vermont 05407  
Tel: 802-864-0223 Fax: 802-864-0165  
e-mail: firstinitial.lastname@dufresne-henry.com

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<td>9/07/05</td>
<td>10:00 am</td>
<td>11:30 am</td>
<td>11/17/05</td>
<td>8:00 am</td>
<td>Greg Edwards</td>
</tr>
</tbody>
</table>

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**Attendees:***  
CCMPO: Christine Forde, Bruce Hoar  
Williston: Neal Boyd  
DH: Greg Edwards  
VTrans: Amy Bell  
UVM: David Jacobowitz  
George Gerecke

---

**Meeting Purpose:** To Review the results of the Local Concerns meeting and determine which alternative alignments to pursue for evaluation.

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| 1-1   | **Local concerns meeting:**  
Concerning the Local Concerns Meeting discussions it was determined the alternative evaluation should include the complete path alignment connecting to existing or planned shared use path facilities. |
| 1-2   | **Design criteria:**  
Based on the VT Pedestrian and Bicycle Design Manual some specific criteria discussed included:  
1. surface: bituminous  
2. Minimum Path Width: 10 feet with 2 foot shoulders  
3. Minimum separation from roadway: 10 feet desired.  
4. Design speed: 20 mph |
Shared Use Path Connection over Muddy Brook
Williston – S. Burlington, Vermont

Meeting Minutes
Dufresne-Henry, Inc.
Meeting: Project Committee Meeting No. 1
Meeting Date: 09/07/2005

1-3 Alternatives:

US Route 2:

Based on committee’s discussions, this alternative along Route 2 would be discussed in the scoping report, but discarded from further consideration for the following reasons:
1. High traffic volumes on US 2.
2. Difficulty accommodating a shared use path adjacent to the roadway
3. Difficulty and distance connecting potential users from the south.
4. A US 2 Corridor study currently under study for the area will consider the pedestrian and bicycle needs along this corridor.

Alternative Alignments:

These are depicted on the attached plan and include on-road alignments along Marshall Ave., Shunpike, Kimball Ave., and off-road alignments connecting Marshall and Technology Park.

1-4 ROW Widths: DH will check with Bruce and Neal to confirm existing widths.

1-5 Property Owners: DH will discuss the project with John Illickk, the owner of Technology Park, and Gregory Supply’s owner to solicit their input on potential alternatives.

1-6 Next meeting: Project committee will meet on Nov. 17th at 830 AM at the CCMPO office on Kimball Ave.
Project: Shared Use Path Connection Crossing Muddy Brook

Date: Thursday, September 8, 2005 at 10:00 am

Location: CCMPO
            30 Kimball Avenue
            So. Burlington, VT 05403

PROJECT COMMITTEE MEETING No. 1

Agenda Items:

1. Review “Local Concerns Meeting” and Results.

2. Discuss Purpose and Need Statement.


4. Determine Alternatives to Develop and Evaluate.

5. Discuss Next Steps / Meeting.
**Dufresne-Henry, Inc.**
55 Green Mountain Drive, P O Box 2246
South Burlington, Vermont 05407
Tel: 802-864-0223 Fax: 802-864-0165
e-mail: firstinitial.lastname@dufresne-henry.com

**Meeting:** Local Concerns Meeting
**Meeting Date:** August 23, 2005
**Project No.:** 6320020.08

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**Attended By**
- CCMPO: Christine Forde, Lou Bressee
- S. Burl: Jim Condos
- Williston: Neal Boyden, Ben Rose
- Others: See attached list

**Copies To**
All attendees including attached sign in sheet.

**Meeting Purpose:** The purpose of the meeting is to familiarize the public with the project area and project development process and solicit their input, comments, and questions.

