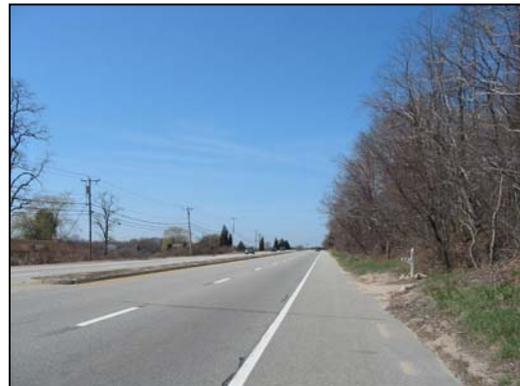


# BICYCLE AND PEDESTRIAN FACILITIES STUDY AND DEVELOPMENT

## SHORELINE BIKEWAY

SOUTH COUNTY TRAIL, POST ROAD,  
ROSS HILL ROAD, AND SHORE ROAD

Town of Charlestown, Rhode Island  
Town of Westerly, Rhode Island



July 2007

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## OVERVIEW

The Town of Charlestown submitted a project proposal form to the Rhode Island State Planning Council as part of the Fiscal Year (FY) 2003-2005 Transportation Improvement Program (TIP). The project proposal described the Shoreline Bikeway bicycle facility in the Towns of Westerly and Charlestown that includes the study of four roadways for consideration for signing as Signed Shared Roadways. The project application was approved by the Transportation Advisory Committee (TAC) and included in the FY 2003-2005 TIP. The Rhode Island Department of Transportation (RIDOT) has Pare Corporation (PARE) under contract for consultant services for the study and development phase of this task.

This proposed project supports local and state goals and plans. The following goals, policies, and priorities of Charlestown's Comprehensive Plan are met in regards to this study:

### **Open Space and Recreation Element**

#### Major Goal

- *To promote appreciation and appropriate use of Charlestown's natural and cultural resources and a focus of community activity by providing a wide range of recreational opportunities for Charlestown's residents and visitors.*

#### Major Supporting Policies

- *Continue to provide and expand opportunities for organized activities including sports, field trips, and festivals.*
- *Provide opportunities for active and passive recreation throughout the town.*
- *Promote safe pedestrian and bicycle travel.*

#### Medium Priority

- *Provide safe routes for pedestrians and bicyclists using wide road rights-of-way, and low speed limits in coastal settlements.*

#### Lower Priority

- *Over the long term, develop networks of paths for bicyclists and pedestrians, connecting with features such as state trails, village centers, and water access or views.*



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## **Circulation Element**

### Major Goal

- *To provide for safe travel through the town while protecting the rural character, scenic nature, and natural and cultural resources along the roads and throughout the town.*

### Major Supporting Policies

- *Where possible, promote safe bicycle and pedestrian travel and other modes of transportation.*

### Medium Priority

- *Encourage bicycle and pedestrian travel as specified in Open Space and Recreation priorities.*

## **Economic Development Element**

### Major Goal

- *To promote economic development that relies heavily on the Town's natural, scenic, and historic amenities and protects the important resources in the town.*

### Major Supporting Policies

- *Promote the development of appropriate recreational opportunities that focus on the town's natural and cultural resources, including organized sports, a community center, festivals, passive outdoor recreation, access to the shore, and commercial sports such as golf. Include sufficient controls to ensure that these uses protect the natural and cultural resources of the town and rural character.*

### Lower Priority

- *Continue to develop and market specific recreational opportunities and focuses, with an emphasis on natural and cultural resources, eg., historic trails along the Pawcatuck River villages, hiking trails, or antiques/arts festivals.*

The Town of Charlestown is currently in the process of completing their Five-Year Update to the Comprehensive Plan. In conjunction with the goals, policies, and priorities already identified, the following proposed goals, policies, and actions also support this study:



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## **Open Space and Recreation Element**

### Policy 3

*The Town should continue to provide opportunities for active and passive recreation throughout the Town.*

- *Consider the recommendations identified in the project narrative for Ninigret Park.*
- *Design/Plan for active and passive recreation.*

## **Natural Resources Element**

### Policy 6

*To promote appreciation of natural resources by residents and visitors.*

- *Promote access to and appreciation of many of the natural resources through the continued development of shore access points, hiking trails, and other opportunities for outdoor activities.*

## **Circulation Element**

### Policy 2

*Seek appropriate state funding for transportation improvements.*

- *Town departments to prepare a yearly memo to the Planning Board and Town Council, outlining requests for state assistance or status of ongoing RIDOT construction projects.*

### Policy 4

*Promote safe bicycle and pedestrian travel and other modes of transportation where possible.*

- *Promote safe pedestrian and bicycle travel for recreation, physical exercise, and as an alternative to travel by passenger vehicle.*
- *Encourage bicycle, pedestrian, and water travel as specified in the Open Space and Recreation Element priorities, to the extent possible under budgetary limitations.*
- *Where possible, require sufficient setbacks to provide a pedestrian way in front of new businesses.*
- *Evaluate the feasibility of widening/improving roads rights-of-way to provide a safe pedestrian bicycle route.*
- *Consider reducing speed limits in densely developed coastal neighborhoods to increase bicycling safety.*
- *Encourage provisions of pedestrian and/or bicycle paths as part of development exactions.*
- *Coordinate with RIDOT regarding existing and proposed bike routes.*



- 
- *Collaborate on suitability of local roadways for inclusion on the state bicycle map.*
  - *Support RIDOT bicycle projects as warranted.*
  - *Recognize the importance of bike paths, hiking trails, and 'blue trails' for recreation and tourism.*
  - *Regularly maintain established municipal bike and hiking trails.*
  - *Include 'blue trails', bike, hiking, and coastal birding trails in tourism literature developed by the South County Tourism Council and others.*

Additionally, The 2004 Update of the State Guide Plan/Element 611/Ground Transportation Plan: states many specific goals related to transportation land use and development that this proposed project would implement. They include:

### **Bicycle**

*Maintain and expand an integrated statewide network of on-road and off-road bicycle routes to provide a safe means of travel for commuting, recreation, and tourism in order to improve public health, and reduce auto congestion and dependency.*

- B.2.a. *Maintain existing bicycle paths and on-street lanes in a clean, safe, and attractive condition.*
- B.2.b. *Expand the on and off-road bicycle network – prioritizing projects that provide links between paths, seamless connections to other modes, or have the potential to reduce automobile traffic. This includes provision of facilities such as bike racks, lockers, and showers, etc.*
- B.2.c. *Encourage cities and towns to address bicycle transportation in comprehensive plans. Promote locally sponsored bicycle facilities, which connect with and complement the state system.*
- B.2.d. *Adhere to the 'bicycle tolerant' design philosophy in all highway reconstructions. Include experienced bicyclists in the design review process for both on and off road bicycle routes.*
- B.2.e. *Promote bicycling as a viable transportation choice for commuters, students, and tourists. Businesses receiving state funding for expansion should accommodate bicycle commuting by providing user facilities if safe and reasonable connections can be made to an existing bicycle route.*



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B.2.g. *Cooperate with public and private sector entities to promote and provide a resource for healthy recreation activities.*

### **Design**

*Strive for excellence in design of transportation projects to enhance safety, security, mobility, and environmental stewardship, aesthetic quality, and community livability.*

D.2.a. *Utilize context-sensitive design solutions for roads and streets that respond to the environs in which they are located, while adhering to appropriate requirements for safety and capacity. These must be flexible to adapt to different situations and must consider bicycle and pedestrian accommodations where feasible.*

D.2.b. *Emphasize effective and attractive signage that clearly conveys essential safety and directional information to travelers. Where appropriate, employ gateway signage to distinguish regions and themes and to provide increased identification for transportation facilities, business and civic centers, historic districts, institutions, tourist destinations, and natural features like rivers and watersheds.*

### **Economic Development**

*Support a vigorous economy by facilitating the multi-modal movement of freight and passengers within Rhode Island and the northeast region.*

ED2.b. *Provide viable and affordable transportation options.*

ED2.h. *Utilize transportation investments to support tourism, one of the state's most important industries. Strengthen linkages between the Providence metropolitan center, air and rail terminals, and tourist attractions in Newport, South County, and the Blackstone Valley.*

### **Equity**

*Ensure that the transportation system equitably serves all Rhode Islanders regardless of race, ethnic origin, income, age, mobility impairment, or geographic location.*

EQ.2.a *Proactively work with state agencies and other stakeholders to determine needs of underrepresented population, and strive for transportation options that encourage independency.*



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## **Highway**

*Maintain the highway and bridge network in a safe, attractive, and less congested condition to carry passenger vehicles, commercial vehicles, government vehicles, and transit vehicles, as well as bicycles and pedestrians. Recognize roadways as vital public spaces that accommodate travel, commerce, community activities, and utility infrastructure.*

H.2.c *Minimize recurring and non-recurring congestion through increased use of other travel modes, effective incident management and access management, and traffic flow improvements.*

H.2.d *Encourage alternatives to single-occupant auto travel, such as transit, carpools, vanpools, and bicycle and pedestrian travel to help reduce vehicle miles of travel, conserve energy, improve air quality, benefit the environment in other ways, and support the economy.*

In addition to reviewing the Town of Charlestown's Comprehensive Plan, the following goals, policies, and priorities from the Town of Westerly Comprehensive Plan from December 1991 were reviewed in regards to this study:

## **Open Space and Recreation Element**

### **Action Program**

- *Identifies the public actions necessary to address the needs and implement the goals and policies of this element.*

### **Actions Requiring Further Study**

- *Recommended Action No. 3: Investigate Creation of Bike Paths in Conjunction with Scenic Roads.*

### **Management Strategies**

- *Contact neighboring communities and state agencies for proposed bicycle path plans.*

### **Responsibility**

- *Recreation Director and Department of Public Works*



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## **Traffic and Transportation Element**

### Bicycling Trails and Scenic Roads

- *Although no bicycling facilities appear to be planned for Westerly, the Rhode Island State Outdoor Recreation Plan for 1986-1991 state that Rhode Islands communities should access their recreational and transportation bicycling needs as part of their comprehensive planning process. Bicycle tolerant designs should be incorporated into new or rebuilt local roads wherever possible. Local bicycle facilities should be planned to link to state-built bikeways where feasible. Communities should also review their zoning and subdivision ordinances to determine if they encourage or discourage bicycling.*

The stated policy of the Plan is:

- *“Rhode Island recognizes the values of bicycling as a healthy recreational activity and an energy efficient alternative mode of transportation, and will seek to improve the availability of safe and enjoyable bicycling opportunities.”*

The Town of Westerly is currently in the process of completing their Five-Year Update to the Comprehensive Plan. In conjunction with the goals, policies, and priorities already identified, the following proposed goals, policies, and actions also support this study:

## **Open Space and Recreation Element**

### Improvements to Existing Facilities

- *Recommended Action No. 3: Upgrade all existing Town and school playgrounds and provide necessary future maintenance and upgrades to meet changing recreational standards.*

### Administrative and Management

- *Recommended Action No. 5: Design and Implement Pedestrian Circulation Plan Linking Downtown to the River and Wilcox Park*

### Actions Requiring Further Study

- *Recommended Action No. 3: Investigate Creation of Bike Paths in Conjunction with Scenic Roads*



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The total study area of the proposed, signed, on-road, Shoreline Bikeway project is shown in Figure 1, the Overall Site Plan. Implementation of this project will require the coordination of both Charlestown and Westerly. The site plan indicates that the proposed Shoreline Bikeway would provide connections with tie-ins to the existing signed South County Bike Route (shown on the overall site plan) and, ultimately, the South County Bike Path located in the Towns of Charlestown, Westerly, Richmond, South Kingstown, and Hopkinton. An uninterrupted bicycle facility network would be provided with the addition of the roads that would make up the Shoreline Bikeway. Some of the attractive and accessible destinations within the project area include the Block Island Sound beaches from Misquamicut State Beach east to the Charlestown Town beach, the Ninigret and Quonochontaug Ponds, and Ninigret and Burlingame State Park. Other destinations include the Cross Mills Library, and the Charlestown Town Hall and the Department of Public Works facility. There are also historical sites located in this area: the Historic Village of the Narragansetts (also known as the former reservation of the Narragansett Tribe of Indians), the Joseph Stanton home (also known as the Wilcox Tavern and General Stanton Monument), and the Shannock Historical District.

This report was a combined effort by the PARE team and local Town officials. Relevant and available data, reports, and mappings were obtained from State, Town, and local agencies and organizations. Site visits were conducted and the existing conditions documented, tabulated, and organized.

The Shoreline Bikeway Feasibility study prepared for RIDOT by Vanasse Hangen Brustlin, Inc. (VHB) dated September 1999 has been referenced throughout this report. The VHB report was prepared to evaluate the feasibility of a continuous east/west bikeway connecting the towns of Westerly, Charlestown, and South Kingstown as a link in a statewide bicycle network planned by RIDOT. Basic objectives studied include:

- \* Accessibility
- \* Safety
- \* Ease of Use
- \* Community Acceptance
- \* Limited Capital
- \* Maintain Uninterrupted Traffic Flow on Route 1



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Throughout the VHB report, existing traffic/conditions along Post Road (Route 1) present significant safety concerns relative to shared use with bicyclists. Alternative 3 was recommended as the preferred route - utilizing Matunuck Schoolhouse Road, Matunuck Beach Road, and portions of Old Post Road. In addition, the creation of 7.3 miles of a separate Class 1 bicycle facility in the Route 1 right-of-way was also recommended as part of Alternative 3. Alternative designs were prepared to confront the conflict of vehicle vs. bicyclists at the over forty (40) crossroad intersections along the studied Route 1 corridor. These plans call for the construction of a 1,000-foot bicycle path designed to intersect the entrance and exit ramps at right angles. Bicyclists would be required to stop at each location, and wait for a gap in traffic. Most bicyclists stated they would probably not make efficient use of these very costly, indirect paths. In summary, the VHB report indicates that it is recommended to continue to allow bicyclists to use Route 1 in the Shoreline area, but not to designate the facility for bicycle use through signing (reinforced in the following section, as well as in Section 4 -Post Road).

Of the four roadways studied as part of this report, the following recommendations have been made:

1. South County Trail (Route 2) is recommended as a Signed Shared Roadway, following the implementation of recommended improvements.
2. Post Road/Route 1 from the intersection of Route 2 to the intersection of Route 216, is not recommended to be signed as a Signed Shared roadway.
3. Ross Hill Road/Church Street is recommended as a Signed Shared Roadway, following the implementation of recommended improvements.
4. Post Road (Route 1)/Shore Road (Route 1A) is not recommended to be signed as Signed Shared roadway.

Referring to the Bicycle Route Sign Criteria chart in DPM 920.06 (Section 2 - Criteria), Post Road and Post Road/Shore Road currently do not meet the criteria to sign them. This is based on average AADT volumes and posted speed limits. Reconstruction is required for South County Trail and Ross Hill Road to meet the criteria as recommended in the 1999 AASHTO "Guide for the Development of Bicycle Facilities" design criteria for a Signed Shared Route. Once reconstruction is completed, the two recommended roadways would be identified, by signing, as preferred routes. Signs shall be installed at approximate 1/2 mile locations on both sides, opposite from each, of the roadways.



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Post Road and Post Road/Shore Road are not recommended as a Signed Shared roadway due to the high number of accidents, vehicle and truck volumes, truck blast, dangerous crossroads and U-turns, and review of the Shoreline Bikeway Feasibility study prepared for RIDOT by VHB dated September 1999. Although bicyclists currently utilize this roadway as a shared facility, the data collected relative to signing the roadway as a Signed Shared roadway represents major safety concerns even for experienced bicyclists.

In the “*Guide To Cycling in the Ocean State 2005-2006*” map that is prepared and distributed by RIDOT, the roadway classification for bicycle travel on Route 2 and Ross Hill Road (Route 216) are labeled as a Suitable Road. RIDOT defines these Suitable Roads as roads that the bicyclist will find less adequate or no shoulders whereas compared to the Most Suitable Roads where the bicyclist will generally find adequate shoulders. The other two roadways evaluated in this report, Post Road (Route 1) and Shore Road (Route 1A) were not classified, although Church Street (part of the Ross Hill Road segment) is classified as “most suitable”.

To further highlight details of the existing conditions and routes, a separate project map has been created for each of the four studied roadways: South County Trail, Post Road, Ross Hill Road, and Shore Road, respectively.

A field review of each roadway and an inventory of existing roadway conditions pertinent to bikeway classification criteria were performed. The following information was gathered for each roadway:

- Travel and shoulder lane widths
- Posted speed limit and 85<sup>th</sup> percentile speed
- Density and type of traffic
- Parking conditions
- Grades and sight distances
- Horizontal and vertical geometry.

Other impediments to bicycle travel such as incompatible drainage inlet grates, debris, edge of roadway obstructions, driveways, rough pavements, curbside auto parking, railroad tracks, and traffic signals that are not responsive to bicyclists were also noted.



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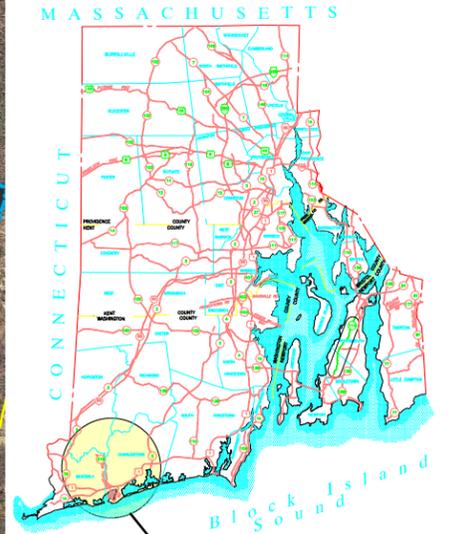
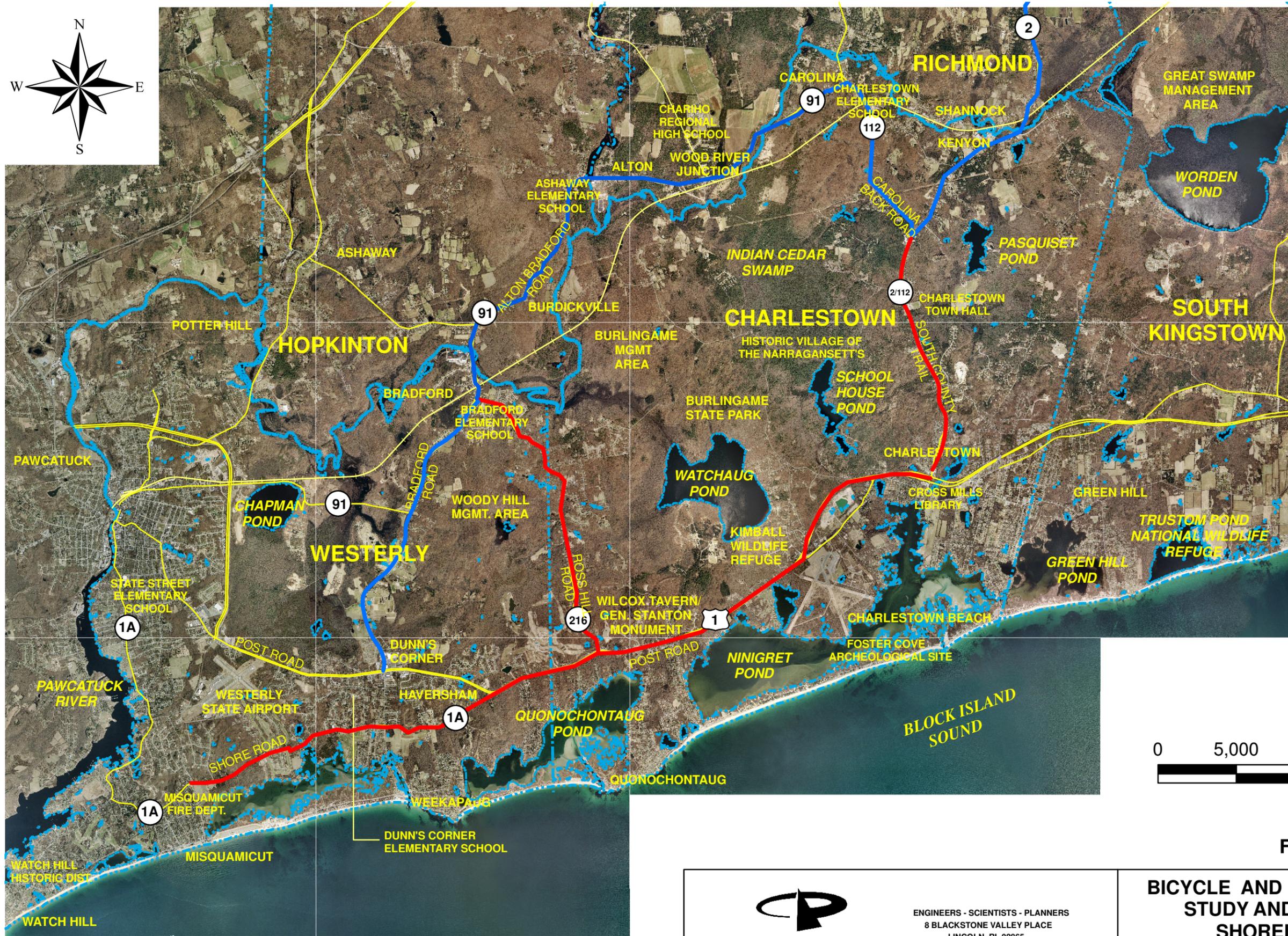
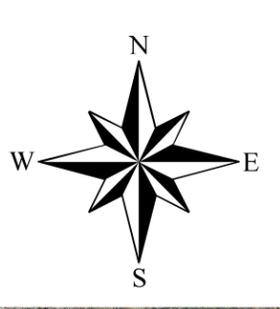
In addition to the information gathered in the field, a crash analysis for each roadway has been organized, completed, and included in each roadway section. Electronic Accident Data (EAD) for each of the last five years (2002, 2003, 2004, 2005, and 2006) were requested and received from RIDOT. The EAD for the year 2006 was received in the draft form. The final draft of the EAD from RIDOT will not be available until summer 2007. Information regarding the type of crash, location of crash, injury and fatality information, roadway surface condition, and the time of day or night of the crash can be determined from crash reports.

The following report is organized according to the area covered by each of the four roadways. Their location and limits are indicated on the plans and discussed in detail in each roadway section of the report. Each roadway is discussed, evaluating its existing conditions and constraints as it relates to the most appropriate and best bikeway facility.

RIDOT's report "*Bike Route Signing: Statewide, Rhode Island*" issued May 3, 2006 pertains to on-road signing, facilities listing, and destination signage. It documents signage on existing facilities and provides recommendations for signage for future facilities. Of particular interest for this project is the use of destination signage at the route termini and intermediate points where applicable.

RIDOT's recently established and instituted Design Policy Memo (DPM) Number 920.06 – titled *Bicycle Routes & Share the Road Signs*, dated 1/18/05 with Attachment: *Bicycle Route Suitability Report, Revision 2*, dated 7/26/06, (see Document 1). It specifically addresses setting standards for the signing of roadways as bike routes throughout the State. Item number 5 in Section 920.06.05.01 of the DPM, titled *Bicycle Route Sign Criteria*, refers to a "Bicycle Route Suitability Recommendation Report". This report contains 24 items that are investigated and documented in a formal setting. The report is provided to RIDOT for review by various departments for consideration of signing a road as a Signed Shared Roadway. This information is to be evaluated prior to providing an opinion on the posting of bike route signs on the subject road. This DPM has become an integral part of this report in the evaluation and consideration of the four roads for bike route signing.

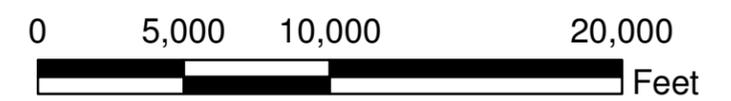




**LOCATION MAP**  
NOT TO SCALE

**LEGEND**

- APPROXIMATE TOWN LINE
- EXISTING ROADWAY
- SOUTH COUNTY BIKE ROUTE
- PROPOSED SHORELINE BIKE WAY



**Figure 1**

 <p><b>PARE</b> CORPORATION</p>	<p>ENGINEERS - SCIENTISTS - PLANNERS 8 BLACKSTONE VALLEY PLACE LINCOLN, RI 02865 401-334-4100</p>	<p><b>BICYCLE AND PEDESTRIAN FACILITIES STUDY AND DEVELOPMENT SHORELINE BIKEWAY Charlestown &amp; Westerly, Rhode Island OVERALL SITE PLAN</b></p>
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## CRITERIA

The 1999 American Association of State Highway and Transportation Officials (AASHTO) “*Guide for the Development of Bicycle Facilities*” defines three bicycle user types that are a helpful guide in assisting highway designers in determining the impact of different facility types and roadway conditions on bicyclists:

- Group A – Advanced Bicyclists: These are experienced riders who can operate under most traffic conditions. They are typically comfortable riding with motor vehicle traffic; however they need sufficient operating space on the traveled way or shoulder to eliminate the need for either them or a passing vehicle to shift position.
- Group B – Basic Bicyclists: These are casual or new adult and teenage riders who are less confident of their ability to operate in traffic without special provisions for bicycles. Thus, basic riders are comfortable riding on neighborhood streets and Shared Use Paths and prefer designated facilities such as Bike Lanes or wide shoulder lanes on busier streets.
- Group C – Children: These bicyclists ride on their own or with their parents. Residential streets with low motor vehicle speeds, linked with Shared Use Paths and busier streets with well-defined pavement markings between bicycles and vehicles, can accommodate children without encouraging them to ride in the travel lane of major arterials.

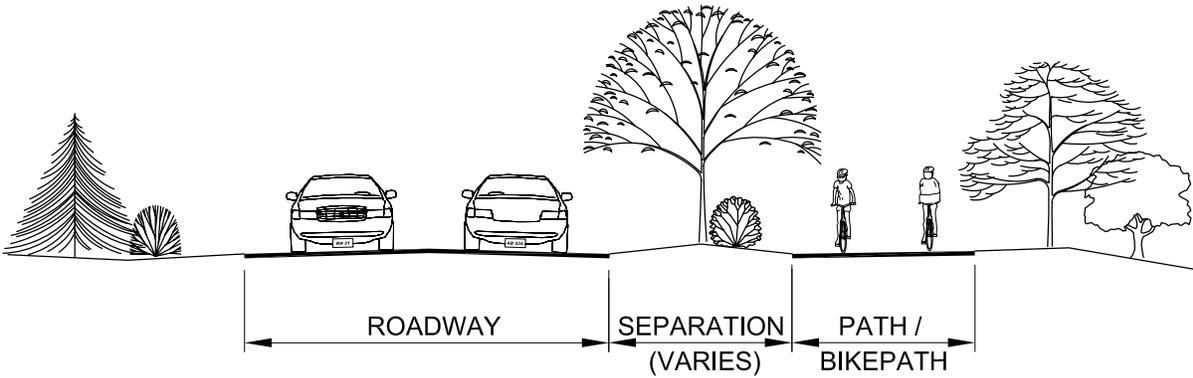
### Bicycle Facility Design:

Bikeway classification is based on AASHTO’s description of each of the four bike facility types as explained below. Figure 2, Bike Facility Class, illustrates three of these types. The recommended bicycle facility is based on several factors including the ability of the users, specific corridor conditions, existing roadway conditions, and associated costs necessary to upgrade the roadway to an acceptable bicycle facility.

