



November 8, 2013

Honorable Richard K. Sullivan, Jr.
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, Massachusetts 02114

Re: *Mass Central Rail Trail*

Dear Secretary Sullivan:

On behalf of the Massachusetts Department of Conservation and Recreation (DCR), I am pleased to submit, for your review, the Expanded Environmental Notification Form (EENF) for the *Mass Central Rail Trail – Wayside Branch*.

The DCR is proposing the Mass Central Rail Trail – Wayside Branch (MCRT-WB) project, a 10-foot wide and 23-mile long shared-use path through the municipalities of Berlin, Bolton, Hudson, Stow, Sudbury, Wayland, Weston, and Waltham. The rail trail would be constructed within a 19-foot wide project development corridor within the existing 50- to 100-foot wide former Massachusetts Central Railroad right-of-way (ROW) now owned by the Massachusetts Bay Transit Authority (MBTA). DCR has secured a long-term lease with the MBTA along the ROW that allows DCR to construct, manage and maintain a rail trail within a 19-foot delineated “path development corridor” and develop additional amenities outside of this corridor provided they do not conflict with other MBTA uses. During 2012, DCR delineated the path development corridor within the existing ROW, and received approval from the MBTA for its use for the MCRT-WB rail trail project. This corridor largely follows and is centered on the existing single wide track, ties and ballast. The rail trail would extend from Coburn Road in Berlin to Beaver Street in Waltham. Once completed, the MCRT-WB would be managed by DCR and maintained by either DCR, municipalities through which it crosses, or through a cooperative agreement between DCR and the municipalities. The rail trail would be constructed as an off-road multi-use path. As with other multi-use paths in Massachusetts, the MCRT-WB would have trail heads at adjacent intersecting streets and would use existing parking facilities along its corridor to the greatest extent feasible. Construction phasing of the various segments of the MCRT-WB is dependent on several factors, such as design, status of encroachment resolutions, environmental permitting, and identification and availability of funds.

The EENF describes the purpose of, and need for, the proposed project components, the alternatives considered, and the potential environmental impacts. As described in the EENF, DCR is seeking a waiver of the requirement to prepare an Environmental Impact Report (EIR) for the project, as this strategy would allow the design of the MCRT-WB to proceed while also undergoing supplemental public review, that would expedite the permitting process, would facilitate community partnerships, would expedite the construction of the rail

COMMONWEALTH OF MASSACHUSETTS · EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS

Department of Conservation and Recreation
251 Causeway Street, Suite 600
Boston MA 02114-2119
617-626-1250 617-626-1351 Fax
www.mass.gov/dcr



Deval L. Patrick
Governor

Richard K. Sullivan Jr., Secretary
Executive Office of Energy & Environmental Affairs
John P. Murray, Commissioner
Department of Conservation & Recreation

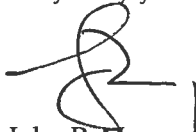
trail, and due to the limited impact of the project on a former rail bed, we believe that appropriate direct review with communities, DEP and MHC will sufficiently serve to avoid, minimize and mitigate any impacts. Preparing an EIR would represent an unnecessary and undue hardship and would not serve to avoid or minimize damage to the environment, in part as the thresholds that would be exceeded can be considered not significant when the 23-mile long trail is considered as a whole and in light of the fact that the involved land alteration and impervious area thresholds concern primarily a former railroad corridor that already has been altered substantially by prior railroad uses. With the detailed information provided in the EENF and the unique nature of this recreational project being located along an already altered former rail corridor, DCR believes supplemental information is not necessary by way of an EIR, rather any remaining issues or needed information can be addressed directly with the permitting agencies in their review processes.

The comment period will begin on the publication date of the next Environmental Monitor and will end on November 26, 2013. All parties on the attached distribution list will be sent a copy of the EENF in either hard copy or on a CD. In addition, the EENF will be available for inspection on DCR's website (<http://www.mass.gov/eea/agencies/dcr/conservation/planning-and-resource-protection/projects/>) and a limited number of hard copies are available on request.

DCR hopes that you and other reviewers of the EENF find the document informative. We look forward to your review of this document and to close consultation with you and other reviewers in the coming weeks. In coordination with your staff, a MEPA scoping session will be scheduled and the date and place announced in the Environmental Monitor.

Please feel free to contact Dan Driscoll at (617) 626-1438 if you have any questions.

Very truly yours,

A handwritten signature in black ink, appearing to read 'John P. Murray', with a stylized flourish at the end.

John P. Murray, Commissioner

cc: Joe Orfant, Chief, Bureau of Planning and Resource Protection
Dan Driscoll, Director, Recreation Facilities Planning
Paul Jahnige, Greenways and Trails Program


CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

(Name) Boston Globe/Metro West Daily News (Date) 11/05/2013

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Signatures:

Date	 Signature of Responsible Officer or Proponent	Date	<u>11/13/13</u> Signature of person preparing ENF (if different from above)
------	---	------	---

John P. Murray, Commissioner
Name (print or type)

Lisa Standley
Name (print or type)

DCR
Firm/Agency

Vanasse Hangen Brustlin, Inc.
Firm/Agency

251 Causeway Street
Street

101 Walnut Street
Street

Boston, MA 02114
Municipality/State/Zip

Watertown, Ma 02471-9151
Municipality/State/Zip

617-626-1250
Phone

617-924-1770
Phone

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

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

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: Mass Central Rail Trail – Wayside Branch		
Street Address: N/A		
Municipality: Waltham, Weston, Wayland, Sudbury, Stow, Hudson, Bolton, and Berlin	Watershed: Charles, Sudbury, and Assabet Rivers	
Universal Transverse Mercator Coordinates: Easting: 318092.6818256506 (Waltham) 282260.9273057822 (Berlin) Northing: 4694731.993296294 (Waltham) 4696054.360546819 (Berlin)	Latitude: 42.383586 (Waltham) 42.386271 (Berlin) Longitude: -71.209751 (Waltham) -71.645110 (Berlin)	
Estimated commencement date: 2014		Estimated completion date: 2020
Project Type: Shared Use Path		Status of project design: Concept Complete
Proponent: Massachusetts Department of Conservation & Recreation (Attn: Daniel Driscoll)		
Street Address: 251 Causeway Street		
Municipality: Boston	State: MA	Zip Code: 02114
Name of Contact Person: Lisa Standley		
Firm/Agency: VHB	Street Address: 101 Walnut Street	
Municipality: Watertown	State: MA	Zip Code: 02471
Phone: (617) 924-1770	Fax: (617) 924-2286	E-mail: lstandley@vhb.com

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 301 CMR 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.)

This Expanded Environmental Notification Form serves to adequately present background information and environmental resource impacts of the Mass Central Rail Trail – Wayside Branch project and respectfully requests a waiver for the preparation of a mandatory EIR. In the event a full EIR waiver is not granted, a Phase I waiver is requested for the Wayland segment of this project.

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

The project exceeds the following MEPA thresholds under 11.03(1)(a)2 Creation of ten or more acres of new impervious area; 11.03(3)(a)1.b. Alteration of ten or more acres of any other wetlands.

Which State Agency Permits will the project require?

Chapter 91 Waterways License

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:

Financial assistance has not been identified at this point in the project design.

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	53		
New acres of land altered		0	
Acres of impervious area	0	28	28 ¹
Square feet of new bordering vegetated wetlands alteration		4,146 (<0.1 ac.)	
Square feet of new other wetland alteration ²		726,193 (16.77 ac.)	
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
Has this project been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No			
Has any project on this site been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No			

¹ Acres of impervious area is dependent on the surface material chosen in each community for the shared-use path. This value represents the most impervious area that could be associated with the 10-foot wide, 23-mile long path.

² Previously altered Riverfront Area and Bordering Land Subject to Flooding

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

The Massachusetts Department of Conservation and Recreation (DCR) is proposing the Mass Central Rail Trail – Wayside Branch (MCRT-WB) project, a 10-foot wide and 23-mile long shared-use path through the municipalities of Berlin, Bolton, Hudson, Stow, Sudbury, Wayland, Weston, and Waltham. The rail trail would be constructed within a 19-foot wide path development corridor within the existing 50- to 100-foot wide former Massachusetts Central Railroad right-of-way (ROW) now owned by the Massachusetts Bay Transit Authority (MBTA). DCR has secured a lease with the MBTA along the ROW that allows DCR to construct, manage and maintain a rail trail within a 19-foot delineated “path development corridor” and develop additional amenities outside of this corridor provided they do not conflict with other MBTA uses. During 2012, DCR delineated the path development corridor within the existing ROW, and received approval from the MBTA for its use for the MCRT-WB rail trail project. This corridor largely follows and is centered on the existing single wide track, ties and ballast. The rail trail would extend from Coburn Road in Berlin to Beaver Street in Waltham. Once completed, the MCRT-WB would be managed by the DCR and maintained by either the DCR, municipalities through which it crosses, or through a cooperative agreement between DCR and the municipalities.

The MCRT - Wayside Branch, the subject of this Expanded Environmental Notification Form (EENF), would be located along the former Massachusetts Central Railroad ROW, a passenger and freight service rail line originally extending from Boston to Northampton. The project is considered a DCR Priority and would contribute to the future vision for a multi-use pathway traversing the state from west to east, specifically connecting Northampton (where the current Norwottuck Rail Trail is heavily used) to Boston. Portions of the MCRT between Oakham and Sterling have been constructed. The project limits have been limited to the Berlin to Waltham section of the corridor, because DCR has a lease which allows them ownership and control of this segment.

The following bullets describe the proposed MCRT-WB in each municipality. The MCRT alignment is shown on Figure 1 through Figure 9 in Attachment C.

- Berlin (2.3 miles) – Beginning at Coburn Road, approximately 182 feet north of the Coburn Road/West Street intersection, and extends east along the existing ROW track alignment to the Berlin/Hudson town line. The Berlin segment crosses two roads at-grade (Highland Street, and Sawyer Hill Road) and under Interstate 495 (I-495).
- Bolton (100 feet) – The MCRT-WB would cross over the Berlin/Bolton town line for a very brief distance before crossing into Hudson. The Bolton segment would cross one road at-grade (Stone Road).
- Hudson (6.9 miles) – From the Bolton/Hudson town line, extends east to the Hudson/Sudbury town line. The Hudson segment would cross seventeen roads at-grade, over, or under the existing roadway. The at-grade crossing streets are: Central Street (at two locations), Cottage Street, Warner Street, Lincoln Street, Felton Street, Pope Street, Church Street, Manning Street, Priest Street, Cox Street, Main Street, Parmenter Road, and White Pond Road. The MCRT-WB would travel under High Street and Chestnut Street (via a box culvert underpass), and would travel over Wilkins Street and Tower Street (via a bridge replacing the removed existing railroad bridge). The MCRT-WB will intersect the existing Town of Hudson segment of the Assabet River Rail Trail east of Wilkins Street.
- Stow (327 feet) – The MCRT-WB would cross over the Hudson/Stow town line for a very brief distance

before crossing back into Hudson east of Wilkins Street.

- Sudbury (4.6 miles) – From the Hudson/Sudbury town line, extends east to the Sudbury/Wayland town line. The Sudbury segment would cross five roads at-grade (Dutton Road, Peakham Road, Horse Pond Road, Union Avenue, Boston Post Road). The MCRT-WB will travel under (via an underpass) Landham Road.
- Wayland (3.0 miles) – From the Sudbury/Wayland town line, extends east to the Wayland/Weston town line. The Wayland segment would cross six roads at-grade (Boston Post Road, Old Sudbury Road, Concord Road, Millbrook Road, Glen Road, and Plain Road).
- Weston (3.0 miles) – From the Wayland/Weston town line, extending east to the Weston/Waltham town line. The Weston segment would cross Gun Club Lane at-grade, and would cross under three roads (Concord Road, Conant Road and Church Street).
- Waltham (3.0 miles) – From the Weston/Waltham town line, extends east to the end point at the intersection of Beaver Street and Waverley Oaks Road (Route 60). The Waltham segment would cross eight roads: seven at-grade, and one (I-95) along an overpass (Jones Road, Interstate 95, Stow Street, Main Street, Hillside Road, Prospect Hill Road, Hammond Street, Bacon Street, Lexington Street, Lyman Street, and Linden Street).

The rail trail would be constructed as an off-road multi-use path. As with other multi-use paths in Massachusetts, the MCRT-WB would have trail heads at adjacent intersecting streets and would use existing parking facilities along its corridor to the greatest extent feasible. Construction phasing of the various segments of the MCRT-WB is dependent on several factors, such as design, status of encroachment resolutions, environmental permitting, and availability of funds.

CONSISTENCY WITH OTHER TRAIL NETWORKS AND PLANS:

The MCRT-WB would bring a number of advantages to its users, surrounding communities and the Commonwealth as a whole. Development of the MCRT-WB would advance state-wide trail network connections. The proposed MCRT alignment in Sudbury would intersect and connect to the proposed Bruce Freeman Rail Trail (BFRT), a proposed rail trail extending north to south from Lowell to Framingham (Sudbury is included in Phase 2 of the BFRT, which has not yet been constructed). The MCRT alignment would also intersect and connect to the Assabet River Rail Trail (ARRT) in Hudson. The ARRT will run through Marlborough, Hudson, Stow, Maynard, and Acton when complete. The Hudson section of the ARRT has been completed and is now in use. The MCRT-WB would be located approximately three miles west of the Minuteman Commuter Bike Path. The trail would also intersect the Bay Circuit Trail in Sudbury (at Route 20) and Wayland (at Route 27), a 200-mile recreational trail that circumnavigates the Boston metropolitan area from Ipswich to Duxbury. The MCRT-WB has also been identified as a future segment of the East Coast Greenway System, a 3,000-mile long trail / greenway that will on-day run from Maine to Florida connecting major East Coast cities. If developed, the MCRT-WB would also support this large scale, eastern United States trail network. See Figure 10 for trails in close proximity to the MCRT-WB within the region.

The *Massachusetts Bicycle Transportation Plan* (2008), developed by the Executive Office of Transportation, aims to identify and prioritize improvements to the state's existing infrastructure to support and promote bicycling. The Plan provides an inventory of existing on-road and off-road facilities, and proposed projects, along with a thorough strategy for implementing the Bay State Greenway network. The Bay State Greenway network, composed of seven corridors and spanning 740 miles across the state, serves as a primary bike network in Massachusetts with secondary routes branching off along the corridor. The Mass Central Corridor (including

the proposed MCRT-WB project from Berlin to Waltham) is one of the seven corridors that compose the Bay State Greenway network, stretching from Hancock to Somerville. Similarly, the *Massachusetts Pedestrian Transportation Plan* (1998) aims to develop a more pedestrian focused transportation system through improvement strategies and suggestions. At the time this statewide Pedestrian Transportation Plan was developed, Massachusetts had one of the highest percentages of walking trips and low pedestrian fatality rates. Additional pedestrian paths would expand walkability in all areas. The MCRT-WB supports these statewide Bicycle and Pedestrian Transportation Plans as it would serve to advance the plan's goals and the development of a more extensive and robust bicycle and pedestrian network in the Commonwealth.

The MCRT has been highlighted as a priority in *Commonwealth Connections*, the *Massachusetts Greenway Vision Plan*. The *Commonwealth Connections* initiative was developed by DCR, the National Park Service, and various trail, land and non-profit organizations in order to create a greenway and trail network to conserve resources, provide recreation and provide alternative transportation opportunities. Through *Commonwealth Connections*, seven strategies were developed for greenway development:

- Protect and promote long-distance trail corridors as primary spines of the Massachusetts Greenway and Trail System;
- Protect critical river corridors and their tributaries statewide;
- Strategically link important natural and human communities;
- Create a cross-state multi-use trail reaching from Boston to the Berkshires;
- "Trail bank" unused rail corridors and work to gain public access to utility corridors;
- Assist the greenways and trails development community with technical support and funding needed to establish a coordinated statewide greenway system; and
- Increase funding for greenways and trails.

The *Massachusetts Greenway Vision Plan* was developed in 2001 through a series of seven listening sessions around the state as part of the *Commonwealth Connections* initiative. The MCRT was noted as a critical trail and a State-wide priority in this Greenway Plan, as it supports many of the *Commonwealth Connections* strategies.

In addition to statewide bike and pedestrian plans in Massachusetts, regional plans also play an important role serving as guides for the development of these uses. The Metropolitan Area Planning Council (MAPC) has developed the *Boston Region's Pedestrian Transportation Plan* (2010) to focus pedestrian related efforts on communities within the Boston Metropolitan area. This plan works to advance goals of the MAPC's MetroFuture plan³ related to expansion of travel choices and increasing opportunities for walking. MetroFuture recommendations targeted towards promotion of pedestrian access include maintaining and managing bicycle and pedestrian facilities as full-fledged transportation linkages, and increasing bicycle, pedestrian, and transit accessibility. The *Boston Region's Pedestrian Transportation Plan* contains information on the different stakeholders and advocacy groups involved with promoting solutions to pedestrian issues, and strategies a community can undertake to increase pedestrian related amenities, such as converted rail trails. The MCRT-WB supports the MAPC's goals for the region to enhance pedestrian resources.

In April 1997, the Boston Metropolitan Planning Organization (MPO) conducted the Central Massachusetts Rail Trail Feasibility Study, based on requests from seven communities along the corridor (Berlin, Hudson, Sudbury, Wayland, Weston, Waltham, and Belmont). This study analyzed various factors to determine trail

3 MetroFuture is the MAPC and Boston Metropolitan Planning Organization's regional plan aimed at improving the overall quality of life for those who live and work in the Boston Metropolitan area between now and 2030. <http://www.mapc.org/metrofuture>

feasibility, such as public transit availability in the study area towns, ROW characteristics, environmental issues, costs, and potential parking locations. An advisory committee composed of representatives from study area towns and various agencies/organizations held meetings throughout the feasibility study, in which over 400 citizens attended. The study determined that constructing a rail trail on the Massachusetts Central Railroad ROW was feasible and should be pursued. The study also documented strong levels of community interest and support. The feasibility study made recommendations relevant to at-grade crossings, enforcement, educating users, environmental factors, and handling local jurisdiction. DCR has used this feasibility study in the development of conceptual design and preliminary engineering of the trail. Following the feasibility study, Weston voted not to continue participation in the effort at that time. However, various other communities, including Waltham, Wayland, and Hudson, continued to work to support the trail and moving the project forward. Although Weston has not formally voted on the support of the trail in recent years, general consent shows more support than in the past. DCR would collaborate with the communities involved during the MCRT-WB development.

ENVIRONMENTAL IMPACTS:

The MCRT-WB exceeds two thresholds requiring the preparation of an Environmental Impact Report (EIR) through the Massachusetts Environmental Policy Act (MEPA) with the purpose of analyzing environmental impacts and mitigation associated with the project. The MEPA thresholds exceeded include:

- 11.03(1)(a)2 *creation of ten or more acres of new impervious area, and*
- 301 CMR: 11.03(3)(a)1.b. *alteration of ten or more acres of any other wetlands (Bordering Land Subject to Flooding and Riverfront Area).*

The MCRT-WB would not result in new alteration of land, as the project corridor is the re-use of an existing railroad bed consisting of ballast, ties and track.

Although the MCRT-WB would result in more than ten acres of impervious area, the project would span 23 miles across eight communities along a linear and narrow corridor. Compared to a non-linear corridor project, such as a site being developed on a traditional parcel of land, the increase in impervious area would not have the same impacts. As the MCRT-WB would be narrow, any stormwater that falls upon the impervious surface would immediately shed off onto surrounding vegetated, pervious areas. The increase in runoff rates are considered negligible due to the similarities between the existing surface and the proposed improvements. The existing surface material of the abandoned corridor could be considered currently impervious as it is composed of compacted gravel from years of train loads along the railroad alignment and informal use by walkers and bicyclists. Developing a more formalized trail over this surface would not significantly alter the rates and amount of stormwater filtration.

Although the project is anticipated to alter greater than ten acres of any other wetlands (Riverfront Area and Bordering Land Subject to Flooding), these areas are previously-developed and consist of railroad ballast, ties and track in most locations (See Figures 2-10). The proposed project would not alter the ability of these areas to protect the significant interests of the Act. Considering the MCRT-WB project as a whole, the wetland impacts would not be considered significant.

Many converted rail trail projects in Massachusetts have been approved for development, resulting in minor impacts to environmental resources. These projects aim to conserve natural resources by converting existing, previously industrial, abandoned corridors into recreational assets for the community, while also bringing natural features back to the corridors through native plantings and educational signage.

Due to the long, narrow, linear nature and overall public benefits of the MCRT-WB project, DCR respectfully

requests the Secretary of Environmental Affairs allow the MEPA process for this project to proceed in the following manner:

- Find that the MEPA review process for the MCRT-WB project is adequately complied with through the information provided in this EENF; and
- Consent to a waiver of the requirement for the preparation of an EIR, in accordance with 301 CMR 11.11.