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### Shared Use Path Connection over Muddy Brook
Williston – S. Burlington, Vermont

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### 5 Stream Crossing:

| a | Muddy Brook is the key; wherever SU crossing occurs.                                             |
| b | What kind of bridge would you use?                                                               |
| c | Where is the crossing of Muddy Brook? South of Kimball Ave and north of the Interstate?          |
| d | Five years ago, a crossing near the Interstate was the favored idea but wetlands prompted other crossing points to the north. |
| e | Tell us where is the bridge connection will be? We'll build the paths to the connection point.    |

### 6 Suggestions:

<p>| a | We should use a corridor parallel (separate but near), on, or adjacent to, an existing roadway |</p>
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Project: Shared Use Path Connection Crossing Muddy Brook

Date: Thursday, September 8, 2005 at 10:00 am

Location: CCMPO
30 Kimball Avenue
So. Burlington, VT 05403

PROJECT COMMITTEE MEETING No. 1

Agenda Items:

1. Review “Local Concerns Meeting” and Results.

2. Discuss Purpose and Need Statement.


4. Determine Alternatives to Develop and Evaluate.

5. Discuss Next Steps / Meeting.
Draft Project Purpose and Need Statement

Project Purpose:

The purpose of this project is to provide a connection of existing shared use paths in Williston and South Burlington. This includes a preferred alternative for crossing Muddy Brook.

Project Needs:

The project needs include:

- Providing a separation from motor vehicle traffic.
- Providing a design for “basic and children bicyclists”.
- Providing accessibility from local street systems.
- Considering future land use or planned developments.
- Minimizing resource impacts.
- Contributing to a through-connection while providing an opportunity to access local businesses.
- Minimizing frequency of intersection and driveway crossings.
**Meeting:** Local Concerns Meeting  
**Meeting Date:** August 23, 2005  
**Project No.:** 6320020.08

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If content contained within is not complete, accurate, or in context, please notify Dufresne-Henry of such discrepancy within ten (10) days of this record

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| 2    | Users: |
|      | a. Recreation users (light riders) currently use "off road" paths located at both ends of the project.  
|      | b. Commuter users may outnumber recreation users.  
|      | c. How do sidewalks fit into the plan as a shared use path?  
|      | d. Marshall Ave. in/out traffic is not suitable for a "4-bike group" (2 parents and 2 kids).  
|      | e. Are SU path trips shopping trips? |
| 3    | Routes: |
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## Shared Use Path Connection over Muddy Brook

**Williston – S. Burlington, Vermont**

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| e | Dorset St./Kennedy Dr. more difficult than Kimball Ave./Kennedy Dr. |
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</tr>
<tr>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>John Doe</td>
<td><a href="mailto:jdoe@gmail.com">jdoe@gmail.com</a></td>
</tr>
<tr>
<td>Jane Smith</td>
<td><a href="mailto:jsmith@companyb.com">jsmith@companyb.com</a></td>
</tr>
<tr>
<td>Mike Brown</td>
<td><a href="mailto:mbrown@companyc.com">mbrown@companyc.com</a></td>
</tr>
<tr>
<td>Sarah Davis</td>
<td><a href="mailto:sdavis@companyd.com">sdavis@companyd.com</a></td>
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August 23, 2005
South Burlington, VT
Local Concerns Meeting

Williston - South Burlington, VT
Shared Use Path Concerns over Muddy Brook
SHARED USE PATH CONNECTION OVER MUDDY BROOK
LOCAL CONCERNS QUESTIONNAIRE

In order to better understand the public's views of this project, please take a few moments to complete this questionnaire. Your thoughts, comments and suggestions are greatly appreciated.

1. Assuming the path connects South Brownell Road and Kennedy Drive, what will be the likely use in order of their rankings: (1 being most likely and 5 being least)

- Commuting
- Accessing local businesses
- Recreating/exercising
- Accessing schools
- Accessing residential areas

2. When considering the location or function of a shared use path, which is more important or has more value (mark with an X).

a. Direct or X scenic
b. Commuting or X recreation
c. X Accessing businesses or ___ exercise
d. ___ More developed or ___ Less developed area.

3. Please identify any issues, relative to a shared use facility, along the following existing roadway corridors. Issues may include safety, speed, traffic, trucks, natural resources, etc).

