



To: David Manugian
Director, Bedford Public Works
314 Great Road
Bedford, MA 01730

Date: June 12, 2023

Memorandum

Project #: 09393.01

From: Joshua Trearchis, PE

Re: Minuteman Bikeway Extension Project Summary

The following memorandum is intended to provide a summary of the Minuteman Bikeway Extension project for record, including project description, project history, and design summary:

Project Description

The Minuteman Bikeway, a popular rail trail for Bedford residents, regional commuters and recreational users, currently ends at Depot Park near the intersection of South Road and Loomis Street. This project proposes to extend the bikeway by making a 1,665-foot (0.32 mi) portion of Railroad Avenue accessible to bikes by constructing an off-road shared use path adjacent to the roadway and constructing 9,200 feet (1.7 mi) of bikeway on the unpaved Reformatory Branch Trail, ending just beyond Concord Road.

The existing Minuteman Bikeway is used as a transportation corridor for regional commuters as well as local residents. Extending the bikeway to the Bedford/Concord Town line will provide on-road links to Railroad Avenue, Hartwell Road and Concord Road (Route 62) in addition to providing access to the schools and connecting the Mary Putnam Webber 20-acre wildlife preserve, the 19-acre Elm Brook Conservation Area and the 15-acre Dellovo Conservation Area. Existing trails through these conservation areas are part of a network of trails that also meander through MassPort properties along the Concord town line south of the trail extension.

The Reformatory Branch Trail is currently unpaved and does not provide safe crossings at Hartwell Avenue or Concord Road. In some portions, the trail is overgrown with vegetation, leaving only a narrow beaten path.

The width of Railroad Avenue varies between 20 and 27 feet, the pavement condition is poor, and although it's in close proximity to the Bedford High School, only provides intermittent sidewalks. A substandard curve near the entrance of the bike path requires speed advisory signs, substandard drainage causes ponding in several areas, and undefined curb cuts result in parking along the layout line.

This project proposes to construct a 12-foot paved surface with 3-foot clear zones for about 9,200 feet of the Reformatory Branch Trail. Existing parking areas will be regraded and reconstructed both at the Railroad Avenue end of the project and at the Concord Road end. A new parking lot is also proposed at the end of Lavender Lane to provide an access point for the trail. These enhancements, along with connections to existing paths along the trail, will provide new transportation routes for regional and local commuters, as well as for students to get to school.



Bike and pedestrian accommodations are also proposed for approximately 1,665 feet of a reconstructed Railroad Avenue. As a part of the roadway reconstruction a 10-foot wide shared use path will be constructed along the south side of the road and a new 5.5-foot wide sidewalk will be constructed along the north side of the road. Railroad Avenue itself will be narrowed to two 10-foot travel lanes with 1.5-foot shoulders. New granite curbing, defined curb cuts, pavement markings, signage and an improved stormwater collection system will also be constructed.

There are five at-grade roadway crossings proposed within the project limits: South Road (at the intersection with Loomis St and Railroad Ave); Railroad Ave (at the beginning of the Reformatory Branch Trail); the Water Dept Access Drive (approximately 570 feet west of Hartwell Rd) and Hartwell Rd (approximately 540 feet south of Concord Rd). At the South Road crossing, bicycles will cross during the existing traffic signal pedestrian phase. At the Railroad Ave and Hartwell Road Crossing, warning devices (flashing beacons) are proposed that will be activated by pushbuttons to allow bicyclists to cross. All other crossing locations will be simple stop-controlled crossings.

A sixth roadway crossing at Concord Road (Route 62) will be a grade separated crossing. The former rail bed at this location is below the roadway level, though the old wooden bridge has been removed and filled to support Concord Road. Given the high traffic volumes and vehicle speeds, it was determined that the grade separated crossing was the best fit for this location. The proposed bikeway will run in a precast concrete culvert beneath the roadway providing uninterrupted passage for both vehicles and path users.