### Shared Use Path:

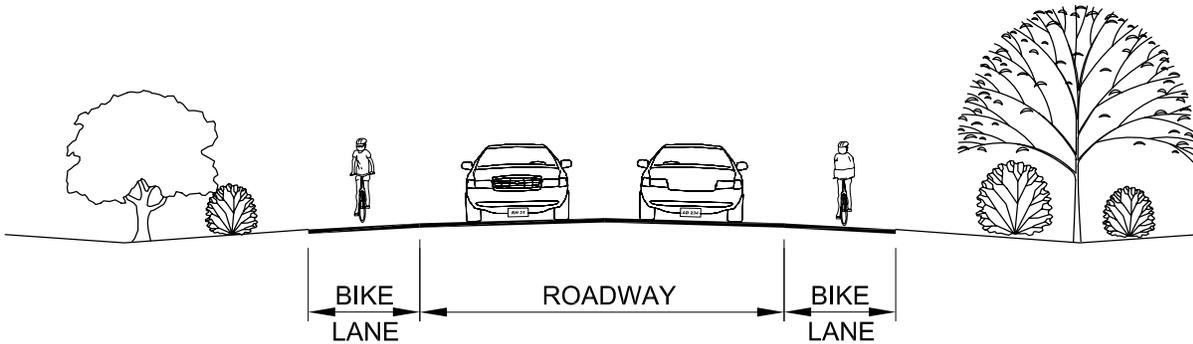
Shared Use Paths should be thought of as a complementary system of off-road transportation routes for bicyclists and others that serve as a necessary extension to the roadway network. Most Shared Use Paths are facilities on exclusive right-of-way, are designed off-road, and are physically separated from motor vehicle traffic. Shared Use Paths can be located along rivers, ocean fronts, canals, abandoned or active railroad and utility right-of-way, limited access freeways, within college





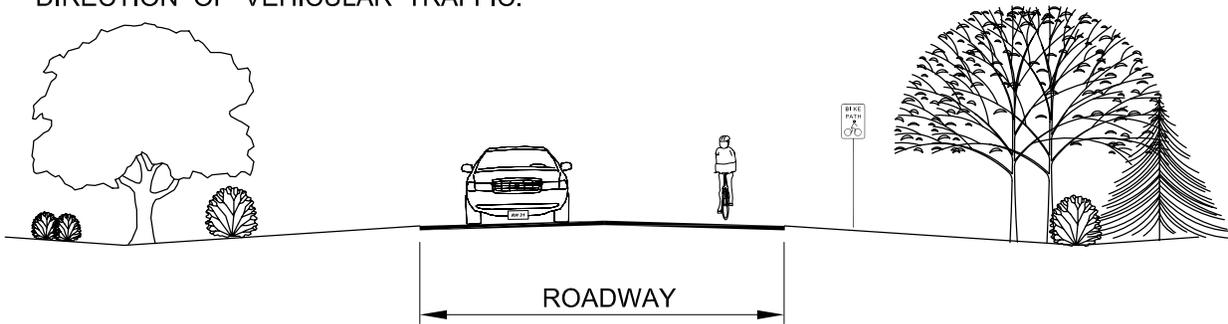
### SHARED USE PATH / BIKE PATH - CLASS I

A BIKEWAY PHYSICALLY SEPARATED FROM MOTORIZED VEHICULAR TRAFFIC BY AN OPEN SPACE OR BARRIER WITHIN THE HIGHWAY RIGHT - OF - WAY OR WITHIN AN INDEPENDENT RIGHT - OF - WAY. THESE PATHS WILL ALSO BE USED BY PEDESTRIANS, SKATERS, WHEELCHAIRS, JOGGERS AND OTHER NON - MOTORIZED USERS.



### BIKE LANE - CLASS II

A PORTION OF A ROADWAY WHICH HAS BEEN DESIGNATED BY STRIPING, SIGNING, AND PAVEMENT MARKINGS FOR THE PREFERENTIAL OR EXCLUSIVE USE OF BICYCLISTS. BIKE LANES ARE ONE - WAY DIRECTIONAL TRAVEL LANES, CORRESPONDING WITH THE DIRECTION OF VEHICULAR TRAFFIC.



### SIGNED SHARED ROADWAY / SIGNED BIKE ROUTE - CLASS III

A SHARED ROADWAY WHICH HAS BEEN DESIGNATED BY SIGNING AS A PREFERRED ROUTE FOR BICYCLE USE. THE SHARED ROADWAY, WHICH IS OPEN TO BOTH BICYCLE AND MOTOR VEHICLE TRAVEL, MAY BE WITH OR WITHOUT PAVED SHOULDERS AND / OR CURBING. BICYCLISTS TRAVEL IN THE SAME DIRECTION AS VEHICLES SHARING THE SAME SIDE OF THE ROADWAY.

Not To Scale



PARE CORPORATION  
ENGINEERS - SCIENTISTS - PLANNERS  
8 BLACKSTONE VALLEY PLACE  
LINCOLN, RI 02865  
401-334-4100



SHORELINE BIKEWAY  
BICYCLE AND PEDESTRIAN FACILITIES  
STUDY AND DEVELOPMENT

BIKE FACILITY CLASS

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campuses or within and between parks. Shared Use Paths are designed to work with the on-road bicycle facilities to provide the greatest opportunities to bicyclists and pedestrians. For Shared Use Paths to be successful, it is very important to provide users with connections to the roadway network as well as vehicle parking facilities for the casual or family user. A critical component of Shared Use Paths are the transitions to and from the roadway network.

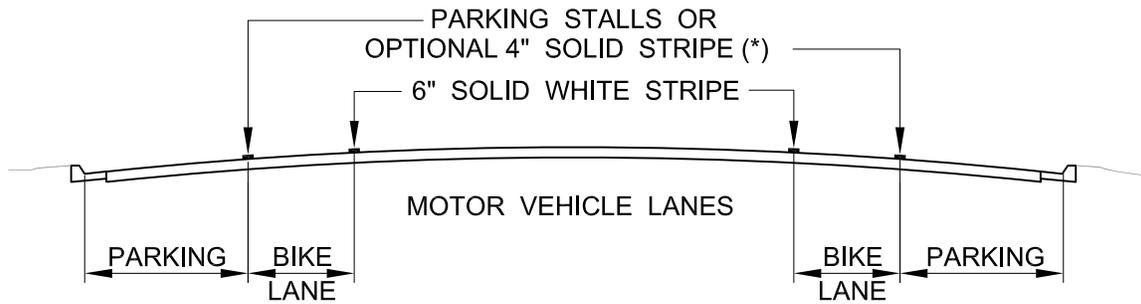
Bike Lane:

A Bike Lane is a portion of roadway that has been designated with striping, signing, and pavement markings for preferred or exclusive use by bicyclists. Bike Lanes should always be one-way, carrying bicyclists in the same direction as the adjacent travel lane and on the right side of the road. Minimum motor vehicle travel lane width is the same as for that of the Shared Roadway, 12 feet minimum, 14 feet desirable. Widths greater than 14 feet may encourage the undesirable operation of two motor vehicles in one lane and therefore is not recommended. In areas where 15 feet or more of pavement width exists, striping of lanes for bikes or shoulders should be considered. Width requirements for Bike Lanes vary according to roadway conditions. Bike Lanes may have a minimum width of 4 feet, where the area beyond the paved shoulder can provide additional maneuvering width. A width of 5 feet or greater is preferred where truck traffic is present or where motor vehicle speeds exceed 50 MPH. Where parking is permitted, the Bike Lane should be placed between the parking area and the travel lane and have a minimum width of 5 feet. A Bike Lane should be delineated from motor vehicle travel lanes with a 6-inch solid white line. Figure 3, Typical Bike Lane Cross Sections, is the standard provided by AASHTO for the delineation and designations of Bike Lanes for different situations.

Signed Shared Roadway:

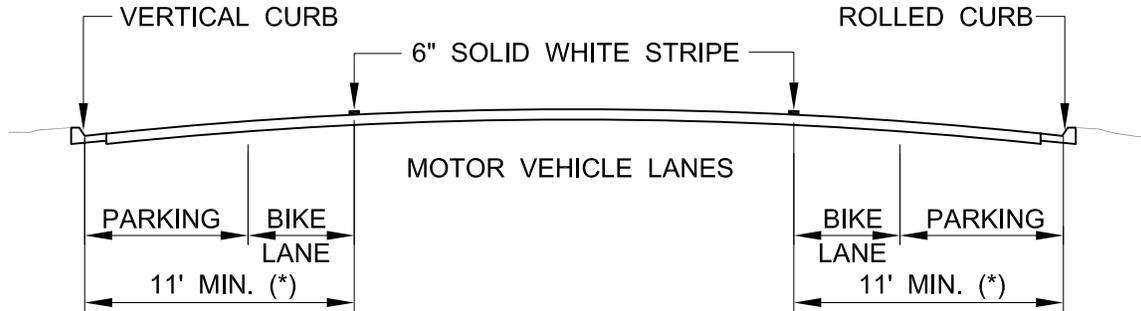
Signed Shared Roadways are those roads that have been identified by signing only as preferred bike routes through high demand corridors. Certain criteria must be considered prior to signing a Signed Shared Roadway. These include, but are not limited to, the removal or restriction of on-street parking, smooth riding surface, regularly maintained roadways that meet the needs of bicyclists, and have wide shoulders.





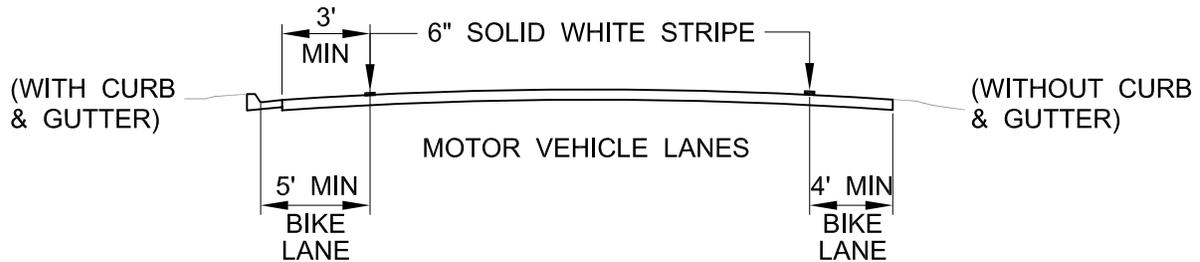
### ON STREET PARKING

\*THE OPTIONAL SOLID WHITE STRIPE MAY BE ADVISABLE WHERE STALLS ARE NECESSARY (BECAUSE PARKING IS LIGHT) BUT THERE IS CONCERN THAT MOTORISTS MAY MISCONSTRUE THE BIKE LANE TO BE A TRAFFIC LANE.

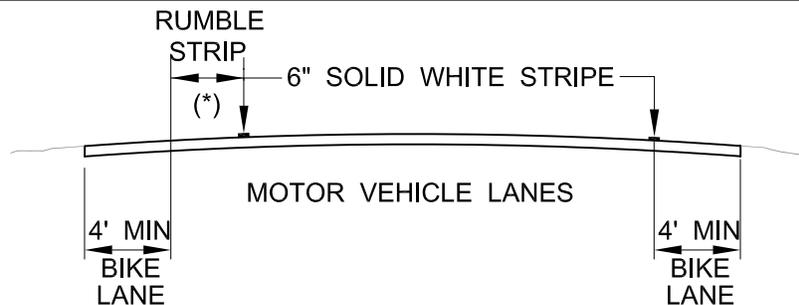


### PARKING PERMITTED WITHOUT PARKING STRIPE OR STALL

\* 13' IS RECOMMENDED WHERE THERE IS SUBSTANTIAL PARKING OR TURNOVER OF PARKED CARS IN HIGH (e.g. COMMERCIAL) AREAS.



### PARKING PROHIBITED



### TYPICAL ROADWAY IN OUTLYING AREAS PARKING PROTECTED

\*IF RUMBLE STRIPS EXIST THERE SHOULD BE 4' MINIMUM FROM THE RUMBLE STRIPS TO THE OUTSIDE EDGE OF THE SHOULDER.

Not To Scale



PARE CORPORATION  
ENGINEERS - SCIENTISTS - PLANNERS  
8 BLACKSTONE VALLEY PLACE  
LINCOLN, RI 02865  
401-334-4100



SHORELINE BIKEWAY  
BICYCLE AND PEDESTRIAN FACILITIES  
STUDY AND DEVELOPMENT

TYPICAL BIKE LANE  
CROSS SECTIONS

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A Signed Shared Roadway should have particular advantages for bicyclists over alternative routes. According to AASHTO, Signed Shared Roadways should provide through and direct travel, connect to other bicycle facilities, and give priority to bicyclists. Signing also advises motorists that bicycles are present.

According to AASHTO, “width is the most critical variable affecting the ability of a roadway to accommodate bicycle traffic. In order for bicycles and motor vehicles to share the use of a roadway without compromising the level of service and safety for either, the facility should provide sufficient paved width to accommodate both modes.” AASHTO recommended paved widths vary with the roadway conditions. Like that of a “Shared Roadway,” minimum lane width of 12 feet is required but 14 feet is desirable to accommodate both bicyclists and motorists. These minimum useable lane widths provide maneuvering room for drivers exiting from or in areas with limited sight distances.

According to the AASHTO Report, Signed Shared Roadways should be signed approximately every ¼ mile and at signalized intersections with both guide and supplemental signs. Also, directional signs are to be placed at every turn to both mark the road and to confirm that the rider has made the correct turn. Bicycle warning signs should be installed to warn bicyclists of conditions not readily apparent, such as “HILL” or “CURVE”, along the route. Roadways that do not meet the criteria for a Signed Shared Roadway should not be signed as such. However, destination signs may be posted if the roadway leads to a logical destination such as a park, school, or municipal offices. Crossing signs and crosswalks can be proposed at locations where it is necessary to cross the road to access Signed Shared Roadways, Shared Use Paths, or other destinations.

AASHTO provides the following reasons for designating a road as a Signed Shared Roadway as follows:

*Signed Shared Roadways are those that have been identified by signing as preferred bike routes.*

*There are several reasons for designating signed bike routes:*

- a. The route provides continuity to other bicycle facilities such as bike lanes and shared use paths.*
- b. The road is a common route for bicyclists through a high demand corridor.*
- c. In rural areas, the route is preferred for bicycling due to low motor vehicle traffic volume or paved shoulder availability.*
- d. The route extends along local neighborhood streets and collectors that lead to an internal neighborhood destination such as a park, church, school or commercial district.*



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Signing also advises motorists that bicycles are present. Once a route has been signed it means that the responsible agencies have taken action to ensure these routes are suitable as shared routes for both the bicyclist and motorist and that they will be maintained regularly. Maintenance of the route will be at a higher standard than that of other comparable streets (e.g. more frequent street sweeping, tree trimming and removal of edge of road obstructions). The agency or municipality is ultimately responsible for prioritizing a recurring maintenance schedule for this roadway that has been designated as a Signed Shared Roadway, or Bike Route.

Shared Roadways:

A Shared Roadway facility has no bikeway classification or designation. This facility is not shown on Figure 1 since this is any roadway that does not prohibit bicycle traffic. According to AASHTO, different types of roadway conditions can result in a Shared Roadway designation. One condition is that the existing street system is currently being used for efficient bicycle travel without signing and striping. A second condition is that the existing roadway is not deemed suitable for bicycle travel and, therefore, bicycle travel should not be encouraged by designating the Signed Shared Roadway by means of signing and/or marking as an approved bikeway. Another condition that could lead to a Shared Roadway classification is that the roadway is not considered a high demand bicycle corridor and as such the road should not be designated as another bikeway classification, regardless of roadway conditions. On roadways without designated bikeways, a minimum lane width of 12 feet, 14 feet desirable, can best accommodate both the bicyclist and motorist.

**RIDOT DPM 920.06**

RIDOT recently established and instituted Design Policy Memo (DPM) Number 920.06 A-1 – titled Bicycle Routes & Share the Road Signs, dated 1/18/05 with Attachment: Bicycle Route Suitability Report, Revision 2, dated 7/26/06, (see Document 1). It specifically addresses setting standards for the signing of roadways as bike routes throughout the State. Its description states, “*this DPM serves as general technical guidance for the signing of state and local roadways as bike routes that are constructed utilizing federal and state funds. The intent of this DPM is to sign such roadways as an aid to navigation for experienced and /or commuter cyclists in determining those roadways that may be designated as bike routes, utilizing the parameters of sound engineering judgment by considering a given roadway posted speed limit, Average Annual Daily Traffic (AADT) Volume, minimum*



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*useable width in feet and other factors. This DPM is not intended to indicate the relative safety of the roadways that are signed as bike routes.”*

Item number 5 in Section 920.06.05.01 of the DPM, titled Bicycle Route Sign Criteria, refers to a “Bicycle Route Suitability Recommendation Report”. This report contains 24 items that are investigated and documented in a formal setting. The report is provided to RIDOT for review by various departments for consideration of signing a road as a bike route. This information is to be evaluated prior to providing an opinion on the posting of bike route signs on the subject road.

The Manual on Uniform Traffic Control Devices (MUTCD) provides sign and pavement markings standards. RIDOT specifies that *“all signs on state roadways must conform to the Manual on Uniform Traffic Control Devices (MUTCD) D11-1 (Bike Route) sign, to be typically placed at .5 mile intervals”* in item number 4 of the DPM.



## 920.06

## Bicycle Routes & Share the Road Signs

920.06.01	General
920.06.02	References
920.06.03	Definitions
920.06.04	Policy
920.06.05	Procedures

### 920.06.01 General

This DPM serves as general technical guidance for the signing of state and local roadways as bike routes that are constructed utilizing federal and state funds. The intent of this DPM is to sign such roadways as an aid to navigation for experienced and/or commuter cyclists in determining those roadways that may be designated as bike routes, utilizing the parameters of sound engineering judgment by considering a given roadways posted speed limit, Average Annual Daily Traffic (AADT) Volume, Minimum Useable width in feet and other factors. This DPM is not intended to indicate the relative safety of the roadways that are signed as bike routes.

### 920.06.02 References

“Manual on Uniform Traffic Control Devices” and all supplements  
“Bicycle Route Suitability Report” – as attached

### 920.06.03 Definitions

There are no definitions for this section.

### 920.06.04 Policy

A roadway may be signed as a bicycle route providing the roadway meets or exceeds the criteria specified herein, as detailed in the Procedures.

### 920.06.05 Procedures

#### 920.06.05.01 Bicycle Route Sign Criteria

1. Identify the Minimum Usable Widths for Signage as a Bicycle Route, as listed in the table below. The minimum acceptable width (in feet) is calculated by adding together the shoulder plus adjacent lane widths. Narrower minimum useable widths may be considered with proper justification, in coordination with the RIDOT Project Manager.

POSTED SPEED LIMIT	Average Annual Daily Traffic (AADT) Volume Vehicles Per Day (vpd)		
	Less than 2,000	2,000 – 10,000	10,000 – 20,000
Less than 30 mi/hr	12'	15'	16'
30-40 mi/hr	14'	15'	16'
40-50 mi/hr	15'	16'	16'
Minimum Useable Road widths in Feet			

**Note 1:** Roadways having an AADT greater than 20,000 vpd will be considered on a case by case basis

**Note 2:** Standard Bike Route sign (D11-1) included in the MUTCD shall be used for roads signed as bike routes.

2. In certain cases, a local municipality may design and install a special sign logo for those roadways under City and/or Town maintenance responsibility.
3. In addition to the minimum criteria listed in the above table, sight distance, the frequency of curb cuts (with particular attention paid to commercial curb cuts), the percent of AADT that is truck traffic, accident rates, and roadway grades should also be considered when evaluating a roadway for signing as a bike route.
4. All signs on state roadways must conform to the MUTCD D11-1 (Bike Route) sign, to be typically placed at .5 mile intervals.
5. A “Bicycle Route Suitability Recommendation Report” of the format attached to this DPM will be filled out by the Section and/or its Designer, recommending or not recommending the posting of signs. The “Report” will be signed by the Reviewing Engineer, who must be a licensed Professional Engineer (PE). The “Report” will then be forwarded to the Section’s Deputy Chief Engineer for signature. The “Report will then be forwarded to the Chief Engineer who may then approve or disapprove the recommendation.

#### **920.06.05.02 “Share the Road” Signs Criteria**

1. Short roadway segments, in an otherwise contiguous bike route, that do not meet the minimum criteria or where the sight distance is inadequate should be signed with “Share the Road” signs in place of the “Bike Route” sign.
2. In certain cases, a local municipality may design and install a special sign logo for those roadways under City and/or Town maintenance responsibility.

**STATE OF RHODE ISLAND**  
**DEPARTMENT OF TRANSPORTATION**  
**BICYCLE ROUTE SUITABILITY REPORT**

PROJECT: \_\_\_\_\_

CONSULTANT: \_\_\_\_\_ REVIEW DATE: \_\_\_\_\_

ROUTE NAME & NUMBER: \_\_\_\_\_ CITY/TOWN: \_\_\_\_\_

ROADWAY LIMITS: \_\_\_\_\_

Technical Paper No. 155 Roadway Classification \_\_\_\_\_

“Guide to Cycling in the Ocean State 2003” Roadway Designation \_\_\_\_\_

The State Highway noted above is being considered for signage as a “Signed Shared Roadway” in accordance with the criteria set forth in RIDOT DPM No. 920.06. The following information is to be provided to the Deputy Chief Engineer of the Design Section for consideration:

ITEM NO.	DESCRIPTION	COMMENT NO. (SEE ENDNOTES)
1	Posted Speed Limit	
2	85 <sup>th</sup> Percentile Speed (Radar speed study)	
3	Average Annual Daily Traffic (AADT) Volume	
4	Percent Truck Traffic Volume	
5	Number of Travel Lanes	
6	Width of Travel Lanes	
7	Width of Shoulders	
8	Delineation of Centerline & Shoulders	
9	Sidewalk	
10	Curbing	
11	On-Street Parking	

ITEM NO.	DESCRIPTION		COMMENT NO. (SEE ENDNOTES)
12	Frequency of Curb Cuts	Moderate	
		Heavy	
		Commercial	
		Residential	
13	Horizontal Alignment Constraints		
14	Vertical Alignment Constraints		
15	Intersections & Corresponding Stopping Sight Distances		
16	Stop Controls Along Roadway		
17	General Roadway Conditions	Surface	
		Potholes	
		Cracking	
		Catch Basin Types	
		Sand & Debris	
18	Are all grates bicycle-safe? (If no, please indicate which ones)	Yes:_____	No:_____
18A	Total Number of Grates: _____		
18B	Location of Grates (list): _____		
19	Off-Road Obstacles	Mailboxes, signs	
		Poles	
		Outcrops	
		Hanging Limbs	

ITEM NO.	DESCRIPTION		COMMENT NO. (SEE ENDNOTES)
20	Facilities List on Roadway	Parks	
		Schools	
		Recreational Fields	
		Historical Districts	
		Commercial Establishments	
21	Expected Bike User Type	A – Advanced	
		B – Basic	
		C – Children	
22	Location of nearest Bike Route/Path as potential link		
23	Additional Observations		
24	Accident History (Provide Crash Data for the previous three years according to type, location, injury, roadway surface and time)		

**COMMENTS**

(Expand/Delete as needed)


Based on the information contained in the above "Bicycle Route Suitability Report", the reviewing engineer:

Recommends ( )

Does not recommend ( )

designation of this roadway as a Rhode Island Bicycle Route

Reviewing Engineer:	Date:
Approved Deputy Chief Engineer:	Date:
Approved Chief Engineer:	Date:



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## SOUTH COUNTY TRAIL

**Description:** The section of South County Trail (Route 2) that has been studied is approximately three miles in length. It extends north from the commercial plaza, just north of the Route 1 southbound/Route 2 intersection, terminating at Route 112 (Carolina Back Road) in Charlestown. The South County Trail roadway plan, shows the roadway's location and its project limits (Figure 4). The Rhode Island Department of Administration, Division of Planning Technical Paper No. 155, has classified the roadway as a rural minor arterial. South County Trail is a State owned and maintained roadway.

Just beyond the beginning of South County Trail from Route 1 is a commercial development, providing an excellent destination (start/end point) in this segment of the proposed bicycle network. There is the Hungry Haven Restaurant, several retail establishments and a small duck pond/park area with ample parking (Photo1).



*Photo 1. Duck pond, Sweenor's Candy, Hungry Haven Restaurant.*

The Matthew Puchalski Memorial Park athletic fields can be accessed from the Town Hall and DPW facility located along South County Trail (Photos 2 and 3).



*Photo 2. Matthew Puchalski Memorial Park.*



*Photo 3. Town Hall and DPW.*



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The Historic Village of the Narragansett Indian Tribe is located to the west along South County Trail. The village includes the tribe’s Administration Office and Four Winds Community Center, which is comprised of the Senior Center, Senior Meal Site, Child Care Center and Youth Center. Camp Davis is also located to the west of South County Trail.

**Existing Conditions:**

The attached Design Policy Memo (DPM – South County Trail/Route 2) summarizes existing conditions in a formal setting.

South County Trail is moderately flat and winding throughout (Photo 4). The commercial businesses along South County Trail are concentrated near the intersection of Route 1 southbound and South County Trail, while the remainder of this section of Route 2 consists of predominantly residential land uses. There is one travel lane each on the northbound and southbound sides of South County Trail. The typical roadway width varies from 24 to 30 feet with shoulder widths varying from 2 to 6 feet. Shoulder widths widen out after the Town Hall, heading north on South County Trail. The centerline and shoulders are striped, and there are no sidewalks or curbing. There are several small sections of guardrail located in areas of steep decline immediately off the shoulder, particularly in the area near the Charlestown Auto Body and on the south approach to Route 1 (Post Road). The studied roadway terminates at the intersection of Route 112/Carolina Back Road, and provides a connection and ultimate continuation to the South County Bike Route, which is in the final stages of construction as of March 2007.



***Photo 4 – Route 2 north.***

South County Trail (Route 2 south) has many areas of obvious erosion and washout along the shoulder’s edge (Photo 5). Several areas include sand and debris that has washed out into the shoulder. Horizontal sight distance is a concern along the curve located approximately 10 feet north of utility



***Photo 5– Erosion along Route 2 south.***





*Photo 6 – Open culvert Route 2 south.*

pole No. 146 (shown on Figure 4). Additionally, an open culvert exists beyond the paved shoulder of the roadway (Photo 6) just after the above-mentioned curve.

The posted speed limit on South County Trail is 30 mph, but changes to 40 mph in the vicinity of Utility Pole No. 142. The general condition of the pavement is good with very minimal cracking and few potholes. The vegetation along the route has been maintained with no overhanging tree limbs. Mailboxes, utility poles and signage are all located within 2 to 4 feet off the edge of pavement. There are nine streets that intersect South County Trail.