Marshall/Kimball Ave.: safety and traffic

Williston Road (US 2): safety, trucks, traffic

South Brownell Road: safety, traffic speed

4. Please provide any additional comments about any part of this project.

- We need a shared use path to open up commuting & other access for bikes, etc.
  between Kennedy Road area & Williston.

Signed: [Signature]
August 10, 2005

Gentlemen:

Please add my name in support of a path connection over Muddy Brook. I am a hiker and walker who is always looking for new routes and this new, planned one sounds very attractive.

Sincerely,

Ernest Haas

72 Winding Brook
South Burlington, VT 05403
Tel. 802 658 0565

E-mail: ernest.haas@msn.com
SHARED USE PATH CONNECTION OVER MUDDY BROOK
LOCAL CONCERNS QUESTIONNAIRE

In order to better understand the public's views of this project, please take a few moments to respond to this questionnaire. Your thoughts, comments and suggestions are greatly appreciated.

1. Assuming the path connects South Brownell Road and Kennedy Drive, what will be the likely use in order of their rankings: (1 being most likely and 5 being least)

   1. Commuting
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   3. Recreating/exercising
   4. Accessing schools
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   c. Accessing businesses or ___ exercise
   d. More developed or ___ Less developed area.

3. Please identify any issues, relative to a shared use facility, along the following existing roadway corridors. Issues may include safety, speed, traffic, trucks, natural resources, etc.

   Marshall/Kimball Ave.: ______________________________________________________________________________________
   Too far from path

   Williston Road (US 2): ________________________________________________________________________________________
   Too busy. If the bike path was like Dorset, it would be fine.

   South Brownell Road: _________________________________________________________________________________________
   OK

4. Please provide any additional comments about any part of this project. _____________________________________________________________________________________________
   See map on back.
   I think that is ideal
SHARED USE PATH CONNECTION OVER MUDDY BROOK
LOCAL CONCERNS QUESTIONNAIRE

In order to better understand the public's views of this project, please take a few moments to respond to this questionnaire. Your thoughts, comments and suggestions are greatly appreciated.

1. Assuming the path connects South Brownell Road and Kennedy Drive, what will be the likely use in order of their rankings: (1 being most likely and 5 being least)

   3 Commuting
   4 Accessing local businesses
   1 Recreating/exercising
   5 Accessing schools
   2 Accessing residential areas

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   c. Accessing businesses or ___ exercise
   d. ___ More developed or ___ Less developed area.

3. Please identify any issues, relative to a shared use facility, along the following existing roadway corridors. Issues may include safety, speed, traffic, trucks, natural resources, etc).

   Marshall/Kimball Ave.: Narrow road with no shoulder
   across Muddy Brook. Kimball Ave. could have a bicycle lane.

   Williston Road (US 2): Ugly, narrow shoulders

   South Brownell Road: Not bad. The sketch between Williston Rd.
   and Shurnpke should be improved for bicycling.

4. Please provide any additional comments about any part of this project.

   I find Jeff Fehr's comments about the long-term value of a separate bicycle path crossing to be thoughtful
   and compelling.
   One way or another, we need to improve the current situation!
SHARED USE PATH LOC.

In order to better understand the potential use of this questionnaire. Your thoughts
Assuming the path connects to different areas of the community, which of the following uses is likely in order of the importance of these uses:

1. Commuting
2. Accessing local businesses
3. Recreating/exercising
4. Other

When considering the location of a shared use path, which is more important or has more value (mark with an X).

a. X Direct or scenic route
b. X Commuting or recreation route
b. X Accessing businesses or exercise route
d. X More developed or Less developed area.

3. Please identify any issues, relative to a shared use facility, along the following existing roadway corridors. Issues may include safety, speed, traffic, trucks, natural resources, etc).