Project History

1. In 2004 Town Meeting approved funding for a feasibility study to construct a bike path on the Reformatory Branch Trail.
2. The Town of Bedford retained VHB to prepare a feasibility study of a formal bike path on the West Bedford Reformatory Branch Trail. The study was completed and submitted to the town in November, 2005 and identified key issues such as environmental and design constraints, alternative path materials, right of way requirements, roadway crossing treatments, regional connections, parking facilities, construction costs and potential funding resources.
3. In November 2008 VHB provided a supplemental report to the 2005 feasibility study with additional information related to path surface treatment options, cross sectional width options and impacts, and funding options and requirements.
4. On March 23, 2010, Town Meeting approved the use of a bituminous asphalt surface for the off road section of the bikeway. On March 22, 2010, at the same Town Meeting, the meeting approved the extension of the project from Concord Road to the Concord Town Boundary.



5. In 2010, the town retained VHB to prepare project funding applications for submission to MassDOT and to develop the final design of the bikeway. An initial project need form was submitted to MassDOT for review and approval. Although it was not included in the contract scope, at the direction of the town, VHB developed 3 alternative cross sections for Rail Road Avenue. The criteria for the analysis was focused on right of way impacts, tree removals, roadway bike accommodations, and construction costs. The three options were considered for the cross section, as follows:
 - Option 1: 2- 6 ft sidewalks, 2- 4 ft shoulders, and 2-10 ft travel lanes
 - Option 2: 2-6 ft sidewalks, 2-4 ft shoulders and 2- 11 ft travel lanes.
 - Option 3: 1- 6 ft sidewalk on the north side of roadway, no shoulders, 10 ft wide sidewalk with a 5 foot grass strip on the south side of road.
6. Due to right of way impacts, Options 2 and 3 were dismissed. On December 15, 2010, the project was presented at a Bike Committee Meeting. The committee had a number of comments that were addressed at the meeting, and was followed up with written comments dated February 25, 2011. VHB was directed by the Town to advance Option 1 to preliminary design for submission to the Town and MassDOT.
7. VHB was also directed to contact MassDOT to ask if they would fund the off road extension of the bikeway without the Railroad Ave section of the bikeway from Railroad Ave to Concord Road , or allow for an alternative alignment of the path to extend along Elm Brook, and Mongo Brook, to avoid Railroad Ave. MassDOT stated that they would consider funding an alternate alignment to connect the existing minuteman bikeway to the extension, as long as there was a connection between the end of the existing bikeway and the beginning of the new bikeway. Since the two bikeways are in close proximity to one another, MassDOT determined that the gap created would cause an unsafe condition for bikepath users, if they wanted to travel from the existing bikeway terminus to the extension.
8. The project was presented to the bike committee on March 2, 2011, to solicit input from the committee. Comments were received and answered at the meeting.
9. In 2011 Town Meeting approved design funding for the project.
10. 2012, the request to submit the Project Need Form (PNF) was presented to the Board of Selectmen, which approved the request, and the PNF was submitted to MassDOT for approval in February 2012. In June of 2012, the Project Initiation Form (PIF) was submitted to MassDOT to request funding through the State Transportation Improvement Program.
11. Due to the environmentally sensitive nature of the Elm Brook path alignment, on January 18, 2013 a meeting was held with the Town DPW, Conservation Commission, and VHB to discuss this possible route. Members of the conservation commission, as well as the agent were not in favor of the alignment along Elm Brook, due to the number of environmental impacts associated with the construction of the trail, the



introduction of bike traffic along an existing passive recreation walking path, the potential of exceeding 5000 square feet of wetland impacts, resulting in a required variance application to DEP for the work, and introducing a paved surface in a conservation restriction area. The conservation agent reminded the meeting attendees that the variance would not be approved unless the Railroad Ave alignment was deemed not viable. It should be noted that the right of way is privately owned along Elm Brook, and land takings would be required along the alignment.