This strategy would allow the design of the MCRT-WB to proceed while also undergoing supplemental public review, that would expedite the permitting process, would facilitate community partnerships, would expedite the construction of the rail trail, and would additionally preserve limited DCR funding that could otherwise be spent supporting DCR's goals and investing into the public's open space and recreation inventory. Preparing an EIR would be an undue hardship and would not serve to avoid or minimize damage to the environment, as the thresholds that would be exceeded can be considered not significant when the 23-mile long trail is considered as a whole. Attachment B provides a detailed waiver request to the Secretary of Environmental Affairs.

ENVIRONMENTAL RESOURCES

As part of the preparation of this EENF, DCR conducted a GIS- and field-based analysis to calculate project impacts to environmental resources including wetlands (Bordering Land Subject to Flooding and Riverfront Area), Priority Habitats of Rare Species, and prehistoric and historic archaeological and above-ground resources. A town-by-town and section-by-section breakdown of these impacts is provided in this EENF and the relevant attachments. Figures 1 through 9 (Attachment C) depict the location of the proposed MCRT-WB alignment and the locations of potential areas of impact to Bordering Vegetated Wetlands, Bordering Land Subject to Flooding, Riverfront Area, Estimated and Priority Habitats of Rare Species, and other resources.

Various environmental resources have the potential to be affected by the proposed 23-mile long MCRT-WB project. These include wetland resource areas (Bordering Land Subject to Flooding and Riverfront Area), estimated and priority habitats of rare species, outstanding resource waters, vernal pools, impaired water bodies, and a component of a Wild and Scenic River. Avoidance of all impact to environmental resources is not possible because of the extent of this rail trail (23 miles long and crossing through eight communities). Some of the impacts would be considered beneficial overall for some resources, such as capping the existing railroad bed while also stabilizing the surface and minimizing sediment runoff to adjacent water bodies and wetland areas. Due to the nature of the project and overall scale, any localized impacts to resources would be minimal. For a full description of environmental resources affected by the MCRT-WB project, see the narrative in Attachment A.

ENVIRONMENTAL BENEFITS

Once developed, the MCRT-WB would bring environmental benefits to the community and natural environment. The previously developed corridor is currently perceived as a location for illegal or unwarranted activities such as illegal refuse dumping and use of all-terrain vehicles, or ATVs. If the MCRT-WB were developed, these activities along with the waste and noise associated with them would be essentially eliminated. A formalized trail open to the public would deter such activities from occurring. Converting the corridor into a trail serves as an opportunity to restore the natural habitat that existed prior to the development of the railroad. Natural habitat would be restored by planting native vegetation, controlling invasive species, and enhancing connectivity and the ability for turtles and salamanders to move across the area, as they are currently obstructed by existing rails and ties in the ground. DCR also plans on implementing interpretive educational signage in order to develop awareness and educate trail users about specific species that may inhabit the area.

CONSTRUCTION PHASING

The MCRT-WB project would likely be constructed in phases based on Town boundaries and logical end points. Each Town may participate in the advancement of, to varying extents depending on available resources, local permitting, design, construction, and necessary maintenance of the rail trail segment within its boundaries.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:

Is the project within or adjacent to an Area of Critical Environmental Concern?

☐ Yes (Specify _____)
☒ No

if yes, does the ACEC have an approved Resource Management Plan? ____ Yes ____ No;
If yes, describe how the project complies with this plan.

Will there be stormwater runoff or discharge to the designated ACEC? ____ Yes ____ No;

If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC.

RARE SPECIES:

Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhosp/regulatory_review/priority_habitat/priority_habitat_home.htm)

☒ Yes (Specify Project within Priority Habitats 1305, 687, 1516 and
Estimated Habitats 485, 648, 38)

☐ No

According to the latest Massachusetts Natural Heritage and Endangered Species Program (NHESP) atlas dated 2008, the MCRT-WB would pass through three priority and estimated species habitats: PH 1305/EH 485, PH 687/EH 648 and PH 1516/EH 38. The NHESP has been consulted concerning the species found in these polygons and in a letter dated June 19, 2013 (Attachment G), has identified eight state-listed rare species present in the vicinity of the project corridor.

PH 1305, EH 485

Scientific Name	Common Name	Taxonomic Group	State Status
<i>Emydoidea blandingii</i>	Blandings Turtle	Reptile	Threatened

PH 687, EH 648

Scientific Name	Common Name	Taxonomic Group	State Status
<i>Glyptemys insculpta</i>	Wood Turtle	Reptile	Special Concern
<i>Terrapene carolina</i>	Eastern Box Turtle	Reptile	Special Concern

PH1516, EH 38

Scientific Name	Common Name	Taxonomic Group	State Status
<i>Botaurus lentiginosus</i>	American Bittern	Bird	Endangered
<i>Ambystoma laterale</i>	Blue-Spotted Salamander	Amphibian	Special Concern
<i>Gallinula chloropus</i>	Common Moorhen	Bird	Special Concern
<i>Ixobrychus exilis</i>	Least Bittern	Bird	Endangered
<i>Podilymbus podiceps</i>	Pied-Billed Grebe	Bird	Endangered

Source: Massachusetts Natural Heritage and Endangered Species Program

The project proponent will continue to coordinate with NHESP regarding project development within estimated and priority species habitats. Copies of the Notice of Intent (NOIs) would be submitted to the

NHESP for review along with a request for a Massachusetts Endangered Species Act review when the NOIs are filed with the town Conservation Commissions. The four bird species found within polygons crossed by the MCRT-WB are species of large deep-water marshes, habitats that would not be affected by the proposed trail. The three turtle and one salamander found within polygons crossed by the MCRT-WB may cross the trail to move between upland and wetland habitats used at different life history stages, or simply to move between similar habitat patches. The proposed MCRT-WB would remove the existing track and ties that create a barrier to the movement of these species, and would improve habitat connectivity.

HISTORICAL /ARCHAEOLOGICAL RESOURCES:

Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

☒ Yes (Specify The project is within or near numerous National Register Historic Districts, individually listed National Register properties, and inventoried historic properties.) ☐ No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☐ Yes (Specify _____) ☒ No

A cultural resources analysis was performed for above-ground inventoried and listed historic and archaeological resources within 0.25 miles of the MCRT corridor (the Area of Potential Effect). The following resources were discovered in proximity to the corridor: seven individual resources listed in the State Register of Historic Places; six districts listed in the State Register of Historic Places; and, twenty-three inventoried resources. These resources include ten previously inventoried railroad bridges and one bridge officially listed in the State and National Register of Historic Places that would be reused by the MCRT-WB. Sixteen previously reported archaeological sites were also identified along the corridor or within 0.25 miles of the centerline.

Impacts to cultural resources are anticipated to be minimal, as the MCRT-WB project and construction would entail developing a 10-foot wide path with associated vegetated shoulders and grading. According to the *Mass Central Rail Trail Evaluation of Existing Bridges, Wayside Branch – Waltham to Berlin* (Attachment F) completed by DCR, many of the bridges contain deficiencies that would need to be addressed. Recommended rehabilitation and replacement was evaluated in the memo. Any proposed work to listed or inventoried historic bridges is intended to increase the safety and stability of the bridge structures for the purposes of the MCRT-WB, while maintaining the historic character of the structures. The recommended repairs to the listed or inventoried historic bridges needed for the development of the MCRT-WB are described in detail in Attachment A.

Construction of the MCRT-WB is not expected to affect any recommended areas of archaeological sensitivity or previously recorded sites due to the shallow depth of construction entirely within the old railroad ballast and subgrade (under the railroad bed itself) areas. Appropriate measures would be taken to avoid any identified archaeological resources, however, should work go outside these areas.

As some of the historic resources identified in the analysis are designated by local historic district commissions, these historic commissions have been provided a copy of this EENF detailing the proposed work. Additionally, the project proponent would notify and coordinate with the Massachusetts Historical Commission (MHC) and State Historic Preservation Officer (SHPO) regarding any potential impacts to historic and cultural resources that could arise. A detailed analysis of the cultural resources along the MCRT-WB has been conducted and is further explained in the narrative in Attachment A.

WATER RESOURCES:

Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site? X Yes
 No;
if yes, identify the ORW and its location.

The project would pass through a surface water supply protection zone in Weston and Waltham associated with the Cambridge Reservoir. Three certified vernal pools are located in proximity to the alignment. No alterations or impacts to ORWs or surface water features associated with the water supply protection zone are anticipated as part of the proposed work.

(NOTE: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

Are there any impaired water bodies on or within a half-mile radius of the project site? ☒ Yes ☐ No; if yes, identify the water body and pollutant(s) causing the impairment:

According to the Massachusetts Department of Environmental Protection (MassDEP) 2012 Integrated List of Waters, the project would cross over the following impaired water bodies: Assabet River (MA82B-04), Hop Brook (MA82A-05), Sudbury River (MA82A-04), Wash Brook (MA82A-06), and Beaver Brook (MA72-28). The proposed project would not contribute to the impairments of concern associated with these water bodies. For more information please refer to the attached narrative.

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? ☒ Yes ☐ No

The project is located within the SuAsCo (Sudbury-Assabet-Concord) and Charles Major Drainage Basins, which are listed as medium stress basins.

STORMWATER MANAGEMENT:

Generally describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

The immediate area of the former Massachusetts Central Railroad MBTA-owned ROW (and the area where the MCRT-WB would be developed within the path development corridor) is currently compacted ballast material. The MBTA-owned ROW area is currently a hard surfaced path composed of compacted gravel and substrate from the informal use of the trail by walkers, runners, bicyclists, and others. The proposed project would develop a 10-foot wide trail, with 2-foot vegetated shoulders on either side of the trail. Stormwater would generally be shed off the trail (country drainage) directly onto the adjacent vegetated shoulders and areas. In some locations where the rail trail is in a cut section, swales may be needed to control runoff. Since the rail trail would be mainly used by pedestrians and bicyclists, there would be minimal (if any) accumulations of contaminants that would otherwise collect on a typical roadway surface. In accordance with the Massachusetts Wetlands Protection Act Regulations the MCRT-WB would be designed to address the Stormwater Management Standards to the maximum extent practicable (310 CMR 10.05(6)(m)(6.)). The project would require a National Pollutant Discharge Elimination System (NPDES) Construction General Permit through the Environmental Protection Agency for the alteration of more than one acre of land. DCR would secure all necessary permits throughout the development of the MCRT-WB.

MASSACHUSETTS CONTINGENCY PLAN:

Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? Yes ☐ No ☒ ; if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification): _____

Is there an Activity and Use Limitation (AUL) on any portion of the project site? Yes ☐ No ☒ ; if yes, describe which portion of the site and how the project will be consistent with the AUL: _____

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN?
Yes ___ No X ; if yes, please describe: _____

SOLID AND HAZARDOUS WASTE:

If the project would generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:

The former railroad ties and rails are present along much of the MCRT-WB alignment. These materials would be removed before trail construction. The steel rail would be recovered and recycled. The ties are impregnated with creosote and cannot be recycled and would be disposed of properly.

(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Will your project disturb asbestos containing materials? Yes ___ No X ;
if yes, please consult state asbestos requirements at <http://mass.gov/MassDEP/air/asbhom01.htm>

Describe anti-idling and other measures to limit emissions from construction equipment:

Construction specifications would stipulate use of ultra-low sulfur fuel in construction equipment with necessary engine modifications in accordance with the MassCleanDiesel Program. In addition, equipment being used on or adjacent to the work site that are not being used or five minutes or longer shall be turned off.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? Yes X No ___ ;
if yes, specify name of river and designation:

The proposed project would cross the Sudbury River in Wayland, a National Park Service designated Wild and Scenic River, on an existing bridge. No impacts are anticipated as part of the proposed project to any Wild and Scenic River segments. The bridge is deficient and requires rehabilitation or full replacement in order to satisfy state and federal design standards for rail trail bridges. According to the *Mass Central Rail Trail Evaluation of Existing Bridges, Wayside Branch – Waltham to Berlin* (Attachment F) and further explained in the narrative in Attachment A, recommended rehabilitation includes:

- Remove and dispose timber ties, steel rails, and ballast;
- Remove timber curbs and timber decking;
- Repair severed timber pile;
- Repair deteriorated timber pile cross bracing;
- Repair/replace deteriorated timber pile caps as required;
- Replace deteriorated timber beams as required; and
- Construct new timber deck and railings.

The MCRT-WB would advance the Wild and Scenic Rivers Act by utilizing a former rail trail for a multi-use path, while enhancing public access to scenic views and a natural corridor. The MCRT-WB, once complete, would not accumulate contaminants due to the intended use. The trail would be used solely by walkers, runners, and bicyclists. No vehicles or machinery would be allowed on the trail other than maintenance and emergency vehicles. Due to the nature of use, the MCRT-WB would not adversely impact any Wild and Scenic River segments, but would provide additional access to view and enjoy the scenic values of the waterway.

If yes, does the project have the potential to impact any of the "outstandingly remarkable" resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River?

Yes ___ No X ; if yes, specify name of river and designation: _____;

if yes, will the project will result in any impacts to any of the designated "outstandingly remarkable" resources of the Wild and Scenic River or the stated purposes of a Scenic River.

Yes ___ No X ;

if yes, describe the potential impacts to one or more of the "outstandingly remarkable" resources or stated purposes and mitigation measures proposed.

ATTACHMENTS:

1. List of all attachments to this document.
2. U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries.
- 3.. Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities.
- 4 Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts.
5. Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase).
6. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2).
7. List of municipal and federal permits and reviews required by the project, as applicable.

List of Permits/Reviews Required

Order of Conditions in each municipality (eight)

United States Army Corps of Engineers Section 404 Permit

Chapter 91 Waterways License(s)

Natural Heritage Endangered Species Program Conservation and Management Permit
(potential)

National Pollutant Discharge Elimination System Construction General Permit

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1)) X Yes ___ No; if yes, specify each threshold:

The MCRT-WB project exceeds review threshold 301 CMR 11.03(1)(a)(2), creation of ten or more acres of impervious area. The project area is a former railroad bed that was previously altered and consists of hard, ballast material. There would be no new alteration of land. The proposed work within the former rail bed, although altering the existing conditions, would be an improvement by stabilizing the corridor, capping the underlying soils, addressing encroachment and dumping, and allowing public access with the creation of a shared-use path. Although the total maximum new impervious cover is estimated at 28 acres, this is for the entire 23-mile long corridor. Taken as a whole, this impervious cover is not significant when compared to the project size.

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Footprint of buildings	<u>0</u>	<u>0</u>	<u>0</u>
Internal roadways	<u>0</u>	<u>0</u>	<u>0</u>
Parking and other paved areas	<u>0</u>	<u>28</u>	<u>28</u>
Other altered areas*	<u>53</u>	<u>0</u>	<u>0</u>
Undeveloped areas	<u>0</u>	<u>0</u>	<u>0</u>
Total: Project Site Acreage	<u>53</u>	<u>28</u>	<u>53</u>

*Other altered areas (existing) include the former railroad embankment and bed

B. Has any part of the project site been in active agricultural use in the last five years?
___ Yes X No; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?

C. Is any part of the project site currently or proposed to be in active forestry use?
___ Yes X No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ___ Yes X No; if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction?
___ Yes X No; if yes, does the project involve the release or modification of such restriction? ___ Yes ___ No; if yes, describe:

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes X No; if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? Yes ___ No X; if yes, describe:

III. Consistency

- A. Identify the current municipal comprehensive land use plan
Title: _____ Date: _____
- B. Describe the project's consistency with that plan with regard to:
- 1) economic development _____
 - 2) adequacy of infrastructure _____
 - 3) open space impacts _____
 - 4) compatibility with adjacent land uses _____

Municipal and regional land use plans, goals, and objectives were examined for consistency in each municipality along the MCRT corridor. The evaluation of Open Space and Recreation Plans, Community Development Plans, Community Preservation Plans, and Master Plans demonstrates that the MCRT-WB project would support these plans, goals and objectives. Communities, local organizations, and businesses have expressed their support for the development of the MCRT-WB through letters and other correspondence with DCR (see Attachment E for Letters of Support). The MCRT-WB has been highlighted as a priority in *Commonwealth Connections*, the Massachusetts Greenway Vision Plan. The Commonwealth Connections initiative was developed by DCR, the National Park Service, and various trail, land and non-profit organizations in order to create a greenway and trail network to conserve resources, provide recreation and provide alternative transportation opportunities. The *Massachusetts Greenway Vision Plan* was developed in 2001 through a series of seven listening sessions around the state as part of the Commonwealth Connections initiative. The MCRT was noted as a critical trail as a State-wide priority in this Greenway Plan, as it supports many of the *Commonwealth Connections* strategies. Throughout the project's development, DCR will continue to coordinate with the communities along the MCRT-WB. For more information on how the MCRT-WB would support these plans and each community's goals for the future, please refer to the narrative in Attachment A.

RARE SPECIES SECTION

I. Thresholds / Permits

- A. Will the project meet or exceed any review thresholds related to **rare species or habitat** (see 301 CMR 11.03(2))? ☐ Yes ☒ No; if yes, specify, in quantitative terms:

NHESP has been consulted for information regarding state-listed rare species located within the project limits. Three polygons of Estimated and Priority Habitat of state-listed rare species are crossed by the existing rail corridor in Berlin, Hudson, Sudbury and Wayland. The NHESP responded to a request for information about the identity of the species within the polygons in a letter dated June 19, 2013 (Attachment G), and indicated that eight protected species are present within the three polygons. When NOIs are prepared, copies of the NOIs would be provided to the NHESP for detailed review and a determination if a "take" would occur. The Project is not anticipated to result in the "take" of a protected species or its habitat and therefore, is not anticipated to require a Conservation and Management Permit from the NHESP. The four bird species found within polygons crossed by the MCRT-WB are species of large deep-water marshes, habitats that would not be affected by the proposed trail. The three turtle and one salamander found within polygons crossed by the MCRT-WB may cross the trail to move between upland and wetland habitats used at different life history stages, or simply to move between similar habitat patches. The proposed MCRT-WB would remove the existing track and ties that create a barrier to the movement of these species, and would improve habitat connectivity.

(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

- B. Does the project require any state permits related to **rare species or habitat**? ☐ Yes ☒ No

It is not anticipated that Conservation and Managements Permit would be needed.

- C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ☒ Yes ☐ No.

The polygons of rare species habitat crossed by the project are illustrated on the attached Figures 1 through 9 (Attachment C).

- D. If you answered "No" to all questions A, B and C, proceed to the **Wetlands, Waterways, and Tidelands Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

- A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ☒ Yes ☐ No. If yes,

1. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)? ☒ Yes ☐ No; if yes, have you received a determination as to whether the project will result in the "take" of a rare species? ☐ Yes ☒ No; if yes, attach the letter of determination to this submission.

2. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ☐ Yes ☒ No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts

3. Which rare species are known to occur within the Priority or Estimated Habitat?

According to the latest NHESP atlas dated 2008, the rail trail corridor would pass through the following priority and estimated species habitats: PH1305/EH485, PH1516/EH38, and PH 697/EH 648. NHESP has been consulted for information regarding state-listed rare species located within the project limits. The NHESP responded in a letter dated June 19, 2013 (Attachment G), and has indicated that the following species are within the project limits:

PH 1305, EH 485

Scientific Name	Common Name	Taxonomic Group	State Status
<i>Emydoidea blandingii</i>	Blandings Turtle	Reptile	Threatened

PH 687, EH 648

Scientific Name	Common Name	Taxonomic Group	State Status
<i>Glyptemys insculpta</i>	Wood Turtle	Reptile	Special Concern
<i>Terrapene carolina</i>	Eastern Box Turtle	Reptile	Special Concern

PH1516, EH 38

Scientific Name	Common Name	Taxonomic Group	State Status
<i>Botaurus lentiginosus</i>	American Bittern	Bird	Endangered
<i>Ambystoma laterale</i>	Blue-Spotted Salamander	Amphibian	Special Concern
<i>Gallinula chloropus</i>	Common Moorhen	Bird	Special Concern
<i>Ixobrychus exilis</i>	Least Bittern	Bird	Endangered
<i>Podilymbus podiceps</i>	Pied-Billed Grebe	Bird	Endangered

Source: Massachusetts Natural Heritage and Endangered Species Program

4. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act? ___ Yes X No

4. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? ___ Yes X No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? ___ Yes ___ No

Copies of the NOIs would be submitted to the NHESP for review along with a request for a Massachusetts Endangered Species Act review when the NOIs are filed with the town Conservation Commissions.

B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes X No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

The four bird species found within polygons crossed by the MCRT-WB are species of large deep-water marshes, habitats that would not be affected by the proposed trail. The three turtle and one salamander found within polygons crossed by the MCRT-WB may cross the trail to move between upland and wetland habitats used at different life history stages, or simply to move between similar habitat patches. The proposed MCRT-WB would remove the existing track and ties that create a barrier to the movement of these species, and would improve habitat connectivity. The Project

would be constructed on an existing railroad embankment. During construction it is anticipated that daily sweeps of the construction area would be required to ensure no protected species are within the construction zone. Operation of the rail trail would be for bicycles, runners and walkers which should have minimal impact to habitat or individual animals within the habitat polygons. The Project would be fully coordinated with the NHESP for both construction and operation.

