

Alternatives Ranking Matrix (Coastal Route Bikeway, Phase 1 Feasibility Study)

| #   | Impact Criteria                                       | Option A - Shared-Use Path, Primarily US-1 Corridor   | Rank | Option B - Bike Lanes along Old Post Road  | Rank | Option C - Shared-Use Path along Old Post Road.  | Rank | Universal 1 (Ninigret Park)  | Universal 2 (King Tom Pond)  | Universal 3 (Matunuck Schoolhouse Road)  |
|-----|---|---|------|--|------|--|------|--|--|--|
| 1.  | Relocation Impacts and ROW Acquisition                | 108,884 SF (37 Parcels) / 112,593 SF with universal elements (43 parcels)   | 3    | Temporary construction only / 3,709 SF with universal elements (6 parcels)   | 1    | 37,408 SF (52 Parcels) / 41,117 SF with universal elements (58 parcels)  | 2    | Temporary construction only, plus impacts associated with preferred Option and other universal elements  | 3,709.1 (6 Parcels), plus impacts associated with preferred Option   | Temporary construction only, plus impacts associated with preferred Option and other universal elements  |
| 2.  | Considerations Relating to Pedestrians and Bicyclists | The most desirable for bicycles and pedestrians. This option would provide less access to destinations along Route 1A than Options B and C. Short sight distance for Cross Mills Road crossing would require advance warning beacon.  | 2    | This option provides good access to destinations along Route 1A. Bike lanes are less comfortable for less experienced bicyclists than pathways. Bike lanes are subject to potential conflicts with adjacent motor vehicles and turning movements at driveways and intersections. This option does not provide dedicated space for pedestrians. | 3    | A shared-use path adjacent to the road is desirable for most bicyclists and pedestrians and provides dedicated space for both. This option provides good access to destinations along Route 1A. This type of path is subject to potential conflicts with motor vehicle turning movements at driveways and intersections. | 1    | A shared-use path is the most desirable for bicycles and pedestrians. This will provide easy access to the existing pathways within Ninigret Park. | A shared use path adjacent of the road is desirable for most bicyclists and pedestrians and provides dedicated space for both. | This option provides good access to destinations along Matunuck Schoolhouse Road. Bike lanes are less comfortable for less experienced bicyclists than pathways. Bike lanes are subject to potential conflicts with adjacent motor vehicles and turning movements at driveways and intersections. This measure does not provide dedicated space for pedestrians. |
| 3.  | Air Quality Impacts                                   | Temporary: Exhaust from construction vehicles, fumes from bituminous pavement and dust from earthwork. These will occur primarily away from where people congregate due to the alignment.<br><br>Permanent: Occasional exhaust and dust associated with routine maintenance activities.<br><br>Sensitive receptors: medical center, childcare center. | 1    | See Option A general impacts. Temporary impacts may be more acute as this option is along one of the Town's main roadways (Route 1A).<br><br>Sensitive receptors: medical center, childcare center, senior housing facility.   | 2    | See Option A general impacts. Temporary impacts may be more acute as this option is along one of the Town's main roadways (Route 1A).<br><br>Sensitive receptors: medical center, childcare center, senior housing facility.   | 2    | See Option A general impacts.<br><br>No sensitive receptors.   | See Option B general impacts.<br><br>No sensitive receptors.   | See Option A general impacts. Temporary impacts may be more acute as this option is along one of the Town's main roadways (Matunuck Schoolhouse Road).<br><br>No sensitive receptors.  |
| 4.  | Noise Impacts   | Temporary: Noise from construction vehicles and activities.<br><br>Permanent: Occasional noise associated with routine maintenance activities.<br><br>Sensitive receptors: medical center, childcare center, senior housing facility  | 1    | See Option A general impacts. Temporary impacts may be more acute as this option is along one of the Town's main roadways (Route 1A).<br><br>Sensitive receptors: medical center, childcare center, senior housing facility.   | 1    | See Option A general impacts. Temporary impacts may be more acute as this option is along one of the Town's main roadways (Route 1A).<br><br>Sensitive receptors: medical center, childcare center, senior housing facility.   | 1    | See Option A general impacts.<br><br>No sensitive receptors.   | See Option B general impacts.<br><br>No sensitive receptors.   | See Option A general impacts. Temporary impacts may be more acute as this option is along one of the Town's main roadways (Matunuck Schoolhouse Road).<br><br>No sensitive receptors.  |
| 5.  | Water Quality Impacts                                 | No significant impacts to groundwater or CRMC water types.  | 1    | No significant impacts to groundwater or CRMC water types.   | 1    | No significant impacts to groundwater or CRMC water types.   | 1    | No significant impacts to groundwater or CRMC water types.   | No significant impacts to groundwater or CRMC water types.   | No significant impacts to groundwater or CRMC water types.   |