12. On February 6, 2013 the options were presented at a Bike Committee Meeting. Comments from the committee were responded to.
13. The project was presented to the Board of Selectmen on July 1, 2013. The 2 options of using Railroad Ave or the Elm Brook alignment of the future bikeway was discussed. At the meeting, VHB was directed to focus on the Railroad Ave alignment, due to the environmentally sensitive nature of the Elm Brook option.
14. On September 25, 2013, a neighborhood meeting was held to discuss the project. The three options that were developed in 2010 were presented to the audience, and the Town received comments at the meeting, and after the meeting. As a result of the comments, VHB developed an additional hybrid cross section that would combine options 2 and 3. VHB developed this option, and submitted it to the town for consideration.
15. The Project Initiation Form (PIF) was resubmitted to MassDOT in in October, 2013 in response to comments from MassDOT
16. On April 29, 2014 MassDOT approved the project for construction funding, for a total of \$4,006,200.
17. A Board of Selectman's meeting was held on June 9, 2014 to present the findings of the 4 options, and to solicit comments from the BOS and audience. At the meeting, the BOS requested that a site walk be conducted to review the existing roadway features, and the town roadway layout line be staked out. The site walk with the abutters occurred in August 2014.
18. The Bike Committee submitted comments for the options presented for Railroad Ave to the DPW in August 2014, and contacted representatives from MAPC, and MassDOT to solicit comments on bike travel on Railroad Ave. At the request of the Town, VHB contacted MAPC on July 29, 2014 to discuss the project. VHB also contacted MassDOT on August 4th and 19th of 2014 to discuss the project. VHB developed 2 additional options for consideration based on the conversations with DOT – one option was a cycle track, and the other options was to use a buffered bikeway on one side of the roadway. Both options were ruled out due to maintenance and safety reasons. VHB was also directed to measure the length of the driveways for the residential properties to determine if the use of the 10 foot wide pedestrian easement for the bikeway would impact private parking at each house lot.



19. A Board of Selectman's meeting was held on August 4, 2014 to discuss the options, and to solicit comments from the audience. The bike committee suggested that a shared use path be constructed on Railroad Ave. Carl Larson, son of Ken Larson, and a bike advocate presented the use of a cycle track on Railroad Ave.
20. A Board of Selectman's meeting was held on August 25, 2014. The Bike Committee presented an option to the BOS for an off-road bikeway on Railroad Ave. VHB was not at this BOS meeting.
21. The Town received comments from the legal counsel representing Bedford Charter Bus and forwarded them to VHB in August 2014.
22. A site walk was conducted on October 9, 2014 with representatives from MassDOT, the Town, Bike Committee and VHB to review the roadway and options for bike travel.
23. VHB collaborated with MassDOT to discuss multiple options for bike travel on Railroad Ave. At the suggestion of the Bike Committee and from field observations of family cyclists on Railroad Ave, MassDOT recommended the use of a separated shared use path running parallel to the roadway. VHB further developed this option and presented this option to the Board of Selectmen on November 3, 2014. Due to comments received from the audience at the meeting, the Town requested that VHB develop several additional alternatives that aligned the bikeway behind the properties on Railroad Ave, along the abandoned B&M right of way, along property lines between Taylor and Lloyd, and McDonough Electric. VHB developed an alternative alignment through the Miller Moore Conservation Area, south of the resident on Railroad Ave. A graphic of 6 alternative alignments was prepared, along with a summary of impacts to private property, and environmental resources was prepared and submitted to the Town for evaluation.
24. A meeting was held at Town Hall on January 7, 2015 to discuss the design options for Railroad Ave with Ken Larson, representatives from Taylor and Lloyd and the Bedford Bus Charter to discuss the options prepared as a result of the BOS meeting on November 3, 2014.
25. The Town has received letters of concern from Taylor and Lloyd, and the Bedford Bus Charter in 2015.
26. In April 2015 a meeting was held with MassDOT Complete Streets Engineer and VHB to discuss the design option for Railroad Ave. The following is a summary of the conversation regarding Railroad Ave:
 - a. MassDOT will reject the project if no protection is given to bicyclists on Railroad Ave.
 - b. If the town pays for the construction of RR Ave as a complete street, and requests funding from MassDOT for the bikeway extension, MassDOT will require a shared use path on Railroad Ave before approving the request. He said if there were another feasible alignment that connects the existing bikeway to the extension, they would consider that option.
 - c. If the town requests that the bikeway extension be a separate project without Railroad Ave, DOT will require a connection from the existing Bikeway to the extension. He said if there were another feasible alignment, he would consider that option