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wetlands, waterways, and tidelands** (see 301 CMR 11.03(3))? X Yes No; if yes, specify, in quantitative terms:

The project exceeds review threshold 301 CMR 11.03(3)(a)(1)(b), alteration of ten or more acres of any other wetland (Bordering Land Subject to Flooding and Riverfront Area). The proposed alignment would cross approximately 16.7 acres of Bordering Land Subject to Flooding and Riverfront Area, of which 5.0 acres is both BLSF and Riverfront Area. Individually, 10.9 acres of Bordering Land Subject to Flooding (100-year floodplain) and approximately 10.7 acres of Riverfront Area would be crossed based on a GIS analysis. Although these resource areas would be crossed by the project, actual impacts would be minimal as the work would be on the existing railroad embankment. As it exists today, the railroad embankment is presumably elevated above the 100-year floodplain, meaning the path development corridor and associated MCRT-WB would be developed above the 100-year floodplain elevations, causing only minimal, if any, impacts to flooding and floodplain storage. If the design of the rail trail demonstrates flood elevations to be higher than presumed, the height of the embankment from development of the MCRT-WB would be kept at its current elevation minimizing any potential impacts to the 100-year floodplain and retaining current floodplain storage. Final designs that would be reviewed by the local Conservation Commissions and/or the MassDEP would determine actual impact areas and would include mitigation measures to minimize and offset any impacts.

B. Does the project require any state permits (or a local Order of Conditions) related to **wetlands, waterways, or tidelands**? X Yes No; if yes, specify which permit:

An Order of Conditions would be required from every town crossed by the MCRT-WB. Under the Wetlands Protection Act 310 CMR 10.53(6), an Order of Conditions may be issued for the construction of a footpath, bikepath, and other pedestrian access to or along riverfront area. The regulations state that generally the access width shall not exceed ten feet of pavement, with the exception of already altered areas, such as railroad beds within a ROW.⁴ Waterways regulations 310 CMR 9.04 and 9.05 require a Chapter 91 license for any maintenance or repair of structures, and any change in use of structures in non-tidal navigable rivers or streams.⁵ Chapter 91 licensing would be required through MassDEP for several of the navigable river and stream crossings, in particular, the Sudbury and Assabet River crossings for reuse and change of use from a railroad bridge to a public rail trail use. Other potential navigable waters the MCRT-WB would cross include: Hogg Brook in Berlin/Hudson; Fort Meadow Brook in Hudson; Hop Brook, Wash Brook, and Dudley Brook in Sudbury; Mill Brook and Hayward Brook in Wayland; Cherry Brook and Stony Brook in Weston; Chester Brook and Beaver Brook in Waltham.

C. If you answered "No" to both questions A and B, proceed to the **Water Supply Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

⁴ Massachusetts Department of Environmental Protection. 310 CMR 10.53(6)

⁵ Massachusetts Department of Environmental Protection. 310 CMR 9.00: Waterways

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? X Yes ___ No; if yes, has a Notice of Intent been filed? ___ Yes X No; if yes, list the date and MassDEP file number: _____; if yes, has a local Order of Conditions been issued? ___ Yes ___ No; Was the Order of Conditions appealed? ___ Yes ___ No. Will the project require a Variance from the Wetlands regulations? ___ Yes X No.

The preferred project alignment was chosen in order to avoid wetland areas to the greatest extent feasible. The MCRT-WB would alter approximately 4,150 square feet of Bordering Vegetated Wetland (BVW) throughout its alignment. NOIs would be filed for the project with each of the town Conservation Commissions and the MassDEP at the final design phase.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

Potential impacts to regulated wetland resources, BVW, Bank, Bordering Land Subject to Flooding and Riverfront Area would occur in varying degrees in each of the towns crossed by the project. Impacts would include filling, excavating, grading, re-surfacing, and landscaping. Work associated with development of the MCRT-WB is expected to meet all performance standards. A detailed description of construction activities and impacts to wetland resources is provided in Attachment A.

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

<u>Coastal Wetlands</u>	<u>Area (square feet) or Length (linear feet)</u>	<u>Temporary or Permanent Impact?</u>
Land Under the Ocean	_____	_____
Designated Port Areas	_____	_____
Coastal Beaches	_____	_____
Coastal Dunes	_____	_____
Barrier Beaches	_____	_____
Coastal Banks	_____	_____
Rocky Intertidal Shores	_____	_____
Salt Marshes	_____	_____
Land Under Salt Ponds	_____	_____
Land Containing Shellfish	_____	_____
Fish Runs	_____	_____
Land Subject to Coastal Storm Flowage	_____	_____
<u>Inland Wetlands</u>		
Bank (lf)	2,140 lf	Permanent
Bordering Vegetated Wetlands	4,150 sf	Permanent
Isolated Vegetated Wetlands	0	_____
Land under Water	0	_____
Isolated Land Subject to Flooding	0	_____
Bordering Land Subject to Flooding	475,500 sf	Permanent
Riverfront Area	466,600 sf	Permanent

D. Is any part of the project:

1. proposed as a **limited project**? X Yes ___ No; if yes, what is the area (in sf)? _____

The portions of the MCRT-WB that are in Riverfront Area alone qualifies as a limited project (310 CMR 10.53(6)).

2. the construction or alteration of a **dam**? ☐ Yes ☒ No; if yes, describe:
3. fill or structure in a **velocity zone** or **regulatory floodway**? ☐ Yes ☒ No
4. dredging or disposal of dredged material? ☐ Yes ☒ No; if yes, describe the volume of dredged material and the proposed disposal site:
5. a discharge to an **Outstanding Resource Water (ORW)** or an **Area of Critical Environmental Concern (ACEC)**? ☐ Yes ☒ No
6. subject to a wetlands restriction order? ☐ Yes ☒ No; if yes, identify the area (in sf):
7. located in buffer zones? ☒ Yes ☐ No; if yes, how much (in sf) 1,200,609 (28 acres)

E. Will the project:

1. be subject to a local wetlands ordinance or bylaw? ☐ Yes ☒ No
2. alter any federally-protected wetlands not regulated under state law? ☐ Yes ☒ No; if yes, what is the area (sf)?

III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? ☒ Yes ☐ No; if yes, is there a current Chapter 91 License or Permit affecting the project site? ☐ Yes ☐ No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands:

Waterways regulations 310 CMR 9.04 and 9.05 require a Chapter 91 license for any maintenance or repair of structures and any change in use of structures in non-tidal navigable rivers or streams.⁶ Several major rivers (Sudbury, Assabet) and smaller inland perennial streams would be crossed on existing bridges constructed by the Massachusetts Central Railroad. Potential navigable waters the MCRT-WB would cross include: Hogg Brook in Berlin/Hudson; Assabet River and Fort Meadow Brook in Hudson; Hop Brook, Wash Brook, and Dudley Brook in Sudbury; Sudbury River, Mill Brook, and Hayward Brook in Wayland; Cherry Brook and Stony Brook in Weston; Chester Brook and Beaver Brook in Waltham. This chartered railroad may not have been issued Chapter 91 licenses for these bridges. The MassDEP would be consulted during preliminary and final design regarding the need for new Chapter 91 licensing for the rehabilitation of these bridges and reuse for the MCRT-WB.

B. Does the project require a new or modified license or permit under M.G.L.c.91? ☒ Yes ☐ No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use? Current 0 Change 0 Total 0. If yes, how many square feet of solid fill or pile-supported structures (in sf)? **(To be determined during final design)**

C. For non-water-dependent use projects, indicate the following:

Area of filled tidelands on the site: 0

Area of filled tidelands covered by buildings: 0

For portions of site on filled tidelands, list ground floor uses and area of each use: 0

Does the project include new non-water-dependent uses located over flowed tidelands?

Yes ☐ No ☒

Height of building on filled tidelands _____

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

D. Is the project located on landlocked tidelands? ☐ Yes ☒ No; if yes, describe the project's

⁶ Massachusetts Department of Environmental Protection. 310 CMR 9.00: Waterways

impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ___ Yes X No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

F. Is the project non-water-dependent **and** located on landlocked tidelands **or** waterways or tidelands subject to the Waterways Act **and** subject to a mandatory EIR? ___ Yes X No; (NOTE: If yes, then the project will be subject to Public Benefit Review and Determination.)

G. Does the project include dredging? ___ Yes X No; if yes, answer the following questions:

What type of dredging? Improvement ___ Maintenance ___ Both ___

What is the proposed dredge volume, in cubic yards (cys) _____

What is the proposed dredge footprint ___ length (ft) ___ width (ft) ___ depth (ft);

Will dredging impact the following resource areas?

Intertidal Yes___ No___; if yes, ___ sq ft

Outstanding Resource Waters Yes___ No___; if yes, ___ sq ft

Other resource area (i.e. shellfish beds, eel grass beds) Yes___ No___; if yes ___ sq ft

If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either avoidance or minimize is not possible, mitigation?

If no to any of the above, what information or documentation was used to support this determination?

Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.

Sediment Characterization

Existing gradation analysis results? ___ Yes ___ No; if yes, provide results.

Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6? ___ Yes ___ No; if yes, provide results.

Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

Beach Nourishment ___

Unconfined Ocean Disposal ___

Confined Disposal:

Confined Aquatic Disposal (CAD) ___

Confined Disposal Facility (CDF) ___

Landfill Reuse in accordance with COMM-97-001 ___

Shoreline Placement ___

Upland Material Reuse ___

In-State landfill disposal ___

Out-of-state landfill disposal ___

(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:

A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? ___ Yes X No; if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? ___ Yes X No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **water supply** (see 301 CMR 11.03(4))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **water supply**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Wastewater Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Municipal or regional water supply	_____	_____	_____
Withdrawal from groundwater	_____	_____	_____
Withdrawal from surface water	_____	_____	_____
Interbasin transfer	_____	_____	_____

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ___ Yes ___ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ___ Yes ___ No; if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results. _____

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? _____ Will the project require an increase in that withdrawal? ___ Yes ___ No; if yes, then how much of an increase (gpd)? _____

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ___ Yes ___ No. If yes, describe existing and proposed water supply facilities at the project site:

	<u>Permitted Flow</u>	<u>Existing Avg Daily Flow</u>	<u>Project Flow</u>	<u>Total</u>
Capacity of water supply well(s) (gpd)	_____	_____	_____	
Capacity of water treatment plant (gpd)	_____	_____	_____	

F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve:

1. new water service by the Massachusetts Water Resources Authority or other agency

of

the Commonwealth to a municipality or water district? ☐ Yes ☐ No

2. a Watershed Protection Act variance? ☐ Yes ☐ No; if yes, how many acres of alteration?

3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking water supply for purpose of forest harvesting activities? ☐ Yes ☐ No

III. Consistency

Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wastewater** (see 301 CMR 11.03(5))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **wastewater**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Discharge of sanitary wastewater	_____	_____	_____
Discharge of industrial wastewater	_____	_____	_____
TOTAL	_____	_____	_____

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Discharge to groundwater	_____	_____	_____
Discharge to outstanding resource water	_____	_____	_____
Discharge to surface water	_____	_____	_____
Discharge to municipal or regional wastewater facility	_____	_____	_____
TOTAL	_____	_____	_____

B. Is the existing collection system at or near its capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

C. Is the existing wastewater disposal facility at or near its permitted capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? ___ Yes ___ No; if yes, describe as follows:

	<u>Permitted</u>	<u>Existing Avg Daily Flow</u>	<u>Project Flow</u>	<u>Total</u>
Wastewater treatment plant capacity (in gallons per day)	_____	_____	_____	_____

E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is

the direction of the transfer, and is the interbasin transfer existing or new?

(NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)

F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district? ____ Yes ____ No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials? ____ Yes ____ No; if yes, what is the capacity (tons per day):

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Treatment	_____	_____	_____
Processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency

- A. Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:
- B. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ____ Yes ____ No; if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan:

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to **traffic generation** (see 301 CMR 11.03(6))? ____ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **state-controlled roadways**? X Yes ____ No; if yes, specify which permit:

The project would require access permits for the crossing of state owned highways and roadways throughout the MCRT-WB alignment.

C. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Number of parking spaces	<u>TBD</u>	<u>0</u>	<u>N/A</u>
Number of vehicle trips per day	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
ITE Land Use Code(s):	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>

B. What is the estimated average daily traffic on roadways serving the site?

<u>Roadway</u>	<u>Existing</u>	<u>Change</u>	<u>Total</u>
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____

No new parking facilities are proposed as part of this project. The MCRT-WB is expected to make use of existing municipal and private parking infrastructure. The MCRT-WB project is not expected to generate substantial new roadway traffic. While some unique vehicle trips will be generated by the new pathway, the development of the MCRT-WB is also expected to lead to mode shifting from motorized vehicular trips to non-motorized trips along the pathway thus also reducing unique vehicle trips that currently occur.

C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

E. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? ____ Yes X No; if yes, describe if and how will the project will participate in the TMA:

F. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ____ Yes X No; if yes, generally describe:

G. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

The MCRT-WB supports and complies with various municipal, regional, and state plans and policies related to pedestrian and bicycle transportation. An evaluation of Open Space and Recreation Plans, Community Development Plans, Community Preservation Plans, and Master Plans of the MCRT corridor communities demonstrates the proposed project would support goals and initiatives in these municipalities. Communities, local organizations, and businesses have expressed their support for the development of the MCRT-WB through letters and other correspondence with DCR (see Attachment E for Letters of Support). For more information and specific details on municipal plans that would encourage the development of the MCRT-WB, refer to Attachment A.

The MAPC's *Boston Region's Pedestrian Transportation Plan* (2010) focuses pedestrian related efforts in the Boston Metropolitan Area. With goals such as increasing bicycle and pedestrian accessibility within the region, the Plan encourages development of rail trail projects such as the MCRT-WB. Additionally, statewide bike and pedestrian plans including the *Massachusetts Bike Transportation Plan* (2008) and the *Massachusetts Pedestrian Transportation Plan* (1998) aim to identify and prioritize improvements to the state's existing infrastructure to support and promote bicycling and walking. The MCRT-WB is pinpointed in the statewide bike plan as a section of the Mass Central Corridor, which is a segment for the larger Bay State Greenway network, a 740-mile bike and pedestrian path spanning from Hancock to Somerville, Massachusetts. The MCRT has been highlighted as a priority in *Commonwealth Connections*, the Massachusetts Greenway Vision Plan. The Commonwealth Connections initiative was developed by DCR, the National Park Service, and various trail, land and non-profit organizations in order to create a greenway and trail network to conserve resources, provide recreation and provide alternative transportation opportunities. These plans contain overarching goals for increasing the amount of cyclists and walkers in the Commonwealth and enhancing the bike and pedestrian network. Developing a 23-mile long converted rail trail from Berlin to Waltham would not only support these municipal, regional, and state plans and goals, but would serve as a crucial linkage to more extensive trail systems in the state.

Abutters and residents that live within the region and MCRT-WB communities, also express concerns and questions for the proposed rail trail. These concerns related to environmental impacts, parking, and public safety. DCR would work closely with the communities and residents throughout the development of the MCRT-WB in order to answer questions and address any concerns with the project. It is important to note that the experience in Massachusetts with rail trail development has been consistently positive, with public benefits largely occurring and concerns rarely materializing.

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? ____ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **roadways or other transportation facilities**? ____ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Energy Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site:

B. Will the project involve any

1. Alteration of bank or terrain (in linear feet)? _____

2. Cutting of living public shade trees (number)? _____

3. Elimination of stone wall (in linear feet)? _____

III. Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

See previous Transportation section for discussion of how the MCRT-WB is consistent with federal, state, regional and local plans and policies related to pedestrian and bicycle transportation facilities and services.

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **energy** (see 301 CMR 11.03(7))? ____ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **energy**? ____ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Capacity of electric generating facility (megawatts)	_____	_____	_____
Length of fuel line (in miles)	_____	_____	_____
Length of transmission lines (in miles)	_____	_____	_____
Capacity of transmission lines (in kilovolts)	_____	_____	_____

B. If the project involves construction or expansion of an electric generating facility, what are:

1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? ____ Yes ____ No; if yes, please describe:

D. Describe the project's other impacts on energy facilities and services:

III. Consistency

Describe the project's consistency with state, municipal, regional, and federal plans and policies enhancing energy facilities and services:
for

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? ____ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **air quality**? ____ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? ____ Yes ____ No; if yes, describe existing and proposed emissions (in tons per day) of:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Particulate matter	_____	_____	_____
Carbon monoxide	_____	_____	_____
Sulfur dioxide	_____	_____	_____
Volatile organic compounds	_____	_____	_____
Oxides of nitrogen	_____	_____	_____
Lead	_____	_____	_____
Any hazardous air pollutant	_____	_____	_____
Carbon dioxide	_____	_____	_____

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **solid and hazardous waste**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ___ Yes ___ No; if yes, what is the volume (in tons per day) of the capacity:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ___ Yes ___ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Recycling	_____	_____	_____
Treatment	_____	_____	_____
Disposal	_____	_____	_____

C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

D. If the project involves demolition, do any buildings to be demolished contain asbestos?
___ Yes ___ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

III. Consistency

Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

This ENF is intended to serve as a Project Notification Form (PNF) filed with the Massachusetts Historic Commission (MHC) in accordance with 950 CMR 71.07.

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? ☐ Yes ☒ No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? ☐ Yes ☒ No; if yes, attach correspondence

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ☒ Yes ☐ No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? ☐ Yes ☒ No; if yes, please describe:

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ☒ Yes ☐ No; if yes, does the project involve the destruction of all or any part of such archaeological site? ☐ Yes ☒ No; if yes, please describe:

D. If you answered "No" to all parts of both questions A, B and C, proceed to the **Attachments and Certifications** Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

A cultural resources analysis was performed for above-ground inventoried and listed historic and archaeological resources within 0.25 miles of the MCRT corridor (the Area of Potential Effect). The following are resources that were discovered in proximity to the corridor: seven individual resources listed in the State Register of Historic Places; six districts listed in the State Register of Historic Places; and, twenty-three inventoried resources. These resources include ten previously inventoried railroad bridges that would be reused by the MCRT-WB and one bridge officially listed in the State and National Register of Historic Places. Sixteen previously reported archaeological sites and areas of possible archaeological sensitivity were also identified along the corridor or within 0.25 miles of the centerline.

Impacts to cultural resources are anticipated to be minimal, as the MCRT-WB project and construction would entail developing a 10-foot wide path with associated vegetated shoulders and grading. According to the *Mass Central Rail Trail Evaluation of Existing Bridges, Wayside Branch – Waltham to Berlin* (Attachment F) completed by DCR, many of the bridges contain deficiencies that would need to be addressed. Recommended rehabilitation and replacement was evaluated in the DCR memo. Any proposed work to listed or inventoried historic bridges is intended to increase the safety and stability of the bridge structures for the purposes of the MCRT-WB, while maintaining the historic character of the structures. The recommended repairs to the listed or inventoried historic bridges needed for the development of the MCRT-WB are described in detail in Attachment A.

No bridges listed in the State or National Register of Historic Places will be demolished or replaced as part of this project. Repairs and maintenance to such bridges would be required in order to create a safe and stable area for the development of the MCRT-WB. The other ten inventoried bridges would need to be evaluated for National Register eligibility by the United States Army Corps of Engineers and concurrence by MHC. The project proponent will coordinate with MHC throughout the design phases, Massachusetts General Laws Chapter 9, sections 26-27C and Section 106 of the National Historic Preservation Act review processes and prior to any work to historic bridges. For additional information on the listed or inventoried bridges see Attachment A.

Construction of the MCRT-WB is not expected to affect any recommended areas of archaeological sensitivity or previously recorded sites due to the shallow depth of construction entirely within the old railroad ballast and subgrade (under the railroad bed itself) areas. Appropriate measures would be taken to avoid any identified archaeological resources, however, should work go outside these areas.

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

As some of the historic resources identified in the analysis are designated by local historic district commissions, these historical or historic district commissions have been provided a copy of this EENF. DCR would notify and coordinate with MHC and the appropriate local historic commissions regarding any potential impacts to historic properties that could arise.

CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

(Name) Boston Globe/Metro West Daily News (Date) 11/05/2013

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Signatures:

Date	Signature of Responsible Officer or Proponent	Date	Signature of person preparing ENF (if different from above)
John P. Murray, Commissioner		Lisa Standley	
Name (print or type)		Name (print or type)	
DCR		Vanasse Hangen Brustlin, Inc.	
Firm/Agency		Firm/Agency	
251 Causeway Street		101 Walnut Street	
Street		Street	
Boston, MA 02114		Watertown, Ma 02471-9151	
Municipality/State/Zip		Municipality/State/Zip	
617-626-1250		617-924-1770	
Phone		Phone	

Table of Contents

Attachment A Mass Central Rail Trail – Wayside Branch Expanded Environmental Notification Form Narrative1

Introduction.....	1
MEPA Review.....	1
Proposed Project	3
Project Background.....	5
Required Permits and Approvals	7
Proposed Project	10
Existing Conditions	10
Proposed Conditions.....	15
Proposed Conditions Summary	25
Alignment Alternatives	26
Project Benefits.....	28
Consistency with Local Plans and Objectives.....	30
Affected Environment and Environmental Consequences	35
Methodology	37
Wetlands.....	38
Outstanding Resource Waters.....	40
Impaired Waterbodies.....	41
Priority Habitats of Rare Species	43
Historic/Archaeological Resources	44
Open Space.....	48
Land.....	49
Temporary Construction Impacts.....	50
Proposed Mitigation Measures	51

Attachment B Request to the Secretary of Environmental Affairs

EIR Waiver Request	2
General Waiver Requirements.....	2
EIR Waiver Requirements	4
Phase One Waiver Request	7
Conclusion.....	8

Attachment C - EENF Figures

Attachment D - EENF Construction Detail Figures (on CD)

Attachment E - Letters of Support

Attachment F - Evaluation of Existing Bridges (on CD)

Attachment G - NHESP Letter

Attachment H - MHC Inventory Forms (on CD)

Attachment I - Distribution List

List of Tables

Table No.	Title	Page
Table 1	Required Permits and Approvals for the MCRT	8
Table 3	Possible Crossing Treatments for MCRT Roadway Crossings	20
Table 4	Description of MCRT By Municipality	26
Table 5	Potential Environmental Resource Impacts By Municipality	36
Table 6	Major Perennial Waterways Crossed by the MCRT Town	39
Table 7	State-Listed Species in Vicinity of Project Corridor	43
Table 8	Open Space - State and Local Forest Lands	49
Table 9	Path Development Corridor and Impervious Cover Areas By Municipality	50

List of Figures

ATTACHMENT C

Mass Central Rail Trail EENF Figures

- Figure 1: Key Map
- Figure 2-9: Project Alignment and Constraints
- Figure 10: Trails in Proximity to MCRT
- Figure 11: Potential Deviation (PD) 1 Alignment Alternative

ATTACHMENT D

Mass Central Rail Trail EENF Construction Detail Figures

- Figure 1: Typical Fill Section
- Figure 2: Typical Cut Section
- Figure 3: Proposed Transverse Section
- Figure 4: Reinforced Earth Slope
- Figure 5: Mechanically Stabilized Earth Slope
- Figure 6: Shrub Planting in Slope or on Level Ground
- Figure 7: Root Barrier Treatment
- Figure 8: Split Rail Wood Fence
- Figure 9: Loam and Seed Swale
- Figure 10: Examples of Signing and Markings for a Shared-Use Path Crossing
- Figure 11: Typical Path Striping/ Pedestrian HAWK Signal Head
- Figure 12: Pedestrian HAWK Signal Mast Arm
- Figure 13: Rapid Reflectorized Flashing Beacon Details
- Figure 14: Entry Gateway/ Concrete Unit Paver
- Figure 15: Flush Granite Curb
- Figure 16: Proposed Overlook/ Rest Area

This page intentionally left blank

Attachment A

Mass Central Rail Trail –Wayside Branch Expanded Environmental Notification Form Narrative

This page intentionally left blank

Mass Central Rail Trail – Wayside Branch Expanded Environmental Notification Form Narrative

Introduction

The Massachusetts Department of Conservation and Recreation (DCR) is proposing the Mass Central Rail Trail - Wayside Branch (MCRT-WB) project, a 10-foot wide and 23-mile long shared-use path through the municipalities of Berlin, Bolton, Hudson, Stow, Sudbury, Wayland, Weston, and Waltham. The rail trail would be constructed within a 19-foot wide path development corridor within the existing 50- to 100-foot wide former Massachusetts Central Railroad right-of-way (ROW) now owned by the Massachusetts Bay Transit Authority (MBTA). DCR has secured a lease with the MBTA along the ROW that allows DCR to construct, manage and maintain a rail trail within a 19-foot delineated path development corridor and develop additional amenities outside of this corridor provided they do not conflict with other MBTA uses. During 2012, DCR delineated the path development corridor within the existing ROW and received approval from the MBTA for its use for the MCRT-WB project. This corridor largely follows and is centered on the existing single wide track, ties and ballast. The rail trail would extend from Coburn Road in Berlin to Beaver Street in Waltham. Once completed, the MCRT-WB would be managed by the DCR and maintained by either the DCR, municipalities through which it crosses, or through a cooperative agreement between DCR and the municipalities.

MEPA Review

The MCRT-WB exceeds two thresholds requiring the preparation of an Environmental Impact Report (EIR) through the Massachusetts Environmental Policy

Act (MEPA) with the purpose of analyzing environmental impacts and mitigation associated with the project. The MEPA thresholds exceeded include:

- 11.03(1)(a)2 *creation of ten or more acres of new impervious area,*
- 301 CMR: 11.03(3)(a)1.b. *alteration of ten or more acres of any other wetlands (Bordering Land Subject to Flooding and Riverfront Area).*

The MCRT-WB would not result in new alteration of land, as the project corridor is the re-use of an existing railroad bed consisting of ballast, ties and track.

Although the MCRT-WB would result in more than ten acres of impervious area, the project would span 23 miles across eight communities along a linear and narrow corridor. Compared to a non-linear corridor project, such as a site being developed on a traditional parcel of land, the increase in impervious area would not have the same impacts. As the MCRT-WB would be narrow, any stormwater that falls upon the impervious surface would immediately shed off onto surrounding vegetated, pervious areas. The increase in runoff rates are considered negligible due to the similarities between the existing surface and the proposed improvements. The existing surface material of the abandoned corridor could be considered currently impervious as it is composed of compacted gravel from years of informal use by walkers and bicyclists. Developing a more formalized trail over this surface would not significantly alter the rates and amount of stormwater filtration.

Although the project is anticipated to alter greater than ten acres of any other wetlands (Riverfront Area and Bordering Land Subject to Flooding), these areas are previously-developed and consist of railroad ballast, ties and track in most locations. The proposed project would not alter the ability of these areas to protect the significant interests of the Act. Considering the MCRT-WB project as a whole, the wetland impacts would not be considered significant.

Many converted rail trail projects in Massachusetts have been approved for development, resulting in minor impacts to environmental resources. These projects aim to conserve natural resources by converting existing, previously industrial, abandoned corridors into recreational assets for the community, while also bringing natural features back to the corridors through native plantings and educational signage.

Due to the long, narrow, linear nature and overall public benefits of the MCRT-WB project, DCR respectfully requests the Secretary of Environmental Affairs allow the MEPA process for this project to proceed in the following manner:

- Find that the MEPA review process for the MCRT-WB project is adequately complied with through the information provided in this EENF; and
- Consent to a waiver of the requirement for the preparation of an EIR, in accordance with 301 CMR 11.11.

This strategy would allow the design of the MCRT-WB to proceed while also undergoing supplemental public review, that would expedite the permitting process, would facilitate community partnerships, would expedite the construction of the rail trail, and would additionally preserve limited DCR funding that could otherwise be spent supporting DCR's goals and investing into the public's open space and recreation inventory. Preparing an EIR would be an undue hardship and would not serve to avoid or minimize damage to the environment, as the thresholds that would be exceeded can be considered not significant when the 23-mile trail is considered as a whole and considering the previously-developed status of the railroad ROW.

The Secretary of Environmental Affairs may waive any provision or requirement in 301 CMR 11.00 provided that strict compliance with the provision or requirement would meet general waiver requirements and EIR waiver requirements. These waiver requirements and how the MCRT-WB would meet these requirements are further described in this EENF and in Attachment B, *Requests to the Secretary of Environmental Affairs*. This EENF serves to provide detailed information related to the project and its potential environmental impacts sufficient enough to meet the waiver requirements.



Proposed Project

The MCRT – Wayside Branch, the subject of this EENF, would be located within the former Massachusetts Central Railroad ROW, a passenger and freight service rail line originally extending from Boston to Northampton. The project is considered a DCR Priority and would contribute to the overall future vision of an extensive multi-use pathway traversing the state from west to east, specifically connecting Northampton (where the current Norwottuck Rail Trail is heavily used) to Boston. Portions of the MCRT in the central part of the corridor, between Oakham and Sterling, have already been constructed. The project is limited to section of the MBTA property, between Berlin and Waltham because DCR has a lease which allows them control of this segment.

The following bullets describe the proposed MCRT-WB in each municipality. The MCRT-WB alignment is shown on Figure 1 through Figure 9 in Attachment C.

- Berlin (2.3 miles) – Beginning at Coburn Road, approximately 182 feet north of the Coburn Road/ West Street intersection, and extends east along the existing ROW track alignment to the Berlin/ Hudson town line. The Berlin segment crosses two roads at-grade (Highland Street, and Sawyer Hill Road) and under Interstate 495 (I-495).
- Bolton (100 feet) – The MCRT-WB would cross over the Berlin/ Bolton town line for a very brief distance before crossing into Hudson. The Bolton segment would cross one road at-grade (Stone Road).

- Hudson (6.9 miles) – From the Bolton/ Hudson town line, extends east to the Hudson/ Sudbury town line. The Hudson segment would cross seventeen roads at-grade, over, or under the existing roadway. The at-grade crossing streets are: Central Street (at two locations), Cottage Street, Warner Street, Lincoln Street, Felton Street, Pope Street, Church Street, Manning Street, Priest Street, Cox Street, Main Street, Parmenter Road, and White Pond Road. The MCRT-WB would travel under High Street and Chestnut Street (via a box culvert underpass), and would travel over Wilkins Street and Tower Street (via a bridge replacing the removed existing railroad bridge). The MCRT-WB will intersect the existing Town of Hudson segment of the Assabet River Rail Trail east of Wilkins Street.
- Stow (327 feet) – The MCRT-WB would cross over the Hudson/ Stow town line for a very brief distance before crossing back into Hudson east of Wilkins Street.
- Sudbury (4.6 miles) – From the Hudson/ Sudbury town line, extends east to the Sudbury/ Wayland town line. The Sudbury segment would cross five roads at-grade (Dutton Road, Peakham Road, Horse Pond Road, Union Avenue, and Boston Post Road). The MCRT-WB will travel under (via an underpass) Landham Road.
- Wayland (3.0 miles) – From the Sudbury/ Wayland town line, extends east to the Wayland/ Weston town line. The Wayland segment would cross six roads at-grade (Boston Post Road, Old Sudbury Road, Concord Road, Millbrook Road, Glen Road, and Plain Road).
- Weston (3.0 miles) – From the Wayland/ Weston town line, extending east to the Weston/ Waltham town line. The Weston segment would cross Gun Club Lane at-grade, and would cross under three roads (Concord Road, Conant Road and Church Street).
- Waltham (3.0 miles) – From the Weston/ Waltham town line, extends east to the end point at the intersection of Beaver Street and Waverley Oaks Road (Route 60). The Waltham segment would cross eight roads: seven at-grade, and one (I-95) along an overpass (Jones Road, Interstate 95, Stow Street, Main Street, Hillside Road, Prospect Hill Road, Hammond Street, Bacon Street, Lexington Street, Lyman Street, and Linden Street).

The rail trail would be constructed as an off-road multi-use path. As with other multi-use paths in Massachusetts, the MCRT-WB would have trail heads at adjacent intersecting streets and would use existing parking facilities along its corridor to the greatest extent feasible. Construction phasing of the various segments of the MCRT-WB is dependent on several factors, such as design, status of encroachment resolutions, environmental permitting, and availability of funds.

As part of the preparation of this EENF, DCR conducted a GIS- and field-based analysis to calculate project impacts to environmental resources including wetlands (Bordering Land Subject to Flooding and Riverfront Area), Priority Habitats of Rare Species, and prehistoric and historic archaeological and above-ground resources. A town-by-town and section-by-section breakdown of these impacts is provided in this EENF and the relevant attachments. Figures 1 through 9 (Attachment C) depict the location of the proposed MCRT-WB alignment and the locations of potential areas of impact to Bordering Vegetated Wetlands, Bordering Land Subject to Flooding, Riverfront Area, Estimated and Priority Habitats of Rare Species and other resources.



Project Background

A rail trail traversing the state from west to east would bring a number of advantages to its users, surrounding communities, and the Commonwealth as a whole. Development of the MCRT-WB would advance state-wide trail network connections. The proposed MCRT-WB alignment in Sudbury would intersect and connect to the proposed Bruce Freeman Rail Trail (BFRT), a proposed rail trail extending north to south from Lowell to Framingham (Sudbury is included in Phase 2 of the BFRT, which has not yet been constructed). The MCRT-WB alignment would also intersect and connect to the Assabet River Rail Trail (ARRT) in Hudson. The ARRT is another multi-use rail trail, which would run through Marlborough, Hudson, Stow, Maynard, and Acton when complete. The Hudson section of the ARRT has been completed and is now in use. The MCRT-WB would be located approximately three miles west of the Minuteman Commuter Bike Path. The trail would also intersect the Bay Circuit Trail in Sudbury (at Route 20) and Wayland (at Route 27), a 200-mile recreational trail that circumnavigates the Boston metropolitan area from Ipswich to Duxbury. The MCRT-WB has also been identified as a potential future segment of the East Coast Greenway System, a 3,000-mile long trail / greenway that will one day run from Maine to Florida connecting major East Coast cities. If developed, the MCRT-WB would also support this even larger scale, eastern United States trail network. See Figure 10 for trails in close proximity to the MCRT-WB within the region.

The *Massachusetts Bicycle Transportation Plan* (2008), developed by the Executive Office of Transportation, aims to identify and prioritize improvements to the state's existing infrastructure to support and promote bicycling. The Plan provides an inventory of existing on-road and off-road facilities, and proposed projects, along with a thorough strategy for implementing the Bay State Greenway network. The Bay State Greenway network, composed of seven corridors and spanning 740 miles across the state, serves as a primary bike network in Massachusetts with secondary routes branching off along the corridor. The Mass Central Corridor (including the proposed MCRT-WB project from Berlin to Waltham) is one of the seven corridors that compose the Bay State Greenway network, stretching from Hancock to Somerville. Similarly, the *Massachusetts Pedestrian Transportation Plan* (1998) aims to

develop a more pedestrian focused transportation system through improvement strategies and suggestions. At the time this statewide Pedestrian Transportation Plan was developed, Massachusetts had one of the highest percentages of walking trips and low pedestrian fatality rates. Additional pedestrian paths would expand walkability in all areas. The MCRT-WB supports these statewide Bicycle and Pedestrian Transportation Plans as it would serve to advance the plan's goals and the development of a more extensive and robust bicycle and pedestrian network in the Commonwealth.

The MCRT has been highlighted as a priority in Commonwealth Connections, the *Massachusetts Greenway Vision Plan*. The Commonwealth Connections initiative was developed by DCR, the National Park Service, and various trail, land and non-profit organizations in order to create a greenway and trail network to conserve resources, provide recreation and provide alternative transportation opportunities. Through Commonwealth Connections, seven strategies were developed for greenway development:

- Protect and promote long-distance trail corridors as primary spines of the Massachusetts Greenway and Trail System;
- Protect critical river corridors and their tributaries statewide;
- Strategically link important natural and human communities;
- Create a cross-state multi-use trail reaching from Boston to the Berkshires;
- “Trail bank” unused rail corridors and work to gain public access to utility corridors;
- Assist the greenways and trails development community with technical support and funding needed to establish a coordinated statewide greenway system; and
- Increase funding for greenways and trails.

The *Massachusetts Greenway Vision Plan* was developed in 2001 through a series of seven listening sessions around the state as part of the Commonwealth Connections initiative. The MCRT was noted as a critical trail and a State-wide priority in this Greenway Plan, as it supports many of the Commonwealth Connections strategies.

In addition to statewide bike and pedestrian plans in Massachusetts, regional plans also play an important role serving as guides for the development of these uses. The Metropolitan Area Planning Council (MAPC) has developed the *Boston Region's Pedestrian Transportation Plan* (2010) to focus pedestrian related efforts on communities within the Boston Metropolitan area. This plan works to advance goals of the MAPC's MetroFuture plan¹ related to expansion of travel choices and increasing opportunities for walking. MetroFuture recommendations targeted towards promotion of pedestrian access include maintaining and managing bicycle and pedestrian facilities as full-fledged transportation linkages, and increasing



¹ MetroFuture is the MAPC and Boston Metropolitan Planning Organization's regional plan aimed at improving the overall quality of life for those who live and work in the Boston Metropolitan area between now and 2030. <http://www.mapc.org/metrofuture>

bicycle, pedestrian, and transit accessibility. The *Boston Region's Pedestrian Transportation Plan* contains information on the different stakeholders and advocacy groups involved with promoting solutions to pedestrian issues, and strategies a community can undertake to increase pedestrian related amenities, such as converted rail trails. The MCRT-WB supports the MAPC's goals to enhance pedestrian resources for the region.

In April 1997, the Boston Metropolitan Planning Organization (MPO) conducted the Central Massachusetts Rail Trail Feasibility Study, based on requests from seven communities along the corridor (Berlin, Hudson, Sudbury, Wayland, Weston, Waltham, and Belmont). This study analyzed various factors to determine trail feasibility, such as public transit availability in the study area towns, ROW characteristics, environmental issues, costs, and potential parking locations. An advisory committee composed of representatives from study area towns and various agencies/ organizations held meetings throughout the feasibility study, in which over 400 citizens attended. The study determined that constructing a rail trail on the Massachusetts Central Railroad ROW was feasible and should be pursued. The study also documented strong levels of community interest and support. The feasibility study made recommendations relevant to at-grade crossings, enforcement, educating users, environmental factors, and handling local jurisdiction. DCR has used this feasibility study in the development of conceptual design and preliminary engineering of the trail. Following the feasibility study, Weston voted not to continue participation in the effort at that time. However, various other communities, including Waltham, Wayland, and Hudson, continued to work to support the trail and move the project forward. Although Weston has not formally voted on the support of the trail in recent years, general consensus shows stronger support than in the past.

Recently, the Town of Wayland Planning Department, Weston Conservation Commission, Berlin Conservation Commission, adjacent businesses, groups such as the Friends of the Mass Central Rail Trail, the Waltham West Suburban Chamber of Commerce, and the Waltham Land Trust have shown their support of the MCRT-WB through correspondence with DCR via email or support letters. Support letters sent are attached to this EENF in Attachment E. DCR would collaborate with all communities involved during the MCRT-WB development.



Required Permits and Approvals

Apart from the MEPA review process, the project would trigger other state and local environmental permits which would need to be obtained prior to construction of the MCRT-WB. A Chapter 91 Waterways License is required for the rehabilitation and reuse of bridges located over state navigable waters. Potential navigable waters the MCRT-WB would cross include: Hogg Brook in Berlin/ Hudson; Assabet River and Fort Meadow Brook in Hudson; Hop Brook, Wash Brook, and Dudley Brook in

Sudbury; Sudbury River, Mill Brook, and Hayward Brook in Wayland; Cherry Brook and Stony Brook in Weston; Chester Brook and Beaver Brook in Waltham.

Order of Conditions would need to be obtained in each municipality. The local Order of Conditions, administered by each community’s Conservation Commission, serves in place of the project’s Water Quality Certificate, as less than 5,000 square feet of bordering vegetated wetlands would be impacted. If any of the Orders of Conditions issued by the town Conservation Commissions is appealed, a Superseding Order of Conditions would be required from the Massachusetts Department of Environmental Protection (MassDEP). A Conservation and Management Permit under the Massachusetts Endangered Species Act (MESA) is not anticipated, but will be determined by the Natural Heritage Endangered Species Program (NHESP) during their MESA review of the project. A United States Army Corps of Engineers (USACE) Section 404 permit would also be required for wetland impacts. A general permit is anticipated because wetland impacts are less than 5,000 square feet. The project would require a National Pollutant Discharge Elimination System (NPDES) Construction General Permit through the Environmental Protection Agency for the alteration of more than one acre of land. DCR would secure all necessary permits throughout the development of the MCRT-WB. The following table provides a summary of the required permits and approvals needed to advance the MCRT-WB.

Table 1
Required Permits and Approvals for the MCRT-WB

Order of Conditions in each municipality (eight)
Chapter 91 Waterways License
USACE Section 404 permit (anticipate compliance with the Massachusetts Programmatic General Permit)
NPDES Construction General Permit

Development Strategy

Although DCR has requested funding for this project through DCR capital planning and the transportation bond, the financial resources for the full design and development of the 23-mile rail trail have not been currently identified. However, DCR has identified funds for conceptual planning and initial permitting, and various resources for project design and development have been identified at the community level. As a result, DCR seeks to take a phased partnership approach for development of this rail trail with the local municipalities, and potentially third parties that may currently or in the future be granted leases from the MBTA, such as NSTAR. The party or parties that will complete each step may depend on available financial and human resources.

Working community by community, initially with Wayland and Waltham as these communities have expressed the most interest in development of the trail, this

phased partnership development strategy is envisioned to include planning, construction, and operations phases.

