

Commonwealth of Massachusetts
 Executive Office of Energy and Environmental Affairs
 Massachusetts Environmental Policy Act (MEPA) Office

Environmental Notification Form

For Office Use Only

EEA#: 15819

MEPA Analyst: EVE schulter

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: Bruce Freeman Rail Trail – Phase 2B

Street Address: The project follows the former Lowell Secondary Track of the abandoned New Haven Rail Road from a point in the Rail Right of Way adjacent to the Teamworks Acton facility at 30 Great Road, Acton (the terminus of Phase 2A) to the project terminus in the Rail ROW west of Commonwealth Ave. and the MCI Concord Facility at approximately 407-409 Commonwealth Ave, Concord where it meets the northerly terminus of Phase 2C.

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| Municipality: Acton and Concord | Watershed: Sudbury-Assabet-Concord |
| Universal Transverse Mercator Coordinates: Start: Zone 19T – 301857mE; 4705174mN End: Zone 19T – 302799mE; 4704190mN | Latitude: 42°28'24.88"N(Start) 42°27'53.88"(End) Longitude: 71°24'37.47"W(Start) 71°23'55.03(End) |
| Estimated commencement date: 2019 | Estimated completion date: 2021 |
| Project Type: Multi-Use Rail Trail | Status of project design: 75% complete |

Proponent: Town of Concord, Chris Whelan (Town Manager)

Street Address: 22 Monument Square

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|------------------------------|------------------|------------------------|
| Municipality: Concord | State: MA | Zip Code: 01742 |
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Name of Contact Person: Marcia Rasmussen

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| Firm/Agency: Concord Planning Division | Street Address: 141 Keyes Road |
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| Municipality: Concord | State: MA | Zip Code: 01742 |
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| Phone: (978) 318-3290 | Fax: | E-mail: mrasnussen@concordma.gov |
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Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?

Yes No

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting:

a Single EIR? (see 301 CMR 11.06(8))

Yes No

a Special Review Procedure? (see 301CMR 11.09)

Yes No

a Waiver of mandatory EIR? (see 301 CMR 11.11)

Yes No

a Phase I Waiver? (see 301 CMR 11.11)

Yes No

(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

301 CMR 11.03(30(b)(1)(f): "Provided a permit is required, alteration of one half or more acres of any other wetland"

Which State Agency Permits will the project require?

MA DEP Section 401 Water Quality Certificate & Chapter 91 Waterways License for Water-Dependent Use

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres:

MassDOT is funding 20% of the constructions costs and the Federal Highway Administration will fund the remaining 80% of the construction costs. This project involves the transfer of land from the Commonwealth of Massachusetts Department of Corrections (0.11 acres) for a temporary easement to the Town of Concord.

| Summary of Project Size & Environmental Impacts | Existing | Change | Total |
|--|----------|---|--------|
| LAND | | | |
| Total site acreage | 7.8031 | | |
| New acres of land altered | | 1.0530 | |
| Acres of impervious area | 1.1472 | 1.3276 | 2.4748 |
| Square feet of new bordering vegetated wetlands alteration | | NA | |
| Square feet of new other wetland alteration | | 39939 SF RA (16150 SF Temp – 23789 SF Perm) 101 LF Bank (29 LF Temp – 73 LF Perm) 293 SF LUW (194 SF Temp – 99 SF Perm) 48 SF BLSF | |
| Acres of new non-water dependent use of tidelands or waterways | | NA | |
| STRUCTURES | | | |
| Gross square footage | NA | NA | NA |
| Number of housing units | NA | NA | NA |
| Maximum height (feet) | NA | NA | NA |
| TRANSPORTATION | | | |
| Vehicle trips per day | NA | NA | NA |
| Parking spaces | NA | NA | NA |
| WASTEWATER | | | |
| Water Use (Gallons per day) | NA | NA | NA |
| Water withdrawal (GPD) | NA | NA | NA |
| Wastewater generation/treatment (GPD) | NA | NA | NA |
| Length of water mains (miles) | NA | NA | NA |
| Length of sewer mains (miles) | NA | NA | NA |
| <p>Has this project been filed with MEPA before? <input checked="" type="checkbox"/> Yes (EEA # <u>12109</u>) <input type="checkbox"/> No</p> <p>The proposed Bruce Freeman Rail Trail was the subject of MEPA review in 1999 when the Towns of Chelmsford and Westford submitted an Environmental Notification Form that described the 6.8-mile-long recreational trail to be located entirely within the abandoned railroad right of way (ROW).</p> | | | |
| <p>Has any project on this site been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No</p> | | | |