As a result of the meeting, it was agreed that the preferred alternative on Railroad Ave was a shared use path in lieu of an on-street bike lanes.

27. At the suggestion of the Complete Street Engineer an alternatives analysis was prepared for the Concord Road Crossing during the 25% design phase. A meeting was held at District 4 on February 12, 2017 to discuss the study findings. It was agreed that providing a grade separated crossing was the right solution for this regionally significant project.
28. The 25% Design Submission was submitted to MassDOT on March 31, 2017 and the project was approved for the Fiscal Year 2022 TIP Funding.
29. In 2019 Meetings were held with abutters to discuss project status and any specific right-of-way questions/concerns.
30. The project was presented to the public at the 25% Design Public Hearing that was held by MassDOT on February 6, 2020.
31. Several design changes were made as a result of public comments from the public hearing, including three-foot-wide stone dust shoulders included where possible, a new sidewalk connection to Bonnievale Drive, the use of permeable pavement instead of gravel at parking lots, landscape screening to provide additional privacy for neighboring homes, and additional amenities and interpretative signs.
32. Bridge Sketch Plan submittals for the Concord Rd culvert crossing were submitted to MassDOT on March 2, 2020 and resubmitted July 9, 2020 in response to MassDOT comments.
33. The 75% Design Submission and 1st Structural Design Submission was submitted to MassDOT on October 30, 2020.
34. Discussions were held with MassDOT regarding the project terminus at the Concord Town line following the 75% design submittal. To meet FHWA requirements, the project limits were reduced to end just beyond the Concord Rd culvert at the base of the ramp on the west side of Concord Rd. The project could not be extended to the town line since the existing trail is unpaved and does not meet ADA compliance. The extension to the Town line would need to be completed by the town as a separate project.
35. Right of Way meetings were held in January 2021 with Town DPW staff, MassDOT, VHB, and the Town's legal counsel, Anderson Kreiger. During the title research for the Reformatory Branch Trail, it was determined that the Town did not own certain portions of the former railroad right of way, and was instead owned by the abutting property owners to the centerline of the right of way. Changes were made to the Right of Way easement plans to incorporate the additional easements/takings needed from private properties to allow the Town to control the full width of the former railroad right of way.



36. In February 2021, the MPO recommended that the project get moved from the FFY 2023 to FFY 2022 with an advertisement date of August 2022, based on the project status and input from MassDOT.
37. Properties appraisals completed in September, 2021 with total just compensation costs of \$3.1M. As requested by the Town, updates were made to the ROW plans to reduce the widths of the easements and minimize costs for takings/easements.
38. An archeological survey was completed by MassDOT in portions of the path that are outside of previously disturbed areas. The field investigations identified a Native American archaeological site near the proposed Lavender Lane parking lot. A redesign of the parking lot and trail in this area was completed to avoid impacts to the archeological site.
39. The 100% Design submittal was submitted to MassDOT on January 17, 2022
40. The Notice of Intent for the project was filed on January 28, 2022 and presented to the Conservation Commission at a hearing held on February 9, 2022. The project closed during the hearing and an Order of Conditions was issued on February 14, 2022.
41. In February 2022, the Bedford Arbor Resources Committee acknowledged that final tree removal and landscape plans met Bedford's Tree Policy.
42. Supplemental appraisals completed in for the revised taking and easement areas in January/Feb 2022.
43. Warrant article was voted on at Annual Town Meeting on March 28, 2022 for the approval of funds for the eminent domain takings and easements for the construction of the Minuteman Bikeway Extension. The Article for the use of the Community Preservation funds for the takings/easements passed with a majority vote, however, the Article to approve the Select Board to use the funds for eminent domain required a 2/3 vote, and therefore did not pass.
44. The project was tentatively placed on the 2023 TIP, pending the outcome of a new vote on the easements/takings at the 2022 Fall Town Meeting.
45. Based on the outcome of the Annual Town Meeting, a meeting was held on June 3, 2022 with VHB and the MassDOT Complete Streets Engineer to discuss potential options for alternative surface treatments or cross section width/allocations. The outcome of the meeting was that the path cross section width could not be reduced due to the anticipated heavy use, and that an asphalt surface was required for ADA requirements and future maintenance concerns.
46. On September 13, 2022 an abutters meeting was held to discuss the project and answer questions related to Right of Way impacts from the project.