The posted speed limit on South County Trail is 30 mph, but changes to 40 mph in the vicinity of Utility Pole No. 142. The general condition of the pavement is good with very minimal cracking and few potholes. The vegetation along the route has

There are three (3) bicycle-safe catch basins located along South County Trail. Catch basin location, type, and recommended actions to be taken are attached at the end of this section, in Table 1.

An analysis of the reported crashes for five years, including 2002, 2003, 2004, 2005 and 2006 indicated ninety-three crashes. There were fifty-four single-vehicle crashes, twenty four percent of which involved hitting deer or going off the road in an attempt to avoid hitting deer. There were thirty-nine multi-vehicle crashes. Of the reported crashes resulting in injury, there were no fatalities. Based on the written vehicle operator statements that were part of the reports and the other crash report data, none of the crashes indicate problem intersections or areas, although the largest percentage of accidents occurred in the vicinity of the Route 1/Route 2 intersection. This data has been tabulated in Table 2, at the end of this section. This segment's southern limit has been modified to begin/end at the commercial plaza, north of the Route 1/Route 2 intersection.



*Photo 7 – Route 2 south.*



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**Proposed Recommendations:**

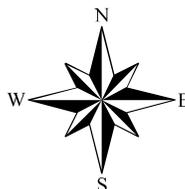
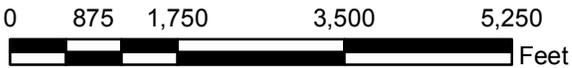
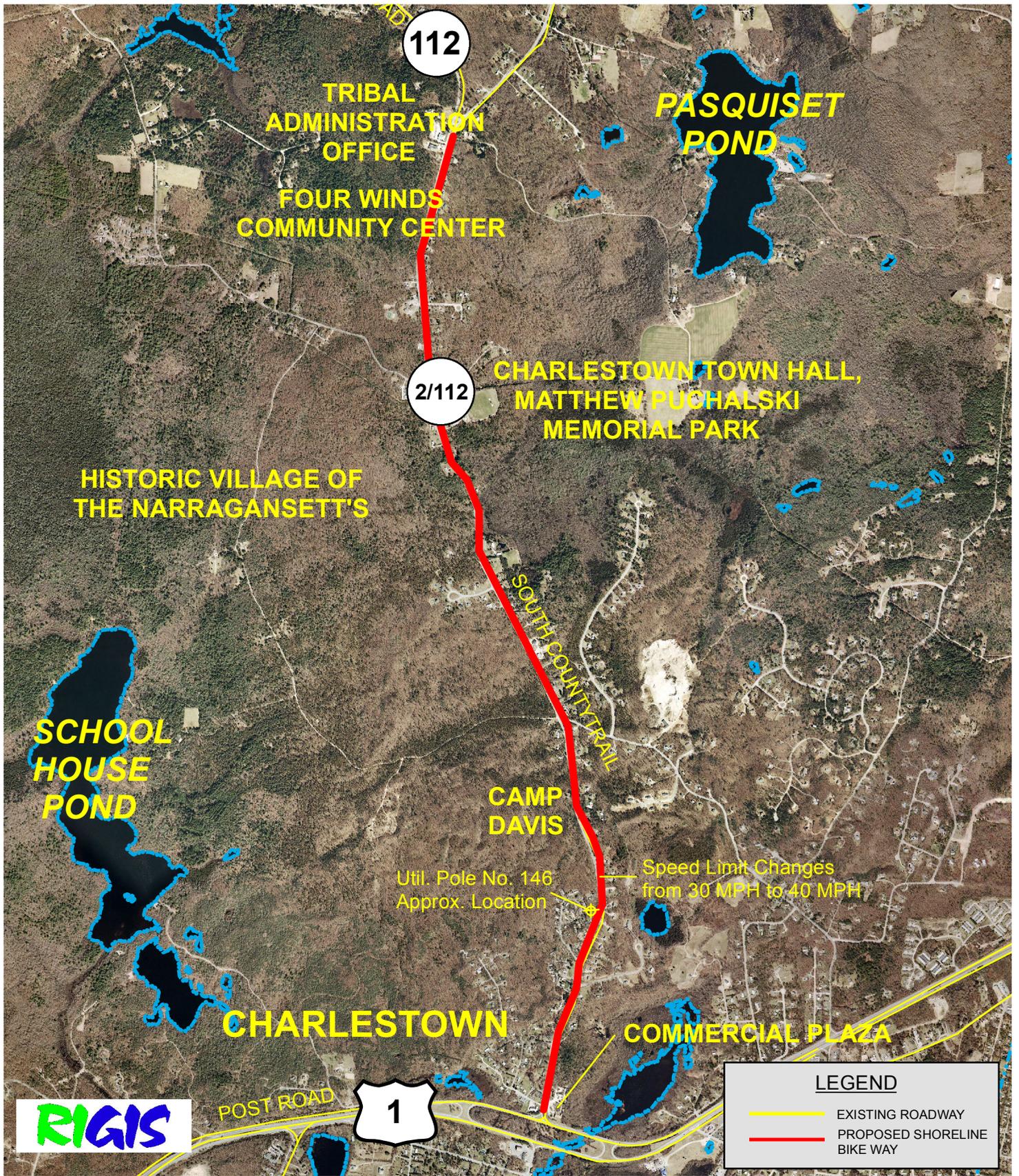
Referring to the *Bicycle Route Sign Criteria* chart in DPM 920.06 (Section 2 - Criteria), this roadway does not meet the criteria to sign it as a Signed Shared roadway. This is based on an AADT volume of between 2,000-10,000 vpd and speed limit of 30-40 mph. Its existing minimum lane width of thirteen (13) feet does not meet the minimum usable lane width of fifteen (15) feet, as recommended in the 1999 AASHTO '*Guide for the Development of Bicycle Facilities*' design criteria for a Signed Shared route. The areas where lane width is less than fifteen (15) feet will require widening.

Upon the completion of the proposed widening, South County Trail is recommended to be designated as a Signed Shared roadway. The roadway would be identified, by signing, as a preferred route. Signs shall be installed at approximate 1/2 mile locations on both sides, opposite from each, of the roadway.

With South County Trail designated as a Signed Shared Roadway it is advised that the State provide regular maintenance of the route to ensure that it continues to be an acceptable route for bicyclists. Regular maintenance includes sweeping the pavement to prevent accumulation of debris, providing a smooth surface, removing edge of pavement obstructions, and trimming trees. The sunken catch basin grates should be raised to grade and cleared of debris. Immediate improvements include the widening of approximately 11,880 linear feet (assumed 75% of total segment length) of roadway, as well as the relocation of some off-road obstacles (mailboxes, signage). Destination signage indicating the direction to the Matthew Puchalski Memorial Park athletic fields and commercial plaza/park, north of the Route 1/Route 2 intersection have been recommended.

With the designation of South County Trail as a Signed Shared Roadway, a connection/tie-in with the South County Bike Route is provided at the intersection of South County Trail (Route 2) with Carolina Back Road (Route 112).





**Figure 4**  
**BICYCLE AND PEDESTRIAN FACILITIES**  
**STUDY AND DEVELOPMENT**  
**SHORELINE BIKEWAY**  
 Charlestown, Rhode Island  
 SOUTH COUNTY TRAIL



ENGINEERS - SCIENTISTS - PLANNERS  
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**STATE OF RHODE ISLAND**  
**DEPARTMENT OF TRANSPORTATION**  
**BICYCLE ROUTE SUITABILITY REPORT**

PROJECT: Bicycle & Pedestrian Facilities Study & Development: Shoreline Bikeway

CONSULTANT: Pare Corporation REVIEW DATE: April 11, 2006

ROUTE NAME & NUMBER: South County Trail (Route 2) CITY/TOWN: Charlestown

ROADWAY LIMITS: Commercial Plaza (North of Route 1)/Carolina Back Road

Technical Paper No. 155 Roadway Classification Minor Arterial (rural)

“Guide to Cycling in the Ocean State 2003” Roadway Designation Suitable Road

The State Highway noted above is being considered for signage as a “Signed Shared Roadway” in accordance with the criteria set forth in RIDOT DPM No. 920.06. The following information is to be provided to the Deputy Chief Engineer of the Design Section for consideration:

ITEM NO.	DESCRIPTION	COMMENTS NO. (SEE ENDNOTES)
1	Posted Speed Limit	30 MPH changes to 40 MPH at Utility Pole No. 93
2	85 <sup>th</sup> Percentile Speed (Radar speed study)	48 MPH
3	Average Annual Daily Traffic (AADT) Volume	5,500 VPD
4	Percent Truck Traffic Volume	5%
5	Number of Travel Lanes	2; one in each direction
6	Width of Travel Lanes	11 feet
7	Width of Shoulders	2 – 6 feet
8	Delineation of Centerline & Shoulders	Yes
9	Sidewalk	None
10	Curbing	None
11	On-Street Parking	None

ITEM NO.	DESCRIPTION		COMMENTS NO. (SEE ENDNOTES)	
12	Frequency of Curb Cuts	Moderate	Moderate	
		Heavy		
		Commercial		
		Residential	Residential	
13	Horizontal Alignment Constraints		Vicinity of Utility Pole No. 146	
14	Vertical Alignment Constraints		None	
15	Intersections & Corresponding Stopping Sight Distances		Okay	
16	Stop Controls Along Roadway		None	
17	General Roadway Conditions	Surface	Good	
		Potholes	Very few	
		Cracking	Minor	
		Catch Basin Types	Standard (see Table 1)	
		Sand & Debris	Occasional	
18	Are all grates bicycle-safe? (If no, please indicate which ones)	Yes: <input checked="" type="checkbox"/> _____	No: <input type="checkbox"/> _____	See attached
18A	Total Number of Grates: <u>    3    </u>			
18B	Location of Grates (list): <u>    See Table 1    </u>			
19	Off-Road Obstacles	Mailboxes, signs	Both; 2 – 4' off edge of pavement	
		Poles	2 – 4' off edge of pavement	
		Outcrops	None	
		Hanging Limbs	None	

ITEM NO.	DESCRIPTION		COMMENTS NO. (SEE ENDNOTES)
20	Facilities List on Roadway	Parks	None
		Schools	None
		Recreational Fields	Matthew Puchalski Memorial Park (behind Town Hall)
		Historical Districts	Historic Village of the Narragansett's along entire west side of Route 2
		Commercial Establishments	Vicinity of Route 1/Route 2 intersection
21	Expected Bike User Type	A – Advanced	A - Advanced
		B – Basic	
		C – Children	
22	Location of nearest Bike Route/Path as potential link		South County Bikepath north of Route 2/Route 112 intersection
23	Additional Observations		
24	Accident History (Provide Crash Data for the previous three years according to type, location, injury, roadway surface and time		See Table 2 attached

**COMMENTS**

(Expand/Delete as needed)


Based on the information contained in the above "Bicycle Route Suitability Report", the reviewing engineer:

Recommends (✓ )

Does not recommend ( )

Designation of this roadway as a Signed Shared Roadway, following the implementation of recommended improvements including resetting the depressed catch basin grates, widening of all areas where the total roadway width is less than 30-feet, and the relocation of some off road obstacles (mailboxes, signage). Installation of destination signing including the Matthew Puchalski Memorial Park and Town Hall is recommended.

Reviewing Engineer:	Date:
Approved Deputy Chief Engineer:	Date:
Approved Chief Engineer:	Date:



**TABLE 1. SOUTH COUNTY TRAIL - CATCH BASINS**

<u>PHOTO NO.</u>	<u>LOCATION</u>	<u>TYPE (R.I. Standard Detail)</u>	<u>Notes</u>	<u>ACTION</u>
1	Northbound on South County Trail 6' North of Utility Pole No. 57  Same side as the Pole	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Sunken, covered with debris	To Remain
2	Northbound on South County Trail 93' South of Utility Pole No. 57  Same side as the Pole	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)		To Remain
3	Southbound on South County Trail 100' North of Utility Pole No. 146  Same side as the Pole	RI Std. 6.4.0 Round Frame and Grate (Bicycle Safe)		To Remain

**Existing Catch Basin Photos**



*South County Trail 1*



*South County Trail 2*



*South County Trail 3*

**Table 2. Crash Data - South County Trail**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
02-10-AC	1.20.02	1	0	0	SNOW/SLUSH	ANGLE	NIGHT (NOT LIGHTED)	US 1
02-15-AC	1.21.02	1	0	0	ICE	BROADSIDE	NIGHT (NOT LIGHTED)	RI 2, W/ 1,500' N RI 112
02-14-AC	1.21.02	2	0	0	ICE	BROADSIDE	DAYLIGHT	US 1, W/ 100' N S. COUNTY TRL.
02-46-AC	4.21.02	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 1,000' S S. COUNTY TRL.
02-58-AC	5.25.02	1	0	0	DRY	ANGLE	NIGHT (NOT LIGHTED)	OLD MILL RD. W/ 2,000' W RI 2
02-71-AC	6.20.02	2	1	0	DRY	REAR-END	DAYLIGHT	S. COUNTY TRL. W/ 10' S OLD MILL RD.
02-103-AC	7.15.02	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD., W/ 20' N S. COUNTY TRL.
02-109-AC	7.21.02	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD.
02-120-AC	8.6.02	2	1	0	DRY	REAR-END	DAYLIGHT	S. COUNTY TRL.
02-121-AC	8.8.02	2	0	0	DRY	REAR-END	DAYLIGHT	S. COUNTY TRL.
02-163-AC	10.25.02	1	0	0	DRY	HEAD-ON	DAYLIGHT	S. COUNTY TRL., W/ 1 MILE S NARROW LN.
02-172-AC *	11.7.02	1	0	0	DRY	HEAD-ON	DUSK	OLD MILL RD. W/ 2,000' W RI 2
02-183-AC *	11.23.02	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	S. COUNTY TRL.
02-204-AC *	12.19.02	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	S. COUNTY TRL.
03-4-AC	1.6.03	1	0	0	SNOW/SLUSH	HEAD-ON	DAYLIGHT	S. COUNTY TRL., W/ 1000' N NARROW LN.
03-14-AC	1.17.03	1	0	0	SNOW/SLUSH	RAN OFF-ROAD	DAYLIGHT	S. COUNTY TRL., W/ 500' NARROW LN.
03-33-AC	2.17.03	1	0	0	SNOW/SLUSH	HEAD-ON	DAYLIGHT	S. COUNTY TRL., W/ 2000' N NARROW LN.
03-53-AC	3.28.03	2	0	0	DRY	REAR-END	DAYLIGHT	S. COUNTY TRL.
03RIK3-204-AC	4.19.03	2	1	0	DRY	BROADSIDE	DAYLIGHT	S. COUNTY TRL.
03-68-AC	5.4.03	1	0	0	DRY	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	POST RD.
03-83-AC	6.16.03	1	1	0	DRY	HEAD-ON	DAYLIGHT	S. COUNTY TRL, W/ 100' HONEY LOCUST DR.
03-87-AC	6.25.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD.
03-94-AC	7.4.03	1	0	0	DRY	ROLL-OVER	DAYLIGHT	US 1, W/ 500' S RI 2
03-116-AC	8.3.03	2	0	0	DRY	HEAD-ON	DAYLIGHT	ROUTE 2, 10' W/ JONATHON ST.
03-129-AC	8.20.03	1	0	0	DRY	HEAD-ON	DAYLIGHT	RI 2, W/ 1 MILE N US 1
03-131-AC	8.21.03	1	0	0	DRY	HEAD-ON	DAYLIGHT	RI 2 W/ 1000' S OLD MILL RD.
03-144-AC	9.5.03	1	1	0	DRY	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	ROUTE 2
03-189-AC *	11.18.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	S. COUNTY TRL.

\* Denotes accident involving an animal (deer).

**Table 2. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
03-190-AC	11.21.03	1	1	0	DRY	ROLL-OVER	DAYLIGHT	RI 2, W/ 51' S FRONT OF 4440
03-212-AC	12.29.03	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD., W/ 1,000' S S. COUNTY TRL.
04-3-AC	1.2.04	2	0	0	WET	REAR-END	NIGHT (NOT LIGHTED)	POST RD.
04-6-AC	1.11.04	1	1	0	DRY	ROLLOVER	DAYLIGHT	S. COUNTY TRL.
04-5-AC	1.11.04	2	0	0	DRY	SIDESWIPE	DAYLIGHT	RI 2, W/ 0' N 4878
04-12-AC	1.16.04	1	0	0	ICE	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	POST RD., W/ 500' S S. COUNTY TRL.
04-18-AC	1.28.04	1	0	0	SNOW/SLUSH	ANGLE	NIGHT (NOT LIGHTED)	POST RD., W/ 500' N S. COUNTY TRL.
04-21-AC	1.30.04	2	0	0	DRY	SIDESWIPE	DAYLIGHT	ROUTE 2, 12' W/ JONATHON ST.
04-27-AC	2.20.04	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	RI 2, W/ 1 MILE N US 1
04-49-AC *	4.11.04	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	S. COUNTY TRL.
04-61-AC	5.3.04	2	0	0	WET	REAR-END	DAYLIGHT	S. COUNTY TRL., W/ 20' N POST RD.
04-96-AC	6.14.04	2	4	0	DRY	BROADSIDE	DAYLIGHT	S. COUNTY TRL., W/ 200' N RI 112
04-112-AC	7.5.04	2	0	0	WET	BROADSIDE	DAYLIGHT	POST RD.
04-119-AC *	7.16.04	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 200' S S. COUNTY TRL.
04-131AC	7.29.04	1	0	0	DRY	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	S. COUNTY TRL. FRONT OF 4929
04-137-AC	8.1.04	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD.
04-139-AC	8.3.04	2	0	0	DRY	BROADSIDE	DAYLIGHT	S. COUNTY TRL., W/ 100' N NARROW LN.
04-162-AC	8.30.04	2	0	0	WET	REAR-END	DAYLIGHT	POST RD.
04-181-AC	10.7.04	1	0	0	DRY	REAR-END	DAYLIGHT	US 1, W/ 200' N RI 2
04-185-AC	10.13.04	1	0	0	DRY	HEAD-ON	DAWN	POST RD., W/ 500' S S. COUNTY TRL.
04-188-AC	10.17.04	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD.
04-190-AC	10.21.04	1	1	0	DRY	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	S. COUNTY TRL.
04-192-AC *	10.22.04	1	0	0	WET	HEAD-ON	NIGHT (NOT LIGHTED)	S. COUNTY TRL.
04-193-AC	10.28.04	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD.
04-212-AC *	11.22.04	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	S. COUNTY TRL.
04-242-AC	12.21.04	3	2	0	DRY	ANGLE	DAYLIGHT	S. COUNTY TRL., W/ 0' N NARROW LN.

\* Denotes accident involving an animal (deer).

**Table 2. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
05-17-AC	1.22.05	1	0	0	CONTAMINANT	RAN OFF ROAD	DARK(LIGHT)	POST ROAD/S COUNTY TL
05-19-AC	1.25.05	2	1	0	WET	REAR END	DAYLIGHT	S COUNTY TL, 10'S CAROLINA BACK RD
05-36-AC*	2.9.05	1	0	0	WET	SIDESWIPE-S	DARK(NL)	RI 2, 1MN US 1
05-38-AC	2.14.05	1	0	0	WET	HEAD ON	DARK(LIGHT)	S COUNTY TL/NARROW LN
05-54-AC	3.11.05	2	0	0	SNOW/SLUSH	SIDESWIPE-S	DAYLIGHT	RI 2/JONATHAN DR
05-58-AC	3.11.05	1	0	0	SNOW/SLUSH	BROADSIDE	DAYLIGHT	S COUNTY TL, 100'S NARROW LN
05-80-AC*	4.16.05	1	0	0	DRY	HEAD ON	DARK(NL)	S COUNTY TL, 10'N CAROLINA BACK RD
05-87-AC	4.29.05	2	0	0	DRY	REAR END	DAYLIGHT	S COUNTY TL/NARROW LN
05-94-AC	5.12.05	2	0	0	DRY	REAR END	DAYLIGHT	RI 2, 10'S RI 112
05-132-AC	7.14.05	1	0	0	DRY	BROADSIDE	DAYLIGHT	S COUNTY TL/HONET LOCUST DR
05-133-AC	7.15.05	2	0	0	DRY	REAR END	DAYLIGHT	POST RD/S COUNTY TL
05-138-AC	7.23.05	1	3	0	DRY	RAN OFF ROAD	DAYLIGHT	S COUNTY TL, 1000'N NARROW LN
05-152-AC	8.2.05	1	0	0	DRY	REAR END	DAYLIGHT	CAROLINA BACK RD/S COUNTY TL
05-171-AC	8.25.05	1	1	0	DRY	RAN OFF ROAD	DAYLIGHT	S COUNTY TL/OLD MILL RD
05-203-AC	10.25.05	2	0	0	WET	ANGLE	DAYLIGHT	S COUNTY TL/CAROLINA BACK RD
05-207-AC	11.4.05	2	0	0	DRY	REAR END	DAYLIGHT	S COUNTY TL/POST ROAD
05-228-AC*	12.3.05	1	0	0	DRY	HEAD ON	DAYLIGHT	RI 2, 1M N US 1
05-231-AC	12.9.05	2	0	0	SNOW/SLUSH	HEAD ON	DAYLIGHT	S COUNTY TL, 200'S NARROW LN
05-232-AC	12.9.05	1	0	0	SNOW/SLUSH	HEAD ON	DAYLIGHT	RI 2, 100'N JONATHAN DR
05-240-AC	12.9.05	1	0	0	SNOW/SLUSH	RAN OFF ROAD	DAYLIGHT	RI 2, 200'S E.CHARLES ST
05-243-AC	12.12.05	2	0	0	DRY	SIDESWIPE-O	DARK(LIGHT)	S COUNTY TL, 250'N OLD MILL RD
06-1-AC	1.3.06	1	0	0	SNOW/SLUSH	ANGLE	DAYLIGHT	S.COUNTY TL/NARROW LN
06-18-AC*	2.6.06	1	0	0	DRY	HEAD ON	DARK(NL)	S.COUNTY TL, 1MS NARROW LN
06-29-AC	3.2.06	2	0	0	SNOW/SLUSH	BROADSIDE	DAYLIGHT	S.COUNTY TL, 10'N CAROLINA BACK RD
06-51-AC	4.23.06	2	0	0	WET	BROADSIDE	DAYLIGHT	RI 2, 20'N RI 112

\* Denotes accident involving an animal (deer).

2006 accident data is in draft form

**Table 2. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
06-52-AC	4.27.06	2	1	0	DRY	REAR END	DAYLIGHT	S.COUNTY TL/OLD MILL RD
06-58-AC	5.6.06	1	1	0	DRY	HEAD ON	DARK(LIGHT)	S.COUNTY TL/NARROW LN
06-77-AC*	6.16.06	1	0	0	DRY	HEAD ON	DAYLIGHT	S.COUNTY TL, 100'S NARROW LN
06-103-AC	7.26.06	1	0	0	DRY	HEAD ON	DAYLIGHT	S.COUNTY TL/HONEY LOCUST DR
06-102-AC	7.22.06	1	0	0	DRY	RAN OFF ROAD	DARK(NL)	RI 2, 1000'S RI 112
06-107-AC	7.29.06	2	0	0	DRY	HEAD ON	DAYLIGHT	RI 2/E.CHARLES ST
06-125-AC	8.25.06	1	1	0	DRY	ANGLE	DAYLIGHT	S.COUNTY TL/NARROW LN
06-129-AC	9.3.06	2	0	0	WET	REAR END	DAYLIGHT	S.COUNTY TL/NARROW LN
06-164-AC	11.3.06	2	0	0	DRY	MERGING	DAYLIGHT	CAROLINA BAVK RD, 200'S S.COUNTY TL
06-169-AC	11.10.06	2	0	0	DRY	SIDESWIPE-S	DAYLIGHT	S.COUNTY TL, 100'S OLD MILL RD
06-172-AC	11.11.06	2	0	0	DRY	REAR END	DAYLIGHT	S.COUNTY TL/OLD MILL RD
06-187-AC	12.8.06	2	0	0	DRY	REAR END	DAYLIGHT	S.COUNTY TL/NARROW LN
06-188-AC	12.9.06	1	0	0	DRY	RAN OFF ROAD	DARK(NL)	NARROW LN, 25'E S.COUNTY TL
06-196-AC	12.22.06	2	0	0	DRY	REAR END	DAYLIGHT	S.COUNTY TL, 10'N NARROW LN

\* Denotes accident involving an animal (deer).

2006 accident data is in draft form



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## POST ROAD

**Description:** The second roadway studied of the proposed bicycle network is Post Road/Route 1 (Photo 8) from the intersection of Route 2 (South County Trail) to the intersection of Route 216 (Ross Hill Road) in Charlestown. The section of Route 1 that has been studied is approximately 5 miles in length. The Post Road roadway plan, identifies the roadway's location and its project limits (Figure 5). The Rhode Island Department of Administration, Division of Planning Technical Paper No. 155, has classified the roadway as a rural principal arterial. Post Road is a State owned and maintained roadway.



*Photo 8– On Route 2, at the Route 1 southbound approach.*



*Photo 9– Kettle Pond Visitor's Center at Bend Road.*

Several commercial establishments (restaurants and motels) are located along this stretch of roadway, generally setback from the shoulder. Burlingame State Park and Ninigret Park can be accessed from Post Road. The Kettle Pond Visitor's Center is located off Bend Road from Route 1 southbound (Photo 9). The South Shore Mental Health Center and Charlestown Senior Center are also accessible off this stretch of roadway. The Dunn's Corner Fire Station No. 2 is located along the northbound side of Post Road. Charlestown's beaches and the 'village district' of the historic Old Post Road corridor are also accessible from the northbound side of Route 1.

### **Existing Conditions:**

The attached Design Policy Memo (DPM – Post Road/Route 1) summarizes existing conditions, indicating standards for RIDOT's review of this segment as it pertains to signing the road as a Signed Shared Bike Route.



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This section of Post Road is a four-lane highway. It is generally flat with sections of straight and curving roadway (Photo 10). There are two travel lanes on the northbound and southbound side of Post Road approximately 12 feet in width. The shoulder varies from 1 foot to 10 feet along this section of roadway. There are five u-turn areas with designated turning lanes provided to access points on the other side of the highway, and include:

Charlestown Beach/Cross Mills; South Shore Mental Health Center/Senior Center; two unmarked; Ninigret Park/Tourist Information Center. Curbing exists in the areas of the u-turns, on both sides of the roadway, and lining the u-turns. Additionally, there are seven breaks in the center median that also provide cross-over access but unlike the five aforementioned u-turns, do not have a designated turning lane. These breaks appear in the less vegetated areas of Post Road and allow for vehicles to turn around.



*Photo 10– Post Road southbound.*

Nineteen streets intersect Post Road. There are two acceleration and deceleration lanes to enter/exit Route 1 along Post Road southbound at King’s Factory Road and Prosser Trail, and three acceleration and deceleration lanes to enter/exit Route 1 along Post Road northbound that allows for access to Ninigret Park, South Shore Mental Health and the Old Post Road Historic District. All acceleration and deceleration lanes have curbing along them.