Planning Phase

- Establish sub-agreements with community (DCR and municipality). DCR may establish Memoranda of Agreements or grant Construction Access Permits to Municipalities to allow them to undertake trail development work.
- Establish trail and bridge design parameters (DCR)
- Obtain permits for trail development with the local Conservation Commissions, NHESP (if necessary) and other regulatory agencies as necessary (municipality, DCR, third party)
- Identify parking and access points and negotiate agreements as necessary (municipality)
- Assess road crossings (DCR, municipality)
- Public Process (DCR)
- Identify and resolve encroachments (DCR, MBTA)

Construction Phase

- Clearing, tie and rail removal, grading and compacting the trail sub-grade (DCR, municipality, third-party, contractor)
- Constructing a finished trail surface and shoulders, stormwater and trail amenities (DCR, municipality, third-party, contractor)
- Installing safe road crossing marking and signals as warranted (municipality, DCR, MassDOT)
- Rehabilitating bridges (DCR, MBTA)
- Constructing underpasses and overpasses that have been either filled in or removed (DCR)
- Installing trail signage (DCR, Municipality)

Operations Phase

- Maintain the trail (municipality, community groups, DCR)

Funding Strategy

Although full trail development funding has not been identified at this time, various resources have been identified that are or may become available to develop this trail. These include:

- Value of the steel rail: In other communities on other rail trail projects, this value has been used to pay for clearing, grubbing, grading, compacting, preparing the sub-grade and some final surfacing costs.
- DCR capital and operating funds: DCR has already committed over \$140,000 to the initial assessment and planning for this project. DCR expects to identify additional state funds moving forward.
- Community Preservation Act (CPA) and other local funds: Communities such as Wayland and Waltham are reportedly considering allocating CPA funds to help support trail development.
- Recreational Trails Grants: DCR has already been awarded a grant of \$75,000 for initial assessment and planning. Additional grants could likely be available for future phases to DCR or municipalities.
- Third-Party expenditures: The developer of the former Polaroid site in Waltham has already constructed a segment of the MCRT-WB pathway. The developer of the Town Center in Wayland has committed to contributing to the development of a portion of the trail in that community. NStar, which has electric transmission lines along much of the corridor from Waltham to Sudbury, has an interest in permitting, developing and improving access to their lines.
- Volunteers: Although not able to accomplish some tasks and financial resources, volunteers can be an important resource for trail maintenance, monitoring and stewardship.

Proposed Project

This section describes the existing conditions of the MBTA-owned ROW, proposed work anticipated as part of the MCRT-WB development, alternatives evaluated for the alignment of the MCRT-WB, and project benefits.



Existing Conditions

The MCRT-WB would be developed along segments of the former Massachusetts Central Railroad corridor within the MBTA-owned ROW. DCR has secured a lease with the MBTA along the ROW that allows DCR to construct, manage and maintain a rail trail within a 19-foot delineated path development corridor and develop additional amenities outside of this corridor provided they do not conflict with other MBTA uses.

In 1881, passenger and freight service began on the Massachusetts Central Railroad, and ended a century later by 1981. Since this time, the ROW has not been used and currently contains remnants of the single track railroad (ballast, track and ties).

Ground cover consists of ballast material and vegetation. The MBTA-owned ROW in general has been informally used by bicyclists, runners, walkers, and others which have created a path of compacted gravel along the railroad corridor. In most locations, the existing MCRT corridor consists of a single track railroad, with ties and rail intact. The rail line was largely constructed on an elevated embankment, with evidence of abandoned drainage swales adjacent to the rail.

The physical condition of the ROW varies significantly along the corridor. Along the eastern section of the trail. In Waltham, the railroad features have been removed and the legal rights of portions of the ROW have been sold or leased and redeveloped to accommodate the surrounding land use. Evidence of the rail line becomes more apparent along the western MCRT communities, with the exception of Hudson, where the ROW extends through the center of town and the ROW has been redeveloped to accommodate parking for adjacent land uses.

Existing Right-of-Way²

MBTA ownership of the railroad ROW begins just east of Coburn Road in Berlin. In Berlin, much of the ROW is a fairly high embankment, with steep slopes on both sides. Heading east, the ROW is overgrown with trees, bushes, and weeds. Just east of Sawyer Hill Road, the ROW extends on an embankment at the southern part of Hog Swamp, an extensive wetland. The remainder of the Berlin segment ranges from fairly flat with some shallow swales to low embankments. An existing commuter parking lot on the north side of Route 62, west of I-495, is adjacent to the ROW, and could be potentially used by MCRT-WB users. At I-495, there are two underpasses about 20 feet wide that are adequate for a trail. Rails and ties from the former railroad corridor remain in place throughout much of Berlin.

In Hudson, the ROW is a fairly steep embankment with occasional ditches, and overgrown. As the ROW approaches the more developed area of downtown Hudson, the ROW flattens out and houses about the ROW to the north and south of the corridor. Just west of Felton Street, a church parking lot has been paved in the ROW. This parking lot could be potentially used by MCRT-WB users. At this point, the ROW crosses Bruce Pond on a bridge and further east crosses the Assabet River on another bridge. East of Cox Street there is a culvert and high embankment. This is where the ARRT is located in Hudson, and could intersect the MCRT-WB. A parking lot utilized by ARRT users on Wilkins Street could also serve MCRT-WB users. For approximately 327 feet, the ROW crosses into Stow at its southern edge and then back into Hudson. Further east, the ROW crosses the Fort Meadow Brook on a bridge and through a wetland before crossing Main Street. Rails and ties remain in place throughout much of the Hudson and Stowe section.



² Much of this information was taken from the *Central Massachusetts Rail Trail Feasibility Study, April 1997*, and described in a west to east order. Conditions of the former railroad corridor may be different today.

In Sudbury, the ROW remains fairly flat throughout the Town. The ROW crosses Hop Brook where wetlands and meadows offer natural and scenic views from the ROW. To the east, the ROW parallels Station Road and is fairly overgrown. At the Route 20 intersection, a handcar shed exists that has been maintained by the Sudbury Valley Trustees, serving as a historical image and remnant of the Massachusetts Central Railroad's past. Hop Brook parallels the ROW here for several hundred feet. Approaching the Landham Road overpass, the ROW is fairly overgrown. At this point prior to crossing into Wayland, NStar power lines run along the ROW and continue throughout to Waltham. Rails and ties also remain in place throughout much of the Sudbury section.

The ROW in Wayland is fairly flat with the exception of a few short sections of steep embankments. Heading east from Sudbury, the ROW enters the Great Meadows National Wildlife Refuge on a high embankment. A wide timber pile trestle bridge crosses the Sudbury River, offering scenic views. The ROW then crosses to the north side of Route 20 and runs along the former Raytheon site. As the ROW approaches the Route 27 and Route 126 intersection, the former Wayland Train Station is directly adjacent to the ROW. This building is now used as a nonprofit shop to sell crafts that residents in the area have created. Parking is available in this general vicinity (including the Wayland Public Library parking lot) that could provide potential parking for MCRT-WB users. After crossing this intersection, the corridor becomes wide and is informally used as a shared-use path by walkers, runners, and bicyclists. This section travels along a utility corridor, which has been cleared and maintained by NStar. Fewer rails and ties remain in place in Wayland, compared to the other communities.

Similar to the section in Wayland, the corridor remains fairly flat and clear through Weston where it passes under Concord Road. This section travels along the same NStar utility corridor, as in the Wayland section. The segment between Conant Road and Church Street is also fairly clear and wide, and contains wetland areas along its embankments. Extending further east land used by a sand and gravel company abuts the corridor along a steep embankment. Prior to entering Waltham, the ROW crosses over the Fitchburg commuter rail ROW on a wide and high riveted lattice thru truss bridge.

At the Waltham line, the Waltham-Weston Corporate Center property is on the south side of the ROW. This area of Waltham contains parking lots for the commercial businesses located here, and could potentially serve MCRT-WB users. Further east, the ROW passes directly through an auto parts yard (which has encroached onto the ROW) before crossing over Route 128 (I-95) on a two span thru plate girder bridge. The ROW here no longer travels along the utility corridor, and passes through dense, overgrown, urban areas, with abutters directly north and south of the corridor. There are high bridges over Beaver Brook (timber pile trestle) and Route 60/ Linden Street (riveted lattice thru truss bridge). For the next 200 feet, Beaver Brook winds back and forth beneath the ROW, while the Fitchburg commuter rail parallels the corridor on the south. The two corridors merge near the Beaver Street intersection where the

proposed MCRT-WB would end. Here again, the rails and ties remain in place only in certain sections.

Existing Right-of-Way Widths

A majority of the existing MBTA-owned ROW is approximately 80 feet wide. The bullets below describe the ROW width in each segment.

- From Coburn Road in Berlin to the Hudson town line, the ROW is at least 80 feet wide, with some sections reaching up to 200 feet wide.
- At the Hudson/ Berlin line, the ROW is 80 feet wide and widens in two places to 130 feet and 190 feet west of the Central Street intersection. In the vicinity of downtown Hudson, the width varies from 40 feet to 100 feet, with the majority being between 40 and 65 feet wide.
- In Sudbury, the ROW remains at about 80 feet wide throughout the Sudbury segment, with a few 60 feet wide sections. Under Landham Road, the width is about 40 feet.
- Through the Wayland segment, the ROW continues at 80 feet wide until crossing the area of Wayland Center near Routes 27 and 126 where the width decreases to 25 feet wide for a length of approximately 100 feet.
- The ROW in Weston is also mainly 80 feet wide, but narrows to 60 feet on the east side of Conant Road and then widens back out to 80 feet. East of Church Street there is significant portions that are 115 to 120 feet wide.
- In Waltham, the ROW decreases back to 80 feet, with a couple of areas reaching 100 feet. On the east side of Lexington Street, the ROW is only 20 feet wide and gradually widens to 60 feet over a length of 500 feet. The ROW then fluctuates between 60 and 80 feet, ending at Beaver Street with a width of 70 feet.

These widths are important to note as they determine if the MCRT-WB could be constructed based upon the size of the overall MBTA-owned ROW. The existing ROW widths would provide ample room for the 19-foot path development corridor for the MCRT-WB to be constructed, as the average width throughout the communities is at 80 feet or more.

Existing Structures

DCR performed the *Mass Central Rail Trail Evaluation of Existing Bridges, Wayside Branch – Waltham to Berlin* (Spring 2013) as part of the preparation of this EENF for the proposed MCRT-WB project. Bridges located along the Massachusetts Central Railroad were evaluated to determine their structural integrity and any actions that would be needed to meet the structural loads designed for the project. Ten existing bridges were evaluated, including five steel structures and five timber structures.

The steel structures consist of two lattice thru trusses, two deck plate girder bridges, and one thru-plate girder bridge. The timber bridges are multi-bent timber pile trestle bridges with timber beams supporting either an open tie/ track deck or a wood deck supporting ballast, ties, and track.³ The bridges cross over a roadway, active commuter rail line, or waterbody. These bridges were constructed from 1881 to 1939, with the exception of the bridge over I-95 which was constructed in 1960.

Based on the evaluation, the following steel bridges were recommended to be rehabilitated:

- Bridge over Linden Street, Waltham (1894 Riveted Lattice Thru Truss)
- Bridge over I-95 (Route 128), Waltham (1960 Two Span Thru Plate Girder)
- Bridge over MBTA Fitchburg Line, Weston (1896 Riveted Lattice Thru Truss)
- Bridge #127 Hop Brook, Sudbury (1881 Riveted Plate Deck Girder)
- Bridge #128 Hop Brook, Sudbury (1881 Riveted Plate Deck Girder)

Based on the evaluation, the following timber bridges were recommended to be rehabilitated or replaced:

- Bridge over Clematis Brook, Waltham (Timber Pile Trestle-open timber tie deck)
- Bridge over Bruce's Pond, Hudson (Timber Pile Trestle-open timber tie deck)
- Bridge over Assabet River, Hudson (Timber Pile Trestle-timber deck with ballast)
- Bridge over Sudbury River, Great Meadows Wildlife Refuge Sudbury (Timber Pile Trestle-timber deck with ballast)
- Bridge over Fort Meadow Brook, Hudson (Timber Pile Trestle-open timber tie deck)

Due to the condition of the bridge structures, various deficiencies would have to be addressed during construction of the MCRT-WB for safety reasons and to meet load requirements. For example, the evaluation noted that some of the bridges had sustained impact damage to bracing members under the bridge deck; paint was peeled and missing; mortar in the stone abutments was cracked, loose, and missing; timber ties were not sufficient; and other deficiencies. At the date of the evaluation, the bottoms of the girders of Bridge #127 over Hop Brook in Sudbury were submerged approximately 12 inches. This could possibly be due to flooding of the wetland area from beaver dams located downstream of the bridge. Pile bents on the upstream side of the bridge over Fort Meadow Brook in Hudson have collected heavy debris (also attributable to beaver dams), obstructing water flow. The west approach embankment has washed out behind the end pile bent and backwall. Recommended actions for bridge deficiencies are explained in the *Bridge Rehabilitation* section of this EENF. For more information on the bridge evaluation, refer to the *Mass Central Rail Trail Evaluation of Existing Bridges, Wayside Branch - Waltham to Berlin* (Spring 2013) in Attachment F.



³ Department of Conservation and Recreation. *Mass Central Rail Trail Evaluation of Existing Bridges, Wayside Branch – Waltham to Berlin*, 2013

Based on valuation maps and field data collected by DCR, there are approximately 59 culverts under the rail bed that would need to be evaluated as part of the design development.

Existing Roadway crossings

The MBTA-owned ROW intersects or crosses over 40 roadways. Each of the roadways has varying volumes of traffic, and highway functional classifications include local, collector, or arterial roadway. Crossing treatments should be designed to allow for trail users to cross the roadway without the potential of conflict. The condition of the roadway crossings varies from full removal of ties and rail through the roadway to rail being visible on the roadway without ties. The ROW crosses over I-95 in Waltham on an overpass bridge, and under I-495 in Berlin through two underpasses. Roadway crossings are explained in the *Proposed Project and Road Crossings* sections of this EENF.

Existing Encroachments and Corridor Redevelopment

DCR has identified a number of locations where the ROW has been redeveloped with the permission of the MBTA through easements, license agreements, sale of land, or without permission of the MBTA through property encroachment. As the trail design is further developed, DCR and MBTA will work cooperatively, as described in the DCR lease, to take any necessary corrective actions to remove illegal encroachments, or to establish the trail alignment around the areas of reuse.

Proposed Conditions

In order to construct a public transportation facility (such as the MCRT-WB), certain design criteria must be met. The MassHighway Design Manual, the MassHighway guidelines *Building a Better Bikeway* (1999), the American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities* (1999), the Americans with Disability Act (ADA) of 1990, the American Access Board, and the Manual on Uniform Traffic Control Devices (2003 Edition), are industry standards that are applicable for the design of bicycle facilities. In order to meet the requirements of the ADA of 1990, the path cross slope cannot exceed two percent, for pedestrians using wheelchairs, walkers, canes, or strollers that may face difficulties with greater slopes. The following considerations will be used in the MCRT-WB design.

The MCRT-WB project is an off-road multi-use path through eight communities along the former Massachusetts Central Railroad ROW, currently owned by the MBTA. DCR has secured a lease with the MBTA along the entire ROW that allows DCR to construct, manage and maintain a rail trail within a 19-foot delineated path development corridor and develop additional amenities outside of this corridor

provided they do not conflict with other MBTA uses. The trail profile would be designed to meet or be slightly above the existing ground surface to comply with MassDEP's Best Management Practices for Rail Trail projects. The trail design would remove the abandoned railroad ties and rail, install a gravel sub-base and a ten-foot wide ADA compliant surface, either using Hot Mix Asphalt, stone dust, or stabilized soil materials that would be hard and stable. See Attachment D, *Mass Central Rail Trail EENF Construction Detail Figures* for a typical cross-section of the proposed MCRT-WB (note the measurements and sizes in the figures may not correspond directly with the proposed MCRT-WB design) and other detailed figures of proposed condition elements.

The stormwater design for the trail would vary, depending on the surrounding land use. All stormwater design would meet the MassDEP's Stormwater guidelines to the greatest extent possible. In more urban settings, a closed drainage system consisting of deep sump catch basins, manholes, and pipes may be used to collect stormwater from the trail and surrounding lands that may cause additional runoff and runoff sheeting along the trail or potential flooding along adjacent properties. Where applicable, the drainage would be connected to existing town or state owned drainage systems, to convey the runoff away from the project.

In more rural or undeveloped areas, country drainage would be used more in place of piped drainage systems. Stormwater would generally be shed off the trail directly onto the adjacent vegetated shoulder and areas.

At bridge approaches, the trail would be designed to meet the future bridge deck elevations without a grade difference at the interface. ADA compliant railings would be installed at the approaches and on the bridge to channel users onto the bridge. The approach railings would be angled slightly to eliminate the potential of a trail user striking the rail head on, but rather to deflect the user away from the railing and hazard.

Design considerations for a bike facility include establishing proper horizontal and vertical sight lines, with special consideration for avoiding obstructions of view such as signage poles and benches, at the edge of the path. Bicycle design speeds should also be considered when designing a bike path. Shoulders for rest and stopping should be provided along the edge of the path. Roadway crossings will be considered carefully to provide a safe means of passage for both the path users, and vehicles. Surface materials would also be considered, both for functionality and long term facility maintenance.

Graded shoulders would be designed adjacent to the path on both sides. At a minimum, the width of the graded shoulder area would be 2 feet. The shoulder would be either paved, or unpaved (with materials such as grass, stone dust, crushed stone), and would have a minimum of a 3-foot clear zone from the inside edge of the shoulder to any obstruction, such as trees, fences, signs, benches, guard rail, etc. Where the embankment has a vertical drop off that is steeper than a 1 vertical to

3 horizontal slope (1:3), such as when the path is adjacent to drainage ditches, a wider clear zone (such as 5 feet) would be considered. If the embankment has a vertical drop off that is steeper than 1 vertical to 2 horizontal (1:2) then a physical barrier such as dense shrubbery, railing, or fencing would be considered along the top of the embankment. The height of the barrier is recommended to be a minimum of 3.5 feet high. Attachment D, *Mass Central Rail Trail EENF Construction Detail Figures* presents a typical bike path cross section for off-road paths (note the measurements and sizes in the figures may not correspond directly with the proposed MCRT-WB design).

Sight Distance and Design Speed

The path design must allow for bicyclists to have an opportunity to see and react to unexpected circumstances. Minimum stopping sight distance is dependent on design speed, and would be calculated at the horizontal and vertical curves of the facility to insure safe breaking distance on shared-use paths. Stopping sight distance would also be calculated at roadway crossings for both the path and the roadway.

The bike path would be designed for a selected speed that is at least as high as the preferred speed of the fastest bicyclist using the facility. In general, a 20-mile per hour design speed would be used. In areas where there are multiple types of path users, such as in parks, a lower design speed would be used.

Path Materials

The selection of surface materials for the MCRT-WB would consider long term durability, safety, accessibility, construction cost and maintenance. The path surface would be firm, stable, and slip resistant under various weather conditions.

There are various surface materials that can be used in outdoor environments. Shared-use paths are generally paved with asphalt or concrete, but may also use prepared surfaces such as crushed stone or soil stabilizing agents mixed with native soils or aggregates. High use trails passing through developed areas or fragile environments are commonly surfaced with asphalt or concrete to maximize the longevity of the shared-use path surface and promote bicycle and inline skating use.

The surfacing material on the shared-use path significantly affects which user groups would be capable of negotiating the terrain. Shared-use paths that have been built using crushed aggregate generally are unusable by inline skaters and increase difficulty of use for bicyclists. Paved surfaces would be provided in areas that are subject to flooding or drainage problems, in areas with steep terrain, and in areas where bicyclists or inline skaters are the primary users. Surface materials would be chosen for the MCRT-WB based on collaboration with the communities involved.

Rest Areas

There are many vistas along the trail that would be considered as part of the design development. Path rest stops or turn outs can be designed along long uninterrupted segments. The design of the turnouts can vary from a widened clear zone to allow for path users to move out of the way of other path users, to picnic and landscaped facilities with tables, benches, and trash receptacles that would allow for path users to enjoy the surrounding environment. If rest stops are part of the path design, long term maintenance costs would also be considered. Rest areas would be developed in areas to avoid sensitive resources and minimize environmental impacts to the greatest extent feasible.

Periodic rest areas are beneficial for all shared-use path users, particularly for people with mobility impairments that expend more effort to walk than other pedestrians. Rest areas are especially crucial when grade or cross slope demands increase. The frequency of rest areas would vary depending on the terrain and intended use. Rest areas provide an opportunity for users to move off the trail, instead of remaining on the trail to stop and rest. If a rest area is only provided on one side of the trail, it would be on the uphill side. Rest areas would have the following design characteristics, and avoid environmental impacts (a detail of a rest area is shown in Attachment D, *Mass Central Rail Trail EENF Construction Detail Figures*):

- Grades that do not exceed five percent;
- Cross slopes on paved surfaces that do not exceed two percent and cross slopes on non-paved surfaces that do not exceed five percent;
- A firm and stable surface;
- A width equal to or greater than the width of the trail segment leading to and from the rest area;
- A minimum length of 60 inches;
- A minimal change of grade and cross slope on the segment connecting the rest area with the main pathway; and
- Accessible designs for amenities such as benches, where provided.

Benches or seating boulders can be particularly important for people with disabilities, who may have difficulty getting up from a seated position on the ground. Some benches would have backrests to provide support when resting, and at least one armrest to provide support as the user resumes a standing position. Accessible seating would provide the same benefits as seating for users without disabilities. For example, providing a wheelchair space facing away from the intended view would not be appropriate.