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

The purpose of the Bruce Freeman Rail Trail (BFRT) project is to construct a multi-use recreational trail through Lowell, Chelmsford, Westford, Carlisle, Acton, Concord, Sudbury, and Framingham, Massachusetts, in order to provide safe pedestrian and bicycle facilities and reduce traffic congestion on overtaxed roadways. The rail trail will follow the 25-mile route of the former New Haven Railroad Framingham & Lowell line and will be designed and constructed in six phases. Each of the six phases is considered independent and separate Environmental Notification Forms (ENFs) will be completed for each phase, as necessary (see attached MEPA Advisory Opinion date 3/7/07). This ENF is inclusive of the 0.9-mile segment of the proposed multi-use recreational trail through the Towns of Acton and Concord, referred to herein as Phase 2B.

The BFRT will be constructed in the following phases: 1, 2A, 2B, 2C, 2D, and 3. Phase 1 of the BFRT begins at the Cross-Point Towers office complex in Lowell and passes through Chelmsford and Westford, terminating at the intersection of Route 225 and Route 27 for a total length of 6.8 miles. Construction of Phase 1 of the BFRT was completed in 2009 and this segment is now open to the public.

Phase 2 of the BFRT is separated into four distinct and independent segments: Phase 2A, Phase 2B, Phase 2C, and Phase 2D. Beginning at the terminus of Phase 1, Phase 2A travels 700 ft. southerly to the Carlisle town line and proceeds another 850 feet southerly to the Acton town line. From there, the proposed trail runs southerly to the Acton town line and proceeds southerly through Acton for 4.5 miles until it reaches a point approximately 100 feet south of Wetherbee Street. This phase began construction in Spring 2015.

Phase 2B of the BFRT begins at the Phase 2A terminus and continues to a point just north of Commonwealth Avenue in Concord, where Phase 2C terminates. This project is in the 75% design stage and is on the 2019 Transportation Improvement Program (TIP). This phase includes a new bridge crossing over Route 2 and the replacement of the existing railroad bridge over Nashoba Brook.

Phase 2C of the BFRT begins just north of Commonwealth Avenue near the Massachusetts Correctional Institute in Concord and continues to the Sudbury town line for approximately three miles. The proposed trail crosses the active Massachusetts Bay Transit Authority (MBTA) Fitchburg Commuter Rail Line and travels through a tunnel under Powder Mill Road.

Both Phases 2D & 3 are in conceptual stage. Phase 2D will extend from the 2C terminus through Sudbury for 5 miles. Phase 3 will extend from the Phase 2D terminus through Sudbury and Framingham for 4.6 miles

Land uses within the Phase 2B project area include forest, forested and non-forested wetland, participation recreation, industrial, cropland, and pasture. The proposed trail will cross the Nashoba Brook over an existing railroad trestle bridge and Route 2 over a new pedestrian crossing in the absence of an existing structure. A new wildlife corridor will also be constructed under Route 2 to facilitate the movement of local wildlife. The Teamworks Acton facility is located adjacent to the northerly project terminus and the Massachusetts Correctional Institute is located near the southerly project terminus.

The majority of the site corridor runs through adjacent fields and farm land. The abandoned rail bed itself is vegetated by trees and shrubs, with minimal ground cover. A maintained walking path exists within the railroad ROW on the section of rail to the south of Route 2.