| 6.  | Impacts to National Wetlands Inventory wetlands       | 0 SF direct impacts to wetlands; 7,226 SF inside the 50-foot wetland buffer zone; 25,936 SF inside the 100-foot riverbank wetland buffer zone   | 1    | 0 SF direct impacts to wetlands; 6,542 SF inside the 50-foot wetland buffer zone; 1,645 SF within the riverbank wetland buffer zone  | 1    | 0 SF direct impacts to wetlands; 5,394 SF inside the 50-foot wetland buffer zone; 3,701 SF within the riverbank wetland buffer zone  | 1    | 0 SF   | 0 SF direct impacts to wetlands; 3,613 SF within the riverbank wetland buffer zone   | 0 SF   |
| 7.  | Floodplain Impacts                                    | 26,352 SF / 32,715 SF with universal elements   | 3    | 164 SF / 6,527 SF with universal elements  | 1    | 1,096 SF / 7,459 SF with universal elements  | 2    | 0 SF   | 6,363 SF   | 0 SF   |
| 8.  | Coastal Impacts                                       | Fully within Coastal Resource Management Council jurisdiction.  | 1    | Fully within Coastal Resource Management Council jurisdiction.   | 1    | Fully within Coastal Resource Management Council jurisdiction.   | 1    | Fully within Coastal Resource Management Council jurisdiction.   | Fully within Coastal Resource Management Council jurisdiction.   | Fully within Coastal Resource Management Council jurisdiction.   |
| 9.  | Impacts to Threatened/Endangered Species or Habitat   | 0 SF / 14,067 SF with universal elements; potentially greater impacts to long-eared bat populations through tree removal in wooded areas.   | 2    | 0 SF / 14,067 SF with universal elements   | 1    | 0 SF / 14,067 SF with universal elements   | 1    | 0 SF   | 0 SF   | 14067 SF of RI Natural Heritage Area<br><br>State listed species potentially impacted: Grasshopper Sparrow<br><br>Federal listed species potentially impacted: Red Knot, Northern Long-Eared Bat   |
| 10. | National Register Districts and Property              | 0 SF  | 1    | 0 SF   | 1    | 5,585 SF<br><br>Historic properties: Nathan Kenyon Lot; Peleg Cross Lot. Any excavation within 25 feet of a cemetery or alteration must follow Rhode Island Laws § 23-18-11, 23-18-11.1 and 23-15-11.2.  | 2    | 0 SF   | 0 SF   | 0 SF   |
| 11. | Hazardous Waste Sites                                 | 1,132 SF  | 2    | 0  | 1    | 1,132 SF   | 2    | 0  | 0  | 0  |

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|---------------|-------------------------------|---|------|--|------|---|------|---|--|--|
| 12.           | Construction Impacts          | <p>Temporary construction activities - vegetation clearance, grubbing, grading, construction of full depth path with associated features. It is assumed construction can mainly be staged within the 20-foot right-of way that would constitute the finished path. Some staging along public roadways.</p> <p>Minor impacts to traffic on public roads, as this option is on an independent alignment.</p>          | 1    | <p>Temporary construction activities - construction of a full-depth road shoulder marked as a bike lane with associated features, likely including some vegetation clearance (including some mature trees), relocation of stone walls, grading, relocation of some utility poles, signs and mailboxes. Staging would take place at sites along Route 1A.</p> <p>Impact to traffic on public roads, though it is assumed that construction would take place on one side of Route 1A at a time. Vehicular access to all roads and driveways would be maintained throughout construction.</p> | 2    | <p>Temporary construction activities - vegetation clearance, grubbing, grading, construction of full depth path with associated features. Would likely include removal of some mature trees, relocation of stone walls, grading, relocation of utility poles, signs and mailboxes. Staging would take place at sites along Route 1A.</p> <p>Impact to traffic on public roads during construction. Vehicular access to all roads and driveways would be maintained throughout construction.</p> | 2    | See Option A general impacts.   | <p>See Option C general impacts. Staging would take place at sites along Route 1A east and west of the construction zone.</p> <p>Potential temporary closure of the ramps to US-1 located north of US-1 during construction would necessitate detours to the west and east for traffic accessing and exiting US-1.</p>   | See Option B general impacts. Staging would take place at sites along Matunuck Schoolhouse Road.   |
| 13.           | Visual Impacts                | <p>Temporary: construction equipment and materials staged at sites along public roadways and disturbed landscapes (soil, vegetation clearance). Staging may take place largely within the 20-foot right-of-way.</p> <p>Permanent: paved pathway and graded soft shoulder, pavement markings, crosswalks, signs and a beacon at one location on Cross Mills Road, potentially relocated parking at Falcone Lane.</p> | 1    | <p>Temporary: construction equipment and materials staged at sites along public roadways and construction activities alongside Route 1A (construction-related signage, vegetation and tree removal, relocation of stone walls, cleared and graded shoulders).</p> <p>Permanent: widened roadway cross-section, relocated stone walls, marked bike lanes and related signage, and crosswalks and signage at some locations.</p>   | 2    | <p>Temporary: construction equipment and materials staged at sites alongside Route 1A, including construction-related signage, vegetation and tree removal, relocation of stone walls, the cleared and graded pathway.