Marshall/Kimball Ave.: natural resources – crossing waterways + wetlands; favor this option because it's a direct route and these crossings are already made – little additional environmental impact

Williston Road (US 2): safety, pollution from traffic, curb cuts, trash and gravel along roadway – commuters may use but no place for kids and purely recreational use

South Brownell Road: pretty heavily trafficked, but bike path + sidewalk already exist; lots of trucks; some speed issues

4. Please provide any additional comments about any part of this project:

A cross-country scenic path might seem nice walking between Kennedy and South Brownell, in the short-term, but as the area becomes more developed the scenic qualities would diminish. The more direct route (Kimball) would serve a range of users best in long-term.
Meet & Talk Connections to Multi-Path

Local Concerns Meeting

Meeting Minutes

7:00pm/8:00pm

Attendees: See Attached

Christine Roberts

Jim Cusens [S.Burlington]

Neal Bottem [Wilistna]

Lou O'Shea [comm]

Cross Vermont Trail

Ben Rose

Public Comments/Questions:

1. Essex Junction route is a point.

2. Industrial upgrade is in pipeline.

3. Route 2 corridor is in planning now.

4. "Millions of connections" on both sides.

5. Businesses on those roads are destinations.

6. Recreation users (light riders) on bike path.

7. Commuter users may outnumber recreation users.

8. We should use a corridor for or adjacent to an existing, secondary (separate but near).

9. How do sidewalks fit into the plan as SW path?

10. Balance needed wrt to SW corridor (Open land + wildlife).

11. Home & Ford & Big Box stores generate Ped traffic that could conflict.

12. Marshall Ave -SW traffic is not a "bike group."

13. Stick bike as a preferred cut to Wilistin.

14. Muddy Brook is the key.

15. Route to west is also a crossing issue.

16. What kind of bridge would you use?

Focus on

17. Kennedy/Kimball

18. Bike path standard is 10' wide.

[Williston Path Network]
[Burke/Town Path Network]
[Local Concerns Meeting]
19) Torrall St/Kennedy were difficult then

20) B e a c o m e a p e d e s t r i a n o n b i k e.

21) Wilshire is too dangerous,

22) Glass rocks & trash in shoulder make biking diff

23) Willamette from Tait's corner toward South Browne is more friendly to bikes & pedestrians than Marshall Ave.

24) Are shopping trips

25) ZA/Marshall is problem

26) Where is the crossing of Murray Brook [South of Kimball] & N of Interstate

27) Five years ago its near Interstate was idea

28) Making a connection & crossing

29) -

30) Tell us where is

31) Subdivided open area will be developed eventually

32) Kimball has less conflicts (south side) & less conflicts

33) Clearing area

34) Build a bridge close to Kimball to reduce conflicts

35) BDM commuters [on the south side] need to be considered
<table>
<thead>
<tr>
<th>NAME</th>
<th>AFFILIATION</th>
<th>ADDRESS</th>
<th>PHONE</th>
<th>EMAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Edwards</td>
<td>Intervene Henry</td>
<td>65 Green Mtn Dr, S Burlington</td>
<td>864-6223</td>
<td></td>
</tr>
<tr>
<td>Dave DeBaise</td>
<td></td>
<td></td>
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<tr>
<td>David McLead</td>
<td></td>
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<tr>
<td>Lynn M. Tindal</td>
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</tr>
<tr>
<td>Susan Green</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Will Mikel</td>
<td>Resident</td>
<td>965 Van Sicklen Rd</td>
<td>867-0357</td>
<td><a href="mailto:Will.Mikel@vtmedia.org">Will.Mikel@vtmedia.org</a></td>
</tr>
<tr>
<td>Sarah Dopp</td>
<td>So BURLAND Trust</td>
<td>500 Cheese Factory Rd</td>
<td>935-3581</td>
<td><a href="mailto:sarah.dopp@vtmedia.org">sarah.dopp@vtmedia.org</a></td>
</tr>
<tr>
<td>Jessica Earnig</td>
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<td>9 White Birch Rd</td>
<td>918-3122</td>
<td><a href="mailto:Lani.Ravin@speedymail.org">Lani.Ravin@speedymail.org</a></td>
</tr>
<tr>
<td>Lani Ravin</td>
<td>Resident</td>
<td></td>
<td>862-5989</td>
<td></td>
</tr>
<tr>
<td>Neil Boyden</td>
<td>Town of Williston</td>
<td>7900 Williston Rd</td>
<td>678-1239</td>
<td><a href="mailto:boydenn@williston-town.com">boydenn@williston-town.com</a></td>
</tr>
<tr>
<td>Ben Rose</td>
<td>Cross River Trail Assoc</td>
<td>137 Village Green, Williston</td>
<td>879-5173</td>
<td><a href="mailto:brose@greenwayclub.org">brose@greenwayclub.org</a></td>
</tr>
<tr>
<td>George Gerckes</td>
<td></td>
<td></td>
<td>854-2330</td>
<td><a href="mailto:gerek@edyphi.net">gerek@edyphi.net</a></td>
</tr>
<tr>
<td>Jim Canoos</td>
<td>SB City Council</td>
<td>575 Durrant St, SB</td>
<td>963-4654</td>
<td><a href="mailto:canoos@sburl.com">canoos@sburl.com</a></td>
</tr>
<tr>
<td>Tim Hubbard</td>
<td>SB Rec Dept</td>
<td>23 Crown Rd Ave</td>
<td>658-0397</td>
<td><a href="mailto:hubbards@sburl.com">hubbards@sburl.com</a></td>
</tr>
<tr>
<td>Jon Breese</td>
<td>SB Rec Path</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Public Meeting Notice