This segment and the overall BFRT will provide a multimodal transportation and recreational trail. Phase 2B will provide bike and pedestrian connectivity to both local and regional transportation networks. This phase will also provide safe crossings at the trail's intersection with Route 2 for bike and pedestrian traffic as well as wildlife. This ENF discloses resource impacts associated with this phase of the BFRT project and documents previous coordination with other agencies to arrive at a context sensitive design that avoids, minimizes and mitigates resource impacts.

Proposed Project

Phase 2B of the BFRT proposes to construct a 0.9-mile multi-use recreational trail that will begin south of the Phase 2A crossing over Wetherbee Street and will extend south to a point just west of the Massachusetts Correction Institution MCI-Concord facility. The proposed trail in BFRT Phase 2B will consist of a multi-use path with a 12 feet wide, hot mix asphalt (HMA) surface and a 2 feet wide stone dust or paved shoulder on each side. The maximum grade along the path in the Phase 2B segment will not exceed 4.5%. The path will have a design typical 1.5% superelevation. The trail is designed in accordance with the 2006 MassDOT Project Development Guide and the 2012 AASHTO Guide for the Development of Bicycle Facilities (4th Edition).

In addition to the construction of a shared use path on the existing rail Right of Way Phase 2B proposes to construct a new pedestrian overpass at the trail's intersection with Route 2. The proposed bridge(C-19-039) will be constructed within the current railroad ROW. Bridge C-19-039 will be a horizontally curved two-span, continuous steel girder bridge with reinforced concrete deck. Mechanically stabilized earth (MSE) walls parallel to the trail will achieve the grade separation between Route 2 and the trail. The abutments are cast-in-place concrete supported on spread footings. The pier is a concrete hammerhead style pier also supported on spread footing. The pedestrian overpass will have a span of 304'-0" and a width of 19'-0". The proposed bridge will feature a 16'-0" wide trail over an 8" concrete deck and a 1.5% superelevation. Safety features on the bridge will include timber rail in approach sections and pedestrian bridge rail with 2"x2"x1/4" aluminum mesh between posts.

To facilitate the safe movement of local wildlife Phase 2B also includes the construction of a wildlife corridor, Bridge C-19-040, beneath Route 2. The top of the precast concrete box culvert will be located approximately 1'-3" and 3' below the existing Grade of Route 2 on the westbound and eastbound sides respectively. The crossing will have a clear opening of 7 feet wide and 4 feet tall. The crossing is proposed perpendicular to Route 2 and will have flared wingwalls at each opening. Construction will occur via accelerated construction during the weekends and will require traffic shifts along Route 2 during two (2) stages of construction.

Phase 2B will also include the rehabilitation of an existing rail crossing over Nashoba Brook(C-19-037). The existing bridge is a single span, steel girder structure supported by granite block abutments and footings. The superstructure consists of two steel plate girders supporting timber ties and railroad tracks. The bridge has not been maintained since it was abandoned, the timber deck shows significant decay. The existing steel girder bridge will be removed to allow for a new steel girder to be constructed at a higher elevation to meet the grades of the new bridge over Route 2. The proposed bridge span length is 62'-0" and the proposed width is 18'-0". The new bridge will feature a 3" HMA surface over an 8" concrete deck, two (2) 6'-0" lanes, 2'-0" shoulders on each side, and a 1.5% superelevation. Safety features on the new bridge include 3'-10" timber rails mounted on concrete curbs and appropriate pavement markings.

The proposed trail will also cross an unnamed intermittent stream. At this location, an existing 12" vitrified clay pipe conveying the stream under the rail ROW has been washed out. The eroded crossing will be replaced with a proposed 48"x48" box culvert embedded to a depth of 2 feet. The proposed culvert will have a natural streambed substrate at the pipe bottom. The culvert will better meet the stream crossing standards and will improve the crossing by eliminating the erosion of un-stabilized banks.

Existing drainage patterns will be maintained throughout the Phase 2B project limits. Additional construction items will include: pavement marking and signage, earthwork, landscaping, fencing, and stormwater management features.