There are two service roads along this section of roadway. These two access roads, the West Beach Road signalized intersection (Photo 11) and the approach to Ross Hill Road, provide access to the residences and businesses located in the vicinity, and roadway lengths for u-turning vehicles.



*Photo 11– West Beach Road crossroad.*

Several short segments of guardrail have been installed along Post Road southbound. Significantly more guardrails are present along Post Road



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northbound, from Shirley Drive to West Beach Road, East Beach Road to Wildflower Road, and in the vicinity of the access road to Ninigret Park.

The posted speed limit on Post Road is 50 mph. The condition of the pavement is generally good with minimal cracking and potholes. The vegetation along the route has been maintained with no overhanging tree limbs. Mailboxes and signage are located at the edge of pavement. Utility poles are located approximately twenty feet off the edge of pavement. There are existing catch basins along the edge of pavement the entire length of Route 1, several of which have debris and concentrations of sand deposited at them.

There are twenty-nine (29) bicycle-safe catch basins along this segment of Post Road, both north and southbound. Catch basin location, type, and recommended action to be taken are included in Table 3, attached at the end of this section.

An analysis of the reported crashes for five years, including 2002, 2003, 2004, 2005, and 2006 indicated two hundred and seven crashes. There were one hundred and eleven single-vehicle crashes, forty-three of which involved hitting deer or going off the road in an attempt to avoid hitting deer. There were fifty-eight multi-vehicle crashes. Of the reported crashes resulting in injury, there were two fatalities. The largest percentage of accidents occurred in the vicinity of the Route 1/Route 216 intersection. This data has been tabulated in Table 4, at the end of this section.

Through traffic on Route 1 is only required to stop at the West Beach Road signalized intersection. There are no roadway overpasses on this section of Route 1. Previously mentioned at the beginning of this section, major intersecting roadways are provided with acceleration and deceleration lanes to enter/exit Route 1, and u-turn areas are provided to access points on the opposite side of the highway. Referenced from the *Shoreline Bikeway Feasibility Study*, completed by VHB in September 1999, 'RIDOT does not want to alter the design of Route 1 to the degree that the existing flow of traffic would be disrupted'.

The five (5) u-turn areas with designated turning lanes: Charlestown Beach/Cross Mills; South Shore Mental Health Center/Senior Center; two unmarked; and Ninigret Park/Tourist Information Center, as well as the five (5) acceleration/deceleration lanes to enter/exit Route 1 southbound: King's Factory Road and Prosser Trail, and northbound: Ninigret Park; South Shore Mental Health;



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and the Old Post Road Historic District present challenges for accommodating bicycle travel. Of particular concern are the U-turns to access an exit on the other side of Route 1. Although experienced bicyclists travel like most other vehicles through intersections, their paths on u-turns is different, in that they diagonally cross two (2) high-speed lanes, share the ramp lane with motor vehicles, merge into the high-speed lane, crossing both diagonally, over to the right shoulder.

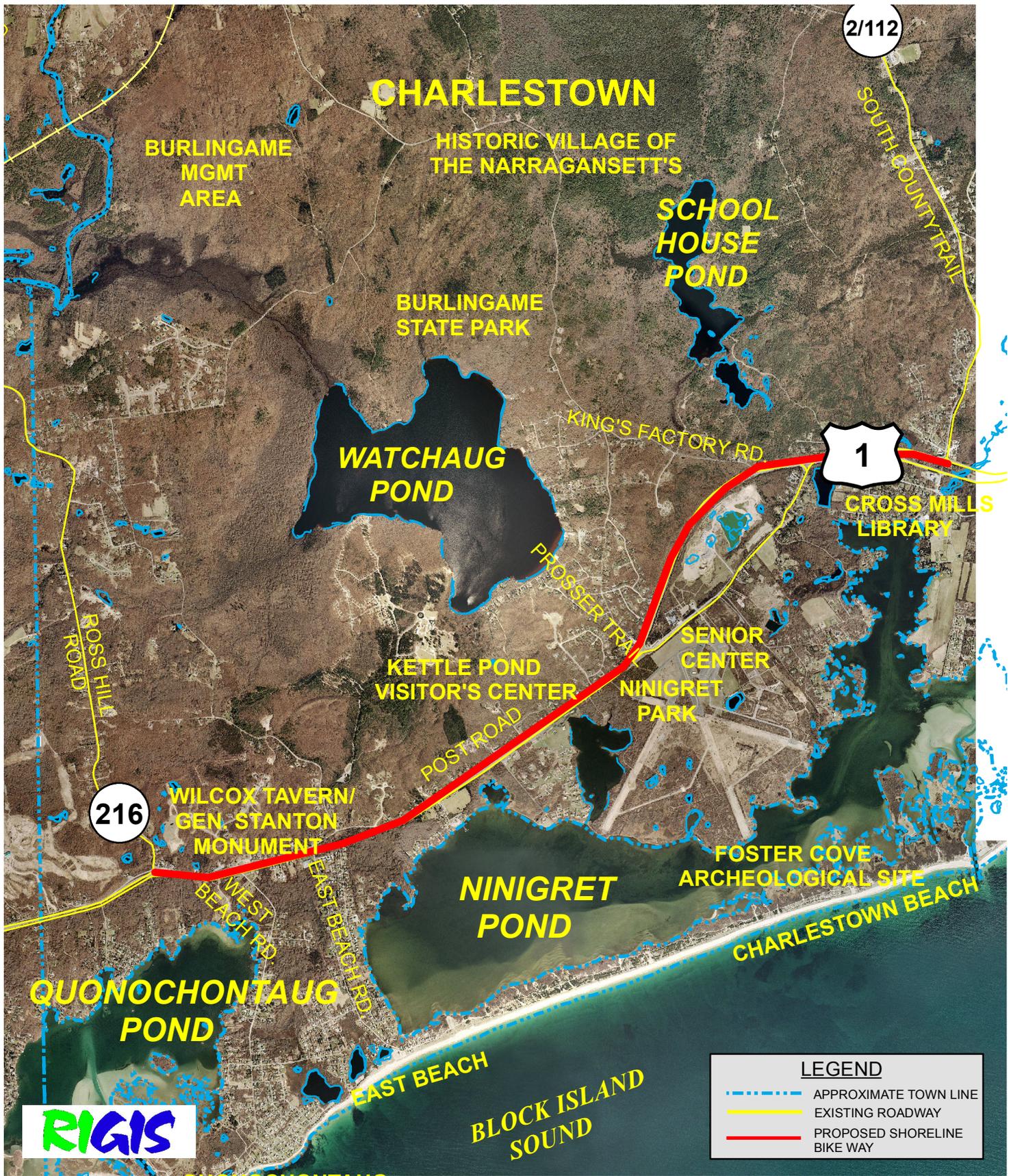
Based on findings from the VHB study, bicyclists stress ratings for Route 1 range from 3.5 to 4.0 and bicyclists are subjected to relatively high levels of stress. In addition, Route 1 rates at the highest stress level 5.0 for vehicle/truck volume and vehicle speeds. Major concerns identified by this VHB study relative to the designation of Route 1 as a bicycle facility include the large amount of traffic at high speeds in conflict to bicyclists riding in the shoulder, through bicyclists and vehicles entering and exiting Route 1, and truck blast to bicyclists. All three represent major safety concerns.

**Proposed Recommendations:**

This segment of Post Road (Route 1) is not recommended as a Signed Shared roadway. Due to the high number of accidents, vehicle and truck volumes, truck blast, and high volume crossroads and u-turns, even experienced bicyclists' safety is a major concern.

Bicyclists currently use this segment of Post Road (Route 1) as a shared roadway facility, without signing. Even without this segment designated as a Signed Shared roadway bike route, a continuous network of connections/tie-ins with the South County Bike Route is achieved with two of the other roadways studied.





2/112

# CHARLESTOWN

BURLINGAME  
MGMT  
AREA

HISTORIC VILLAGE OF  
THE NARRAGANSETT'S

SCHOOL  
HOUSE  
POND

BURLINGAME  
STATE PARK

WATCHAUG  
POND

CROSS MILLS  
LIBRARY

KING'S FACTORY RD.

ROSS HILL  
ROAD

KETTLE POND  
VISITOR'S CENTER

SENIOR  
CENTER

NINIGRET  
PARK

216

WILCOX TAVERN/  
GEN STANTON  
MONUMENT

PROCESOR TRAIL  
POST ROAD

FOSTER COVE  
ARCHEOLOGICAL SITE

NINIGRET  
POND

CHARLESTOWN BEACH

QUONOCHONTAUG  
POND

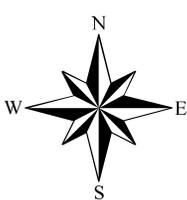
WEST BEACH RD.  
EAST BEACH RD.

EAST BEACH  
BLOCK ISLAND  
SOUND



**LEGEND**

- - - - - APPROXIMATE TOWN LINE
- EXISTING ROADWAY
- PROPOSED SHORELINE BIKE WAY



**Figure 5**  
**BICYCLE AND PEDESTRIAN FACILITIES**  
**STUDY AND DEVELOPMENT**  
**SHORELINE BIKEWAY**  
Charlestown, Rhode Island  
POST ROAD

**ENGINEERS - SCIENTISTS - PLANNERS**  
8 BLACKSTONE VALLEY PLACE  
LINCOLN, RI 02865  
401-334-4100

**STATE OF RHODE ISLAND**  
**DEPARTMENT OF TRANSPORTATION**  
**BICYCLE ROUTE SUITABILITY REPORT**

PROJECT: Bicycle & Pedestrian Facilities Study & Development: Shoreline Bikeway

CONSULTANT: Pare Corporation REVIEW DATE: April 11, 2006

ROUTE NAME & NUMBER: Post Road (Route 1) CITY/TOWN: Charlestown

ROADWAY LIMITS: Route 2/South County Trail to Route 216/Ross Hill Road

Technical Paper No. 155 Roadway Classification Principal Arterial (rural)

“Guide to Cycling in the Ocean State 2003” Roadway Designation N/A

The State Highway noted above is being considered for signage as a “Signed Shared Roadway” in accordance with the criteria set forth in RIDOT DPM No. 920.06. The following information is to be provided to the Deputy Chief Engineer of the Design Section for consideration:

ITEM NO.	DESCRIPTION	COMMENTS NO. (SEE ENDNOTES)
1	Posted Speed Limit	50 MPH
2	85 <sup>th</sup> Percentile Speed (Radar speed study)	60 MPH
3	Average Annual Daily Traffic (AADT) Volume	14,700 VPD at Route 2; 13,200 VPH at Post Road/ Old Post Road; 18,400 VPD at Route 216
4	Percent Truck Traffic Volume	4%
5	Number of Travel Lanes	4; two in each direction
6	Width of Travel Lanes	12 feet
7	Width of Shoulders	1 – 10 feet
8	Delineation of Centerline & Shoulders	Yes
9	Sidewalk	None
10	Curbing	Generally opposite turn arounds and along right turn lanes off Post Road
11	On-Street Parking	None

ITEM NO.	DESCRIPTION		COMMENTS NO. (SEE ENDNOTES)
12	Frequency of Curb Cuts	Moderate	
		Heavy	
		Commercial	
		Residential	
13	Horizontal Alignment Constraints		None
14	Vertical Alignment Constraints		None
15	Intersections & Corresponding Stopping Sight Distances		Okay
16	Stop Controls Along Roadway		Signals at West Beach Road crossroad.
17	General Roadway Conditions	Surface	Good
		Potholes	Very few
		Cracking	Very few
		Catch Basin Types	Standard (see Table 3)
		Sand & Debris	Occasional
18	Are all grates bicycle-safe? (If no, please indicate which ones)	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	See attached
18A	Total Number of Grates: <u>29</u>		
18B	Location of Grates (list): <u>See Table 3</u>		
19	Off-Road Obstacles	Mailboxes, signs	Both at edge of pavement
		Poles	20 feet off edge of pavement
		Outcrops	None
		Hanging Limbs	None

ITEM NO.	DESCRIPTION		COMMENTS NO. (SEE ENDNOTES)
20	Facilities List on Roadway	Parks	Burlingame State Park, Ninigret Park
		Schools	None
		Recreational Fields	Ninigret Park
		Historical Districts	None
		Commercial Establishments	Restaurants, motels
21	Expected Bike User Type	A – Advanced	A - Advanced
		B – Basic	
		C – Children	
22	Location of nearest Bike Route/Path as potential link		Route 91, existing signed bike route
23	Additional Observations		5 turn arounds, 7 breaks in median for left/right turning vehicles
24	Accident History (Provide Crash Data for the previous three years according to type, location, injury, roadway surface and time)		See Table 3 attached

**COMMENTS**

(Expand/Delete as needed)


Based on the information contained in the above "Bicycle Route Suitability Report", the reviewing engineer:

Recommends ( )

Does not recommend (✓)

Designation of this roadway as a Rhode Island Bicycle Route

Reviewing Engineer:	Date:
Approved Deputy Chief Engineer:	Date:
Approved Chief Engineer:	Date:



**TABLE 3. POST ROAD - CATCH BASINS**

<u>PHOTO NO.</u>	<u>LOCATION</u>	<u>TYPE (R.I. Standard Detail)</u>	<u>NOTES</u>	<u>ACTION</u>
1	Southbound on Post Road .025 miles south of Route 2	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Sunken, Damaged	To Be Replaced
2	Southbound on Post Road .1 miles south of Route 2	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)		To Remain
3	Southbound on Post Road .3 miles south of Route 2	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Sunken	To Remain
4	Southbound on Post Road .325 miles south of Route 2	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Sunken	To Remain
5	Southbound on Post Road .4 miles south of Route 2 (at King's Factory Road)	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Half in the travel lane	To Remain
6	Southbound on Post Road .1 miles south of King's Factory Road	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Sunken	To Remain
7	Southbound on Post Road .125 miles south of King's Factory Road	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Sunken	To Remain
8	Southbound on Post Road .9 miles south of King's Factory Road	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Sunken	To Remain



**TABLE 3. POST ROAD - CATCH BASINS**

9	Southbound on Post Road at Prosser Trail crossroad	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)		To Remain
10	Southbound on Post Road .05 miles south of Prosser Trail	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)		To Remain
11	Southbound on Post Road .2 miles south of Prosser Trail	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Sunken	To Remain
12	Southbound on Post Road .3 miles south of Prosser Trail	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain
13	Southbound on Post Road .1 miles south of Tamanaco Drive	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain
14	Southbound on Post Road .125 miles south of Tamanaco Drive	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain
15	Southbound on Post Road .2 miles south of Tamanaco Drive	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)		To Remain
16	Southbound on Post Road .25 miles south of Tamanaco Drive	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain



**TABLE 3. POST ROAD - CATCH BASINS**

<u>PHOTO NO.</u>	<u>LOCATION</u>	<u>TYPE (R.I. Standard Detail)</u>	<u>NOTES</u>	<u>ACTION</u>
17	Southbound on Post Road .3 miles south of Tamanaco Drive	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken, Debris	To Remain
18	Southbound on Post Road .4 miles south of Tamanaco Drive	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken, Debris	To Remain
19	Southbound on Post Road .025 miles south of Bend Road	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken, Debris	To Remain
20	Southbound on Post Road .7 miles south of Bend Road	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Debris	To Remain
21	Northbound on Post Road .5 miles north of West Beach Road	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain
22	Northbound on Post Road at East Beach Road Same side as the Pole	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)		To Remain
23	Northbound on Post Road .6 miles north of East Beach Road	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)		To Remain
24	Northbound on Post Road 1 mile north of Meadow Lane	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain

Bicycle and Pedestrian Facilities Study and Development Project,  
 Charlestown Routes  
 Variuos Locations  
 RI Contract No.: 2005-EI-001  
 PARE No. 05087.00 / Task 003



**TABLE 3. POST ROAD - CATCH BASINS**

<u>PHOTO NO.</u>	<u>LOCATION</u>	<u>TYPE (R.I. Standard Detail)</u>	<u>NOTES</u>	<u>ACTION</u>
25	Northbound on Post Road at Wildlower Lane	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)		To Remain
26	Northbound on Post Road at Ninigret right-turn lane	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken, Half in the travel lane	To Remain
27	Northbound on Post Road 2.6 miles north of Ninigret right-turn lane	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)		To Remain
28	Northbound on Post Road at Old Post Road right-turn lane	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)		To Remain
29	Northbound on Post Road .5 miles from Old Post Road right-turn lane	RI Std. 6.3.2 Square Frame and Grate (Bicycle Safe)	Sunken	To Remain

### Existing Catch Basin Photos



*Post Road 1*



*Post Road 2*



*Post Road 3*



*Post Road 4*



*Post Road 5*



*Post Road 6*



*Post Road 7*



*Post Road 8*

### Existing Catch Basin Photos



*Post Road 9*



*Post Road 10*



*Post Road 11*



*Post Road 12*



*Post Road 13*



*Post Road 14*



*Post Road 15*



*Post Road 16*

### Existing Catch Basin Photos



*Post Road 17*



*Post Road 18*



*Post Road 19*



*Post Road 20*



*Post Road 21*



*Post Road 22*



*Post Road 23*



*Post Road 24*

### Existing Catch Basin Photos



*Post Road 25*



*Post Road 26*



*Post Road 27*



*Post Road 28*



*Post Road 29*

**Table 4. Crash Data - Post Road**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
02-34-AC	2.28.02	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 50' N PROSSER TRL.
02-27-AC *	2.28.02	1	0	0	CONTAMINANT	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD.
02-31-AC	3.21.02	1	1	0	DRY	ANGLE	NIGHT (NOT LIGHTED)	POST RD., W/ 1,125' N FRONT OF 5000
02-32-AC	3.22.02	2	1	0	DRY	SIDESWIPE	DAYLIGHT	US 1, W/ 100' E FRONT OF SUNOCO GAS STN.
02-41-AC	4.12.02	2	0	0	DRY	BROADSIDE	DAYLIGHT	POST RD.
02-44-AC	4.17.02	2	1	0	DRY	REAR-END	DAYLIGHT	US 1
02-50-AC	4.28.02	2	0	0	WET	REAR-END	DAYLIGHT	POST RD., W/ 1 MILE N OLD POST RD.
02-54-AC	5.16.02	2	0	0	DRY	BROADSIDE	DAYLIGHT	POST RD., W/ 10' N MEADOW LN.
02-80-AC	6.30.02	2	0	0	DRY	BROADSIDE	DAYLIGHT	ROSS HILL RD.
02-83-AC	7.4.02	2	0	0	DRY	REAR-END	DAYLIGHT	ROSS HILL RD., W/ 10' W POST RD.
02-87-AC	7.5.02	2	0	0	DRY	BROADSIDE	DAYLIGHT	US 1
02-88-AC	7.5.02	1	0	0	DRY	OTHER	DAYLIGHT	US 1
02-90-AC	7.7.02	2	5	0	DRY	REAR-END	DAYLIGHT	POST RD.
02-96-AC	7.11.02	2	6	0	DRY	BROADSIDE	DAYLIGHT	POST RD., W/ 0' OLD POST RD.
02-99-AC	7.12.02	1	0	0	DRY	BROADSIDE	DUSK	POST RD.
02-100-AC	7.13.02	2	2	0	DRY	BROADSIDE	DAYLIGHT	POST RD.
02-102-AC	7.14.02	2	0	0	DRY	SIDESWIPE	DAYLIGHT	POST RD.
02-108-AC	7.18.02	2	1	0	DRY	REAR-END	DAYLIGHT	US 1
02-113-AC	7.28.02	1	0	0	DRY	OTHER	DAYLIGHT	OLD POST ROAD
02-116-AC	8.2.02	2	0	0	OTHER	OTHER	OTHER	POST RD., W/ 100' W OLD POST RD.
02-119-AC	8.4.02	2	0	0	DRY	OTHER	DAYLIGHT	POST RD., W/ 300' N W. BEACH RD.
02-123-AC	8.10.02	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD., W/ 100' W OLD POST RD.
02-129-AC	8.15.02	2	4	0	DRY	BROADSIDE	DAYLIGHT	POST RD.
02-148-AC	9.22.02	2	1	0	WET	SIDESWIPE	NIGHT (NOT LIGHTED)	US 1

\* Denotes accident involving an animal (deer).

**Table 4. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
02-151-AC	10.7.02	1	1	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	US 1
02-154-AC	10.12.02	2	0	0	WET	BROADSIDE	DAYLIGHT	POST RD., W/ 50' E ROSS HILL RD.
02-158-AC *	10.16.02	1	0	0	DRY	OTHER	NIGHT (NOT LIGHTED)	POST RD.
02-160-AC	10.18.02	2	0	0	DRY	REAR-END	DAYLIGHT	W. BEACH RD., W/ 10' S POST RD.
02-168-AC	11.4.02	1	0	0	DRY	HEAD-ON	DAYLIGHT	OLD POST RD., W/ 200' S US 1
02-174-AC *	11.10.02	1	0	0	DRY	ANGLE	DAYLIGHT	RT 216, W/ 1584' N US 1
02-176-AC	11.11.02	1	0	0	WET	RAN OFF-ROAD	DAYLIGHT	POST RD.
02-175-AC	11.11.02	2	2	0	WET	REAR-END	DAYLIGHT	US 1, W/ 250' N FRONT OF 5300
02-177-AC	11.13.02	1	1	0	WET	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 1,000' S KINGS FACTORY RD.
02-66-AC	11.16.02	2	0	0	WET	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 20' S W. BEACH ROAD
02-179-AC	11.22.02	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD.
02-181-AC	11.23.02	1	0	0	DRY	RAN OFF-ROAD	DAYLIGHT	POST RD., W/ 2,500' E SCHOOLHOUSE POND RD.
02-185-AC *	11.26.02	1	0	0	DRY	HEAD-ON	DAYLIGHT	POST RD.
02-186-AC *	11.29.02	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 10' N FRONT OF 5300
02-188-AC *	11.30.02	1	0	0	WET	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD.
02-190-AC	12.3.02	1	0	0	SNOW/SLUSH	RAN OFF-ROAD	DAYLIGHT	KINGS FACTORY RD., W/ 4,500' N POST RD.
02-196-AC *	12.10.02	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD.
02-212-AC	12.30.02	1	1	0	DRY	HEAD-ON	DAYLIGHT	POST RD., W/ 1 MILE N PROSSER TRL.
03-1-AC	1.1.03	2	0	0	WET	REAR-END	DAYLIGHT	POST RD., W/ 1 MILE S TAMANACO DR.
03-11-AC *	1.9.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 500' S PROSSER TRL.
03-21-AC	1.31.03	1	1	0	OTHER	HEAD-ON	NIGHT (NOT LIGHTED)	RI 216, W/ 1584' N US 1
03-26-AC	2.9.03	1	0	0	SNOW/SLUSH	SIDESWIPE	NIGHT (NOT LIGHTED)	KINGS FACTORY RD., W/ 1 MILE N US 1
03-32-AC	2.17.03	2	0	0	SNOW/SLUSH	SIDESWIPE	DAYLIGHT	US 1, W/ 10' S OLD POST RD.
03-36-AC	2.19.03	2	2	0	ICE	BROADSIDE	NIGHT (NOT LIGHTED)	POST RD., W/ 10' S ROSS HILL RD.
03-43-AC	3.6.03	2	0	0	SNOW/SLUSH	SIDESWIPE	DAYLIGHT	RI 216, W/ 250' N US 1
03-48-AC	3.21.03	1	0	0	WET	SIDESWIPE	NIGHT (NOT LIGHTED)	PROSSER TRL.
03-52-AC	3.25.03	2	0	0	DRY	SIDESWIPE	DAYLIGHT	POST RD.
03-59-AC *	4.4.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	US 1, W/ 500' W W. BEACH RD.
03-62-AC *	4.10.03	1	0	0	DRY	HEAD-ON	DAYLIGHT	POST RD. W/ 200' W E. BEACH RD.
03-65-AC *	4.22.03	1	0	0	WET	SIDESWIPE	NIGHT (NOT LIGHTED)	US 1, W/ 4' S OLD POST RD.
03-67-AC	4.30.03	1	0	0	DRY	HEAD-ON	DAYLIGHT	US 1

\* Denotes accident involving an animal (deer).

**Table 4. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
03-72-AC	5.10.03	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD.
03-73-AC *	5.13.03	1	0	0	DRY	HEAD-ON	DAYLIGHT	POST RD.
03-75-AC	5.16.03	1	1	0	DRY	RAN OFF-ROAD	DAYLIGHT	US 1, W/ 0' S OLD POST RD.
03-80-AC *	5.27.03	1	0	0	DRY	BROADSIDE	DAYLIGHT	POST RD., W/ 2,000' S TAMANACO DR.
03-86-AC	6.23.03	1	1	0	DRY	SIDESWIPE	DAYLIGHT	POST RD. W/ 1,000' S E. BEACH RD.
03-91-AC	6.30.03	3	1	0	DRY	BROADSIDE	DAYLIGHT	W. BEACH RD., W/ 0' S POST RD.
03-92-AC	7.1.03	1	1	0	DRY	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	POST RD.
03-95-AC *	7.5.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 1,000' S PROSSER TRL.
03-97-AC	7.6.03	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD.
03-98-AC	7.12.03	1	0	0	DRY	ANGLE	DAYLIGHT	OLD POST RD., W/ 2,500' E US 1
03-101-AC	7.23.03	2	0	0	DRY	SIDESWIPE	DAYLIGHT	US 1, W/ 100' N OLD POST RD.
03-103-AC	7.25.03	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD.
03-105-AC	7.27.03	1	1	0	DRY	RAN OFF-ROAD	DAYLIGHT	POST RD., W/ 4,000' E KINGS FACTORY RD.
03-107-AC *	7.29.03	1	0	0	WET	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 50' N ROSS HILL RD.
03-111-AC	8.1.03	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD.
03-113-AC	8.2.03	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD.
03-126-AC	8.15.03	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD., W/ 10' S W. BEACH RD.
03-128-AC	8.20.03	2	0	0	DRY	MERGING	DAYLIGHT	US 1
03-141-AC	8.30.03	2	1	0	DRY	REAR-END	DAYLIGHT	POST RD., W/ 7' S W. BEACH RD.
03-145-AC	9.7.03	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD.
03RIK3-408-AC *	9.8.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., W/ 500' S PROSSER TRL.
03-147-AC *	9.11.03	1	0	0	DRY	OTHER	DAYLIGHT	ROSS HILL RD., W/ 2 MILES N US 1
03-151-AC	9.20.03	2	4	0	DRY	NIGHT (NOT LIGHTED)	DAYLIGHT	POST RD.
03-157-AC	10.2.03	3	0	0	WET	REAR-END	DAYLIGHT	POST RD.
03-169-AC	10.17.03	1	1	0	DRY	ROLLOVER	DAYLIGHT	POST RD.
03-175-AC	10.25.03	3	2	0	DRY	REAR-END	NIGHT (NOT LIGHTED)	US 1
03-178-AC	10.31.03	1	0	0	DRY	ROLLOVER	NIGHT (NOT LIGHTED)	POST RD., W/ 200' S KINGS FACTORY RD.
03-181-AC *	11.3.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD.
03-182-AC	11.4.03	1	0	0	DRY	SIDESWIPE	DAYLIGHT	POST RD.