Local Concerns Meeting

Shared Use Path Connection over Muddy Brook
Williston - South Burlington, Vermont

Tuesday, August 23, 2005
6:30 pm
CCMPO Conference Room

Chittenden County Metropolitan Planning Organization (CCMPO)
30 Kimball Avenue
South Burlington, VT 05403

Williston and South Burlington are sponsoring a public meeting to discuss possible shared use path connections over Muddy Brook. The project area extends from South Brownell Road in Williston to Kennedy Drive in South Burlington and from I-89 to US Route 2 (Williston Road).

The purpose of this public meeting is to hear your ideas, concerns and answer your questions about this possible new path connection.

We look forward to hearing from you.

If you are unable to attend and have comments or questions, you can contact Greg Edwards, Project Manager, at Dufresne-Henry, Inc., P.O. Box 2246, South Burlington, VT 05403 or gedwards@dufresne-henry.com.
SHARED USE PATH CONNECTION OVER MUDDY BROOK
LOCAL CONCERNS QUESTIONNAIRE

In order to better understand the public’s views of this project, please take a few moments to respond to this questionnaire. Your thoughts, comments and suggestions are greatly appreciated.

1. Assuming the path connects South Brownell Road and Kennedy Drive, what will be the likely use in order of their rankings: (1 being most likely and 5 being least)

___ Commuting  ___ Accessing schools
___ Accessing local businesses ___ Accessing residential areas
___ Recreating/exercising

2. When considering the location or function of a shared use path, which is more important or has more value (mark with an X).

a. ___ Direct or ___ scenic
b. ___ Commuting or ___ recreation
c. ___ Accessing businesses or ___ exercise
d. ___ More developed or ___ Less developed area.

3. Please identify any issues, relative to a shared use facility, along the following existing roadway corridors. Issues may include safety, speed, traffic, trucks, natural resources, etc).

Marshall/Kimball Ave.: __________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Williston Road (US 2): __________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

South Brownell Road: __________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

4. Please provide any additional comments about any part of this project. ________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
Public Meeting Notice

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Muddy Brook
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Memorandum

Creating Better Places To Live, Work And Play

To: File
From: Greg Edwards
Date: July 25, 2005
Subject: CCMPO shared use path connection over Muddy Brook. 6320020.08

On Tuesday, July 25, 2005, I met with Juli-Beth Hinds, Planning Director for the City of South Burlington, to solicit project area information for the above referenced project. Our discussions included the following points:

1. The “Official Map” – Effective 2/14/04, the 2003 Zoning Map, & Overlay districts, as downloaded from the city’s website, are current.