</p> <p>Permanent: paved pathway in a widened roadway cross-section, relocated stone walls, seeded/planted buffer space, pavement markings and signs.</p>   | 1    | <p>Temporary: construction equipment and materials staged at sites within Ninigret Park and along Route 1A; disturbed landscapes (soil, vegetation clearance). Staging may take place largely within the 20-foot right-of-way.</p> <p>Permanent: paved pathway and graded soft shoulder, pavement markings and signs.</p> | <p>Temporary: construction equipment and materials staged at sites alongside Route 1A, including construction-related signage, vegetation and tree removal, relocation of stone walls, the cleared and graded pathway, relocation of utility poles.</p> <p>Permanent: paved pathway north of King Tom Pond, relocated stone walls and utility poles, seeded/planted buffer space, crosswalks, pavement markings and signs.</p> | <p>Temporary: construction equipment and materials staged at sites along Matunuck Schoolhouse Road and construction activities along the road (construction-related signage, vegetation and tree removal, relocation of stone walls and utility poles, cleared and graded shoulders).</p> <p>Permanent: widened roadway cross-section, relocated stone walls and utility poles, marked bike lanes and related signage.</p> |
| 14.           | Public Utilities              | <p>Co-locates for a portion of its length along the National Grid powerline easement north of the South County Sand and Gravel quarry operation. Temporary impacts to this area during construction.</p> <p>Permanent: presence of the pathway adjacent to power line poles and the presence of bicyclists and pedestrians along the utility easement.</p>  | 1    | Relocation of some utility poles along Old Post Road s where they would be within the area of the new bike lane or immediately adjacent and therefore pose a danger to passing bicyclists.   | 2    | Relocation of utility some poles would be required along Old Post Road in some areas where they would be within the area of the new shared-use path or immediately adjacent and therefore pose a danger to passing bicyclists.  | 3    | No Impact   | Relocation of some utility poles adjacent to the US-1 on- and off-ramps due to their proximity to the proposed shared-use path.  | Relocation of some utility poles would be required along Matunuck Schoolhouse Road where they would be within the area of the bike lanes or immediately adjacent and therefore pose a danger to passing bicyclists.  |
| 15.           | Public Facilities Connections | Connects Charlestown Town Center (at Old Post Road/Falcone Lane) to Ninigret Park. Also includes connections to Cross Mills Public Library land (wooded north side of the property), White Cedar Swamp and several public properties not open to the general public (police station, RIDOT maintenance depot), US Post Office.  | 2    | Connects Charlestown Town Center to Ninigret Park. Includes connections to the Charlestown Police Station, Cross Mills Public Library, White Cedar Swamp, Charlestown Fire Station, US Post Office.  | 1    | See Option B.   | 1    | Connects all options to Ninigret Park existing paths.   | Integral element of public facilities connect to three main options.   | Provides connection to Charlestown Beach Road, and thereby Charlestown Town Beach and Charlestown Breachway.   |
| 16.           | Environmental Justice         | Charlestown does not have any Environmental Justice Select Population Group Census Tracts, per the State of Rhode Island Transportation Equity Benefits Analysis, 2018-2021. No impact.   | 1    | See Option A - No Impact   | 1    | See Option A - No Impact  | 1    | See Option A - No Impact  | See Option A - No Impact   | See Option A - No Impact   |
| 17.           | Construction Cost             | \$3,430,600 / \$5,999,200 with universal options  | 1    | \$2,968,000 / \$5,536,600 with universal options   | 2    | \$8,180,000 / \$10,748,600 with universal options   | 3    | \$160,000   | \$1,641,600  | \$767,000  |
| 18.           | Operations and Maintenance    | <p>Regular maintenance would consist of seasonal sweeping and snow clearance.</p> <p>Occasional maintenance would include pavement re-marking, crack repair and resurfacing, as needed. Larger-scale maintenance can be considered as part of the Statewide Transportation Improvement Program.</p>   | 3    | <p>Regular maintenance would consist of seasonal sweeping and snow clearance, which would occur as an extension of regular maintenance on Route 1A.</p> <p>Occasional maintenance would include pavement re-marking, crack repair and resurfacing, as needed, as an extension of Route 1A maintenance. Larger-scale maintenance can be considered as part of the Statewide Transportation Improvement Program.</p>   | 1    | See Option A. Although this option is adjacent to Route 1A, it would be separate from the roadway pavement and may require different equipment than that used for general roadway maintenance activities.   | 2    | See Option A.   | See Option A.  | See Option B. This would be an extension of maintenance activities on Matunuck Schoolhouse Road.   |
| Final Score   |                               |   | 28   |  | 25   |   | 29   | n/a   | n/a  | n/a  |
| Final Ranking |                               |   | 2    |  | 1    |   | 3    | n/a   | n/a  | n/a  |