Summary of Impacts

Wetlands

Wetland Resource Area boundaries along Phase 2B were delineated in the field by Nover-Armstrong Associates, Inc. on August 31, 2017. Resource areas within and adjacent to the proposed segment of trail were identified as Bordering Vegetated Wetlands (BVW), Bordering Land Subject to Flooding (BLSF), Riverfront Area (RA), Bank, and Land Under Water (LUW).

BVW was found in nine (9) locations proximate to the project limits. It was determined that all areas of BVW delineated in the field are hydraulically connected to Nashoba Brook and one to Fort Pond Brook. There will be no temporary or permanent impacts to Bordering Vegetated Wetlands resulting from the work proposed in BRFT Phase 2B. No wetland replication will be necessary as there will be no impacts to BVW.

Riverfront Area (RA) within the proposed project site is associated with Nashoba Brook and Fort Pond Brook. Portions of the work proposed are located within Riverfront Area, totaling approximately 39,939 SF (16150 SF Temporary, 23789 SF Permanent) of RA impact. Phase 2B impacts to RA have been minimized by tightening the footprint of the project within RA to the maximum extent possible and utilizing previously disturbed land. Since historic railroads typically paralleled rivers, linear rail trail projects routinely result in quantifiable impacts to Previously Developed/Degraded RA. Of the Riverfront Area impacted by this project, 12,038 SF (30%) are estimated to be classified as previously Degraded Riverfront Area.

Bank to perennial stream was delineated in two (2) locations within 200 feet of the site. These instances of Bank are associated with Nashoba Brook and Fort Pond Brook. Bank to intermittent stream was delineated in one (1) location within 100 feet of the site. This instance of Bank is associated with an unnamed intermittent stream. The work proposed in BFRT Phase 2B will result in 101 LF (29 Temporary/73 Permanent) of impact to the Bank of this unnamed intermittent stream.

Land Under Water (LUW) within the proposed project limits was identified in several locations. The proposed culvert conveying an unnamed intermittent stream under the Rail ROW will result in 293 SF (194 Temporary/99 Permanent) of impact to LUW. During construction, flow within the stream will be bypassed if necessary, but it is expected that permit conditions will require that culvert replacement will be conducted during low or no flow conditions. Temporary impacts will be restored in place and the proposed culvert will have a natural streambed substrate bottom.

Under the Federal Clean Water Act the wetlands, intermittent streams, and perennial streams located on the site are "Water of the United States" and are therefore subject to the Clean Water Act, 33 U.S.C. § 1251 et seq (1972). Based on this regulation one (1) Isolated Vegetative Wetland (IVW) was delineated within 100 feet of the site. The work proposed in BFRT Phase 2B will not result in any impact to IVW.

Bordering Land Subject to Flooding (BLSF)

Several areas of BLSF were identified proximate to the project limits. These areas were identified using the July 7, 2014 FEMA Flood Insurance Rate Map Numbers 25017C0356F, 25017C0358F, and 25017C03559F. According to these maps, portions of the site are located within Flood Zone AE with a base flood elevation (BFE) of 124 feet. The construction of the proposed wildlife corridor under Route 2 will result in 48 SF of alteration to BLSF.

Rare Species Habitat

The proposed project area for BFRT Phase 2B is not within or adjacent to any NHESP Established Habitat of Rare Wildlife or NHESP Priority Habitat of Rare Species. Additionally, there are no NHESP Certified Vernal Pools or NHESP Potential Vernal Pools within or adjacent to the project area. As a result, BFRT Phase 2B will result in no permanent or temporary impacts to rare species.