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**Table 4. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
03-186-AC *	11.14.03	1	0	0	DRY	ANGLE	DAYLIGHT	US 1, W/ 300' N W. BEACH RD.
03-191-AC	11.21.03	2	2	0	DRY	REAR-END	DAYLIGHT	US 1, W/ 15' W FRONT OF 5300
03-196-AC *	12.4.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD., FRONT OF 4489
03-199-AC	12.5.03	2	0	0	SNOW/SLUSH	REAR-END	DAYLIGHT	US 1, FRONT OF 4498
03-201-AC *	12.8.03	1	0	0	WET	BROADSIDE	NIGHT (NOT LIGHTED)	POST RD., FRONT OF 4489
03-207-AC *	12.18.03	3	0	0	DRY	HEAD-ON	DAWN	POST RD., W/ 1,000 N FRONT OF 5000
03-208-AC	12.18.03	2	0	0	DRY	REAR-END	DAYLIGHT	US 1, W/ 0' N FRONT OF 5193
03-213-AC	12.29.03	1	0	0	ICE	RAN OFF-ROAD	DAYLIGHT	US 1, W/ 0' W FRONT OF 5399
03-214-AC	12.29.03	1	0	0	ICE	RAN OFF-ROAD	DAWN	POST RD., W/ 30' N ROSS HILL RD.
04-4-AC	1.10.04	1	1	0	DRY	ROLLOVER	NIGHT (NOT LIGHTED)	POST RD., W/ 10' W W. BEACH RD.
04-20-AC	1.29.04	2	0	0	WET	BROADSIDE	DAYLIGHT	ROSS HILL RD.
04-22-AC *	2.2.04	1	0	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	ROSS HILL RD.
04-23-AC	2.4.04	1	1	0	ICE	ROLLOVER	DAYLIGHT	ROSS HILL RD., W/ 300' N POST RD.
04-26-AC	2.11.04	1	0	0	DRY	HEAD-ON	DAYLIGHT	US 1, W/ 200' N OLD POST RD.
04-47-AC *	4.9.04	1	0	0	DRY	HEAD-ON	DAYLIGHT	POST RD.
04-56-AC	4.21.04	2	0	0	DRY	BROADSIDE	DAYLIGHT	POST RD.
04-63-AC	5.6.04	2	0	0	DRY	SIDESWIPE	DAYLIGHT	POST RD.
04-83-AC	6.3.04	1	0	0	DRY	OTHER	DAYLIGHT	SPORTSMAN RD. W/ 200' N POST RD.
04-86-AC	6.5.04	2	0	0	DRY	SIDESWIPE	DAYLIGHT	POST RD., W/ 1 MILE N OLD POST RD.
04-91-AC *	6.8.04	1	0	0	DRY	HEAD-ON	DAYLIGHT	US 1, W/ 10' S RI 216
04-100-AC	6.17.04	2	0	0	DRY	ANGLE	DAYLIGHT	US 1, W/ 600' S FRONT OF 5399
04-108-AC	7.1.04	2	2	0	DRY	BROADSIDE	DAYLIGHT	POST RD.
04-109-AC	7.3.04	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD.
04-118-AC	7.14.04	2	0	0	DRY	REAR-END	DAYLIGHT	OLD POST RD.

\* Denotes accident involving an animal (deer).

**Table 4. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
04-120-AC	7.16.04	1	0	0	DRY	ANGLE	NIGHT (NOT LIGHTED)	POST RD., W/ 2,000' N FRONT OF 4937
04-126-AC	7.23.04	1	1	0	DRY	ROLLOVER	DAYLIGHT	ROSS HILL RD., W/ 1,000' N US 1
04-125-AC	7.23.04	2	0	0	DRY	REAR-END	DAYLIGHT	US 1, W/ 100' S FRONT OF 5300
04-128-AC	7.24.04	1	0	0	WET	RAN OFF-ROAD	DAYLIGHT	POST RD.
04-140-AC	8.5.04	2	0	0	DRY	RAN OFF-ROAD	DAYLIGHT	US 1, W/ 0' E RI 216
04-147-AC	8.19.04	1	0	0	DRY	RAN OFF-ROAD	DAYLIGHT	POST RD., W/ 500' N ROSS HILL RD.
04-152-AC	8.22.04	1	1	0	DRY	RAN OFF-ROAD	DAYLIGHT	POST RD.
04-157-AC	8.25.04	1	1	0	DRY	SIDESWIPE	DAYLIGHT	US 1, W/ 200' N OLD POST RD.
04-158-AC	8.26.04	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD., W/ 100' S W. BEACH RD.
04-167-AC	9.4.04	2	0	0	WET	REAR-END	NIGHT (NOT LIGHTED)	POST RD., W/ 300' N HOXSIE AV.
04-170-AC	9.11.04	2	0	0	DRY	OTHER	DAYLIGHT	ROSS HILL RD., W/ 0' N POST RD.
04-176-AC	9.20.04	2	2	0	DRY	BROADSIDE	DAYLIGHT	POST RD., W/ 50' E ROSS HILL RD.
04-177-AC	9.27.04	3	1	0	DRY	REAR-END	DAYLIGHT	US 1, W/ 500' N OF BURLINGAME
04-178-AC	9.29.04	1	0	0	WET	RAN OFF-ROAD	DAYLIGHT	POST RD., W/ 0' S ROSS HILL RD.
04-189-AC	10.18.04	1	1	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	POST RD.
04-194-AC *	10.28.04	1	0	0	DRY	SIDESWIPE	NIGHT (NOT LIGHTED)	POST RD., W/ 200' N HOXSIE AV.
04-195-AC *	11.1.04	1	0	0	DRY	HEAD-ON	DAYLIGHT	US 1, W/ 1,000' N W. BEACH RD.
04-199-AC	11.6.04	2	0	0	DRY	MERGING	NIGHT (NOT LIGHTED)	POST RD.
04-197-AC	11.6.04	2	0	0	DRY	SIDESWIPE	DAYLIGHT	POST RD., W/ 500' N WILDFLOWER DR.
04-205-AC	11.14.04	1	0	0	DRY	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	POST RD.
04-206-AC	11.15.04	1	0	0	DRY	SIDESWIPE	NIGHT (NOT LIGHTED)	POST RD.
04-230-AC	12.10.04	2	0	0	WET	REAR-END	NIGHT (NOT LIGHTED)	POST RD.
04-233-AC	12.13.04	2	1	0	WET	RAN OFF-ROAD	DAYLIGHT	POST RD., W/ 250' N ROSS HILL RD.
04-244-AC	12.22.04	2	1	0	DRY	SIDESWIPE	DAYLIGHT	US 1, W/ 100' S BEND RD.
04-251-AC	12.27.04	1	0	0	OTHER	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	POST RD.

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**Table 4. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
05-24-AC*	1.29.05	1	0	0	DRY	SIDESWIPE-S	DARK(NL)	US 1, 100' W OLD POST ROAD
05-28-AC*	1.30.05	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD, 100'N OLD POST ROAD
05-29-AC*	2.2.05	1	0	0	WET	BROADSIDE	DARK(NL)	OLD POST ROAD/POST ROAD
05-86-AC*	4.26.05	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD, 75'N OLD POST ROAD
05-88-AC*	4.30.05	1	0	0	WET	HEAD ON	DAYLIGHT	POST ROAD, 500' S OLD POST ROAD
05-186-AC	9.22.05	2	0	0	DRY	BROADSIDE	DAYLIGHT	US 1, 10' S OLD POST ROAD
05-238-AC	12.9.05	1	0	0	SNOW/SLUSH	RAN OFF ROAD	DUSK	POST ROAD, 1500' N OLD POST ROAD
05-252-AC	12.6.05	2	0	0	DRY	SIDESWIPE-S	DARK(NL)	POST ROAD, 100'S OLD POST ROAD
05-139-AC	7.23.05	2	1	0	DRY	BROADSIDE	DAYLIGHT	POST ROAD, 300'N E BEACH RD
05-140-AC	7.23.05	2	0	0	DRY	REAR END	DAYLIGHT	POST ROAD, 50' N E BEACH RD
05-229-AC	12.4.05	1	0	0	SNOW/SLUSH	ANGLE	DAYLIGHT	POST ROAD, 100'N HOXSIE AVE
05-61-AC*	3.18.05	1	0	0	DRY	BROADSIDE	DAYLIGHT	POST ROAD/MEADOW LN
05-176-AC	8.28.05	2	0	0	DRY	REAR END	DAYLIGHT	POST ROAD/MEADOW LN
05-224-AC*	11.26.05	1	0	0	DRY	BROADSIDE	DARK(NL)	POST ROAD/MEADOW LN
05-214-AC*	11.14.05	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD/PROSSER TL
05-221-AC	11.20.05	2	3	0	DRY	ANGLE	DAYLIGHT	POST ROAD, 3M S PROSSER TL
05-237-AC	12.09.05	1	0	0	SNOW/SLUSH	RAN OFF ROAD	DAYLIGHT	POST ROAD/PROSSER TL
05-17-AC	1.22.05	1	0	0	CONTAMINANT	RAN OFF ROAD	DARK(NL)	POST ROAD/S COUNTY TL
05-44-AC	2.28.05	1	0	0	SNOW/SLUSH	SIDESWIPE-S	DARK(NL)	POST ROAD, 500' S S.COUNTY TL
05-112-AC*	6.23.05	1	0	0	DRY	BROADSIDE	DAYLIGHT	POST ROAD/S COUNTY TL
05-124-AC	7.3.05	2	0	0	DRY	MERGING	DAYLIGHT	POST ROAD/S COUNTY TL
05-133-AC	7.15.05	2	0	0	DRY	REAR END	DAYLIGHT	POST ROAD/S COUNTY TL
05-156-AC	8.7.05	1	1	0	DRY	SIDESWIPE-S	DAYLIGHT	POST ROAD, 200'S S.COUNTY TL
05-198-AC	10.16.05	1	0	0	DRY	SIDESWIPE-S	DARK(NL)	POST ROAD, 1M S S.COUNTY TL
05-16-AC	1.21.05	1	1	0	DRY	RAN OFF ROAD	DARK(NL)	POST ROAD, 100'S ROSS HILL ROAD

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**Table 4. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
05-44-AC	2.28.05	1	0	0	SNOW/SLUSH	SIDESWIPE-S	DARK(NL)	POST RD, 500'S S COUNTY TL
05-112-AC*	6.23.05	1	0	0	DRY	BROADSIDE	DAYLIGHT	POST RD/S COUNTY TL
05-117-AC	6.26.05	2	0	0	DRY	SIDESWIPE-S	DAYLIGHT	US 1,100'N 5402
05-124-AC	7.3.05	2	0	0	DRY	MERGING	DAYLIGHT	POST RD/S COUNTY TL
05-156-AC	8.7.05	1	1	0	DRY	SIDESWIPE-S	DAYLIGHT	POST RD, 200'S S COUNTY TL
05-162-AC	8.14.05	2	1	0	DRY	REAR END	DAYLIGHT	POST ROAD/TAMANACO DR
05-166-AC	8.21.05	2	0	0	DRY	SIDESWIPE-S	DAYLIGHT	POST ROAD/WILDFLOWER RD
05-177-AC	8.31.05	1	0	0	DRY	BROADSIDE	DAYLIGHT	US 1, 100'S 5280
05-198-AC	10.16.05	1	0	0	DRY	SIDESWIPE-S	DARK(NL)	POST RD, 1M S S COUNTY TL
05-206-AC	10.30.05	2	0	0	DRY	ANGLE	DAYLIGHT	POST ROAD, 10'N WILDFLOWER RD
05-227-AC	12.1.05	1	0	1	DRY	ANGLE	DAYLIGHT	POST ROAD/ROSS HILL ROAD
06-8-AC	1.20.06	2	0	0	DRY	REAR END	DAYLIGHT	POST ROAD/S.COUNTY TL
06-13-AC	1.27.06	1	0	0	DRY	RAN OFF ROAD	DARK(NL)	POST ROAD/PROSSER TL
06-37-AC	3.13.06	1	0	1	DRY	HEAD ON	DAYLIGHT	POST ROAD/KINGS FACTORY ROAD
06-42-AC	4.4.06	2	1	0	DRY	REAR END	DAYLIGHT	POST ROAD/TAMANACO DR
06-45-AC	4.12.06	2	2	0	DRY	BROADSIDE	DAYLIGHT	POST ROAD, 10'E ROSS HILL ROAD
06-46-AC	4.12.06	2	2	0	DRY	REAR END	DAYLIGHT	POST ROAD, 300'W HOXSIE AVE
06-50-AC	4.19.06	2	0	0	DRY	SIDESWIPE-S	DAYLIGHT	POST ROAD/S.COUNTY TL
06-56-AC*	5.3.06	1	0	0	WET	BROADSIDE	DARK(NL)	POST ROAD, 100'N S.COUNTY TL
06-59-AC	5.9.06	1	0	0	WET	SIDESWIPE-S	DARK(NL)	POST ROAD, KINGS FACTORY ROAD
06-63-AC	5.18.06	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD/S.COUNTY TL
06-68-AC	5.23.06	1	1	0	DRY	RAN OFF ROAD	DARK(LIGHT)	POST ROAD/S.COUNTY TL
06-72-AC	5.27.06	2	0	0	DRY	REAR END	DAYLIGHT	POST ROAD, 500'W TAMANACO DR
06-73-AC	5.28.06	2	1	0	DRY	SIDESWIPE-S	DAYLIGHT	POST ROAD, 100'S OLD POST ROAD
06-74-AC	6.4.06	2	0	0	DRY	ANGLE	DAYLIGHT	KINGS FACTORY ROAD, 1000'N US 1

\* Denotes accident involving an animal (deer).

2006 accident data is in draft form

**Table 4. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
06-75-AC	6.5.06	1	0	0	DRY	BROADSIDE	DAYLIGHT	POST ROAD, 500'S OLD POST ROAD OFF RAMP
06-81-AC	6.27.06	2	0	0	DRY	SIDESWIPE-S	DAYLIGHT	POST ROAD, 1000'N OLD POST ROAD
06-84-AC	7.4.06	2	0	0	DRY	REAR END	DARK(NL)	POST ROAD/ROSS HILL ROAD
06-96-AC	7.18.06	3	0	0	DRY	REAR END	DAYLIGHT	POST ROAD/HOXSIE AVE
06-105-AC	7.26.06	2	1	0	DRY	REAR END	DAYLIGHT	POST ROAD/OLD POST ROAD
06-114-AC	8.6.06	2	0	0	DRY	MERGING	DAYLIGHT	POST ROAD, 1000'N MEADOW LN
06-126-AC	8.29.06	2	0	0	WET	ANGLE	DAYLIGHT	POST ROAD/ROSS HILL ROAD
06-128-AC	9.2.06	2	0	0	DRY	SIDESWIPE-S	DAYLIGHT	POST ROAD/E.BEACH ROAD
06-131-AC	9.4.06	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD/TAMANACO DR
06-141-AC	9.21.06	1	0	0	DRY	ANGLE	DAYLIGHT	POST ROAD, 300'N KINGS FACTORY ROAD
06-142-AC	9.22.06	2	1	0	DRY	REAR END	DAYLIGHT	POST ROAD, 10'W MEADOW LN
06-147-AC	10.1.06	2	1	0	WET	RAN OFF ROAD	DUSK	POST ROAD/MEADOW LN
06-173-AC	11.12.06	1	0	0	DRY	RAN OFF ROAD	DARK(NL)	POST ROAD/S.COUNTY TL
06-153-AC	10.13.06	1	0	0	DRY	RAN OFF ROAD	DAYLIGHT	POST ROAD, 25'W S.COUNTY TL
06-154-AC*	10.13.06	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD/WILDFLOWER ROAD
06-157-AC	10.20.06	1	0	0	WET	RAN OFF ROAD	DAYLIGHT	US 1/E.BEACH ROAD
06-163-AC*	11.1.06	1	0	0	DRY	HEAD ON	DAYLIGHT	POST ROAD, 200'S PROSSER TL
06-170-AC*	11.10.06	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD/E.BEACH ROAD
06-171-AC*	11.11.06	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD/OLD POST ROAD
06-173-AC	11.12.06	1	0	0	DRY	RAN OFF ROAD	DARK(NL)	POST ROAD/S.COUNTY TL
06-176-AC*	11.21.06	1	0	0	DRY	BROADSIDE	DAYLIGHT	POST ROAD, 300'S S.COUNTY TL
06-177-AC	11.21.06	2	2	0	DRY	ANGLE	DARK(NL)	POST ROAD/ROSS HILL ROAD
06-185-AC	12.5.06	1	0	0	SNOW/SLUSH	RAN OFF ROAD	DAYLIGHT	POST ROAD, 300'S WILDFLOWER DR
06-192-AC	12.18.06	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD, 100'N E.BEACH ROAD

\* Denotes accident involving an animal (deer).

2006 accident data is in draft form



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## ROSS HILL ROAD/CHURCH STREET

**Description:** The section of Ross Hill Road (Route 216)/Church Street that has been studied is approximately 3.5 miles in length. It extends north from the intersection of the Route 1 southbound travel lane, crosses over into Westerly, and ends at the intersection of Route 91 (Alton Bradford Road). The Ross Hill Road/Church Street roadway plan, shows the roadway's location and its project limits (Figure 6). Technical paper No. 155, the Rhode Island Department of Administration, Division of Planning has classified both Ross Hill Road and Church Street as urban minor arterials. Both roadways are State owned and maintained roadways.

Commercial development is concentrated at the Route 1/Ross Hill Road intersection (Photo 12), with the remaining segment being predominately residential land uses. The Bradford Elementary



*Photo 12 – Captain Don's Bait & Tackle.*



*Photo 13 – Bradford Elementary School.*

School (Photo 13) and the Bradford Historic District are located at the intersection of Church Street with Route 91 (Alton Bradford Road).

### **Existing Conditions:**

The attached Design Policy Memo (DPM – Ross Hill Road (Route 216)/Church Street) summarizes existing conditions in a formal setting.

Both roadways are generally undulating and winding throughout (Photo 14), and includes several straight lengths. The typical roadway width varies from 22 to 24



*Photo 14 – Ross Hill Road northbound.*

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feet with shoulder widths varying from 0 to 1 foot. The centerline and shoulders are striped along both roadways. There are no sidewalks and curbing, except in the vicinity of the Bradford Elementary School on Church Street.

Ross Hill Road (Route 216) has many areas of erosion and washout along the shoulders. Vertical curve sight distance constraints are a concern in the vicinity of utility pole No. 56, indicated on Figure 6. There are many areas, both on the northbound and southbound sides, where sand and debris encroach into the travel lane.

The posted speed limit along Ross Hill Road is 35 mph, reduced to 20 mph in the vicinity of the Bradford Elementary School on Church Street. The general condition of both roadways is fair with moderate cracking and patched potholes. The vegetation along the route has been maintained with no overhanging tree limbs. Mailboxes, utility poles and signage are located approximately 1 to 3 feet off the edge of pavement.

Eight streets intersect with Ross Hill Road, four intersect with Church Street. There is an existing crosswalk at the Bradford Elementary School and traffic control stop sign at the intersection of Church Street with Route 91/Alton Bradford Road (Photo 15).



***Photo 15 – Route 216/Route 91 intersection.***

There are no catch basins located along Ross Hill Road (Route 216)/ Church Street.

An analysis of the reported crashes for five years, including 2002, 2003, 2004, 2005, and 2006 indicated eighty-two crashes. There were fifty single-vehicle crashes, seven of which involved hitting deer or going off-the-road in an attempt to avoid hitting deer. There were thirty-two multi-vehicle crashes. Of the reported crashes resulting in injury, there were two (2) fatalities. Based on the written vehicle operator statements that were part of the reports and the other crash report data, none of the crashes indicate problem intersections or areas, although the largest percentage of accidents occurred in the vicinity of the Route 1/Route 216 intersection. This data has been tabulated at the end of this section, in Table 5. Of special note is the fatality in 2004, a 68 year-old cyclist who was struck and killed in the northbound lane of Route 1/Post Road after leaving Ross



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Hill Road/Route 216, and crossing over four lanes of travel. The fatality that occurred in 2005 involved a bicycle traveling Route 216 toward Route 1. Based on a witness statement the bicycle did not stop at the stop sign at Route 216 and Route 1 south.

**Proposed Recommendations:**

Referring to the *Bicycle Route Sign Criteria* chart in DPM 920.06 (Section 2 - Criteria), this roadway does not meet the criteria to sign it as a Signed Shared roadway. This is based on an AADT volume of less than 2,000 vehicles per day and speed limit of 30-40 mph. Its existing minimum roadway width of eleven (11) feet does not meet the minimum usable roadway width of fourteen (14) feet, as recommended in the 1999 AASHTO ‘*Guide for the Development of Bicycle Facilities*’ design criteria for a Signed Shared route. The areas where roadway width is less than fourteen (14) feet will require widening.

Upon the completion of the proposed widening, this segment is recommended to be designated as a Signed Shared roadway. The roadway would be identified, by signing, as a preferred route. Signs shall be installed at approximate 1/2 mile locations on both sides, opposite from each, of the roadway.



***Photo 16– Route 216 southbound.***

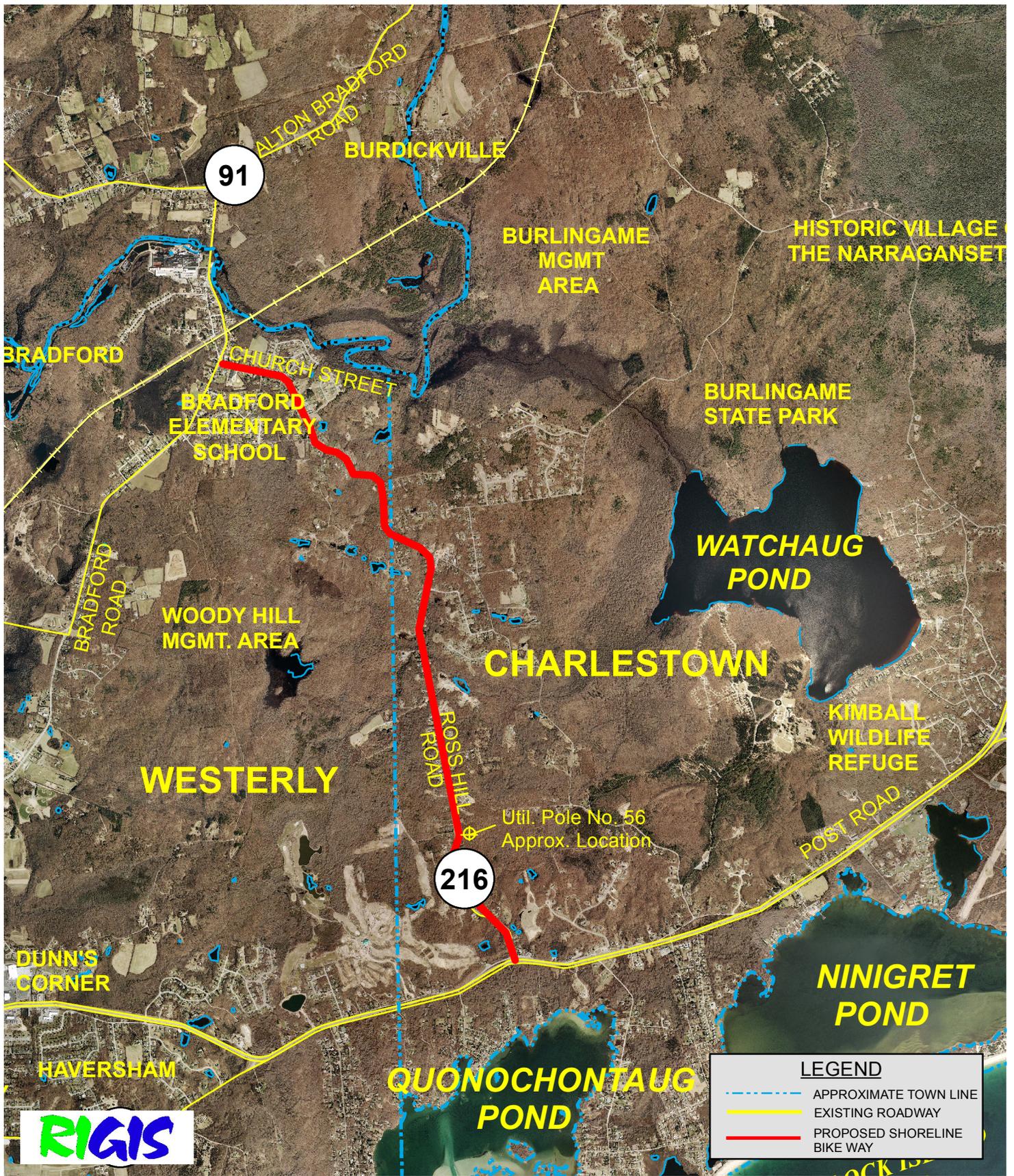
With Ross Hill Road/Church Street designated as a Signed Shared roadway, coordination is necessary between the towns of Charlestown and Westerly. It is advised that regular maintenance of the route be provided to ensure that it continues as an acceptable route for the bicyclists. Regular maintenance includes scheduled sweeping of pavement to prevent accumulation of debris, providing a smooth surface, removing edge of pavement obstructions, and trimming trees. Immediate improvements include the widening of approximately 13,860 linear feet (assumed 75% of total segment length) of roadway, as well as the relocation of some off-road obstacles (mailboxes, signage). These improvements would maintain sight distance around curves as well as provide additional recovery and maneuvering area off-road for both bicyclists and drivers should they encounter a potential conflict.



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With the designation of Ross Hill Road/Church Street as a Signed Shared roadway, a connection/tie-in with the South County Bike Route is provided at the intersection of Church Street (Route 216) with Alton Bradford Road (Route 91).