Root Barriers

To prohibit the growth of roots into the path surface, root barriers would be included in the path design. Root barriers would be installed adjacent to the path surface. The

Root Barrier is to be placed into an excavated trench, adjacent to each path shoulder, held vertically, backfilled and compacted with gravel borrow sub-base or acceptable material removed as a result of the trenching operations. Typical barrier materials are 0.60-millimeter polystyrene plastic, 36 inches deep, supplied or cut to a minimum of 10-foot long segments. A detail of this type of root barrier is shown in Attachment D, *Mass Central Rail Trail EENF Construction Detail Figures*.

Road Crossings

Crossing treatments would be designed to allow trail users to cross the roadway without the potential of conflict. As outlined in existing conditions, each of the roadways that the MCRT-WB intersects has varying volumes of traffic, and has a highway functional classification of a local, collector, or arterial roadway. The crossing treatments for the roadways would range from pavement markings and signage on both the MCRT-WB and roadway alerting the user (of both the trail and road) that there is an intersection ahead, to a rectangular rapid flashing beacon that alerts a roadway user of an approaching trail user, to a Pedestrian Hybrid Beacon System (HAWK) signal that is installed on a mast arm over the roadway, and flashes when a trail user activates it, so that traffic stops for the crossing. The use of any of the crossing treatments would be designed to federal standards, and meet pedestrian warrants, as applicable. Table 3 lists the road crossings along the proposed MCRT-WB and potential crossing treatments. It should be noted that before any crossing treatment is designed and during later design phases, a thorough warrant analysis⁴ would be conducted in accordance with standards outlined in the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD). Typical crossing treatment details are shown in Attachment D, *Mass Central Rail Trail EENF Construction Detail Figures*.

▼
⁴ A warrant analysis is an engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of a particular location in order to determine whether the installation of a traffic control signal is justified. (Manual on Uniform Traffic Control Devices <http://mutcd.fhwa.dot.gov/htm/2009/part4/part4c.htm>)

Table 3
Possible Crossing Treatments for MCRT-WB Roadway Crossings

Town	Street	Possible Crossing Treatment	Roadway Classification	Crossing Type
Berlin	Highland Street	Unsignalized	Minor Collector	at-grade
	Sawyer Hill Road	Unsignalized	Local Road	at-grade
	I-495 ¹		Interstate	underpass
Hudson	Stone Road	Unsignalized	Minor Collector	at-grade
	Old Central Street	Unsignalized	Minor Collector	at-grade
	Central Street	RRFB ² or part of existing signal	Minor Collector	at-grade
	Cottage Street	Unsignalized	Local Road	at-grade
	Warner Street	Unsignalized	Local Road	at-grade
	Lincoln Street	RRFB	Minor Arterial	at-grade
	Felton Street	Unsignalized	Local Road	at-grade
	Pope Street	Unsignalized	Local Road	at-grade
	Church Street	Unsignalized	Local Road	at-grade
	Manning Street	Unsignalized	Minor Collector	at-grade
	High Street		Local Road	filled underpass
	Tower Street		Local Road	missing overpass
	Priest Street	Unsignalized	Local Road	at-grade
	Cox Street	Unsignalized	Minor Collector	at-grade
	Assabet River Rail Trail		N/A	MCRT-WB on embankment, no bridge or overpass
	Wilkins Street (Rt. 62)	RRFB	Principal Arterial	MCRT on embankment, no bridge or overpass
	Chesnut Street		Local Road	filled underpass
	Main Street	RRFB	Minor Arterial	at-grade
	Parmenter Road	Unsignalized	Minor Collector	at-grade
	White Pond Road	Unsignalized	Local Road	at-grade
Sudbury	Dutton Road	Unsignalized	Minor Collector	at-grade
	Peakham Road	Unsignalized	Minor Collector	at-grade
	Horse Pond Road	Unsignalized	Minor Collector	at-grade
	Union Avenue	Unsignalized	Minor Arterial	at-grade
	Boston Post Road (Rt 20)	HAWK ³	Principal Arterial	at-grade
	Landham Rd		Major Collector	filled underpass
Wayland	Boston Post Road (Rt 20)	Treatment in place	Principal Arterial	at-grade
	Old Sudbury Road (Rt 27)/Concord Rd	Treatment in place	Principal Arterial	at-grade

Table 3

Possible Crossing Treatments for MCRT-WB Roadway Crossings (Continued)

Town	Street	Possible Crossing Treatment	Roadway Classification	Crossing Type
Wayland	Millbrook Road	Unsignalized	Local Road	at-grade
	Glen Road	Unsignalized	Local Road	at-grade
	Plain Road	Unsignalized	Local Road	at-grade
Weston	Gun Club Lane	Unsignalized	Local Road	at-grade
	Conant Road		Minor Collector	ROW filled in at roadway overpass filled underpass
	Church Street		Minor Collector	underpass tunnel
Waltham	Jones Road	Unsignalized	Local Road	at-grade
	Stow Street	Unsignalized	Minor Collector	at-grade
	Main Street (Rt 117)	HAWK	Major Collector	at-grade
	Cutting Lane	Unsignalized	Local Road	at-grade
	Prentice Street	Unsignalized	Collector	at-grade
	Hammond Street	Unsignalized	Minor Collector	at-grade
	Bacon Street	Unsignalized	Minor Arterial	at-grade
	Lexington Street	RRFB	Principal Arterial	at-grade
	Lyman Street	Unsignalized	Minor Arterial	at-grade
	Middlesex Circle	Unsignalized	Local Road	at-grade

¹ As the design advances, the communities will determine if the overpasses or underpasses should be reinstalled, or if the trail could be sloped to meet the change in grade at the crossings

² RRFB Rectangular Rapid Flash Beacon is a pedestrian activated LED that supplements warning signs at unsignalized intersections or crosswalks.

³ HAWK Pedestrian Hybrid Beacon System is a traffic signal used to stop traffic and allow pedestrians to cross a road safely.

Path End Treatments and Access Points

Creating a shared-use path that provides access for people with disabilities involves more than the trail itself. An accessible pathway must also lead up to the shared-use path. Access points along the shared-use path should be accessible to people with disabilities.

Curbing and pedestrian ramps and low growth vegetation should be used at the path ends to prohibit motorized vehicles from entering onto the path, but allow for adequate space for the path users to enter onto the facility. If emergency vehicles require passage onto the path, the vehicle could drive over these end treatments. Signage is also essential at the path ends. Path allowed and prohibited uses, hours of operations, maps, and points of interests can be displayed at the path ends using signage.

Trail heads would be designed at appropriate locations along the corridor, where there is a formal or official entrance onto the MCRT-WB. DCR would work with the

communities for the location of trail heads at locations where public parking may be available for trail users. The MCRT-WB would use existing parking areas to the greatest extent feasible throughout the ROW alignment, which are described in the *Existing Conditions* section of this EENF and in the following summary table of the communities. Potential access points for the MCRT-WB could also include any roadway intersection and existing trail or conservation areas that abut the MBTA-owned ROW. Table 4 below indicates potential access points and trail heads.

Bridge Rehabilitation

Based on the bridge evaluation performed by DCR as part of this project, all ten of the bridges for which sub- and super-structures examined were recommended for rehabilitation or in some cases, full replacement. One bridge has been officially listed in the State and National Register of Historic Places, and the others are inventoried resources that have not yet been officially evaluated for listing in the State and National Register of Historic Places. No bridges listed in the State or National Register of Historic Places will be demolished or replaced as part of this project. DCR would address necessary improvements and repairs to these bridges, and would consult with the Massachusetts Historical Commission (MHC) prior to any work.

In some situations, bridges over the MCRT corridor have been removed or filled in. As the design phase advances, the communities along the MCRT-WB would determine if the overpasses or underpasses should be reinstalled, culverts should be developed, or if the trail could be sloped to meet the change in grade at the crossings.

Fourteen-foot wide wood deck super-structures would be constructed on all of the bridges. The decks would have 42-inch high pressure treated wood railings on each side, designed with pressure treated deck surfaces. Along the approaches to the bridges over water, such as in Sudbury, overlooks may be added to the trail at the approaches to the bridges. Sitting areas, using benches, boulders, or other stone materials would be placed at the overlook areas for trail users to rest and enjoy the scenic views that the MCRT-WB would offer.

Specific recommendations for each bridge structure are listed below.

Bridge over Linden Street, Waltham (listed in the State and National Register of Historic Places):

- Remove and dispose of existing timber ties and steel rails;
- Repair bent, cracked/ broken gusset plates and bracing angles;
- Clean and paint steel;
- Replace mortar joints in the abutments; and
- Construct new concrete bridge deck, curbs and bridge railings (a concrete slab with curbs is recommended, since this bridge is over roadway and pedestrian traffic, to prevent ice hazards below).

Bridge over I-95 (Route 128), Waltham (inventoried resource; not officially evaluated for National Register listing):

- Remove and dispose of existing timber ties and steel rails;
- Clean and paint steel (graffiti surfaces only);
- Upgrade bridge drainage system;
- Pave pathway over the bridge;
- Install a timber guardrail along the inside face of the girders; and
- Remove the catwalk along the north side of the bridge (potential safety hazard).

Bridge over MBTA Fitchburg Line, Weston (inventoried resource; not officially evaluated for National Register listing):

- Remove and dispose of existing timber ties and steel rails;
- Clean and paint steel;
- Replace mortar joints in the abutments;
- Construct new timber bridge deck and railings; and
- Construct new backwalls/ wingwalls to facilitate widening of the bridge deck to 14 feet.

Bridge #127 Hop Brook, Sudbury (inventoried resource; not officially evaluated for National Register listing):

- Investigate the cause of flooding and rectify, if possible;
- If water level cannot be lowered, bridge seats need to be raised and the girders reset;
- Remove and dispose of existing timber ties and steel rails;
- Complete miscellaneous repairs to steel as required;
- Clean and paint steel;
- Install new timber transverse beams;
- Construct new timber bridge deck and railings;
- Replace mortar joints in the abutments;
- Construct new backwalls/ wingwalls to facilitate widening of the bridge deck and approaches to the proposed 14 foot trail width and raising of the bridge deck elevation and approaches; and
- Repairs/ replacement of intermediate piers.

Due to extensive repairs required at this location, full bridge replacement is a viable alternative to rehabilitation.

Bridge #128 Hop Brook, Sudbury (inventoried resource; not officially evaluated for National Register listing):

- Remove and dispose of existing timber ties and steel rails;
- Complete miscellaneous steel repairs as required;
- Clean and paint steel;
- Replace mortar joints in the abutments;
- Repair/ replace pier caps;

- Modify backwall to facilitate widening of bridge and approach to the proposed 14 feet trail width; and
- Construct new timber bridge deck and railings.

Bridge over Clematis Brook, Waltham (inventoried resource; not officially evaluated for National Register listing):

- Remove and dispose of existing timber ties and steel rails;
- Remove timber backwalls and reconstruct new backwalls and wingwalls to support backfill;
- Repair/ replace timber pile caps as required;
- Clear stream bed of accumulated debris against the pile bents; and
- Install new additional longitudinal timber beams and construct new timber deck and railings.

Bridge over Bruce's Pond, Hudson (inventoried resource; not officially evaluated for National Register listing):

- Remove and dispose of existing timber ties, steel rails, remains of timber catwalk and fencing;
- Remove timber backwalls and reconstruct new backwalls and wingwalls to support backfill;
- Repair deteriorated timber pile; and
- Install additional longitudinal beams and construct new timber deck and railings.

Bridge over Assabet River, Hudson (inventoried resource; not officially evaluated for National Register listing):

- Remove and dispose of trees, timber ties, steel rails, and ballast;
- Remove and dispose of timber curbs and timber decking;
- Replace any deteriorated timber beams;
- Remove and reconstruct timber backwalls and wingwalls;
- Repair deteriorated timber pile cross bracing; and
- Construct new timber deck and railings.

Further in-depth evaluation of this bridge should include an underwater inspection of timber piles and a hydraulic analysis of the bridge before consideration is given to rehabilitation or replacement.

Bridge over Sudbury River, Great Meadows Wildlife Refuge Sudbury (inventoried resource; not officially evaluated for National Register listing):

- Remove and dispose timber ties, steel rails, and ballast;
- Remove timber curbs and timber decking;
- Repair severed timber pile;
- Repair deteriorated timber pile cross bracing;
- Repair/ replace deteriorated timber pile caps as required;
- Replace deteriorated timber beams as required; and
- Construct new timber deck and railings.

Further in-depth evaluation of this bridge should include an underwater inspection of timber piles and a hydraulic analysis of the bridge before consideration is given to rehabilitation or replacement.

Bridge over Fort Meadow Brook, Hudson (inventoried resource; not officially evaluated for National Register listing):

- Remove and dispose of existing timber ties and steel rails, timber beams and timber pile caps;
- Remove timber backwalls and reconstruct new backwalls and wingwalls to support backfill;
- Restore west approach embankment;
- Replace timber pile caps;
- Install new timber beams, new timber deck and railings; and
- Obtain approval to design and install water level control devices to regulate the water level behind the beaver dam obstruction to avoid future washouts of the adjacent embankments.

This bridge is in very poor condition, with the timber piles being the only elements that could potentially be re-used in rebuilding the bridge.



Proposed Conditions Summary

The MCRT-WB trail design would comply with state and federal design standards for rail-trail corridors. The remainder of the MBTA-owned ROW (or the area outside of the 19-foot path development corridor where the MCRT-WB would be developed) would remain as is in its current state and available for the MBTA to be used for other future purposes. As this project is only in the conceptual design phase, path materials, locations for rest areas and access points, path end treatments, and other design and engineering elements of the MCRT-WB would be determined during later project phases and would be sited so that they do not impact environmental resources. Construction and design of the various pieces of the MCRT-WB is dependent on several factors, such as design status, encroachment resolution, community support, environmental permitting, and availability of funds. Table 4 shows estimate costs for each segment. In addition to the estimated costs for each segment, DCR estimates an additional \$10,000,000 for major bridge and culvert replacement.

Table 4
Description of MCRT-WB and Anticipated Costs By Municipality

Community	Length of Trail	Potential Parking	Potential Access Points	Conceptual Cost Estimates
Berlin	2.3 miles	Commuter parking lot	Coburn Road, Highland Street, Sawyer Hill Road	\$2,355,000
Bolton	100 feet	None	Stone Road	\$69,800
Hudson	6.9 miles	Church parking lot Wilkins Street parking lot	Old Central Street, Cottage Street, Warner Street, Lincoln Street, Felton Street, Pope Street, Church Street, Manning Street, High Street, Tower Street, Priest Street, Cox Street, Wilkins Street, Chestnut Street, Main Street, Parmenter Road, White Pond Road	\$8,151,000
Stow	327 feet	None	-	\$83,000
Sudbury	4.6 miles	TBD	Dutton Road, Peakham Road, Horse Pond Road, Union Avenue, Boston Post Road, Landham Road	\$5,678,000
Wayland	3.0 miles	Route 27 and 128 parking lots	Boston Post Road, Old Sudbury Road, Concord Road, Millbrook Road, Glen Road, Plain Road	\$4,306,000
Weston	3.0 miles	TBD	Gun Club Lane, Conant Road	\$4,314,000
Waltham	3.0 miles	Waltham-Weston Corporate Center area parking lots	Stow Street, Main Street, Prospect Hill Road, Hammond Street, Bacon Street, Lexington Street, Lyman Street	\$5,371,000
Various		Bridge and culvert replacement, installation and repair		\$10,000,000

Source: VHB, 2013 based on Google Earth analysis and site visits



Alignment Alternatives

As part of the MEPA review process, alternatives must be examined as to evaluate feasible options for the project and determine which would have the least impact to resources, especially environmental resources. The path development corridor as proposed is the preferred alignment of the MCRT-WB and was carefully based on: connection to other trails as part of a more extensive trail network, the available space throughout the ROW, environmental resources, accessibility, and roadway crossings. The general location of the MCRT corridor (from Berlin to Waltham) was chosen due to its potential for connections to other trails in the region, the absence of a trail traversing west to east in this vicinity, and the role the MCRT plays as a segment to statewide trail networks (such as the Bay State Greenway network, East Coast Greenway System, and the overall cross-state rail trail vision). The location of the MCRT serves to enhance the statewide trail network and overall connectivity (see Figure 10 of Attachment C).

As mentioned earlier, DCR has secured a lease with the MBTA to construct the 19-foot wide path development corridor within the 50- to 100- foot wide

MBTA-owned ROW area. For the majority of its alignment, the MCRT-WB would follow the original path of the Massachusetts Central Railroad throughout the 19-foot path development corridor. Since the railroad stopped being used in the 1980s, the MBTA-owned ROW has succumbed to the development of wetlands and other environmental resources, encroachments of abutters, and leased development. Throughout the development of the preferred alternative, these obstructions and conflicts have been taken into consideration and environmental resources were avoided to the maximum extent possible. Wetland resource areas were especially avoided and cumulative wetland impact numbers were decreased substantially from the original notion of following the path of the Massachusetts Central Railroad throughout the entire corridor. Access points along the proposed trail and safe roadway crossings were also considered for the development of the preferred alternative.

A No-Build Alternative assumes that the MCRT-WB would not be developed and the existing MBTA-owned ROW would remain in its current condition. The ROW would be continued to be used as an informal, non-ADA compliant trail by a select group of walkers, runners, and bicyclists. The No-Build Alternative would not impact any environmental resources, as the ROW corridor would remain as it exists today. However, not developing the MCRT-WB would not further state, regional, and local trail initiatives and connections, promote public health and exercise, increase recreational opportunities, provide an alternative transportation option, improve air quality, and other benefits that a regional trail would bring to the public. In addition, the No-Build Alternative might allow current unwanted activities to continue such as dumping, ATV use, and encroachment.

Potential Alignment Deviations

DCR initially identified three problematic road crossing that might require deviations from the current alignment or additional right-of-way in Wayland at Route 20 and Routes 27/ 126; and in Waltham at Stowe Street / Route 117.

The Town of Wayland has already addressed problematic crossings and developed safe bicycle and pedestrian crossings at Route 20 (Boston Post Road), Routes 27 (Old Sudbury Road and Route 126 (Concord Road).

As the MCRT-WB approaches the I-95 in Waltham, there may be alternative alignments that DCR, in working with MassDOT and private parties will consider. Just east of the I-95 bridge, a bank parking lot has been constructed entirely in the trail ROW (PD1 on Figure 8 and 11, Attachment C). The bank has permission from the MBTA to be located within the ROW, but is obligated in their easement to allow the bike path to be developed through this area if needed. The developers of the former Polaroid Site in Waltham (1265 Main Street LLC), have satisfied the commitment from their MEPA Certification to develop MCRT-WB bicycle and pedestrian accommodations from their primary site entrance on Route 117 across

Route 95/ 128 to Green Street. These improvements were substantially completed in early 2013. The developers have also demonstrated their commitment to work with DCR to coordinate long-term development plans and alternatives, and any potential off-site mitigation measures, as they relate to DCR's extension of the trail system. (MEPA 13952, April 17, 2009). Potential alternatives may include use of the existing ROW and railroad bridge over I-95, or working with private developers and MassDOT to add a multi-use pathway along Green Street and along the Route 117 bridge to connect to the existing pathway at the Polaroid site entrance. DCR will continue to work with the bank, 1265 Main Street LLC. and MassDOT to evaluate, design and develop the MCRT-WB connection through this area."

If additional problematic issues or wetland resources arise, DCR will develop alternatives to avoid such impacts. Any alternatives developed would stay within the MBTA-owned ROW to the extent possible.

Surface Material Alternatives

The surface material that the path development corridor would be composed of is an aspect of the MCRT-WB that would be further evaluated based on alternative options. Gravel or a naturalized surface would give the feeling of a more natural setting, but could affect certain uses of the trail, such as biking, and would not be as ADA accessible. Bicycling on a gravel based surface is more difficult compared to a paved, smooth surface. Although the current informal path is composed of mainly compacted gravel, the MCRT-WB is designed to create a safe, formalized, ADA-accessible trail to be utilized by the region's bicyclists and pedestrians. An improved surface, such as one that is stabilized or paved, would address these concerns. A stabilized or paved surface material would create a smooth surface that could be easily traveled via bicycle or foot and is more ADA accessible. This stabilized or paved surface is the preferred alternative for the MCRT-WB, as it increases accessibility for all and is a more stable, safe surface material to use for a shared-use path. DCR would consult with the individual communities throughout the project's development to determine the best alternative for surface material. The surface materials chosen for the trail would have to be consistent along a majority of the corridor since using a variety of surface materials could become costly and adversely affect trail users.



Project Benefits

The proposed MCRT-WB would provide a variety of benefits to the communities in the adjacent area, the region as a whole, and the general public. Railroad corridors are long, narrow, and linear making them ideal locations for the development of rail trails which share these same characteristics. Converting former railroad corridors into shared-use paths is beneficial in the fact that they utilize existing, previously developed and poorly maintained areas of land. Rail trail projects take advantage of

existing railroad infrastructure which provides an in-place sub-base and level grade for accessible multi-use paths.