Stormwater

Stormwater within the project area discharges to Nashoba Brook, impaired by low flow alterations, Fort Pond Brook, Warners Pond, impaired by non-native aquatic plants and mercury in fish tissue, and an unnamed intermittent stream. Due to the previous land use of the project site, this portion of the Bruce Freeman Rail trail qualifies as a redevelopment effort pursuant to the Massachusetts Department of Environmental Protection (MassDEP) 2008 Stormwater Handbook. As such, the redevelopment status requires the project to meet DEP Stormwater Standards 2 through 6 to the maximum extent practicable. Three stormwater treatment areas are proposed, consisting of two (2) bioretention areas to provide water quality improvements and one (1) stormwater infiltration trench. Existing drainage patterns will be maintained, and current cross culverts will be maintained with some modifications.

The bioretention areas will allow runoff from the trail to settle out solids within a sediment forebay prior to reaching the bioretention areas. In the bioretention area, stormwater will filtrate through the bioretention medium to provide treatment. These features will provide peak flow attenuation and water quality improvements. In the current condition, stormwater discharges over land directly into receiving waters.

Construction Stage

Best management practices for erosion and sedimentation control will be adhered to for all phases of construction to minimize potential impacts to wetland resource areas and receiving waterbodies. Compost filter tubes will be used to reduce migration of sediments, and all slopes will be stabilized with loam and seed or modified rockfill.

Erosion and sedimentation controls will be installed and maintained where activities are proposed within 100-feet of BVW, Bank, and LUW to prevent silt and sediments from migrating into or towards the wetland resource areas. Inspectors will assess conditions and identify problems in the field during and after construction activities.

None of the following resources are located within the project limits: Areas of Critical Environmental Concern, NHESP Certified Vernal Pools, NHESP Potential Vernal Pools, NHESP Established Habitat of Rare Wildlife, NHESP Priority Habitat of Rare Species, Outstanding Resource Waters, Surface Water Protection Area, Interim Wellhead Protection Areas, Zone II Wellhead Protection Areas.

Project Phasing

The overall Bruce Freeman Rail Trail project will be constructed in six phases. However, each of the six phases of the Bruce Freeman Rail Trail is considered independent. Therefore, separate Environmental Notification Forms (ENFs) will be completed for each phase (see attached MEPA Advisory Opinion dated 3/7/07). This ENF is inclusive of Phase 2B.

Alternative Analysis

Selected Alternative: Rail Trail along the Lowell Secondary Railroad Line

The need for alternative modes of transportation has been identified by the communities to reduce roadway congestion and greenhouse gas emissions. The BFRT proposes to convert previously disturbed land into a recreational facility that can also be used as a multimodal transportation corridor.

The preferred alternative described in the project description portion of this ENF was selected because it avoids, minimizes, and mitigates impacts to environment and other resources while achieving the purpose of the project. The alignment of Phase 2B is centered on the existing rail ballast for the purpose of utilizing previously altered land. The alignment also provides safe passage across Route 2 in Concord. This project presents an opportunity to provide continuity to the constructed and proposed phases of the BFRT while incorporating a resource sensitive design.

Alternative B: Adjacent Lots and Other Lands Within the Municipality

There are no adjacent lots or other land within the municipality that could be reasonably obtained and would present less impact on resources within the project area. There is currently no land of adequate size and configuration available to accommodate a significant length of multi-use recreational trail and listed for sale at the time of filing. This alternative is not practicable and therefore was not chosen.

Alternative C: On-Road Project Location

An alternative on-road alignment utilizing the existing roadway ROW was considered. However, an on-road, non-motorized multi-use passive recreational trail is not feasible while simultaneously ensuring public safety with motorized traffic. This alternative does not meet the purpose of using existing railroad alignments and easements to create a multi-use path. Additionally, this alternative would require significant land easements/purchases and widening of the existing roadway. For these reasons, this alternative was dismissed.

Alternative D: No Build Scenario

The no-build scenario does not fulfill the overall project purpose of constructing a multi-use recreational trail in order to provide safe pedestrian and bicycle facilities.

The Bruce Freeman Rail Trail project offers an opportunity to convert abandoned property into a passive, multimodal transportation and recreational trail, while providing a continuous 26-mile alternative transportation corridor. The selected alternative for this phase avoids, minimizes and mitigates impacts while achieving the goals of this project.