2. The Official Map is a good source for general proposed paths or trails and proposed roadways in the project area. There is no separate bicycle path plan.

3. An important natural resource is the Potash Brook floodplain/wetland area between Commerce Way & Old Farm Rd.

4. A recreation facility/park is currently being discussed opposite the O’Brien Farm on Old Farm Rd.

5. Area major property owners who may warrant soliciting input from are: John Illick (Technology Park owner), Bob Bouchard of Pizzagalli properties (Tilley Farm owner), and Pat & Stephanie O’Brien.

6. Planned roads locations on the Official Map are general & reflect a new interchange of Hinesburg Road

GAE

cc: Christine Forde, via e-mail
Edwards, Greg

From: Christine Forde [cforde@ccmpo.org]
Sent: Tuesday, August 02, 2005 11:42 AM
To: Edwards, Greg
Subject: RE: CCMPO Shared Use Path Connection

The 8th at 1:00 is fine with me. Here or at your offices?

Have you checked out the website for volumes? I think everything we have is there. www.ccmpo.org. If you have other questions you can ask Daryl.

CF

-----Original Message-----
From: Edwards, Greg [mailto:GEDwards@dufresne-henry.com]
Sent: Monday, August 01, 2005 8:54 PM
To: Christine Forde
Subject: CCMPO Shared Use Path Connection

A proposed agenda and responsible parties for the upcoming Local Concerns meeting is as follows:

1. Introductions - CCMPO
2. Meeting Purpose and guidelines - CCMPO
3. Project development process - CCMPO
4. Project Purpose/Area - DH
5. Project Opportunities/Constraints - DH
   a. Users - Recreation, commuters, school children
   b. Values - Scenic, direct, safety, security
   c. Planned future developments
   d. Marshall Ave/Kimball Ave - safety, speed, traffic, resources
   e. US 2 Williston Road - safety, speed, traffic, resources
   f. South Brownell Road - safety, speed, traffic, resources
6. Next steps - DH

The goal is to facilitate an organized discussion. Please call me to discuss.

Would you be available to meet next Monday, the 8th, at 1 pm to review the project base mapping and finalize the agenda. Also, I would like to show the various roadway's AADT or DHV on the base mapping. Does the CCMPO have a database of these? Thanks.

Gregory A. Edwards, PE
Senior Vice President
Dufresne-Henry, Inc.
PO Box 2246
South Burlington, VT 05407

Phone: 802-864-0223
Direct: 802-383-0425 ext 103
Fax: 802-864-0165

8/8/2005
Shared use paths: purpose and need:

- Provide connections to existing shared use paths.
- Provide an opportunity to commute to areas with commercial/development/industrial
- Provide an opportunity for recreation or exercise.
- Provide an alternative to using existing roadways.
- Provide an opportunity to experience a more less developed environment.
- Provide a more direct, less circumscribed link to existing facilities (i.e., shared use paths, roadways, commercial/residential development, schools, etc.)
- Provide connections to local street systems.
- Provide opportunity for winter use such as cross country skiing, snowshoeing.
provide for & shared use path design for

- Advanced bicyclists or
- basic bicyclists
- Children

- provide separation from high vehicle traffic
- rare access points
- increased level of safety & security
- scenic qualities
- Connectivity to a variety of land uses
- well designed street & driveway crossings
- shorter trips
- higher levels of activity
- Uniform design
- Informative signs & markings
- economic contributions to communities
- Coast seismic designs
  - follow coastal terrain/contours.

Should use path next to roadways:
- some bicyclists will ride against
  normal traffic flow.
- at intersections, bicycles unexpectedly approach from the right.
Edwards, Greg

From: Edwards, Greg
Sent: Tuesday, February 07, 2006 10:01 AM
To: 
Cc: Amy Ball (amy.bell@state.vt.us); 'Barry Carris'; 'Becka Rooff'; 'Ben Rose'; 'Bruce Hoar'; cforde@ccmpo.org; 'Chapin'; 'David Jacobowitz'; DeBale, David; Edwards, Greg; 'Eric Schambarg'; 'finnegank@willistontown.com'; 'Lou Bresee'; Neil Boyden (boydenn@willistontown.com); 'Tom Hubbard'

Subject: RE: Muddy_Brook

Jim,

Thank you for your comments. I will share them with the project committee.