47. In September 2022 a meeting was held with the Bedford Children's Center to discuss the project limits and potential impacts. A summary of questions was submitted to the Board of Health from the Bedford Children's Center following the meeting to document their concerns. The following is a brief summary of the concerns:
 - a. The construction noise levels will have negative impact of the children
 - b. Potential impacts to the children's play area and tree removal in the vicinity of the project
 - c. Privacy of the students with the proposed parking area and picnic table adjacent to the property
 - d. Impacts to parking and drop-off/pick-up operations
 - e. Dust control
48. A memo providing comment responses was prepared by the Bedford DPW and was discussed at the October 17, 2022 Board of Health Meeting.
49. In October 2023, a letter to provide notice of reduced scope was submitted to the Bedford Conservation Commission with revised plans that showed the reduced limit of the proposed fiber optic conduit and handholes. The approved NOI plans inadvertently showed the fiber optic conduit and handholes extending into land that is mapped as Priority and Estimated Habitat of Rare Species, or Wildlife as determined by the Massachusetts Natural Heritage and Endangered Species Program (NHESP). The project limits were reduced to resolve the issue and avoid any work or disturbance within the NHESP habitat area.
50. A series of Community Forums were held on Sept 29, 2022 and October 17, 2022 to present an overview of the project and answer questions related to the design details, impacts, etc that were heard during the Annual Town Meeting. Comments heard from the public were generally split between supportive/unsupportive comments. A brief summary of the opposing comments and concerns heard during the forums include the following;
 - a. Many commenters noted that the path should remain as a natural unpaved surface
 - b. Concerns were heard that paving the path would allow for higher bicycle speeds and would create a safety hazard for all users
 - c. Many residents were concerned with the width of the clearing required and suggested reducing the width of the path to reduce the tree/vegetation impacts
 - d. Vehicular trips will be increased by the project since people will have to drive to access natural walking paths
 - e. Eminent domain should only be used for overwhelming public benefit project, which this is not
51. A warrant article was voted on again at the Fall Town Meeting on November 15, 2022 for the approval of funds for the eminent domain takings and easements for the construction of the Minuteman Bikeway Extension. The Article vote failed to get the required a 2/3 vote and did not pass.



Project Design Summary

The following provides a design summary of key features of the project:

Railroad Avenue

1. The proposed reconstruction of Railroad Avenue includes full depth pavement reconstruction that consists of 2-10' travel lanes and 1.5' shoulders. A 5.5' wide HMA sidewalk is proposed on the north side of the road and a 10' HMA shared use path with a 3.5' grass buffer from the edge of the road is proposed on the south side.
2. A new drainage system is incorporate to capture stormwater runoff and improve existing flooding concerns. The proposed drainage design includes new deep sump hooded catch basins and new HDPE trunk lines within Railroad Ave. The drainage system will extend down Commercial Ave and outlet to Elm Brook along the bank of the stream from a headwall with stone armoring for erosion protection. The drainage system within Commercial Ave includes deep sump hooded catch basins and is sized to accommodate the flow from Railroad Ave, the existing 15" RCP pipe that collects flow from the wetland behind the bus lot, and existing drainage connections from the abutting properties.
3. Utility pole relocations are required along the north side of the road between South Road and Commercial Ave, and on the north side of the road between Commercial Ave and the start of the Reformatory Branch Trail. In general, the poles need be relocated $\pm 8'$ south on the south side of the road and $\pm 6'$ on the north side of the road.
4. The work also includes National Grid gas line replacement with new 2" plastic gas main from South Rd to Highland Ave.
5. A crosswalk is proposed across Railroad Ave at the entrance to the Reformatory Branch Trail with a Rectangular Rapid Flashing Beacon (RRFB) to improve safety for pedestrian crossings.