Every effort must be made today to conserve valuable open spaces, and create health benefits, while also increasing the amount of recreational areas for the common good. Other railroad corridors have been converted to shared-use paths in Massachusetts because of these reasons such as the Blackstone River Greenway, Assabet River Rail Trail, Bruce Freeman Rail Trail, Norwottuck Rail Trail, Cape Cod Rail Trail, Shining Sea Bikepath, Minuteman Commuter Bike Path, and Ashuwillticook Rail Trail, which are highly prized recreational and alternative transportation resources in their communities. The MCRT-WB would provide a connection to these other trails, while also acting as a regional non-vehicular commuter trail and supporting regional and state plans for increasing trail capacity and pedestrian friendly neighborhoods. This project would serve to create a more formalized and ADA-accessible trail for those in the region.

Since the trail would travel west to east from Berlin to Waltham, it would serve as a regional commuter trail for walkers and especially bicyclists. Regional trail connections are especially important today in Massachusetts, which is known for its initiatives and goals for increasing the amount of commuters who bike to work. Throughout its length, the MCRT-WB could connect to other regional trails in the future including the Bruce Freeman Rail Trail in Sudbury and the Assabet River Rail Trail in Hudson. The MCRT-WB would be located approximately three miles from the Minuteman Commuter Bike Path in Arlington. The trail would also intersect with the Bay Circuit Trail, a 200-mile recreational trail that circumnavigates the Boston metropolitan area from Ipswich to Duxbury. The MCRT-WB is additionally a segment of the East Coast Greenway System, a 3,000 mile long urban trail spanning from Maine to Florida. If developed, the MCRT-WB would also support this even larger scale, eastern United States trail network. In addition, along the corridor there would be many potential destination points. Other communities, historic sites and districts, other conservation and recreation areas, scenic views, schools, business centers, and shopping area destinations all encourage users to utilize the trail and travel to or between these areas.

Developing an extensive shared-use path increases and supports public health by providing an area for the general public to exercise via walking, running, and biking. As it traverses eight communities, the amount of potential users is large, especially in the denser communities such as Waltham. There would be many potential access points and existing parking facilities, making it fairly easy to access the trail. Increasing the amount of walkers, runners, and bicyclists using the trail would in turn decrease the amount of vehicles on the road and associated congestion. These reductions could also potentially contribute to improvements in air quality by decreasing carbon dioxide emissions attributable to vehicle usage.

Once developed, the MCRT-WB would bring environmental benefits to the community and natural environment. The previously developed corridor is

currently perceived as a location for illegal or unwarranted activities such as illegal dumping and use of all-terrain vehicles, or ATVs. If the MCRT-WB were developed, these activities along with the waste and noise associated with them would be essentially eliminated. A formalized trail open to the public would deter such activities. Converting the corridor into a trail serves as an opportunity to restore the natural habitat that existed prior to the development of the railroad. Natural habitat would be restored by planting native vegetation, controlling invasive species, and enhancing connectivity and the ability for turtles and salamanders to move across the area, as they are currently obstructed by existing rails and ties in the ground. DCR also plans on implementing interpretive educational signage in order to develop awareness and educate the trail users about specific plant or animal species that may inhabit the area.



Consistency with Local Plans and Objectives

The MCRT-WB project supports the goals and objectives of statewide, regional and municipal plans of the communities it would traverse. An evaluation of Open Space and Recreation Plans, Community Development Plans, Community Preservation Plans, and Master Plans demonstrates this. DCR would coordinate with the eight municipalities throughout the project's development. This section describes how the MCRT-WB could support local municipal plans, goals, and objectives.

Recently, the Town of Wayland Planning Department, Weston Conservation Commission, Berlin Conservation Commission, adjacent businesses, groups such as the Friends of the Mass Central Rail Trail, the Waltham West Suburban Chamber of Commerce, and the Waltham Land Trust have shown their support of the MCRT-WB through correspondence with DCR via email or support letters. Support letters sent are attached to this EENF in Attachment E.

As is typical with many trail and rail trail projects, various community residents and abutters in these communities also express questions and concerns about the proposed rail trail. These include concerns about the final width, surface, environmental impacts, property values, parking and public safety. DCR would work closely with the communities throughout the design and development process to answer these questions, address concerns and protect environmental resources.

It is important to note that the experience in Massachusetts with rail trail development has consistently been positive. Once rail trails have been constructed, the benefits -from recreation to community development - have largely resulted; and the concerns - from public safety to environmental impacts - have rarely materialized. From Adams to Belchertown to Lexington, once rail trails have been built, community sentiment has been positive.

Town of Berlin Open Space and Recreation Plan⁵

➤ Open space impacts

Related to open space, the Open Space and Recreation Plan establish goals to create greenways that follow natural corridors and identify new opportunities for creation of trails. The MCRT-WB would serve as a regional west-east trail and would traverse existing natural corridor areas, without causing significant impacts to these resources.

➤ Compatibility with adjacent land uses

The Town of Berlin recognizes that integrating historic resource protection into open space protection and management is important. The rail bed, in which the MCRT-WB would be developed along, represents an historic industrial past. By using this area, a historically representative corridor is salvaged.

The Berlin Conservation Commission has expressed community support for the MCRT-WB, as a non-paved trail.

Town of Hudson Community Development Plan⁶

➤ Adequacy of infrastructure

Listed as a Transportation Recommendation, the Town of Hudson recommends encouraging efforts to develop the MCRT-WB as a regional transit opportunity. Hudson residents could potentially use the proposed MCRT-WB as a non-motorized means of transportation as far east as Waltham, and west to Berlin. The MCRT-WB would create a new regional transit corridor for the community.

➤ Open space impacts

Expanding and enhancing existing facilities and opportunities is another recommendation in the Plan related to Natural Resources. The MCRT-WB would support this recommendation by developing an open space recreational shared-use path.

The Town of Hudson has identified hiking and biking trails generally and the MCRT-WB specifically as important community assets through several town planning efforts including the Open Space and Recreation Plan, the Assabet River Wildlife Refuge Transportation Study, and the Town Master Plan. Hudson has also successfully developed the Assabet River Rail Trail through the community. The town Planning Department has worked with DCR to address potential alignment and development issues along the MCRT-WB, and DCR has worked with the town Department of Public Works to address flooding and beaver concerns.



⁵ Town of Berlin Conservation Commission. *Open Space and Recreation Plan*. 2011-2018.

⁶ Town of Hudson. *Community Development Plan*. 2004. June 2004.

Town of Sudbury Open Space and Recreation Plan⁷

➤ Open space impacts

In recent years, the Town of Sudbury has established the Rail Trail Conversion Advisory Committee in order to examine the conversion of existing unused rail corridors into recreational paths. The Committee is currently studying the feasibility of constructing a rail trail along the proposed Bruce Freeman Rail Trail Corridor running north and south through the Town. The MCRT-WB if developed would run west to east through the Town. With the Bruce Freeman Rail Trail and MCRT-WB developed, Sudbury would contain shared-use paths traversing the community in all directions. Many goals and initiatives included in the Open Space and Recreation Plan include those pertaining to recreational trails through their enhancement, development, or expansion. Development of the MCRT-WB would support the goals of the Sudbury Open Space and Recreation Plan.

The Town of Sudbury has been working to move planning forward for the Bruce Freeman Trail that runs north to south through the community. Residents have expressed divided opinions of both support and opposition to this trail, as well as concerns over environmental impact. In 2012, voters in Sudbury voted 2 to 1 to support moving forward with the Bruce Freeman Rail Trail. The Friends of the Bruce Freeman trail have approximately 900 supporting families in Sudbury. Development of the MCRT-WB would support the goals of the Sudbury Open Space and Recreation Plan.

Wayland Town Master Plan⁸

➤ Adequacy of infrastructure

In the Implementation Plan of the Wayland Town Master Plan, expanding public transportation options in Town is listed as a recommendation. With the development of a shared-use path that would cross the entire length of the Town and connect to areas to the east and west, the MCRT-WB would be used as a non-motorized transportation option for pedestrians and bicyclists. The trail would be used for recreation, but is also anticipated to be used as a commuter trail.

➤ Open space impacts

Continuing to work to expand Wayland's trail network, including the MCRT-WB, is another recommendation listed in the Implementation Plan of the Town's Master Plan.



⁷ Town of Sudbury. *2009-2013 Open Space and Recreation Plan*. June 2009.

⁸ Town of Wayland. *Wayland Town Master Plan*. Final Report August 2004.

Wayland has become a very proactive community in supporting the development of the MCRT-WB. The Friends of the Wayland Trail is an organized and passionate group of over 300 members who came together and produced a document explaining the values the trail would bring to the community, and created a library of information associated with the project. This group also organizes clean-up along the trail, and advocates for its development. Their surveys indicate strong levels of community support for the trail. The Town government has worked to move planning for the project forward, and was negotiating with the MBTA to lease the corridor, before DCR took that on in 2010. The town's Master Plan supports the MCRT-WB and the town has negotiated with a developer to construct a portion of the trail. Significant public and municipal support for the trail has been growing over the years with the hopes that the "informal path could be transformed into a significantly improved and safer recreational trail".⁹

Town of Weston Community Preservation Plan¹⁰

➤ Open space impacts

Goals of Weston's 1996 Open Space and Recreation Plan were restated in the Community Preservation Plan. One of these goals was to enhance recreational opportunities through acquisition of appropriate parcels. Community Preservation Act funds may be used to create trail connections or access to conservation land in order to support this goal.

➤ Compatibility with adjacent land uses

Historic preservation goals listed in the Community Preservation Plan include preserving and restoring historic resources, and encouraging the preservation of historic landscapes as open space. As the Massachusetts Central Railroad ROW is itself a display of an historic past and the MCRT-WB includes the reuse of a few historically significant bridges in Weston, the MCRT-WB project supports these goals and incorporates the element's characteristics into the use and design of the land.

Community sentiment in Weston appears to have become somewhat more supportive since 1997. DCR presented the project to the Select Board in 2010. Other non-governmental organizations have expressed general support as well. The Weston Conservation Commission (who has offered a letter of support) and Weston Forest and Trails Association have expressed interest in seeing the MCRT-WB developed. Developing the MCRT-WB would advance trail connections and access to conservation land in the community.



⁹ Rails-to-Trails Conservancy. *Organized Advocates in Wayland, Mass., Push for Local Rail-Trail*. January 11, 2012. <http://community.railstotrails.org/blogs/trailblog/archive/2012/01/11/organized-advocates-in-wayland-push-for-rail-trail-in-their-town.aspx>

¹⁰ Town of Weston. *Town of Weston Community Preservation Plan*. Issued November 2002. Revised September 2012.

City of Waltham Community Development Plan¹¹

➤ Adequacy of infrastructure

Future development that normally comes along with increased populations would put a heavier burden on Waltham's infrastructure. Development of the MCRT-WB would reduce some of this burden, as it is anticipated to be used as a non-motorized commuter corridor.

➤ Open space impacts

The Waltham Community Development Plan and Open Space and Recreation Plan aim to accomplish the goal of creating regional open space and recreational systems that cross municipal boundaries and are a part of an overall regional network, in addition to other goals of protecting open space and developing additional recreational areas. The MCRT-WB project would support these goals, and especially accomplish the goal of developing regional recreational systems across municipalities. The Town also lists the Massachusetts Central Railroad as an area to be dedicated and developed into the MCRT-WB.

The city government of Waltham has long supported the development of the MCRT-WB as have non-governmental organizations such as the Waltham Land Trust. Waltham was in the process of negotiating with the MBTA to lease the corridor before DCR took that on in 2010. The land trust has organized clean-ups along the trail and various elected officials have expressed public support

Regional Goals

The MCRT would not only support local municipal plans, goals, and objectives, but also supports the regional MetroFuture¹² plan developed by the MAPC. MetroFuture lists goals and objectives for the next 30 years for the Metropolitan region, which includes all of the MCRT-WB communities with the exception of Berlin.¹³ A focus of the MetroFuture plan is related to improving the transit system, while setting goals for trips made on foot or bicycle and miles of off-road paths. Development of the MCRT-WB would fully support these objectives of increasing trips by foot and bicycle, and increasing the total off-road path mileage. MetroFuture works towards the creation of “a robust network of protected open spaces, farms, parks, and greenways” that would “provide wildlife habitat, ecological benefits, recreational opportunities, and scenic beauty”. Development of the MCRT-WB supports this goal in the sense that it would serve as a greenway and recreational opportunity which would provide ecological benefits to the region.



¹¹ City of Waltham. *Waltham Community Development Plan*. June 2007.

¹² Metropolitan Area Planning Council. *MetroFuture*. May 2008.
http://www.mapc.org/sites/default/files/MetroFuture_Goals_and_Objectives_1_Dec_2008.pdf

¹³ Berlin is part of the Central Massachusetts Regional Planning Commission.

The MAPC has also developed the *Boston Region's Pedestrian Transportation Plan* (2010) to focus pedestrian related efforts on communities within the Boston Metropolitan area. This plan works to advance goals of the MAPC's MetroFuture plan. The *Boston Region's Pedestrian Transportation Plan* contains information on the different stakeholders and advocacy groups involved with promoting solutions to pedestrian issues, and strategies a community can undertake to increase pedestrian related amenities, such as converted rail trails. The MCRT-WB supports the MAPC's goals for the region to enhance pedestrian resources.

Affected Environment and Environmental Consequences

As part of the MEPA review process in accordance with 301 CMR 11.00, environmental resource impacts and mitigation must be examined in order to determine whether the proposed project exceeds designated review thresholds. If a review threshold is met or exceeded, the development of an ENF or EIR is required. This section describes the methodology used to determine environmental impacts associated with the MCRT-WB project, the existing environmental resources in the area, estimated and potential impacts of these environmental resources from the project, and possible mitigation efforts that could be implemented throughout construction.

The environmental analysis performed for this EENF included an evaluation of wetlands, priority and estimated species habitat, historic and cultural resources, and other water resources. The methodology used to perform this work is described in the *Environmental Impact Analysis Methodology* section of this EENF. The following table and sections provide a summary of the potential environmental resource impacts associated with the MCRT-WB.

Table 5
Potential Environmental Resource Impacts By Municipality

Community	Potential Environmental Resource Impacts				
	Wetlands (square feet) ¹	Riverfront (square feet) ²	100-Year Floodplain (square feet) ³	Priority/Estimated Habitat Polygons ⁴	Historic and Cultural Resources ⁵
Berlin	870	47,180	41,781	1	-
Bolton	55	4,897	-	-	-
Hudson	1,164	148,495	68,912	-	9
Stow	-	3,634	-	-	-
Sudbury	894	101,036	116,566	1	6
Wayland	380	53,150	190,011	1	8
Weston	270	37,975	23,183	-	7
Waltham	513	70,232	35,052	-	7
Total	4,146	466,599	475,504	3	37

Source: VHB, 2013 based on environmental analysis

Notes: ¹ Bordering Vegetated Wetland

² Land Area within 200 feet of a perennial River

³ Bordering Land Subject to Flooding

⁴ Each Priority/Estimated Habitat Polygon was counted once in the community in which the majority of the polygon exists

⁵ Historic and Cultural Resource numbers include State and National Register-listed and inventoried resources within 0.25 miles of the MCRT-WB

Though there are environmental impacts associated with the proposed MCRT-WB project, impacts are anticipated to be minimal. As the MCRT-WB project would be constructed within a 19-foot path development corridor within the MBTA-owned ROW (as the DCR has secured a lease to do so through the MBTA), this path development corridor may be shifted in order to avoid potential environmental impacts. The MCRT-WB would bring an array of benefits to the public by utilizing a former rail corridor with existing infrastructure in place. Not only would the MCRT-WB serve as a recreational opportunity for its users, it would also improve public health, decrease vehicular congestion and use by encouraging walking and biking to work, improve regional greenway and rail trail initiatives and connectivity, educate the public of natural areas, and support various goals, plans, and initiatives of the state, region, and surrounding communities. The overwhelming benefits represented by the MCRT-WB project outweigh any potential environmental impacts from the construction of the project. Where the project exceeds thresholds for environmental impacts, the project would have to undergo an extensive review by each of the towns along the alignment and the MassDEP through separate regulatory review procedures. Mitigation for environmental impacts would be applied to the greatest extent practicable throughout the development of the MCRT-WB project. Mitigation methods are further described in the *Proposed Mitigation Measures* section below.

Methodology

Review of environmental and cultural resources along the MCRT alignment was conducted using publically available data sources (Massachusetts Geographic Information Systems [MassGIS]), aerial stereoscopic photography taken for the project, aerial topographic mapping of the corridor and an on ground investigation. The initial effort consisted of obtaining the MassGIS datalayers for wetlands and waterways, floodplains, historic districts and properties, state-listed protected species habitats, potential and certified vernal pools and impaired waters. These data layers were added to orthophotos taken of the corridor as part of this analysis that included the project alignment to identify where the proposed MCRT-WB crosses these resources.

Wetland boundaries were enhanced by combining the MassGIS wetlands datalayer with interpolation of wetland boundaries using a stereoscope and 200-scale stereo pair aerial photos. The land area within 200 feet of either side of the entire project corridor was closely examined using the stereoscope and stereo aerial photos to identify wetlands and define their boundaries. This process increased the accuracy of the wetland boundary information from the GIS datalayer and identified additional wetlands not present on the MassGIS datalayer. An accurate wetland limit in the vicinity of the MCRT alignment was obtained using photo interpolation.

An additional source of delineated wetland boundaries was also available for approximately seven miles of the project corridor, previously completed under a separate project. These field delineated wetland boundaries had been located by global positioning system (GPS) equipment and were incorporated into project GIS wetland layers. The combination of using MassGIS, refined with aerial interpolated wetlands and field delineated wetlands, has created an accurate wetland boundary for the project corridor.

The project alignment also crosses a number of streams. Many of these streams were shown as heavy blue lines on USGS topographic mapping, classifying them as perennial streams based on the MassDEP Wetlands Protection Act regulations. In accordance with the MassDEP regulations, the USGS on-line program, StreamStats, was used to determine which streams support perennial flow and are therefore regulated as Rivers pursuant to the Wetlands Protection Act. The banks of the perennial streams within 200 feet of the project alignment were mapped on a separate GIS datalayer.

After the resource area datalayers were revised the GIS analysis was completed to identify impacts from the project. The center line of the proposed MCRT-WB was established from the aerial mapping based on the alignment of the existing railroad tracks. The 19-foot path development corridor centered on the tracks was projected for the entire 23 miles of the project length. Impact areas were determined where this

19-foot wide easement intersected with the different environmental resources. Although the actual path plus shoulders would be 14 feet wide, the 19-foot impact area accounts for temporary disturbance during construction.

Wetlands

Throughout the project corridor, wetlands and streams are present in close proximity to the existing rail bed. Most of the wetlands are classified as forested deciduous swamps dominated by a red maple (*Acer rubrum*) tree overstory and a shrub story of various common species including sweet pepperbush (*Clethra alnifolia*), northern arrow-wood (*Viburnum recognitum*), highbush blueberry (*Vaccinium corymbosum*), swamp azalea (*Rhododendron viscosum*), winterberry (*Ilex verticillata*), spicebush (*Lindera benzoin*), and others. Other wetland cover types identified along the MCRT-WB include scrub/ shrub, emergent, aquatic bed, open water, and riverine. These wetlands that border on a stream, river, lake or pond are regulated by the Massachusetts Wetlands Protection Act as Bordering Vegetated Wetland (BVW). The single largest wetland complex crossed by the project is associated with Wash Brook and the Sudbury River south of Route 20. This extensive emergent wetland complex is also a floodplain, flooding on a yearly basis.

Most of the wetlands found along the project alignment are naturally occurring. Some wetlands were created by the construction of the railroad from excavation of soils at borrow areas to fill for the railroad embankment. These excavated borrow areas either hold water or were excavated deep enough to encounter the groundwater table creating conditions suitable for the development of wetland vegetation. A few wetlands have developed within the railroad alignment from excavations cut through higher ground or from the construction of drainage ditches adjacent to the tracks. Lack of use or maintenance has allowed these excavated areas to trap or hold water and wetland vegetation to become established.

Based on preliminary analysis, impacts to BVW for the entire project would not exceed 5,000 square feet with less than 1,200 square feet in any one location (see Table 5). The extent of wetland impact was based on GIS analysis and the MCRT-WB easement area centered on the existing track location. As the design is advanced, the MCRT-WB alignment (path development corridor) would be adjusted to avoid wetland impacts where possible and further reduce direct wetland impacts from the project.

A number of streams and rivers would be crossed by the MCRT-WB. These waterways are either bridged or conveyed in a culvert beneath the existing railroad embankment. Waterways regulations 310 CMR 9.04 and 9.05 require a Chapter 91 license for any maintenance or repair of structures, and any change in use of structures in non-tidal navigable rivers or streams.¹⁴ Chapter 91 licensing would be

▼
¹⁴ Massachusetts Department of Environmental Protection. 310 CMR 9.00: Waterways

required through MassDEP for several of the navigable river and stream crossings, in particular, the Sudbury and Assabet River crossings for reuse and change of use from a railroad bridge to a public rail trail use. The major navigable waterways crossed by the project are listed in Table 6.