Gregory A. Edwards, PE  
Senior Vice President  
Dufresne-Henry, Inc.  
PO Box 2246  
South Burlington, VT  05407

Phone: 802-864-0223  
Direct: 802-383-0425 ext 103  
Fax: 802-864-0165

Jim McCullough [mailto: jim@jimforwilliston.com]
Sent: Monday, February 06, 2006 9:13 PM
To: Edwards, Greg
Subject: Muddy_Brook

Dear Greg,
I am not able to attend as I expect to be at the EIS meeting about RT 2 in Williston.
I like B-2 the best, based on the mapped route. It has most highway separation and travels near some interesting Muddy Brook land with some possibilities for brook views. I think that the Technology Park version from Leroy Road is the next best choice.
I like how both choices lead directly to the current path in the Williston retail and residential district.
Thank you,
Jim
Jim McCullough  
State Representative Jim McCullough  
Williston, VT

2/7/2006
<table>
<thead>
<tr>
<th>NAME</th>
<th>AFFILIATION</th>
<th>ADDRESS</th>
<th>PHONE</th>
<th>EMAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben Rose</td>
<td>Cross Vermont Trail Alliance</td>
<td>2600 Williston Road, S Burlington, VT 05403</td>
<td>802-795-2321</td>
<td><a href="mailto:benrose@crossvt.org">benrose@crossvt.org</a></td>
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<tr>
<td>Christopher Hill</td>
<td>Heritage Flight</td>
<td>500 South Street, Williston, VT 05495</td>
<td>802-540-3212</td>
<td><a href="mailto:christopherhill@flyheritagelc.com">christopherhill@flyheritagelc.com</a></td>
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<tr>
<td>Scott Mayo</td>
<td>Earl's Cycle</td>
<td>PO Box 14, Burlington, VT 05402</td>
<td>802-244-7431</td>
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<tr>
<td>Greg Guyette</td>
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<td><a href="mailto:guyette@dufresne-henry.com">guyette@dufresne-henry.com</a></td>
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<tr>
<td>David Jacobowitz</td>
<td>S. BURL. Rec Path</td>
<td>9 Andrew St, S Burlington, VT 05401</td>
<td>802-652-2666</td>
<td><a href="mailto:david.jacobowitz@gmail.com">david.jacobowitz@gmail.com</a></td>
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<tr>
<td>Andy Barker</td>
<td>Ben &amp; Jerry's</td>
<td>53 Vine St, Williston, VT</td>
<td>802-537-7800</td>
<td><a href="mailto:anske@adelphia.net">anske@adelphia.net</a></td>
</tr>
<tr>
<td>Bruce Haar</td>
<td>S. BURL. Rec</td>
<td>53 Vine St, Williston, VT</td>
<td>802-537-7800</td>
<td><a href="mailto:shapeshifter@adelphia.net">shapeshifter@adelphia.net</a></td>
</tr>
<tr>
<td>Brooke Scatchard</td>
<td>Town of Williston</td>
<td>7900 Williston Road, Williston, VT</td>
<td>802-876-1239</td>
<td><a href="mailto:bikes@adelphia.net">bikes@adelphia.net</a></td>
</tr>
<tr>
<td>Neil Boyden</td>
<td>Vermont Rail</td>
<td>1 National Life Dr, Montpelier, VT 05602</td>
<td>802-528-5799</td>
<td><a href="mailto:boyden@vtrails.org">boyden@vtrails.org</a></td>
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<tr>
<td>Amy Bell</td>
<td>VT Rails</td>
<td>21 Cornwall Ave, S Burlington, VT</td>
<td>802-652-0597</td>
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<tr>
<td>Lou Brasse</td>
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</tr>
<tr>
<td>Chapin Spencer</td>
<td>Local Motion</td>
<td>1 Steele St, 03850</td>
<td>652-2453</td>
<td><a href="mailto:chapin@adelphia.net">chapin@adelphia.net</a></td>
</tr>
</tbody>
</table>
Meeting Minutes