Reformatory Branch Trail

1. The proposed section of the path along the Reformatory Branch Trail includes a 12' wide HMA shared use path with 3' shoulder. Where feasible with level slopes, stone dust is provided to accommodate runners, and in locations with steep side slopes, grassed shoulder are proposed with a max slope of 6:1.
2. 42" tall wood railings are proposed along the edge of the shoulders where steep slopes are present.
3. Utilities within the former rail corridor include a 16" DI water main, 21" gravity sewer, and town owned fiber optic conduit and handholes.
4. To accommodate the proposed width of the trail and minimize disturbance to the adjacent wetlands, the profile of the path needed to be lowered by ± 2 ft, which results in the need to replace approximately 1,700 ft of the water main to maintain adequate frost protection. The lowered profile also reduced the cover over



the existing sewer which required approximately 1,700 ft of insulation to be added above the existing sewer to provide the required frost protection.

5. At the Mongo Brook crossing the path will be decreased to 10' for $\pm 100'$ to minimize impacts to the existing stone culvert.
6. At the end of Evans Ave an ADA accessible connection (with a slope less than 5%) was provided between the path and the end the public ROW.
7. Where the path intersects with the existing Water Dept access drive, a separate driveway entrance is proposed to keep the path users separate from the vehicles using the access drive. The reconstructed Water Dept access drive is shown as 12' wide and a variable width (12' typical) landscape area is shown between the driveway and the bikeway.
8. At Hartwell Rd an RRFB is proposed and widened splitter islands are proposed within the path to deter vehicles from entering the bikeway.
9. After the path crosses to the west of Hartwell Rd, the path is pushed to the north to maintain as much clearance as possible from the abutting property at 234 Hartwell Rd.
10. At the end of Lavender Lane, the path swings to the south onto the town owned property at 350a Concord Rd to accommodate a proposed 25 space parking lot (later requested to be reduced to 15-space based on input from the public).
11. Approximately 2,300' of new 1.5" HDPE conduit and fiber optic cable is proposed between the Lavender Lane parking lot and the end of the path limits beyond Concord Rd. The fiber optic conduit is intended to connect to and extend the town owned system that current ends at Lavender Lane. 2'x3' handholes are proposed every 1,000' ft.
12. Where the path crosses Concord Rd, the proposed path profile is lowered to maintain 10' vertical clearance within the proposed culvert structure. The 10' clearance is the minimum height clearance allowed by MassDOT for the underpass structure.
13. The path ends approximately 250' beyond the west side of Concord Rd. An ADA accessible ramp is provided from the west side of Concord Rd to the path to maintain access from either side of the road without needing an at-grade crossing facility.

Concord Road & Culvert

1. The proposed profile of Concord Rd raises the grade by approximately 18-24" to allow for the required 10' vertical clearance within the culvert structure.
2. A 5.5' HMA sidewalk with a 3' grass buffer is proposed on the west side of the road to provide a connection between Bonnievale Drive and the proposed ADA accessible ramp to the path west of Concord Rd.
3. To construct the culvert, existing utilities will be impacted and are required to be reconstructed:



- a. Sewer – the existing 8" PVC gravity sewer main needs to be lowered to accommodate the proposed precast culvert. New manholes are proposed to be installed and new 8" sewer pipe adjacent to existing at a lower grade that will still maintain gravity flow. Approximately 280' of sewer and 4 new sewer manholes are required.
 - b. Water – The existing 12" DI water main will be relocated to the east around the culvert and lowered to maintain adequate cover under the proposed trail elevation. Cast iron sleeves are proposed to allow the pipe to penetrate through the wing walls for the culvert and allow for future maintenance.
 - c. The existing 8" and 4" National Grid coated steel gas mains are not in conflict with the proposed bridge, however they will need to be lowered to accommodate the proposed trail elevation. The gas mains are proposed to be replaced with a new 12" plastic gas main that is relocated at a lower elevation.
 - d. Utility Poles & Overhead Wires – The overhead wire connection between poles 12/90 and 12/90A need to be relocated to allow for the construction of the precast culvert sections. The overhead wires will be relocated to connect between poles 12/91 and 12/90A. A new 50' UP is proposed to replace pole 12/91 with a 50' tall pole.
4. The proposed concrete culvert structure is intended to be precast concrete box sections with prefabricated modular block gravity wing walls. The wing walls and face of the concrete barriers are intended to have an Ashlar Stone form liner finish.
 5. Geotechnical investigations notes that ledge is present within the limits of excavation for the culvert. It is assumed that most of the ledge was removed for the previous rail bridge that existed at this location, but the over excavation required for the culvert structure and relocated utilities is anticipated to require ledge removal.
 6. Lighting within the culvert is proposed, including a single wall mount light fixture with a post mounted control panel above the southeast wingwall. Power supplied from the nearby utility pole 12/90A.
 7. As part of the coordination with the abutting Bedford Children's Center, a number of accommodations were proposed to be included in the contract for the construction of the roadway and culvert, including the following:
 - a. Temporary noise abatement panels will be installed around the construction limits in the vicinity of the BCC to reduce noise decibels during construction.
 - b. The construction contract will also require noise abatement measures and dust control treatments to be provided while working in the vicinity of the BCC.
 - c. New trees are shown on the plans to be planted along the slope limits that are impacted by the project. Upon completion of the project, the DPW will work with residents to provide additional plantings along abutting properties, if requested.



- d. The temporary impacts to the parking lot for the BCC are proposed to be maintained within the existing town owned Roadway Layout. The Town will work with the BCC to reconfigure the parking layout and/or drop-off circulation during construction when one of the driveway openings will be closed for the bridge construction.
- e. The contractor will be required to apply dust suppressant treatments, such as calcium chloride spray and watering of unpaved areas to minimize dust levels. For paved surfaces, dry power brooming will not be permitted. The Contractor will be required to use vacuuming, wet sweeping, regenerative air sweeping, or wet power broom sweeping. The use of sandblasting and compressed air will be permitted only with acceptable dust controls in place, and only wet cutting of concrete block, concrete and asphalt will be permitted.

Parking Lots

1. The project includes 3 proposed parking lots to provide access to the trail. Each parking lot is proposed to be permeable pavement to provide treatment of stormwater runoff and groundwater recharge through infiltration:
 - a. Railroad Ave – An 11-space parking lot is proposed with bicycle racks and benches located at the entrance to the bike path, as well as the relocation of the existing sign kiosk. Landscaping around the parking lot includes native trees and shrubs as well as native upland seed mix and the relocation of existing boulders to provide an inviting space for the public.
 - b. Lavender Lane – A 15-space parking lot is proposed with a bicycle rack and bench adjacent to the path entrance, as well as the relocation of the existing covered sign kiosk. Similar to Railroad Ave proposed landscaping includes native plantings and seeding, as well as a row of evergreen tree and shrub plantings to screen the abutting property at 5 Lavender Lane.
 - c. Concord Rd – A 15-space parking lot is proposed with native plantings and seeding similar to the other proposed parking lots. Site furnishing at the parking lot includes a stone dust sitting area adjacent to the path with a picnic table, interpretive sign, bicycle rack, and a drinking fountain. A small modular block retaining wall is also proposed to support the parking lot from the lower grade of the proposed path.