**RIGIS**

**STATE OF RHODE ISLAND**  
**DEPARTMENT OF TRANSPORTATION**  
**BICYCLE ROUTE SUITABILITY REPORT**

PROJECT: Bicycle & Pedestrian Facilities Study & Development: Shoreline Bikeway

CONSULTANT: Pare Corporation REVIEW DATE: April 11, 2006

ROUTE NAME & NUMBER: Ross Hill Rd.(Rte. 216)/Church St. CITY/TOWN: Charlestown/Westerly

ROADWAY LIMITS: Route 1/Post Rd. (Charlestown) to Route 91/Alton Bradford Rd. (Westerly)

Technical Paper No. 155 Roadway Classification Minor Arterial (rural)

“Guide to Cycling in the Ocean State 2003” Roadway Designation Ross Hill Rd = N/A/Church St. = Most Suitable

The State Highway noted above is being considered for signage as a “Signed Shared Roadway” in accordance with the criteria set forth in RIDOT DPM No. 920.06. The following information is to be provided to the Deputy Chief Engineer of the Design Section for consideration:

ITEM NO.	DESCRIPTION	COMMENTS NO. (SEE ENDNOTES)
1	Posted Speed Limit	35 MPH changes to 20 MPH at Bradford Elementary School vicinity (Church Street)
2	85 <sup>th</sup> Percentile Speed (Radar speed study)	39 MPH
3	Average Annual Daily Traffic (AADT) Volume	1,800 VPD
4	Percent Truck Traffic Volume	2%
5	Number of Travel Lanes	2; one in each direction
6	Width of Travel Lanes	11 feet
7	Width of Shoulders	0 – 1 foot
8	Delineation of Centerline & Shoulders	Yes
9	Sidewalk	Bradford Elementary School
10	Curbing	Bradford Elementary School
11	On-Street Parking	None

ITEM NO.	DESCRIPTION		COMMENTS NO. (SEE ENDNOTES)
12	Frequency of Curb Cuts	Moderate	Moderate
		Heavy	
		Commercial	
		Residential	Residential
13	Horizontal Alignment Constraints		None
14	Vertical Alignment Constraints		Vicinity of Utility Pole No. 56
15	Intersections & Corresponding Stopping Sight Distances		Okay
16	Stop Controls Along Roadway		At terminus of Church St./Rte. 91 intersection
17	General Roadway Conditions	Surface	Good
		Potholes	Moderate
		Cracking	Moderate
		Catch Basin Types	None
		Sand & Debris	Moderate/Frequent
18	Are all grates bicycle-safe? (If no, please indicate which ones)	Yes: _____	No: _____
18A	Total Number of Grates: _____ N/A _____		
18B	Location of Grates (list): _____ N/A _____		
19	Off-Road Obstacles	Mailboxes, signs	Both; 1 – 3' off edge of pavement
		Poles	1 – 3' off edge of pavement
		Outcrops	Yes
		Hanging Limbs	None

ITEM NO.	DESCRIPTION		COMMENTS NO. (SEE ENDNOTES)
20	Facilities List on Roadway	Parks	None
		Schools	Bradford Elementary School
		Recreational Fields	None
		Historical Districts	Bradford Historic District
		Commercial Establishments	None
21	Expected Bike User Type	A – Advanced	A - Advanced
		B – Basic	
		C – Children	
22	Location of nearest Bike Route/Path as potential link		Route 91, existing signed bike route
23	Additional Observations		
24	Accident History (Provide Crash Data for the previous three years according to type, location, injury, roadway surface and time)		See Table 5 attached

**COMMENTS**

(Expand/Delete as needed)


Based on the information contained in the above "Bicycle Route Suitability Report", the reviewing engineer:

Recommends (✓)

Does not recommend ( )

Designation of this roadway as a Signed Shared Roadway, following the implementation of the recommended improvements including widening of all areas where the total roadway width is less than 28-feet and the relocation of some off-road obstacles (mailboxes, signage).

Reviewing Engineer:	Date:
Approved Deputy Chief Engineer:	Date:
Approved Chief Engineer:	Date:

**Table 5. Crash Data - Ross Hill Road/Church Street**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
02-8-AC	1.11.02	1	0	0	ICE	HEAD-ON	NIGHT (NOT LIGHTED)	RI 216, W/ 50' S NIANTIC HW.
02-30-AC	3.10.02	1	1	0	WET	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	ROSS HILL RD., W/ 250' S KLONDIKE RD.
02-39-AC *	4.3.02	1	0	0	DRY	HEAD-ON	DAWN	ROSS HILL RD.
02-42-AC	4.16.02	2	0	0	DRY	BROAD-SIDE	DAYLIGHT	ROSS HILL RD., W/ 1000' E KLONDIKE RD.
02-47-AC	4.24.02	1	0	0	DRY	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	ROSS HILL RD.
02-55-AC	5.18.02	1	1	0	WET	HEAD-ON	NIGHT (NOT LIGHTED)	ROSS HILL RD., W/ 30' N FRONT OF 487
02-61-AC *	5.30.02	1	0	0	DRY	HEAD-ON	DAYLIGHT	RI 216, W/ 100' S ROSS HILL RD.
02-268-AC	12.5.02	2	0	0	SNOW/SLUSH	REAR-END	DAYLIGHT	WEST. BRADFORD RD., W/ 50' N CHURCH ST.
02-205-AC	12.22.02	1	2	0	CONTAMINANT	HEAD-ON	DAYLIGHT	ROSS HILL RD., W/ 6' N KLONDIKE RD.
02-337-AC *	12.28.02	1	0	0	DRY	ANGLE	DAYLIGHT	BOWLING LN., W/ 200' N RI 216
03-15-AC	1.17.03	2	0	0	DRY	BROAD-SIDE	DAYLIGHT	ROSS HILL RD.
03-675-AC	7.9.03	1	0	0	WET	RAN OFF-ROAD	DAYLIGHT	CHURCH ST., W/ 1 MILE E RI 91
03-118-AC	8.4.03	2	0	0	DRY	REAR-END	DAYLIGHT	ROSS HILL RD.
03-809-AC	8.5.03	2	0	0	DRY	REAR-END	DAYLIGHT	CHURCH ST., W/ 75' E RI 91
03-203-AC	12.14.03	1	0	0	SNOW/SLUSH	HEAD-ON	DAYLIGHT	ROSS HILL RD.
03-205-AC	12.16.03	1	1	0	ICE	RAN OFF-ROAD	NIGHT (NOT LIGHTED)	RI 216, W/ 20' N MOSENA DRIVE
03-211-AC *	12.24.03	1	0	0	WET	HEAD-ON	DAYLIGHT	RI 216, W/ 20' S ROSS HILL RD.
04-8-AC	1.15.04	1	0	0	SNOW/SLUSH	RAN OFF-ROAD	DAWN	ROSS HILL RD., W/ 500' S BUCKEYE BR. RD.
04-81-AC	1.21.04	1	2	0	DRY	ROLL-OVER	NIGHT (NOT LIGHTED)	CHURCH ST.
04-159-ac	2.18.04	1	0	0	ICE	RAN OFF-ROAD	DAYLIGHT	CHURCH ST., W/ 10' W FRONT OF 268
04-32-AC	3.16.04	1	0	0	SNOW/SLUSH	RAN OFF-ROAD	DAYLIGHT	ROSS HILL RD., W/ 500' N BUCKEYE BR. RD.
04-33-AC	3.16.04	1	0	0	SNOW/SLUSH	RAN OFF-ROAD	DAYLIGHT	ROSS HILL RD.
04-245-AC	3.27.04	1	0	0	DRY	SIDE-SWIPE	NIGHT (NOT LIGHTED)	CHURCH ST., W/ 100' S WEST. BRADFORD RD.
04-332-AC	4.27.04	2	0	0	DRY	REAR-END	DAYLIGHT	CHURCH ST., W/ 10' W WEATHERVANE WY.
04-353-AC	5.3.04	2	0	0	DRY	REAR-END	DAYLIGHT	CHURCH ST.
04-365-AC	5.6.04	2	0	0	DRY	REAR-END	DAYLIGHT	WESTERLY BRADFORD RD.
04-538-AC	6.26.04	1	0	0	DRY	RAN OFF-ROAD	DAYLIGHT	CHURCH ST., W/ 200' E QUARRY RD.
04-562-AC	6.30.04	1	0	0	DRY	RAN OFF-ROAD	DAYLIGHT	CHURCH ST., W/ 100' W WEATHERVANE WY.

\* Denotes accident involving an animal (deer).

**Table 5. Crash Data - Ross Hill Road**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
04-566-AC	7.2.04	1	1	0	DRY	ANGLE	NIGHT (NOT LIGHTED)	RI 91
04-594-AC	7.7.04	2	0	0	WET	SIDE-SWIPE	NIGHT (NOT LIGHTED)	CHURCH ST.
04-141-AC	8.5.04	1	0	0	WET	ANGLE	DAYLIGHT	RI 216, W/ 10' N ROSS HILL RD.
04-816-AC	8.25.04	2	1	0	DRY	REAR-END	DAYLIGHT	CHURCH ST., W/ 100' S BRADFORD RD.
04-166-AC	9.4.04	1	0	1	DRY	ROLL-OVER	NIGHT (NOT LIGHTED)	ROSS HILL RD.
04-165-AC	9.4.04	1	1	0	DRY	HEAD-ON	NIGHT (NOT LIGHTED)	ROSS HILL RD., W/ 100' N BUCKEYE BR. RD.
04-168-AC	9.6.04	1	0	0	DRY	SIDE-SWIPE	NIGHT (NOT LIGHTED)	ROSS HILL RD., W/ 20' W POLE 5 NECO
04-173-AC	9.13.04	2	0	0	REPAIR	HEAD-ON	DAYLIGHT	BUCKEYE BR. RD., W/ 10' E ROSS HILL RD.
04-907-AC	9.22.04	1	1	0	DRY	ROLL-OVER	DAYLIGHT	CHURCHST., W/ 50' E UNK
04-917-AC	9.25.04	2	0	0	DRY	REAR-END	DAYLIGHT	BRADFORD RD.
04-995-AC	10.18.04	2	0	0	DRY	BROADSIDE	NIGHT (NOT LIGHTED)	CHURCH ST., W/ 150' S PARKING LOT
04-191-AC	10.22.04	1	0	0	DRY	RAN OFF-ROAD	DAYLIGHT	ROSS HILL RD., W/ 100' N KLONDIKE RD.
04-1076-AC	11.10.04	2	0	0	DRY	ANGLE	NIGHT (NOT LIGHTED)	CHURCH ST., W/ 200' S PARKING LOT
04-1112-AC	11.21.04	1	0	0	WET	ANGLE	NIGHT (NOT LIGHTED)	WOODY HILL RD.
04-241-AC	12.20.04	1	0	0	SNOW/SLUSH	ANGLE	DAYLIGHT	ROSS HILL RD., W/ 50' S KLONDIKE RD.
04-1268-AC	12.31.04	1	0	0	SNOW/SLUSH	ANGLE	DAYLIGHT	CHURCH ST., W/ 100' S FRONT OF 144
05-21-AC	1.26.05	2	0	0	SNOW/SLUSH	SIDESWIPE-O	DAYLIGHT	ROSS HILL ROAD/POST ROAD
05-202-AC	10.24.05	1	0	0	DRY	HEAD-ON	DAYLIGHT	RI 216, 5000'N POST ROAD
05-204-AC	10.29.05	2	0	0	DRY	REAR-END	DAYLIGHT	ROSS HILL ROAD/POST ROAD
05-225-AC	11.27.05	1	1	0	DRY	RAN OFF-ROAD	DARK(NL)	RI 216, 150'S NIANTIC HW
05-611-AC	7.20.05	1	0	0	DRY	SIDESWIPE-S	DAYLIGHT	RI 216, 100'W PECKHAM HOLLOW RD
05-30-AC*	2.2.05	1	0	0	DRY	HEAD-ON	DARK(NL)	ROSS HILL RD/BUCKEYE BROOK RD
05-242-AC*	12.11.05	1	0	0	DRY	BROADSIDE	DARK(NL)	ROSS HILL RD/KLONDIKE RD
05-46-AC	3.2.05	2	0	0	SNOW/SLUSH	HEAD-ON	DAYLIGHT	ROSS HILL RD, 48'S LAUREL RD
05-47-AC	3.2.05	2	0	0	SNOW/SLUSH	REAR-END	DAYLIGHT	LAUREL RD/ROSS HILL RD

\* Denotes accident involving an animal (deer).

**Table 5. Crash Data - Ross Hill Road**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
05-185-AC	9.21.05	1	1	0	DRY	RAN OFF-ROAD	DAYLIGHT	ROSS HILL RD, 1000'S LAUREL RD
05-190-AC	9.28.05	1	0	0	DRY	HEAD-ON	DAYLIGHT	ROSS HILL RD, 1000'S LAUREL RD
05-21-AC	1.26.05	2	0	0	SNOW/SLUSH	SIDESWIPE-O	DAYLIGHT	ROSS HILL RD/POST RD
05-29-AC	1.14.05	2	0	0	ICE	REAR END	DARK(LIGHT)	CHURCH ST, 10'W FRONT OF 1
05-44-AC	1.21.05	2	0	0	DRY	ANGLE	DAYLIGHT	CHURCH ST/WOODY HILL RD
05-21-AC	1.26.05	2	0	0	SNOW/SLUSH	SIDESWIPE-O	DAYLIGHT	ROSS HILL RD/POST RD
05-66-AC	1.26.05	1	0	0	SNOW/SLUSH	ANGLE	DAYLIGHT	QUARRY RD/CHURCH ST
05-68-AC	1.26.05	2	0	0	SNOW/SLUSH	ANGLE	DAYLIGHT	CHURCH ST, 10'W FRONT OF 208
05-359-AC	5.10.05	2	1	0	DRY	BROADSIDE	DAYLIGHT	CHURCH ST/BRADFORD RD
05-411-AC	5.28.05	2	0	0	DRY	REAR END	DAYLIGHT	CHURCH ST/WOODY HILL RD
05-692-AC	8.9.05	1	0	0	WET	ANGLE	DARK(NL)	CHURCH ST, 50'E WEATHERVANE RD
05-518-AC	9.12.05	2	0	0	DRY	ANGLE	DAYLIGHT	CHURCH ST, 300'W WOODY HILL RD
05-202-AC	10.24.05	1	0	0	DRY	HEAD ON	DAYLIGHT	RI 216, 5000'N POST RD
05-204-AC	10.29.05	2	0	0	DRY	REAR END	DAYLIGHT	ROSS HILL RD/POST RD
05-1003-AC	11.17.05	2	1	0	DRY	REAR END	DAYLIGHT	BRADFORD RD/CHURCH ST
05-227-AC	12.1.05	1	0	1	DRY	ANGLE	DAYLIGHT	POST RD/ROSS HILL RD
05-1062-AC	12.7.05	2	0	0	DRY	OTHER	DAYLIGHT	CHURCH ST, 200'E BRADFORD RD
06-40-AC	3.22.06	1	0	0	DRY	RAN OFF-ROAD	DARK(NL)	ROSS HILL ROAD, 1000'N POST ROAD
06-287-AC	4.23.06	2	0	0	WET	ANGLE	DAYLIGHT	PECKHAM HOLLOW ROAD/RI 216
06-55-AC	4.30.06	1	0	0	DRY	OTHER	DAYLIGHT	ROSS HILL ROAD, 3000'N POST ROAD
06-61-AC	5.8.06	1	1	0	DRY	RAN OFF-ROAD	DAYLIGHT	ROSS HILL ROAD, 100'N KLONDIKE ROAD
06-71-AC	5.27.06	1	1	0	WET	RAN OFF-ROAD	DARK(NL)	ROSS HILL ROAD, 2500'S LAUREL ROAD
06-755-AC	8.18.06	1	0	0	DRY	OTHER	DAYLIGHT	CHURCH STREET, 300'E FRONT OF 10
06-124-AC*	8.27.06	1	0	0	DRY	ANGLE	DARK(NL)	ROSS HILL ROAD/MOSENA DR
06-126-AC	8.29.06	2	0	0	WET	ANGLE	DAYLIGHT	POST ROAD/ROSS HILL ROAD
06-149-AC	10.8.06	1	0	0	DRY	RAN OFF-ROAD	DARK(NL)	ROSS HILL ROAD, 200'E KLONDIKE ROAD
06-161-AC	10.27.06	1	0	0	WET	RAN OFF ROAD	DARK(NL)	ROSS HILL ROAD, 500'N US1
06-177-AC	11.21.06	2	2	0	DRY	ANGLE	DARK(NL)	POST ROAD/ROSS HILL ROAD
06-181-AC	11.26.06	1	0	0	DRY	HEAD ON	DARK(NL)	ROSS HILL ROAD/LAUREL ROAD

\* Denotes accident involving an animal (deer).

2006 accident data is in draft form



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## POST ROAD/SHORE ROAD

**Description:** The fourth roadway of the proposed bicycle network is Post Road (Route 1) from the intersection of Route 216 (Ross Hill Road) in Charlestown (Photo 16), crossing over onto Shore Road (Route 1A) and terminating at the Winnapaug Road crossroad in the Town of Westerly. The section of Post Road/Shore Road that has been studied is approximately five miles in length. The Post Road/Shore Road roadway plan, identifies the roadway's location and its project limits (Figure 7). The Rhode Island Department of Administration, Division of Planning Technical Paper No. 155, has classified Post Road as a rural, principal arterial and Shore Road as an urban, minor arterial. Post Road and Shore Road are both State owned and maintained roadways.



*Photo 16 – Post Road/Ross Hill Road intersection.*

Overall, this section of roadway abuts residential development. The Weekapaug and Winnapaug Golf Clubs, and memorial overlook (Photo 17) are located along Shore Road. In addition, access to Misquamicut Beach, beachfront restaurants and retail shops is also available from Shore Road in Westerly.

### **Existing Conditions:**

The attached Design Policy Memo (DPM – Post Road/Shore Road) summarizes existing conditions, indicating standards for RIDOT's review of this segment as it pertains to signing the road as a Signed Shared Bike Route.



*Photo 17 – Overlook Memorial Site.*

Post Road is a limited-access, four-lane highway. It is generally flat and straight, the exception being the curve at the intersection of Post Road (Route 1) with Shore Road (Route 1A). There are two 12-foot wide through travel lanes on both the northbound and southbound side of Post Road separated by a grass median, varying in width. The shoulder varies



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from 2 to 8 feet along the section. There are four breaks in the center median that provide cross-over access to the streets located off Post Road, located in the less vegetated areas of Post Road.

Ten streets intersect Post Road. There are existing guardrails along the majority of Route 1 north (Post Road) from the intersection of Route 1 with Route 1A.

The posted speed limit on Post Road is 50 mph. The condition of the roadway is generally good with minimal cracking and potholes. The vegetation along Post Road has been maintained with no overhanging tree limbs. Mailboxes, signage and utility poles are located at the edge of pavement.

There are six (6) bicycle-safe catch basins along this segment, all of which are located along the Post Road (Route 1) portion of this segment, both north and southbound. Catch basin location, type, and recommended action to be taken are included in Table 6, attached at the end of this section.



***Photo 18 – Route 1A/Shore Road crossover.***

The intersection of Post Road and Shore Road (Photo 18) warrants particular concern to bicyclists. Through traffic on Route 1 is not required to stop anywhere along this section of Post Road. There are no roadway overpasses on this section of Post Road. As referenced in Section 4 – Post Road of this report, and identified from the *Shoreline Bikeway Feasibility Study*, completed by VHB in September 1999, ‘RIDOT does not want to alter the design of Route 1 to the degree that the existing flow of traffic would be disrupted’.

At this intersection of Post Road and Shore Road, a designated left-turn lane provides crossover access to Shore Road (Route 1A) southbound. A bicyclist must negotiate two (2) high-speed travel lanes (Route 1 southbound), one designated left-turn lane, and an additional two (2) high-speed lanes (Route 1 northbound) in order to access Shore Road.

Based on findings of the VHB study, bicyclists stress ratings for Route 1 range from 3.5 to 4.0 and bicyclists are subjected to relatively high levels of stress. In addition, Route 1 rates at the highest



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stress level 5.0 for vehicle/truck volume and vehicle speeds. Major concerns identified by this VHB study relative to the designation of Route 1 as a bicycle facility include the large amount of traffic and high speeds in conflict to bicyclists riding in the shoulder, through bicyclists and vehicles entering and exiting Route 1, and truck blast to bicyclists. All three represent major safety concerns.

An analysis of the reported crashes for this section of Post Road, including 2002, 2003, 2004, 2005, and 2006 indicated sixty crashes. Approximately one half (31) of the reported crashes occurred at the intersection of Route 1 (Post Road) and Shore Road (Route 1A). Of the reported crashes resulting in injury, there were nine (9) injuries and no fatalities. This data has been tabulated at the end of this section, in Table 7.

The section along Shore Road (Route 1A) is moderately undulating and winding until the approach to the Langworthy/Weekapaug Road signalized intersection, where it becomes flat and straight (Photo 19). The typical roadway width varies from 24 to 30 feet, with shoulder widths varying from 0 to 1 foot along this section. The centerline and shoulders are striped and there are no sidewalks or curbing.



***Photo 19 – Weekapaug/Langworthy Road signalized intersection.***

Shore Road (Route 1A) has many areas of considerable erosion and washout along the shoulders. There are no catch basins along this section of Shore Road, although an open culvert exists in the shoulder near Piezzo Drive, and paved waterway along the southbound travel lane (Photos 20 and 21).



***Photo 20 – Open culvert near Piezzo Drive.***



***Photo 21 – Paved waterway, Shore Road southbound.***



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There is inadequate sight distance at the horizontal curve opposite the Weekapaug Golf Club. Sand and debris encroach into the travel lane along many areas, both north and southbound.

The posted speed limit along Shore Road is 40 mph. The general condition of the roadway is fair with moderate cracking and potholes. The vegetation along the route has been maintained with no overhanging tree limbs. Mailboxes, signage and utility poles are located 0 to 4 feet off the edge of pavement (Photo 22).



*Photo 22 – Shore Road south.*

Thirty-seven streets intersect this section of Shore Road. There are existing guardrails along the majority of Shore road north that extends onto Post Road (Route 1) north.

There are two signalized intersections along Shore Road, at the crossroads of Weekapaug/Langworthy Road (Photo 22), and at the Winnapaug crossroad. There are two crosswalks at Wicklow Drive and Tom Harvey Road.

An analysis of the reported crashes for this section of Shore Road, including 2002, 2003, 2004, 2005 and 2006 indicated eighty-two crashes. Approximately one-fifth (17) of the reported crashes occurred at the intersection of Route 1A (Shore Road) and Weekapaug Road. Of the reported crashes resulting in injury, there were six (6) injuries and no fatalities. This data has been tabulated at the end of this section, in Table 7.

**Proposed Recommendations:**

This segment of Post Road (Route 1) is not recommended as a Signed Shared roadway. Due to the number of traffic accidents, vehicle and truck volumes, truck blast, and the Post Road (Route 1) and Shore Road (Route 1A) intersection, bicyclists must negotiate, to not sign Post Road as a Signed Shared roadway. The section of roadway known as Shore Road (Route 1A) is also not recommended as a Signed Shared roadway.

Referring to the *Bicycle Route Sign Criteria* chart in DPM 920.06 (Section 2 - Criteria), this roadway does not meet the criteria to sign it as a Signed Shared roadway. This is based on an



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AADT volume of between 2,000-10,000 vpd and speed limit of 30-40 mph. Its existing minimum roadway width (travel lane) of thirteen (13) feet does not meet the minimum usable roadway width of fifteen (15) feet, as recommended in the 1999 AASHTO *'Guide for the Development of Bicycle Facilities'* design criteria for a Signed Shared route.

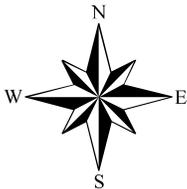
The South County Bike Route does not intersect with Shore Road (Route 1A), therefore Shore Road is not recommended as a Signed Shared roadway.





**LEGEND**

- - - APPROXIMATE TOWN LINE
- EXISTING ROADWAY
- PROPOSED SHORELINE BIKE WAY



ENGINEERS - SCIENTISTS - PLANNERS  
 8 BLACKSTONE VALLEY PLACE  
 LINCOLN, RI 02865  
 401-334-4100

**Figure 7**  
**BICYCLE AND PEDESTRIAN FACILITIES**  
**STUDY AND DEVELOPMENT**  
**SHORELINE BIKEWAY**  
 Charlestown & Westerly Rhode Island  
 POST ROAD/SHORE ROAD

**STATE OF RHODE ISLAND**  
**DEPARTMENT OF TRANSPORTATION**  
**BICYCLE ROUTE SUITABILITY REPORT**

PROJECT: Bicycle & Pedestrian Facilities Study & Development: Shoreline Bikeway

CONSULTANT: Pare Corporation REVIEW DATE: April 11, 2006

ROUTE NAME & NUMBER: Post Road/Shore Road CITY/TOWN: Charlestown/Westerly

ROADWAY LIMITS: Route 216/Ross Hill Road (Charlestown) to Winnapaug Road (Westerly)

Technical Paper No. 155 Roadway Classification Minor Arterial (urban)

“Guide to Cycling in the Ocean State 2003” Roadway Designation N/A

The State Highway noted above is being considered for signage as a “Signed Shared Roadway” in accordance with the criteria set forth in RIDOT DPM No. 920.06. The following information is to be provided to the Deputy Chief Engineer of the Design Section for consideration:

ITEM NO.	DESCRIPTION	COMMENTS NO. (SEE ENDNOTES)
1	Posted Speed Limit	40 MPH
2	85 <sup>th</sup> Percentile Speed (Radar speed study)	43 MPH
3	Average Annual Daily Traffic (AADT) Volume	13,500 VPD at Route 1 along Post Road; 2,000 VPD at Route 1/1A split; 5,300 VPD at vicinity of Winnapaug Road
4	Percent Truck Traffic Volume	No data available
5	Number of Travel Lanes	4; two in each direction along Rt.1/ Post Rd.; 2; one in each direction along Shore Rd./Rt. 1A
6	Width of Travel Lanes	12 feet
7	Width of Shoulders	2 – 8 feet Rt.1/Post Rd. 1 foot along Shore Road/Route 1A
8	Delineation of Centerline & Shoulders	Yes
9	Sidewalk	None
10	Curbing	None
11	On-Street Parking	None

ITEM NO.	DESCRIPTION		COMMENTS NO. (SEE ENDNOTES)
12	Frequency of Curb Cuts	Moderate	
		Heavy	
		Commercial	
		Residential	
13	Horizontal Alignment Constraints		Curve opposite Weekapaug Golf Courses
14	Vertical Alignment Constraints		None
15	Intersections & Corresponding Stopping Sight Distances		Okay
16	Stop Controls Along Roadway		Signals at Langworthy / Weekapaug Road and Winnapaug Road
17	General Roadway Conditions	Surface	Good, Route 1 Fair, Route 1A
		Potholes	Very few, Route 1 Moderate, Route 1A
		Cracking	Moderate, Route 1 Moderate, Route 1A
		Catch Basin Types	Standard (see Table 6)
		Sand & Debris	Minimal, Route 1 Frequent, Route 1A
18	Are all grates bicycle-safe? (If no, please indicate which ones)	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
18A	Total Number of Grates: <u>6</u>		
18B	Location of Grates (list): <u>See Table 6</u>		
19	Off-Road Obstacles	Mailboxes, signs	Both 0 – 4' off edge of pavement along Rt. 1A
		Poles	0 – 4' off edge of pavement along Rt. 1A
		Outcrops	0 – 4' off edge of pavement along Rt. 1A
		Hanging Limbs	None

ITEM NO.	DESCRIPTION		COMMENTS NO. (SEE ENDNOTES)
20	Facilities List on Roadway	Parks	None
		Schools	None
		Recreational Fields	None
		Historical Districts	None
		Commercial Establishments	None
21	Expected Bike User Type	A – Advanced	A - Advanced
		B – Basic	
		C – Children	
22	Location of nearest Bike Route/Path as potential link		Route 91, existing signed bike route
23	Additional Observations		
24	Accident History (Provide Crash Data for the previous three years according to type, location, injury, roadway surface and time)		See attached

**COMMENTS**

(Expand/Delete as needed)


Based on the information contained in the above "Bicycle Route Suitability Report", the reviewing engineer:

Recommends ( )

Does not recommend (✓) Post Road (Route 1) or Shore Road (Route 1A) for designation as a signed shared roadway.