Meeting: Project Committee Meeting No. 2
Meeting Date: November 22, 2005
Project No.: 6320020.08

<table>
<thead>
<tr>
<th>Date</th>
<th>Start Time</th>
<th>End Time</th>
<th>Next Meeting</th>
<th>Next Time</th>
<th>Recorder</th>
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<tbody>
<tr>
<td>11/22/05</td>
<td>8:00 am</td>
<td>9:30 am</td>
<td>TBD</td>
<td>TBD</td>
<td>Greg Edwards</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attended By</th>
<th>Copies To</th>
</tr>
</thead>
</table>
| CCMPO: Christine Forde, Scott
Johnstone              | All attendee
| Williston: Neal Boyden, George Gerecke, Ben Rose | CCMPO: Bruce Hoar
VTrans: Amy Bell
UVM: David Jacobowitz |
| DH: Greg Edwards     | S. Burlington: Lou Bresee |
| S. Burlington: Jim Condos | |

If content contained within is not complete, accurate, or in context, please notify Dufresne-Henry of such discrepancy within ten (10) days of this record.

Meeting Purpose: To review last meeting minutes, update the committee on project status, and solicit input on draft information of Alternatives.

### Old Business

<table>
<thead>
<tr>
<th>Item</th>
<th>Action By</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>ROW Widths: DH received this information for the project area roadways from Bruce and Neal.</td>
</tr>
</tbody>
</table>
| 1-5  | **Property Owners:** DH discussed the project with John Illick of Technology Park and John O'Brien of Gregory Supply. Based on these discussions, DH obtained subdivision and lot development plans indicating easements and restructuring resources. The most influencing of these included:  
  - Proposing an off-road alignment, B2, along an easement paralleling Muddy Brook on the South Burlington side.  
  - Locating the off-road alignments, B1 and B2, outside a 100' wildlife corridor along the south property line of Gregory Supply. |

### New Business

<table>
<thead>
<tr>
<th>Item</th>
<th>Action By</th>
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</table>
| 2-1  | **Alternatives:** The following were comments and discussion items:  
a. Include more pictures of existing conditions along the route.  
b. Rename the east portion of Alternative A to Alternative B3.  
c. Discuss Alternatives with the COE and ANR (Wetlands/Fish) |
|      | DH        |
|      | DH        |
|      | DH        |
& Wildlife).

d. Provide draft Alternative layout to major property owners and solicit their input prior to the Alternatives Presentation meeting. Property owners to include:
- Leo/Dan O'Brien
- John Illick (Technology Park)
- John O'Brien (Gregory Supply)
- Bob Cooper (Burlington Food Service)
- Chad Shepard

e. Develop an evaluation matrix and note the length of alternatives, costs, impacts, etc.

f. Make the Alternative Plan background lighter

g. Initiate the Alternatives Presentation with an introduction or history to include the overall plan for shared use paths. Ben will pursue mapping for Cross Vermont Trail. Spencer will pursue mapping for Greater Burlington area, and Christine will see what the CCMPO/RPC has for mapping. CCMPO will then develop and provide the presentation introduction/background for the presentation.

h. Provide draft alternative plan to Amy Bell for comment. DH will pursue a meeting with Amy to discuss the project and plan.

| 2-2 Alternative Presentation: A tentative date was set for January 26th at the CCMPO conference room. This will be confirmed by Jan. 3rd so notices can be sent by Jan. 6th. | DH/CCMPO |

| 2-3 Next Steps: DH will edit and finalize Alternative Plan, develop an evaluation matrix, including cost estimates, and review information with the CCMPO prior to the Alternatives Presentation meeting. | DH |