Reviewing Engineer:	Date:
Approved Deputy Chief Engineer:	Date:
Approved Chief Engineer:	Date:

**TABLE 6. POST ROAD/SHORE ROAD - CATCH BASINS**

<u>PHOTO NO.</u>	<u>LOCATION</u>	<u>TYPE (R.I. Standard Detail)</u>	<u>NOTES</u>	<u>ACTION</u>
1	Southbound on Shore Road at Westerly Town Line	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain
2	Southbound on Shore Road .05 miles south of Westerly Town Line	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain
3	Southbound on Shore Road .1 miles south of Stenton Avenue	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)		To Remain
4	Northbound on Shore Road .1 miles north of Wagner Road	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain
5	Northbound on Shore Road .2 miles north of Wagner Road	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)		To Remain
6	Northbound on Shore Road .3 miles north of Wagner Road	RI Std. 6.3.4 High Capacity Frame and Grate (Bicycle Safe)	Sunken	To Remain

**Existing Catch Basin Photos**



*Shore Road 1*



*Shore Road 2*



*Shore Road 3*



*Shore Road 4*



*Shore Road 5*



*Shore Road 6*

**Table 7. Crash Data - Post Road/Shore Road**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
10205729	5.25.02	2	1	0	DRY	BROADSIDE	DAYLIGHT	SHORE RD.
10205904	5.27.02	2	0	0	DRY	REAR-END	NIGHT (NOT-LIGHTED)	SHORE RD.
10206155	6.2.02	2	0	0	DRY	SIDESWIPE	DAYLIGHT	WEEKAPAUG RD.
10206326	6.6.02	2	2	0	DRY	ANGLE	DAYLIGHT	WINNAPAUG RD.
10206744	6.14.02	1	0	0	WET	HEAD-ON	NIGHT (NOT-LIGHTED)	POST RD. W/ 50' N SHORE RD.
02-90-AC	10.5.02	1	1	0	DRY	HEAD-ON	NIGHT (NOT-LIGHTED)	POST RD. W/ 30' N SHORE RD.
02-89-AC	10.5.02	2	1	0	DRY	ANGLE	DAYLIGHT	SHORE RD. W/ 10' W LANGWORTHY RD.
02-142-AC	10.24.02	1	0	0	DRY	ANGLE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 200' W WINNAPAUG RD.
02-191-AC	11.8.02	2	0	0	DRY	REAR-END	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 10' N WINNAPAUG RD.
02-192-AC	11.8.02	1	0	0	DRY	OTHER	NIGHT (NOT-LIGHTED)	POST RD. W/ 100' N WAGNER RD.
02-203-AC	11.12.02	1	0	0	WET	HEAD-ON	NIGHT (NOT-LIGHTED)	POST RD. W/ 500' N WAGNER RD.
02-286-AC *	12.11.02	1	0	0	DRY	ANGLE	DAYLIGHT	SHORE RD. W/ 1,296' E TOM HARVEY RD.
02-302-AC	12.17.02	2	0	0	DRY	ANGLE	DAYLIGHT	SHORE RD. W/ 15'W FRONT OF 57
02-306-AC	12.18.02	1	1	0	DRY	ANGLE	DAYLIGHT	POST RD. W/ 100' E SHORE RD.
02-321-AC *	12.22.02	1	0	0	DRY	ANGLE	DAYLIGHT	SHORE RD. W/ 80' W SHORELINE DR.
03-118-AC *	2.11.03	1	0	0	SNOW	ANGLE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 0' W TOM HARVEY RD.
03-134-AC *	2.14.03	1	0	0	DRY	BROADSIDE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 1 M E WINNAPAUG RD.
03-156-AC	2.21.03	2	0	0	DRY	ANGLE	DAYLIGHT	SHORE RD. W/ 100' N FRONT OF 289
03-266-AC	3.22.03	1	1	0	DRY	ROLL-OVER	NIGHT (NOT-LIGHTED)	POST RD. W/ 100' S SHORE RD.
03-267-AC	3.23.03	1	1	0	DRY	BROADSIDE	DAYLIGHT	SHORE RD. W/ 12' E W FAIRWAY AV.
03-282-AC *	3.29.03	1	0	0	WET	HEAD-ON	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 1 M E ROCKRIDGE RD.
03-301-AC	4.5.03	2	0	0	WET	RAN OFF-ROAD	DAYLIGHT	WINNAPAUG RD. W/ 100' S SHORE RD.
03-314-AC *	4.11.03	1	0	0	DRY	HEAD-ON	DAWN	SHORE RD. W/ 0' W SEABURY DR.
03-315-AC *	4.11.03	1	0	0	DRY	OTHER	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 40' E SEABURY DR.
03-355-AC	4.23.03	1	0	0	DRY	ANGLE	DAYLIGHT	SHORE RD. W/ 4' N ROADWAY 9999
03-379-AC *	5.2.03	1	0	0	DRY	BROADSIDE	DAYLIGHT	POST RD. W/ 300' S SHORE RD.
03-391-AC	5.6.03	1	1	0	DRY	HEAD-ON	DAYLIGHT	US 1 W/ 60' E SHORE RD.
03-399-AC	5.6.03	2	1	0	WET	BROADSIDE	NIGHT (NOT LIGHTED)	SHORE RD. W/ 100' S LANGWORTHY RD.
03-403-AC	5.8.03	2	0	0	WET	OTHER	DAYLIGHT	POST RD. W/ 1' S WAGNER RD.
03-490-AC	6.1.03	2	0	0	WET	REAR-END	DAYLIGHT	SHORE RD. W/ 500' N ROCKRIDGE RD.

\* Denotes accident involving an animal (deer).

**Table 7. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
03-515-AC	6.7.03	1	0	0	DRY	ANGLE	DAYLIGHT	SHORE RD. W/ 100' W TOM HARVEY RD.
03-529-AC	6.10.03	2	0	0	DRY	BROADSIDE	DAYLIGHT	SHORE RD. W/ 30' S PARKING LOT
03-565-AC	6.20.03	2	0	0	DRY	REAR-END	DAYLIGHT	SHORE RD. W/ 0' E LANGWORTHY RD.
03-583-AC	6.24.03	2	3	0	DRY	HEAD-ON	DUSK	SHORE RD. W/ 1,500' E SEABURY DR.
03-615-AC *	6.29.03	1	0	0	DRY	SIDESWIPE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 50' S SYCAMORE RD.
03-619-AC	6.30.03	2	0	0	DRY	BROADSIDE	DAYLIGHT	SHORE RD. W/ 0' E WEEKAPAUG RD.
03-730-AC	7.23.03	2	0	0	DRY	REAR-END	DAYLIGHT	RI 1A W/ 500' S SUNNY 9999
03-755-AC	7.26.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 100' W VIA ROMA RD.
03-774-AC	7.29.03	2	0	0	DRY	REAR-END	DAYLIGHT	US 1 W/ 1' N SHORE RD.
03-777-AC	7.30.03	2	1	0	DRY	REAR-END	DAYLIGHT	SHORE RD. W/ 200' W LANGWORTHY RD.
03-783-AC	7.31.03	2	0	0	DRY	REAR-END	DAYLIGHT	SHORE RD. W/ 500' E WINNAPAUG RD.
03-790-AC	8.1.03	2	1	0	WET	REAR-END	DAYLIGHT	SHORE RD. W/ 10' W WICKLOW RD.
03-789-AC	8.1.03	1	0	0	WET	HEAD-ON	DAYLIGHT	SHORE RD. W/ 1' S FRONT OF 419
03-791-AC	8.1.03	2	0	0	WET	BROADSIDE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 20' S PARKING LOT
03-794-AC	8.2.03	2	0	0	DRY	REAR-END	DAYLIGHT	SHORE RD. W/ 10' W CATTAIL DR.
03-084-AC	8.4.03	1	0	0	DRY	ANGLE	DAYLIGHT	WINNAPAUG RD. W/ 100' S SHORE RD.
03-805-AC	8.4.03	1	0	0	DRY	ANGLE	NIGHT (NOT-LIGHTED)	WINNAPAUG RD. W/ 5' S SHORE RD.
03-850-AC	8.15.03	3	2	0	DRY	REAR-END	DAYLIGHT	LANGWORTHY RD. W/ 200' N SHORE RD.
03-879-AC	8.19.03	2	0	0	DRY	OTHER	NIGHT (NOT-LIGHTED)	WEEKAPAUG RD. W/ 5' S SHORE RD.
03-889-AC	8.24.03	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD. W/ 5' W RI 1A
03-138-AC	8.27.03	2	0	0	DRY	ANGLE	DAYLIGHT	POST RD. W/ COVE PT. WEST RD.
03-923-AC	8.28.03	2	0	0	DRY	ANGLE	DAYLIGHT	POST RD. W/ 100' W SHORE RD.
03-1009-AC	9.25.03	3	0	0	DRY	REAR-END	DAYLIGHT	SHORE RD. W/ 10' W LANGWORTHY RD.
03-1014-AC	9.27.03	2	1	0	DRY	ANGLE	DAYLIGHT	T. HARVEY RD. W/ 200' N SHORE RD.
03-1097-AC *	10.23.03	1	0	0	WET	ANGLE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 1 M E LANGWORTHY RD.
03-1141-AC	11.13.03	2	0	0	DRY	SIDESWIPE	DAYLIGHT	POST RD. W/ 100' N SHORE RD.
03-1218-AC	12.5.03	2	0	0	SNOW	ANGLE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 0' S WINNAPAUG RD.
03-1243-AC	12.19.03	1	0	0	DRY	HEAD-ON	NIGHT (NOT-LIGHTED)	POST RD. W/ 100' S SHORE RD.
03-1304-AC	12.29.03	1	0	0	ICE	ROLL-OVER	NIGHT (NOT-LIGHTED)	POST RD. W/ 150' N SHORE RD.
03-1305-AC	12.29.03	1	0	0	ICE	RAN OFF-ROAD	NIGHT (NOT-LIGHTED)	POST RD. W/ 500' S SHORE RD.
04-15-AC *	1.20.04	1	0	0	DRY	BROADSIDE	NIGHT (NOT-LIGHTED)	POST RD. W/ SHADY HARBOR DRIVE
04-117-AC	2.4.04	1	0	0	ICE	ANGLE	DAYLIGHT	SHORE RD. W/ 1 M W LANGWORTHY RD.
04-184-AC	3.2.04	1	0	0	DRY	HEAD-ON	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 10' E SEABURY DR.

\* Denotes accident involving an animal (deer).

**Table 7. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
04-209-AC	3.12.04	1	0	0	DRY	ANGLE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 200' S PARKING LOT
04-253-AC *	3.30.04	1	0	0	WET	HEAD-ON	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 200' E WINNAPAUG RD.
04-382-AC	5.12.04	1	0	0	DRY	ANGLE	DAYLIGHT	LANGWORTHY RD. W/ 10' N SHORE RD.
04-439-AC	5.30.04	2	3	0	DRY	BROADSIDE	DAYLIGHT	US 1 W/ 0' S RI 1A
04-455-AC *	6.5.04	1	0	0	DRY	BROADSIDE	DAYLIGHT	SHORE RD. W/ 500' E WICKLOW RD.
04-493-AC	6.15.04	2	0	0	DRY	ANGLE	DAYLIGHT	WICKLOW RD. W/ 300' N SHORE RD.
04-573-AC	7.3.04	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD. W/ 40' E SHORE RD.
04-591-AC	7.7.04	1	0	0	DRY	OTHER	DAYLIGHT	POST RD. W/ 2,000' S SHORE RD.
04-599-AC	7.8.04	2	0	0	DRY	REAR-END	DAYLIGHT	POST RD. W/ 2' W SHORE RD.
04-620-AC	7.13.04	2	0	0	WET	REAR-END	DAYLIGHT	SHORE RD. W/ 100' W ROCKRIDGE RD.
04-655-AC	7.21.04	2	0	0	DRY	REAR-END	DAYLIGHT	SHORE RD. W/ 50' S PARKING LOT
04-668-AC	7.24.04	1	0	0	DRY	BROADSIDE	NIGHT (NOT-LIGHTED)	POST RD. W/ 20' S WAGNER RD.
04-740-AC *	8.8.04	1	0	0	DRY	OTHER	NIGHT (NOT-LIGHTED)	SHORE RD. W/100' W NOYES NECK RD.
04-746-AC	8.10.04	1	1	0	DRY	OTHER	DAYLIGHT	RT. 1A w/ 80' W HAVERSHAM RD.
04-752-AC	8.12.04	2	0	0	DRY	REAR-END	DAYLIGHT	SHORE RD. W/ 1' E CLIFFORD ST.
04-824-AC	8.27.04	3	1	0	DRY	HEAD-ON	DAYLIGHT	SHORE RD. W/ 10' N WEEKAPAUG RD.
04-866-AC	9.8.04	2	0	0	DRY	REAR-END	DAYLIGHT	SHORE RD. W/ 30'E FRONT OF 322
04-888-AC	9.16.04	2	0	0	WET	ANGLE	NIGHT (NOT-LIGHTED)	POST RD. W/ 400' S SHORE RD.
04-896-AC *	9.17.04	1	0	0	DRY	BROADSIDE	NIGHT (NOT-LIGHTED)	RT. 1A W/ 300' W PIEZZO DR.
04-934-AC	9.29.04	2	0	0	DRY	REAR-END	DAYLIGHT	LANGWORTHY RD. W/ 5' N SHORE RD.
04-1022-AC	10.27.04	2	1	0	DRY	ANGLE	DAWN	POST RD. W/ 100' S SHORE RD.
04-1090-AC	11.13.04	2	0	0	DRY	BROADSIDE	DAYLIGHT	SHORE RD. W/ 1' S WINNAPAUG RD.
04-1149-AC	12.2.04	1	0	0	DRY	ANGLE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 200' E WINNAPAUG RD.
04-1174-AC	12.8.04	1	0	0	DRY	REAR-END	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 100' S PONDVIEW AVE.
04-1259-AC	12.29.04	1	0	0	WET	HEAD-ON	DAWN	POST RD. W/ 20' W WAGNER RD.
04-1261-AC	12.29.04	1	0	0	SNOW	RAN OFF-ROAD	DAYLIGHT	T. HARVEY RD. W/ 200' N SHORE RD.
04-1263-AC	12.30.04	1	0	0	SNOW	ANGLE	NIGHT (NOT-LIGHTED)	SHORE RD. W/ 100' S LANGWORTHY RD.

\* Denotes accident involving an animal (deer).

**Table 7. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
05-16-AC	1.21.05	1	1	0	DRY	RAN OFF ROAD	DARK(NL)	POST RD, 100'S ROSS HILL ROAD
05-51-AC	1.23.05	2	0	0	SNOW/SLUSH	ANGLE	DAYLIGHT	SHORE ROAD, 20'E WINNAPAUG RD
05-57-AC	1.24.05	3	0	0	SNOW/SLUSH	REAR END	DAYLIGHT	SHORE RD, 50'N TOM HARVEY
05-62-AC	1.26.05	1	0	0	SNOW/SLUSH	BROADSIDE	DARK(NL)	POST ROAD, 600'N SHORE ROAD
05-71-AC	1.26.05	2	0	0	SNOW/SLUSH	ANGLE	DARK(NL)	POST ROAD, 100'N WAGNER ROAD
05-138-AC	2.15.05	2	0	0	DRY	ANGLE	DAYLIGHT	SHORE RD, 100'E 265
05-166-AC	2.24.05	1	0	0	SNOW/SLUSH	ANGLE	DARK(NL)	POST ROAD, 10'N SHORE RD
05-214-AC	3.11.05	1	0	0	SNOW/SLUSH	HEAD ON	DAYLIGHT	RI 1A, 300'N SEABURY DR
05-216-AC	3.12.05	1	0	0	SNOW/SLUSH	ANGLE	DAYLIGHT	SHORE RD, 100'E WINNAPAUG RD
05-242-AC	3.23.05	1	0	0	SNOW/SLUSH	HEAD ON	DARK(LIGHT)	SHORE ROAD, 1ME WINNAPAUG RD
05-267-AC*	4.2.05	1	0	0	WET	SIDESWIPE-S	DARK(NL)	SHORE RD, 100'E ROCKRIDGE RD
05-271-AC	4.3.05	1	0	0	DRY	RAN OFF ROAD	DAYLIGHT	POST ROAD, 500'N SHORE RD/POSTRD
05-274-AC	4.4.05	1	0	0	DRY	ANGLE	DARK(NL)	SHORE RD, 500'E WINNAPAUG RD
05-323-AC	4.26.05	2	0	0	DRY	SIDESWIPE-S	DAYLIGHT	POST ROAD, 100'E SHORE ROAD
05-328-AC	4.27.05	1	1	0	WET	ROLLOVER	DARK(NL)	POST ROAD, 300'N SHORE ROAD
05-385-AC	5.19.05	1	0	0	DRY	ANGLE	DAYLIGHT	NOYES NECK RD/SHORE ROAD
05-402-AC	5.25.05	2	1	0	WET	ANGLE	DAYLIGHT	SHORE RD/WINNAPAUG RD
05-414-AC	5.28.05	2	1	0	DRY	REAR END	DAYLIGHT	WINNAPAUG RD/SHORE RD
05-502-AC	6.26.05	1	0	0	DRY	RAN OFF ROAD	DARK(LIGHT)	WEEKAPAUG RD, 10'S SHORE ROAD
05-664-AC	8.2.05	2	0	0	DRY	REAR END	DAYLIGHT	POST ROAD/WAGNER ROAD
05-749-AC*	8.17.05	1	0	0	DRY	SIDESWIPE-S	DARK(NL)	SHORE ROAD, 1000'N LANGWORTHY RD
05-780-AC	8.29.05	1	2	0	DRY	ANGLE	DARK(NL)	SHORE RD, 50'S 360
05-878-AC	10.1.05	1	0	0	DRY	OTHER	DARK(LIGHT)	SHORE RD, 5'W LANGWORTHY RD
05-989-AC*	11.12.05	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD/WAGNER ROAD
05-1054-AC	12.4.05	1	0	0	ICE	RAN OFF ROAD	DAYLIGHT	SHORE RD, 1ME LANGWORTHY RD

\* Denotes accident involving an animal (deer).

**Table 7. Con't.**

Report No.	Date	No. of Vehicles	No. of Injuries	No. of Fatalities	Road Surface Conditions	Type of Accident	Lighting	Location
05-1096-AC	12.17.05	1	0	0	DRY	RAN OFF ROAD	DARK(LIGHT)	SHORE RD, 75'E WINNAPAUG/SHORE RD
06-14-AC*	1.31.06	1	0	0	DRY	SIDESWIPE-S	DARK(NL)	US 1/WARREN ROAD
06-121-AC*	2.23.06	1	0	0	WET	BROADSIDE	DARK(NL)	POST ROAD, 50'N SHORE ROAD
06-204-AC	3.20.06	2	0	0	DRY	MERGING	DAYLIGHT	SHORE RD, 10'E ROCKRIDGE ROAD
06-45-AC	4.12.06	2	2	0	DRY	BROADSIDE	DAYLIGHT	POST ROAD, 10'E ROSS HILL ROAD
06-424-AC	6.7.06	1	0	0	WET	RAN OFF ROAD	DAYLIGHT	POST ROAD, 100'N SHORE ROAD
06-486-AC*	6.23.06	1	0	0	DRY	RAN OFF ROAD	DAYLIGHT	SYCAMORE DRIVE, 1'N SHORE ROAD
06-488-AC*	6.23.06	1	0	0	DRY	ANGLE	DARK(NL)	POST ROAD/SHORE ROAD
06-516-AC	6.30.06	1	0	0	DRY	OTHER	DAYLIGHT	SHORE ROAD/WINNAPAUG ROAD
06-524-AC	7.1.06	1	0	0	DRY	HEAD ON	DAYLIGHT	SHORE ROAD/LANGWORTHY ROAD
06-84-AC	7.4.06	2	0	0	DRY	REAR END	DARK(LIGHT)	POST ROAD/ROSS HILL ROAD
06-606-AC	7.17.06	2	0	0	DRY	REAR END	DAYLIGHT	SHORE ROAD/LANGWORTHY ROAD
06-626-AC	7.21.06	2	1	0	DRY	BROADSIDE	DAYLIGHT	SHORE ROAD/WICKLOW ROAD
06-647-AC	7.27.06	1	0	0	DRY	ANGLE	DARK(LIGHT)	SHORE ROAD, 1000'E WINNAPAUG ROAD
06-698-AC	8.6.06	2	0	0	DRY	REAR END	DAYLIGHT	SHORE ROAD, 200'E POST ROAD
06-733-AC	8.14.06	2	0	0	DRY	ANGLE	DAYLIGHT	SHORE ROAD/WEEKAPAUG ROAD
06-776-AC	8.23.06	1	0	0	DRY	HEAD ON	DARK(NL)	SHORE ROAD, 1MN LANGWORTHY ROAD
06-126-AC	8.29.06	2	0	0	WET	ANGLE	DAYLIGHT	POST ROAD/ROSS HILL ROAD
06-841-AC	9.11.06	2	0	0	DRY	ANGLE	DAYLIGHT	SHORE ROAD/TOM HARVEY ROAD
06-648-AC	9.13.06	1	1	0	DRY	OTHER	DAYLIGHT	SHORE ROAD, 100'E WINNAPAUG ROAD
06-877-AC	9.19.06	1	0	0	DRY	OTHER	DARK(NL)	POST ROAD, 40'E SHORE ROAD
06-968-AC	10.19.06	1	0	0	DRY	HEAD ON	DARK(NL)	POST ROAD, 200'N SHORE ROAD
06-1006-AC	10.29.06	2	1	0	DRY	ANGLE	DAYLIGHT	SHORE ROAD, 100'W TOM HARVEY
06-77-AC	11.21.06	2	2	0	DRY	ANGLE	DARK(NL)	POST ROAD/ROSS HILL ROAD
06-1077-AC	11.22.06	1	0	0	WET	ANGLE	DARK(NL)	POST ROAD, 100'N SHORE ROAD
06-1085-AC	11.25.06	2	2	0	DRY	HEAD ON	DARK(LIGHT)	SHORE ROAD/LANGWORTHY ROAD
06-1086-AC	11.26.06	1	0	0	DRY	RAN OFF ROAD	DARK(NL)	SHORE ROAD, 200'E LANGWORTHY ROAD

\* Denotes accident involving an animal (deer).

2006 accident data is in draft form



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## CONCLUSION

The recommended Shoreline Bikeway plan identifies the two roadways recommended to be designated as Signed Shared roadways, as a result of this study, (Figure 8). For each segment recommended, bike route and destination signage, roadway reconstruction, and catch basin remediation has been approximated and detailed in the Appendices.

### South County Trail

South County Trail is recommended to be designated as a Signed Shared Roadway. This roadway would be identified, by signing, as a preferred route. Immediate improvements include the widening of approximately 11,880 linear feet (assumed 75% of total segment length) of the road, as well as the relocation of some off-road obstacles (mailboxes, signage).

Based on the above-proposed recommendations and referring to Appendix A, Sign Quantities, South County Trail lists a total of sixteen (16) signs to be placed along the roadway. Signs shall be installed at approximate 1/2 mile locations on both sides, opposite from each, of the roadway. Bike route signs will be the Shoreline Bicycle network sign. Destination signage indicating the direction to the Matthew Puchalski Memorial Park athletic fields and commercial plaza (north of the Route 1/Route 2 intersection) are recommended. An opinion of probable costs in 2007 dollars, for the total number of proposed signs to be installed on South County Trail is \$1,280, and, approximately \$564,000 for roadway improvements. Appendix B provides a detailed estimate.

With the designation of South County Trail as a Signed Shared Roadway, a connection/tie-in with the South County Bike Route is provided at the intersection of South County Trail (Route 2) with Carolina Back Road (Route 112).

### Ross Hill Road/Church Street

Ross Hill Road/Church Street is recommended to be designated as a Signed Shared Roadway. This roadway would be identified, by signing, as a preferred route. Immediate improvements include the widening of approximately 13,860 linear feet (assumed 75% of total segment length) of the road, as well as the relocation of some off-road obstacles (mailboxes, signage). These improvements would maintain sight distance around curves as well as provide additional recovery and maneuvering area off-road for both bicyclists and drivers should they encounter a potential conflict.

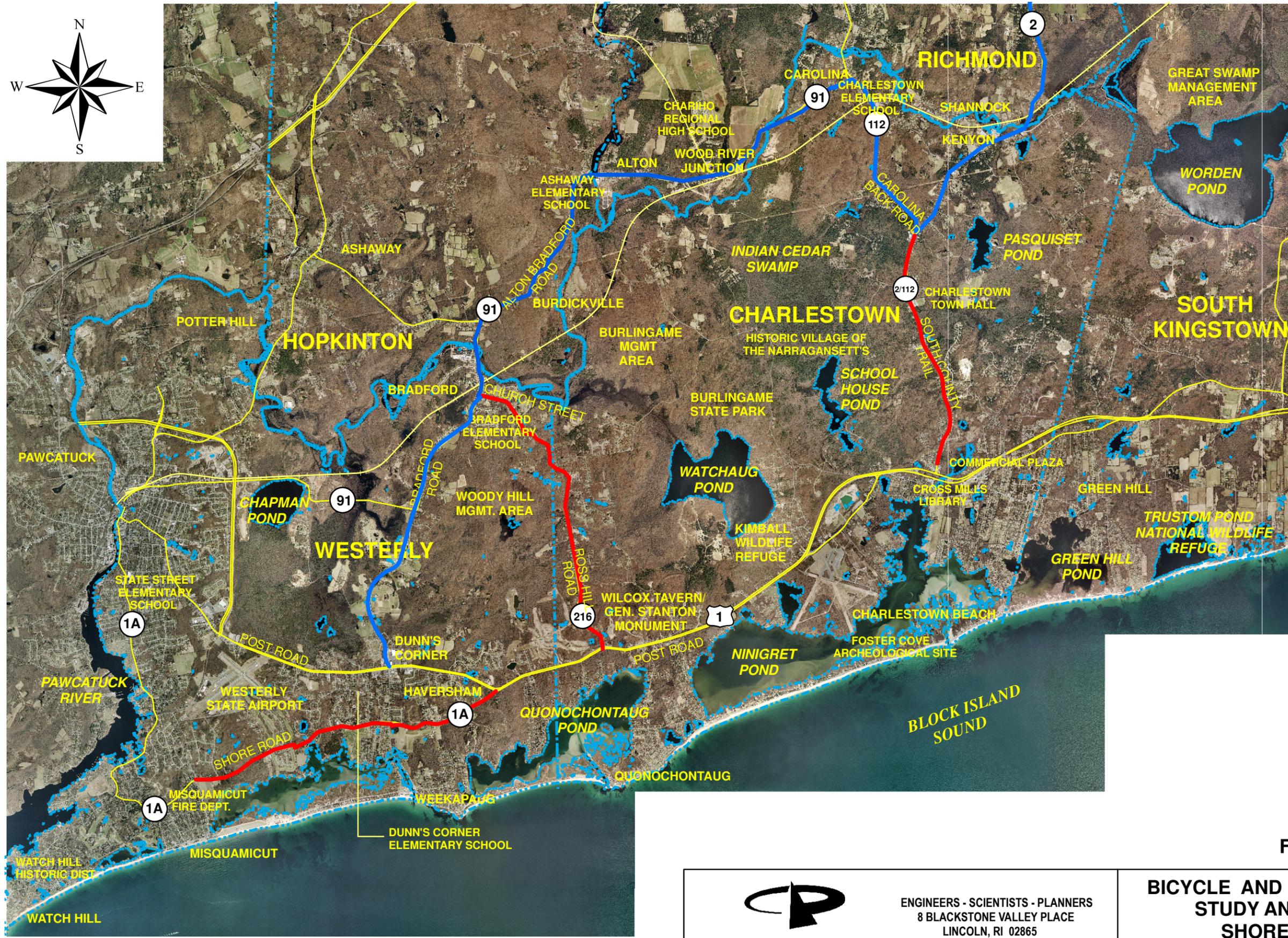
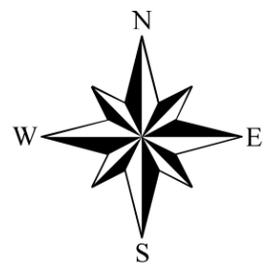


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Based on the above-proposed recommendations and referring to Appendix A, Sign Quantities, Ross Hill Road/Church Street lists a total of fourteen (14) signs to be placed along the roadway. Signs shall be installed at approximate 1/2 mile locations on both sides, opposite from each, of the roadway. Bike route signs will be the Shoreline Bicycle network sign. An opinion of probable costs in 2007 dollars, for the total number of proposed signs to be installed on Ross Hill Road/Church Street is \$1,344, and, approximately \$797,000 for roadway improvements. Appendix B provides a detailed estimate.

Designated as a Signed Shared roadway, coordination is necessary between the towns of Charlestown and Westerly. With this designation, a connection/tie-in with the South County Bike Route is provided at the intersection of Church Street (Route 216) with Alton Bradford Road (Route 91).





**PROJECT LOCATION**  
**LOCATION MAP**  
 NOT TO SCALE

**LEGEND**

- APPROXIMATE TOWN LINE
- EXISTING ROADWAY
- SOUTH COUNTY BIKE ROUTE
- RECOMMENDED SHORELINE BIKE WAY



Figure 8



ENGINEERS - SCIENTISTS - PLANNERS  
 8 BLACKSTONE VALLEY PLACE  
 LINCOLN, RI 02865  
 401-334-4100

**BICYCLE AND PEDESTRIAN FACILITIES  
 STUDY AND DEVELOPMENT  
 SHORELINE BIKEWAY  
 Charlestown & Westerly, Rhode Island  
 RECOMMENDED SHORELINE BIKEWAY**



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**Appendix A**

**SIGN QUANTITIES**



Sign Quantities - All Segments

Sign No. & Size	Text	South County Trail	Ross Hill Rd./ Church St.	(Each)	(SF)
D1-1b R (24" x 6")	PUCHALSKI PARK (Right Arrow)	1		1	1
D1-1b L (24" x 6")	PUCHALSKI PARK (Left Arrow)	1		1	1
D1-1b L (24" x 6")	COMMERCIAL PLAZA (Right Arrow)	1		1	1
D1-1b L (24" x 6")	COMMERCIAL PLAZA (Left Arrow)	1		1	1
D11-1 (24" x 18")	BIKE ROUTE	12	14	26	78
<b>Totals</b>		<b>16</b>	<b>14</b>	<b>30</b>	<b>82</b>

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**Appendix B**

**OPINION OF PROBABLE COST**



**OPINION OF PROBABLE COST - APPENDIX C. ALL SEGMENTS**

	SEGMENT			South County Trail	Ross Hill Road/Church St.	Total
	SEGMENT LENGTH			11,880 LF	13,860 LF	39,856 LF
ITEM CODE	ITEM	UNIT	UNIT PRICE			
202.0100	Earth Excavation	CY	\$ 6.00	\$ 16,740.00	\$ 29,280.00	\$ 46,020.00
204.0100	Trimming and Fine Grading	SY	\$ 2.00	\$ 10,560.00	\$ 18,480.00	\$ 29,040.00
206.0201	Baled Hay Eros. Check Std. 9.1.0	LF	\$ 3.00	\$ 71,280.00	\$ 83,160.00	\$ 154,440.00
206.0208	Removal of Baled Hay Erosion Checks	LF	\$ 1.00	\$ 23,760.00	\$ 27,720.00	\$ 51,480.00
302.0100	Gravel Borrow Subbase Course	CY	\$ 10.00	\$ 17,600.00	\$ 30,800.00	\$ 48,400.00
401.0100	Bituminous Base Course	TON	\$ 60.00	\$ 88,800.00	\$ 155,400.00	\$ 244,200.00
401.0200	Bituminous Surface Course Type I-1	TON	\$ 65.00	\$ 38,675.00	\$ 67,600.00	\$ 106,275.00
403.0300	Asphalt Emulsion Tack Coat	SY	\$ 0.20	\$ 1,056.00	\$ 1,848.00	\$ 2,904.00
707.2000	Adjust Frame and Grate to Grade	EACH	\$ 280.00	\$ 280.00	-	#VALUE!
932.0200	Full Depth Saw Cut of Bituminous Pavement	LF	\$ 1.00	\$ 23,760.00	\$ 27,720.00	\$ 51,480.00
936.0110	Mobilization	LS		\$ 45,237.50	\$ 62,735.00	\$ 107,972.50
937.0200	Maintenance and Movement Traffic Protection	LS		\$ 39,600.00	\$ 46,200.00	\$ 85,800.00
L01.0104	Plantable Soil (4" Depth)	SY	\$ 3.00	\$ 39,600.00	\$ 46,200.00	\$ 85,800.00
L02.0102	Residential Seeding (Type 2)	SY	\$ 1.50	\$ 19,800.00	\$ 23,100.00	\$ 42,900.00
T15.0100	Directional, Regulatory and Warning Signs	SF	\$ 32.00	\$ 1,280.00	\$ 1,344.00	\$ 2,624.00
T20.1000	Remove Existing Pavement Markings	LF	\$ 0.35	\$ 8,316.00	\$ 9,702.00	\$ 18,018.00
T20.2006	6" Epoxy Resin Pavement Markings White	LF	\$ 0.20	\$ 4,752.00	\$ 5,544.00	\$ 10,296.00
T20.2014	4" Epoxy Resin Pavement Markings Yellow	LF	\$ 0.20	\$ 4,752.00	\$ 5,544.00	\$ 10,296.00
	Subtotal			\$ 451,096.50	\$ 636,833.00	\$ 1,087,929.50
	25% Contingency			\$ 112,774.13	\$ 159,208.25	\$ 271,982.38
	<b>2006 SUB TOTAL</b>			\$ 563,870.63	\$ 796,041.25	\$ 1,359,911.88
	<b>TOTAL</b>			\$ 564,000.00	\$ 797,000.00	\$ 1,361,000.00
	<b>2011 Projected Total</b>			\$ 648,451.22	\$ 915,447.44	\$ 1,563,898.66
	<b>2016 Projected Total</b>			\$ 733,031.81	\$ 1,034,853.63	\$ 1,767,885.44

**COLD PLANE AND OVERLAY ALL ROADWAY SEGMENTS**

401.0200	Bituminous Surface Course Type I-1	TON	\$ 65.00	\$ 192,205.00	\$ 209,300.00	\$ 401,505.00
403.0300	Asphalt Emulsion Tack Coat	SY	\$ 0.20	\$ 5,280.00	\$ 5,749.40	\$ 11,029.40
935.0500	Removing Bituminous Surface - Cold Planing	SY	\$ 2.00	\$ 52,800.00	\$ 57,492.00	\$ 110,292.00
T20.0006	6" White Fast-Drying Waterborne Pavement Marking	LF	\$ 0.10	\$ 3,168.00	\$ 3,696.00	\$ 6,864.00
T20.0104	4" Yellow Fast-Drying Waterborne Pavement Marking	LF	\$ 0.10	\$ 3,168.00	\$ 3,696.00	\$ 6,864.00
T20.2006	6" Epoxy Resin Pavement Markings White	LF	\$ 0.20	\$ 6,336.00	\$ 7,392.00	\$ 13,728.00
T20.2014	4" Epoxy Resin Pavement Markings Yellow	LF	\$ 0.20	\$ 6,336.00	\$ 7,392.00	\$ 13,728.00
	<b>2006 SUB TOTAL</b>			\$ 269,293.00	\$ 294,717.40	\$ 564,010.40
	<b>TOTAL</b>			\$ 270,000.00	\$ 295,000.00	\$ 565,000.00

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**Appendix C**

**CORRESPONDENCE**





State Planning Council  
One Capitol Hill  
Providence, RI 02908  
www.planning.state.ri.us

# TRANSPORTATION IMPROVEMENT PROGRAM

## PROJECT PROPOSAL FORM

Do not use this form for Resurfacing or Enhancement Projects

### PROPOSER INFORMATION

Submitted by: (Name of organization/local government): TOWN OF CHARLESTOWN  
Address: 4540 South County Trail, Charlestown, RI 02813  
Contact Person: Alan A. Arsenault, Dir Public Works Phone: 364-1230  
Email: \_\_\_\_\_

### PROJECT INFORMATION

Project Title: SHORELINE BIKEWAY Community(ies): Charlestown-Westerly  
Location: (attach an 8 1/2" x 11" location map and also indicate project limits on townwide map) \_\_\_\_\_  
Limits: From: \_\_\_\_\_ to: \_\_\_\_\_

Identify Project Type: check appropriate project category:

- Bicycle/Pedestrian    Highway    Study & Development (all new projects)    Transit  
 Traffic/Safety:    Intermodal    Congestion Mitigation/Air Quality(CMAQ)    Other \_\_\_\_\_

Please check the following if applicable:  Regional (submitted by 2 or more municipalities)  Enterprise Zone

I A. Describe proposed action: (use additional sheets if necessary)

Additional study and construction of a Class II bikeway from the Westerly train station to Watch Hill, thence directed easterly toward and through Charlestown on Routes 1, 1A, 216, and 2 northerly to Exeter and connecting to the South County bike path. This bikeway is consistent with intermodal transportation goals and ensures broad based appeal of RI as a tourism destination.

II B. Describe need for proposed action and benefits for mobility: (use additional sheets if necessary)

II C. Describe environmental benefits of project e.g., air quality/water quality: (use additional sheets if necessary)

**PROJECT SUPPORT**

Local Priority: (if submitted by a city or town) This proposal is priority # 3 of a total of 3 proposals submitted.

Identify additional resources to be committed to this proposal, if any:

Source: \_\_\_\_\_ Amount: \_\_\_\_\_

Source: \_\_\_\_\_ Amount: \_\_\_\_\_

Has the proposer completed feasibility, planning, or design studies for the proposal?  Yes  No  
(If Yes, list and briefly describe below):

II A. Describe support of proposed project for local and state goals and plans. Include references to local comprehensive plan(s), and State Guide Plan, and other state plans: (use additional sheets if necessary)

This project is third in priority of the Charlestown Town Council and the community.

II B. Identify relationship of project to community or economic development initiatives: (use additional sheets if necessary)

III C. Provide information relevant to consideration of project proposal: (use additional sheets if necessary)

**IV. PROJECT PUBLIC INPUT**

For proposals submitted by city or town government:

A local public hearing to consider proposal  was  will be held on: (date): \_\_\_\_\_

For proposals submitted by other organizations or entities:

A letter of support from city/town municipal chief executive or planning director  is attached  will be submitted by March 1, 2002.

**8 copies of Project Proposal Forms must be returned no later than February 22, 2002 to:**

R.I. Statewide Planning Program  
ATTN: Katherine Trapani, Supervising Planner  
One Capitol Hill Providence, RI 02908

For further information contact:  
katherinet@mail.state.ri.us  
or at 222-6479





STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Rhode Island Department of Transportation  
ENVIRONMENTAL & INTERMODAL PLANNING  
Two Capitol Hill, Providence, RI 02903-1124  
ENVIRONMENTAL PHONE (401) 222-2023  
INTERMODAL PHONE (401) 222-4203  
FAX (401) 222-2207 TDD (401) 222-4971

RECEIVED PARE	
DATE:	9-15-05
JOB NO:	2504700/003
COPIES TO:	
Civil	___
Marketing	___
Environmental & Planning	___
Transportation	✓
KB	✓
DT	✓
JOB FILE:	✓ INC. <i>MTA</i>

September 13, 2005

Mr. Alan A. Arsenault  
Director of Public Works  
4540 South County Trail  
Charlestown, RI 02813

Re: Bicycle and Pedestrian Facilities Study & Development - Various Locations  
Shoreline Bikeway  
RI Contract No.: 2005-E1-001

Dear Mr. Arsenault :

The Town of Charlestown submitted a project proposal form (enclosed) as part of the FY 2003-2005 Transportation Improvement Program (TIP) for the study and development phase for additional study of a Class II bikeway along sections of Routes 1, 1A, 216 and connecting to the South County Bike Path.

The project application was approved by the Transportation Advisory Committee (TAC) and included in the TIP. The Rhode Island Department of Transportation (RIDOT) has hired Pare Engineering Corporation (PARE) for consultant services through the study and development phase for this and four other bicycle and pedestrian facilities at various locations.

RIDOT would like to schedule a meeting in your office during the week of October 3, 2005 to discuss the project concept and preliminary alternatives for this study and development proposal.

To confirm a meeting date, please contact Steven Church at 222-4203 ext. 4042 or via e-mail at [schurch@dot.state.ri.us](mailto:schurch@dot.state.ri.us).

Sincerely,

Stephen A. Devine  
Chief, Intermodal Planning

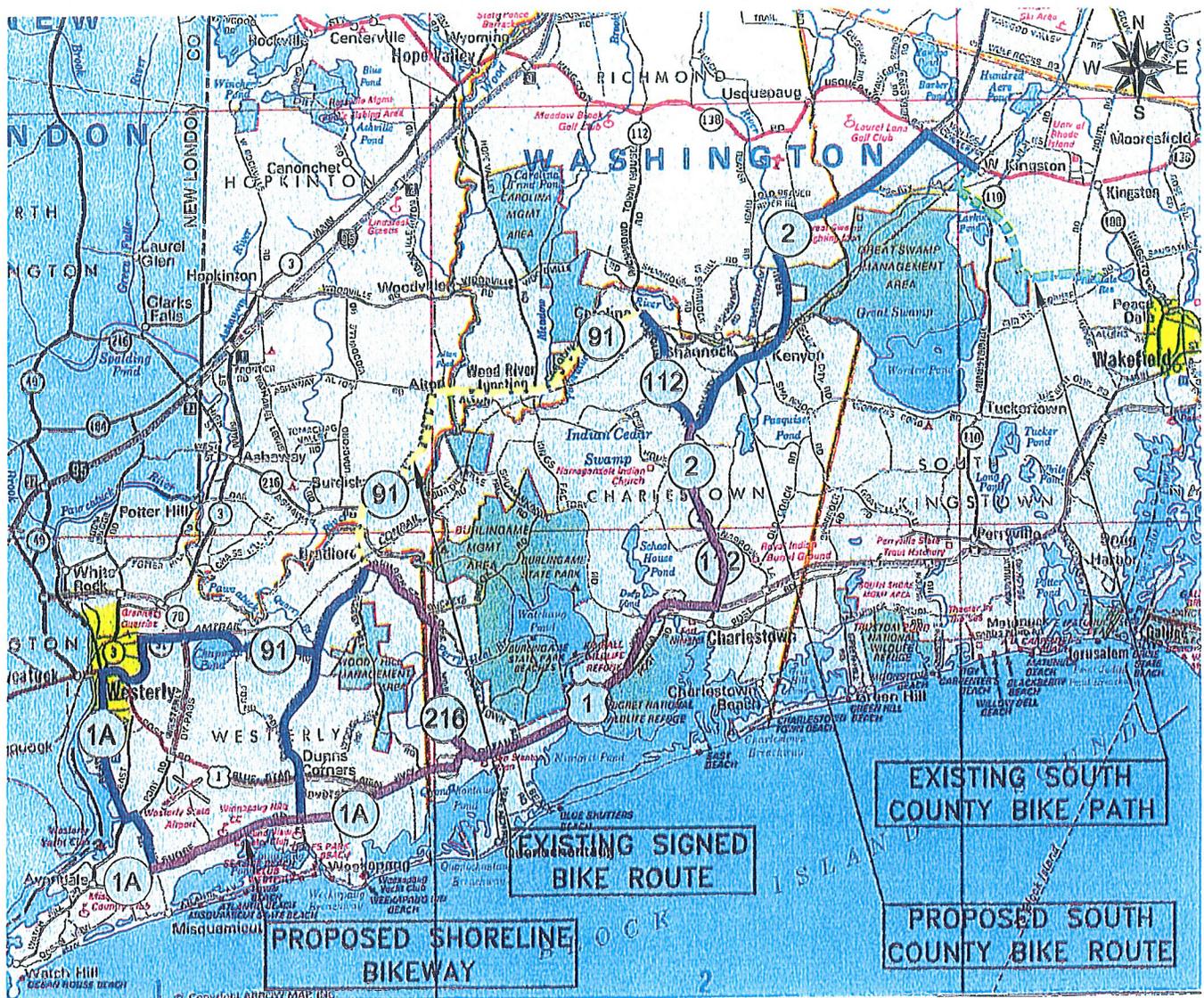
Enclosure  
C/ S. Church, w/out enclosure

# BICYCLE AND PEDESTRIAN FACILITIES STUDY AND DEVELOPMENT

## SHORELINE BIKEWAY

TOWN OF CHARLESTOWN, RHODE ISLAND

OCTOBER 2005



# Shoreline Bikeway

## Agenda

- Introduction
- Update of project status
- Review of project
- General Discussion

# Shoreline Bikeway

## Background

- The Town of Charlestown (TOWN) submitted a project proposal form as part of the FY 2003-2005 Transportation Improvement Program (TIP) for the study and development phase for proposed Signed Shared Roadways along sections of Routes 1, 1A, 216, 112 and 2. This would allow bikes to travel the shoreline area from Westerly to South Kingstown by connecting existing bicycle facilities.
- The project application was approved by the Transportation Advisory Committee (TAC) and included in the FY 2003-2005 TIP.
- The RI Department of Transportation (RIDOT) hired Pare Engineering Corporation (PARE) for consultant services through the study & development phase for this and four other bicycle and pedestrian facilities at various locations.
- The 1990 Shoreline study will be considered in the final recommendation section.

## Purpose

- The purpose of this study & development phase is to fully scope, assess and develop with community input, all necessary site information, including cost estimates, in order to make informed decisions on the advancement of the project into the design phase.
- The study and development phase does not guarantee that a project proceeds into the next stage of development or be implemented; but it does assure that all the relevant information will be presented to the project sponsor, RIDOT and the TAC for further consideration.

## Project Description

- The project involves connecting existing and soon to be Signed Shared Roadways along Routes 1A and 91 in Westerly, Routes 91, 112, and 2 in Charlestown, and the existing South County Bike Path in South Kingstown by signing sections of Routes 1A, 216, 2 and 112 in Charlestown. This would create a complete bicycle facility in the shoreline area in both the north/south and east/west directions.

## Tasks to be Performed

- Coordinate with the TOWN on its project concept and its relation to the Charlestown Comprehensive Plan.
- Gather and analyze relevant data, mapping, and existing conditions.
- Develop and evaluate roadways for the Signed Shared Roadways, considering potential roadway impacts and cost estimates.
- In close coordination with the Town, identified alternatives will be summarized and Signed Shared Roadways will be recommended.

## Next Steps/Process

- After meeting with the TOWN, collect available data and plans to assist in developing the potential Signed Shared Roadway alternatives.
- Continue to coordinate with the TOWN as Signed Shared Roadway alternatives are developed, screened and recommended.
- Present findings to TAC for consideration for funding the design and construction efforts in the FY 2003-2005 TIP.



ENGINEERING CORPORATION

## MEMORANDUM OF MEETING

DATE: October 6, 2005

TO: Steve Devine, Rhode Island Department of Transportation (RIDOT)

CC: Attendees:

Steve Church	RIDOT
Steve Devine	RIDOT
Keith Bloomer, P.E., PTOE	PARE
Diane Johnson, P.E.	PARE
John Shevlin, P.E.	PARE
Alan Arsenault	Town of Charlestown

FROM: Diane Johnson, P.E.

RE: Bicycle and Pedestrian Facilities Study & Development - Various Locations  
Shoreline Bikeway Town Coordination Meeting  
RI Contract No.: 2005-E1-001  
PARE No. 05087.00 - Task 003

A coordination meeting with the Town was held at 10:00 a.m. on October 5, 2005 at the Charlestown Town Hall. PARE provided a package to each attendee that included an agenda, project location map, and a one-page overview of the project concept as was submitted as part of the 2002 Transportation Improvement Program (TIP) for the study and development phase for the Shoreline Bikeway.

The following items were discussed:

- Steve Church gave the project overview and outlined RIDOT and PARE's roles.
- Mr. Arsenault requested that RIDOT examine the possibility of designating Route 1, from Route 216 to Routes 2/112, as a Signed Shared Roadway or Bike Lane. Route 1 has approximately 10-foot wide shoulders and experienced cyclists frequently ride along this section of Route 1, which is a direct link to beaches and other shoreline destinations. The concern is that motorists need to be alerted to the fact that bicyclists are using this road. It is the Town's position that this can be accomplished by installing signs and/or striping.
- PARE pointed out that "*The American Association of State Highway and Transportation Officials-Guide for the Development of Bicycle Facilities*", 1999 edition (AASHTO) defines three bicycle user types that assist highway designers in determining the impact of different facility types and roadway conditions on bicyclists. They are Group A- Advanced and

experienced bicyclists, B-Basic and casual Bicyclists and C-Children and parents on bicyclists. It is clear that only Group A would be comfortable riding on Route 1.

- Mr. Devine indicated that there are other sections of RIDOT, specifically the Traffic and Highway sections that must approve of the concept of signing Route 1 as a Signed Shared Roadway or Bike Lane. These engineers would be examining the existing roadway conditions, volumes, accident data, speed studies and other pertinent traffic information to determine if the roadway is suitable.
- Mr. Church referred to the recent DPM, a checklist that addresses items to be assessed on a road prior to signing it as a Signed Shared Roadway. It would be necessary to complete this DPM when evaluating Route 1 and the other roadways slated to be Signed Shared roadways for this project.
- The Town of Westerly would need to be contacted to coordinate the limits of this project and connections to the South County Bike Route that is now in the design stage.
- RIDOT indicated that Route 1 is not classified as a road suitable for bicycle riding on the 2005-2006 "A Guide To Cycling in the Ocean State" map prepared by RIDOT. It was noted that Route 1 is currently referred to as a Shared Roadway since bicyclists and vehicular traffic currently do make use of this road together.
- The Shoreline Bikeway report that was completed in April 1997 evaluated three alternatives. The alternative that evaluated signing this portion of Route 1 was rejected because of high traffic volumes, high vehicle speeds, and truck traffic in combination with the hazardous crossings of Route 1 at the entrance and exit points. The recommended alternative proposed portions of a Shared Use Path adjacent to the northbound lane of Route 1 with no signing or crossing of Route 1. The report indicated that it is not the intent to pursue an off road alternative because of Right-Of-Way issues.
- As part of this study, it was discussed that PARE would investigate and present the devices that are in use to separate or designate the travel lane from the bicycle portion of the roadway. There was a discussion of using rumble strips. The purpose of installing rumble strips is to alert the driver and should not be used for this type of treatment.
- It will be necessary to determine the existing Freeway and Highway Right-Of-Way lines in this area.

DJ/mjh



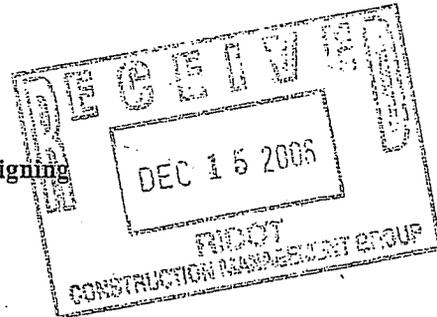
State of Rhode Island and Providence Plantations  
Inter - Office Memorandum

To: Frank Corrao III, P.E.  
Deputy Chief Engineer  
Dept: Construction

Date: December 13, 2006

From: Robert A. Smith, P.E. *RAS*  
Managing Engineer  
Dept: Highway Engineering

Subject: **Statewide Bicycle Signing & Scenic Roadway Signing**  
**Various Routes Statewide**  
**RI Contract No. 2006-CH-006**  
**RI FAP No. STP-SIGN (014)**  
**Deferring the Westerly Bike Route**



Based on the attached letter from Senator Dennis L. Algieri with the Town of Westerly, please delete the Bike Route signs for the downtown Westerly Route beginning at Route 91 and Dunns Corner Road and continuing westward through down town, and down Elm Street, Beach Street, and Winnapaug Road. This section of bike route will be deferred. The Department will revisit the Westerly Bike Route and will determine sign placement with the Town of Westerly at a future date. We recommend that the Contractor deliver the unused signs to the Department of Transportation Maintenance Division for future use.

Signs listed in the contract as number 59 and 60, which directs bicycle traffic to downtown Westerly should be placed at the intersection of Route 91 and Dunns Corner Road. Sign number 39A should be removed since the Bike Route does not end but continues to Dunns Corner Road. Sign designation number 38 should be revised to direct bicycle traffic to Dunns Corner Road in the direction of Route 1.

Due to the deferring of this portion of the Statewide Bicycle Signing & Scenic Roadway Signing Contract a total of 55 signs, which equates to an approximate total quantity of 140 sf will be stockpiled. The signs will be stockpiled at maintenance and Mr. Ray Medeiros at extension 4836 should be contacted. The signs are designated under Item T15.0100 in the construction contract and can be located in the Contract Documents on pages CS-20 (44.18 sf), CS-20B (37.43 sf), and CS-20C (59.25 sf). The corresponding maps also located in the Contract Documents can be found on pages CS-27, CS-28, CS-29, and CS-30. We have attached the maps located on CS-27 to CS-30 showing the portion of the bike route being deferred for your convenience. If you have any question please contact Robin L. Steele Walsh at extension 4031

Approved: *Kazem Farhoumand*  
Kazem Farhoumand, P.E.  
Deputy Chief Engineer

RAS/rlsw

CC: Parker, Farhoumand, Smith, Rocchio, Moghadam, Walsh; file