Table 6
Major Navigable Waterways Crossed by the MCRT-WB

Town	Waterway	Impaired	Chapter 91
Berlin/Hudson	Hogg Brook	No	Yes
Hudson	Assabet River	Yes – Category 5	Yes
	Fort Meadow Brook	No	Yes
Sudbury	Hop Brook	Yes – Category 5	Yes
	Wash Brook	Yes – Category 5	Yes
	Dudley Brook	No	Yes
Wayland	Sudbury River	Yes – Category 5	Yes
	Mill Brook	No	Yes
	Hayward Brook	No	Yes
Weston	Cherry Brook	No	Yes
	Stony Brook	No	Yes
Waltham	Chester Brook	No	Yes
	Beaver Brook	Yes – Category 5	Yes

Source: VHB, Inc.; Massachusetts Department of Environmental Protection. 2012 Integrated List of Waters

Other regulated resource areas in the vicinity of the project include floodplain and Riverfront Area. Floodplain includes the area of land inundated during a 100-year storm event (1 percent chance occurrence in any year) as determined by the Federal Emergency Management Agency (FEMA). This is regulated by the Massachusetts Wetlands Protection Act as Bordering Land Subject to Flooding (BLSF). Floodplain is present within the project area and depicted on FEMA floodplain mapping overtopping the railroad embankment in a number of locations. However, the floodplain may not actually overtop the embankment when the base flood water elevations are compared with the embankment elevations. The railroad embankment is elevated indicating that the path development corridor would be above the 100-year floodplain elevations, causing only minimal impacts to flooding and floodplain storage. If later analysis demonstrates flood elevations to be higher than presumed, the height of the embankment from development of the MCRT-WB would not be raised and would be kept at its current elevation; therefore, minimizing any potential impacts to the 100-year floodplain and retaining current floodplain storage. Furthermore, the affected area is former railroad track and ballast material, and does not provide important floodplain wetland wildlife habitat. Impacts to floodplain were determined using GIS, and the proposed 19-foot path development corridor. Preliminary impacts to floodplain are estimated to be approximately 475,500 square feet (10.9 acres) for the project. Impacts to floodplain are listed by town in Table 5.

Perennial rivers have a 200-foot Riverfront Area regulated by the Massachusetts Wetlands Protection Act. Riverfront Area extends from the bank of the perennial river and encompasses uplands and wetlands. Within the MCRT corridor, the Riverfront Area is predominantly the previously-developed railroad embankment altered with rails and ties, other developed area and roadways, with some areas of wetland and upland vegetation. Overall the project would impact approximately 466,600 square feet (10.7 acres) of Riverfront Area. Impacts to Riverfront Area would consist of installation of the path, grading, vegetation clearing and landscaping. The alignment of the MCRT-WB would be within the existing railroad ROW that was previously altered by construction of the railroad and would occupy the area currently supporting steel rails and ties.

In some circumstances along the proposed Project, BLSF and Riverfront Area overlap. As noted above, work in BLSF would be approximately 475,500 square feet and work in Riverfront Area is 466,600 square feet. However, work in these overlapped resource areas would be approximately 215,910 square feet (5.0 acres). Therefore, the work in these “other wetland resource areas” in total would be approximately 726,190 square feet (16.7 acres). When Notices of Intent are prepared for submission to each town Conservation Commission, work in each resource area would be reported individually and compliance with the performance standards for each resource area would be documented.

Impacts to wetlands and waterways would be minor since the MCRT-WB would be constructed on the existing railroad embankment. The existing embankment is elevated above the adjacent wetlands and waterways and construction of the rail trail would largely be able to avoid wetland impacts. In occurrences where the rail trail is level with adjacent wetlands, the path development corridor may be shifted north or south within the MBTA-owned ROW to avoid the greatest amount of wetland areas. Overall impacts to bordering vegetated wetlands from the project are approximately 4,150 square feet, which is a relatively small impact area for the 23-mile long project.

Impact to wetlands is listed town by town and for the project overall in Table 5. Existing stream and river crossings are all bridged or culverted, and although the bridges and culverts may require repair or replacement, no new crossings would be constructed. Repairs to bridge abutments or culverts may require temporary impacts to wetland, bank or land under water resources.



Outstanding Resource Waters

Outstanding Resource Waters (ORWs) are certain waters designated for protection under the Massachusetts Surface Water Quality Standards by the MassDEP. ORWs include Class A Public Water Supplies and their tributaries, certain wetlands and vernal pools, and other waters predetermined based on their outstanding

socio-economic, recreational, ecological, and/ or aesthetic values. The proposed MCRT-WB would pass through a surface water supply protection zone in Weston and Waltham associated with the Cambridge Reservoir. The project is also located in close proximity to three MassDEP certified vernal pools in the Town of Weston. Due to the scale and scope of the project, no alterations or impacts are anticipated to ORWs or surface water features associated with the water supply protection zone. There would be no fill associated with the project in certified vernal pools or surface water supplies. Construction associated with the project would be minimal and consist of removing the existing former railroad materials, laying down gravel, and developing a path for the trail with vegetated shoulders. Erosion and sedimentation controls would be implemented during construction where appropriate. There would be no accumulation of contaminants on the trail once constructed due to the intended use; therefore there would be no concentrations of contaminants in stormwater runoff from the MCRT-WB and no impact to these ORWs.



Impaired Waterbodies

Under the Clean Water Act, MassDEP monitors and assesses water quality of surface water features in the State. Waterbodies are evaluated for pollutants in terms of whether or not they can support their designated uses (uses such as fish consumption, public water supply, boating, swimming, etc.), as defined in the Massachusetts Surface Water Quality Standards. Those waterbodies not meeting surface water quality standards and their designated uses (known as impaired waterbodies) are required to contain a Total Maximum Daily Load (TMDL). TMDLs set limits for the maximum amount of a pollutant allowed in a waterbody while still being able to maintain water quality standards and being safe for its designated uses.

According to MassDEP's 2012 Integrated List of Waters, the MCRT-WB would cross over five impaired waterbodies designated as Category 5, which are surface waters requiring a TMDL for listed pollutants. Those impaired waterbodies include:

- Assabet River (MA82B-04) –fecal coliform, excess algal growth, dissolved oxygen, and phosphorus;
- Hop Brook (MA82A-05) –algal growth, dissolved oxygen, and phosphorus;
- Sudbury River (MA82-04) –non-native aquatic plants and mercury in fish tissue;
- Hop Brook/ Wash Brook (MA82A-06) –excess algal growth, fecal coliform, dissolved oxygen, and phosphorus; and,
- Beaver Book (MA72-28) –excess algal growth, dissolved oxygen, phosphorus, sedimentation/ siltation, and turbidity.

Although the MCRT-WB would cross over these waterbodies on bridge or culvert structures, it is not anticipated that the project would impact or contribute to the impairments of the waterbodies. Construction associated with the project would be minimal and consist of removing the existing former railroad materials, laying down

gravel, and developing a path for the trail with vegetated shoulders. Erosion and sedimentation controls would be implemented during construction where appropriate. There would be no accumulation of contaminants on the trail once constructed due to the intended use; therefore there would be no concentrations of contaminants in stormwater runoff from the MCRT-WB and no effect on adjacent waterbodies.

Wild and Scenic Rivers

The National Park Service, working under the Wild & Scenic Rivers Act¹⁵, designates certain rivers with outstanding natural, cultural, and recreational values as Wild, Scenic, and/ or Recreational in order to preserve their enjoyment and integrity for present and future generations. The Sudbury River was designated on April 9, 1999 for Scenic and Recreational values. According to the Sudbury, Assabet, and Concord Wild and Scenic River Stewardship Council, the Sudbury River offers recreational opportunities for hiking, birding, fishing, boating, and serves as an educational resource to teach students of the ecology of river systems. The Sudbury River winds through wide floodplains creating extensive views of the sky and the river's natural corridor. One challenge the Sudbury River faces is the state of its water quality. Overloaded with nutrients, such as phosphorus, encourages extensive plant growth which chokes the river with a green blanket of algae. This leads to poor aesthetics, odor, and an insufficient habitat for aquatic organisms. Sediments in the Sudbury River are also contaminated with mercury from the Nyanza chemical waste site in Ashland, Massachusetts. Fish caught in the river segment from Ashland to Concord should not be eaten due to mercury contamination.¹⁶

No impacts are anticipated as part of the proposed project to any Wild and Scenic River segments, including the Sudbury segment which the MCRT-WB would cross in Wayland. The bridge that crosses over the Sudbury River segment is deficient and would require rehabilitation or full replacement in order to satisfy state and federal design standards for rail trail bridges. According to the *Mass Central Rail Trail Evaluation of Existing Bridges, Wayside Branch – Waltham to Berlin* and further explained in the *Bridge Rehabilitation* section of this EENF, recommended rehabilitation includes:

- Remove and dispose timber ties, steel rails, and ballast;
- Remove timber curbs and timber decking;
- Repair severed timber pile;
- Repair deteriorated timber pile cross bracing;
- Repair/ replace deteriorated timber pile caps as required;
- Replace deteriorated timber beams as required; and,



¹⁵ The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) <http://www.rivers.gov/rivers/documents/wsr-act.pdf>

¹⁶ The Sudbury, Assabet, and Concord Wild and Scenic River Stewardship Council.
<http://www.sudbury-assabet-concord.org/theRivers/resources.php>

- Construct new timber deck and railings.

The evaluation report recommended that further in-depth evaluation should include an underwater inspection of timber piles and a hydraulic analysis before consideration is given to rehabilitating the bridge.¹⁷ Design of the replacement bridge would be coordinated with the National Park Service to maintain and enhance the recreational and scenic values of the Sudbury River.

The MCRT-WB would advance the Wild and Scenic Rivers Act by utilizing a former rail trail for a multi-use path, while enhancing public access to scenic views and a natural corridor. The MCRT-WB once complete, would not accumulate contaminants due to the intended use. The trail would be used solely by walkers, runners, bicyclists, and other non-motorized uses; therefore, no vehicles or machinery would be allowed on the trail other than maintenance and emergency vehicles. Due to the nature of use, the MCRT-WB would not adversely impact any Wild and Scenic River segments.



Priority Habitats of Rare Species

According to the latest Massachusetts NHESP atlas dated 2008, the rail trail corridor would pass through three priority and estimated species habitats: PH 1305/ EH 485, PH 687/ EH 648 and PH 1516/ EH 38. The NHESP has been consulted concerning the species found in these polygons and in a letter dated June 19, 2013 (Attachment G), has identified eight state-listed rare species present in the vicinity of the project corridor, described in Table 7.

Table 7
State-Listed Species in the Vicinity of the Project Corridor

Polygon	Scientific Name	Common Name	Taxonomic Group	State Status
PH 1305, EH 485	<i>Emydoidea blandingii</i>	Blandings Turtle	Reptile	Threatened
PH 687, EH 648	<i>Glyptemys insculpta</i>	Wood Turtle	Reptile	Special Concern
	<i>Terrapene carolina</i>	Eastern Box Turtle	Reptile	Special Concern
PH1516, EH 38	<i>Botaurus lentiginosus</i>	American Bittern	Bird	Endangered
	<i>Ambystoma laterale</i>	Blue-Spotted Salamander	Amphibian	Special Concern
	<i>Gallinula chloropus</i>	Common Moorhen	Bird	Special Concern
	<i>Ixobrychus exilis</i>	Least Bittern	Bird	Endangered
	<i>Podilymbus podiceps</i>	Pied-Billed Grebe	Bird	Endangered

Source: Massachusetts Natural Heritage and Endangered Species Program



¹⁷ Department of Conservation and Recreation. *Mass Central Rail Trail Evaluation of Existing Bridges, Wayside Branch – Waltham to Berlin, 2013*

The MCRT-WB is not anticipated to affect the habitat of the four bird species, which occupy deep-water marshes and open water habitats, as the project would not alter these wetland types. The former railroad ROW could provide nesting habitat for the three listed turtle species. DCR would continue to coordinate with NHESP to minimize impacts to these habitats and mitigate any potential unavoidable impacts during construction and operation of the MCRT-WB.



Historic/Archaeological Resources

The MHC is required to review projects with state involvement that may affect properties in the State Register of Historic Places per M.G.L. Ch. 9 ss.26-27C and 950 CMR 71 (Chapter 254). Projects with federal involvement, which in this project would be a U.S. Army Corps of Engineers' (Corps) Section 404 permit, requires MHC review under Section 106 of the National Historic Preservation Act of 1966 and corresponding regulations at 36 CFR 800 (Section 106).

Properties listed or formally determined eligible for the National Register, local historic districts and individual local landmarks, and properties with preservation restrictions are included within the State Register of Historic Places. These historic properties can be buildings, districts, sites, and objects. As part of the Chapter 254 review, MHC also reviews the National Register eligibility of properties that have only been documented on inventory forms, which results in their inclusion in the Inventory of Historic Archaeological Assets of the Commonwealth. In the event that the MHC determines that an inventoried resource is eligible for the National Register, it would then also review the project impacts to the resource. Section 106 requires that all properties over 50 years that are within the Area of Potential Effects (APE) are evaluated for their National Register eligibility, prior to determination of effects.

As part of the project, a *Proposed Mass Central Rail Trail: Cultural Resources Assessment*¹⁸ was performed in order to assess historic and archaeological resources on or adjacent to the MCRT corridor. Properties identified mainly include railroad-related structures, including the remaining bridges on the former railroad line. Other properties included inventoried individual buildings, structures, or areas and State Register-listed individual properties and historic districts.

Historic properties identified in the assessment would not be significantly impacted by the proposed MCRT-WB project. Any work to bridge structures would be for the sole purpose of improving safety and stability for the use of a rail trail while maintaining the historic character of the structures, and would consist of removing existing timber ties and steel rails, cleaning and painting steel, replacing mortar joints, creating a pathway, installing timber guardrails, and potentially replacing the



¹⁸ Vanasse Hangen Brustlin, Inc. *Proposed Mass Central Rail Trail: Cultural Resources Assessment*, June 30, 2012

structure in situations where it is warranted. Some bridges may be sufficiently deteriorated to the point where replacement is more appropriate than repairs. This would be determined throughout the design process.

As some of the historic resources identified in the analysis are designated as local historic districts, the respective historical commissions and historic district commissions would be notified of the proposed work. Additionally, DCR would notify and coordinate with the MHC and State Historic Preservation Officer (SHPO) regarding potential impacts to historic and archaeological resources that could arise and ways to avoid, minimize, or mitigate such impacts.

State-Register Listed Individual Properties

Previously listed resources in the State Register of Historic Places identified along the corridor during the assessment include buildings, bridges, and areas. Some of these resources have also been listed on the National Register of Historic Places. The following is a list of identified State-Register listed individual resources located within 0.25 miles of the MCRT-WB (the APE) in each community:

Hudson

- Goodale Homestead (HUD.F, HUD.103) - also listed in National Register

Sudbury

- B&M Railroad Section Tool House (SUD.282)

Wayland

- First Free Public Library Marker (WAY.910) - also listed in National Register
- Wayland Railroad Station (WAY.82) - also listed in National Register
- Central Massachusetts Railroad Freight House (WAY.256)

Waltham

- Theodore Lyman House, Vale Estate (WLT.BB) - also listed in National Register
- Linden Street Railroad Bridge (WLT.901) - also listed in National Register

Impacts, if any, to State-Register Listed Individual Properties would be minimal as the construction of the MCRT-WB would not physically alter resources, with the exception of the Linden Street Railroad Bridge. This bridge is recommended for rehabilitation based on its condition, to create a safer and more stable structure for the MCRT-WB.

Historic Districts

Six National Register and/ or State Register-listed historic districts were identified in the assessment.

The Wayside Inn Historic District (SUD.E) is located on Old Boston Post Road in Sudbury and known historically for the Wayside Inn and Redstone Schoolhouse buildings. The MCRT corridor is located at the edge of this district, which could be a potential destination for MCRT-WB users. This district is listed in both the State and National Register of Historic Places.

The Peakham-Southwest District (SUD.F) also located in Sudbury, is almost entirely encompassed within the Wayside Inn Historic District. Similar to the Wayside Inn Historic District, it is also located adjacent to the MCRT corridor and could serve as a destination for MCRT-WB users. This district is designated as a local historic district and listed in the State Register of Historic Places.

The George Pitts Tavern Historic District (SUD.P) is a small district named for a former tavern in the area that no longer exists. The district, located in Sudbury, includes buildings dating from about 1800 to the early 20th century. The MCRT corridor crosses through this district, which could serve as a destination for MCRT-WB users. It is designated as a local historic district and listed in the State Register of Historic Places.

Two overlapping districts are located in Wayland. The Wayland Center Historic District (WAY.A) listed in the State and National Register of Historic Places, and the Wayland Center Local Historic District (WAY.I) designated as a local district and listed in the State Register, are both located near Boston Post Road. The MCRT corridor is located within the districts, which may serve as MCRT-WB user destinations.

Near the center of Weston, the Boston Post Road Historic District (WSN.K) is a fairly large district located along the MCRT corridor. Due to its extensive resources and proximity to the rail trail, this district could also serve as a potential destination for MCRT-WB users. This district is listed in both the State Register and National Register of Historic Places.

Construction of the MCRT-WB would not alter the historic character of these districts. The MCRT-WB would serve to educate the public of these historic districts, as they could be destination and access points of the shared-use path. Interpretive signage could be incorporated into the MCRT-WB design in order to educate and explain districts the MCRT-WB would cross through.

Inventoried Resources

Identified resources in the Inventory of Historic and Archaeological Assets of the Commonwealth have been documented on a MHC inventory form. The resources listed below are not officially listed in the State or National Register of Historic Places, although some may have been subject to a MHC opinion regarding their eligibility in the past. The following is a list of the inventoried resources located in each MCRT-WB community (and their associated MHC inventory forms are in Attachment H, *Massachusetts Historical Commission Inventory Forms*):

Hudson

- Hudson Downtown – Assabet River Area (HUD.A); MHC opinion: National Register eligible
- John Rice – DuFault House (HUD-35); No MHC opinion
- Boston & Maine Railroad Station (HUD.24); No MHC opinion
- General Brigham House (HUD.35); No MHC opinion
- Bruce's Pond Railroad Bridge (HUD.906); No MHC opinion
- Assabet River Railroad Bridge (HUD.907); No MHC opinion
- Fort Meadow Brook Railroad Bridge (HUD.908); No MHC opinion
- Ordway Farm (HUD.108); No MHC opinion

Sudbury

- Massachusetts Central Railway Bridge over Hop Brook (SUD.900, SUD.901); No MHC opinion

Wayland

- B&M Railroad Bridge over Sudbury River (WAY.916); No MHC opinion
- Samuel Stone Noyes House (WAY.77); No MHC opinion
- Wayland Public Library (WAY.33); No MHC opinion

Weston

- Lower Conant Area (WSN.G); No MHC opinion
- Mass Central Railroad Station (WSN.251); No MHC opinion
- Church Street Bridge over B&M Railroad (WSN.945); No MHC opinion
- Alpheus Cutter/ George Pushee House (WSN.249); No MHC opinion

- Central Mass Railroad Bridge: culvert adjacent to MBTA Fitchburg Line (WSN.903); No MHC opinion
- Central Mass Railroad Bridge over MBTA Fitchburg Line (WSN.904); No MHC opinion

Waltham

- Route 128 Railroad Bridge (WLT.918); No MHC opinion
- Waltham Highlands Station (WLT.414); No MHC opinion
- Lexington Terrace (WLT.F); No MHC opinion
- Reliance Garnetting Mills (WLT.417); No MHC opinion
- Clematis Brook Railroad Bridge (WLT.919); No MHC opinion

Impacts, if any, to inventoried resources would be minimal as the construction of the MCRT-WB would not physically alter these elements, with the exception of the bridges. The bridges are recommended for rehabilitation based on their condition, in order to create a safer and more stable structure for the MCRT-WB.

Archaeological Resources

Sixteen previously reported archaeological sites located along the corridor or within 0.25 miles of its centerline were identified in the assessment. A preliminary determination of additional areas of sensitivity for both ancient Native American archaeological sites and historic period archaeological sites adjacent to the corridor was also prepared. Information about the location of reported archaeological sites and archaeological sensitivity has been, and would continue to be, kept confidential. Construction of the MCRT-WB would not affect any recommended areas of archaeological sensitivity due to the shallow depth of construction entirely within the old railroad ballast and subgrade (under the railroad bed itself) areas. Appropriate measures would be taken to avoid identified archaeological resources.



Open Space

A number of private, local, state and federal open space parcels are present along the MCRT alignment. These parcels abut the existing MBTA-owned ROW and there would be no direct impact from the development of the MCRT-WB. Establishment of the MCRT-WB would benefit the adjacent open space areas by providing additional access from the rail trail and would provide off road interconnection with other open space parcels. Table 8 lists open space parcels by town along the MCRT alignment.

Table 8
Open Space Parcels by Municipality

Town	Owner	Parcel
Berlin	DCR	Ross Flood Control Site
	Private	Chedco Farm
Hudson	DCR	Marlborough-Sudbury State Forest
Hudson/Sudbury	US Fish and Wildlife Service	Assabet River NWR
Sudbury	Sudbury Valley Trustees	Memorial Forest
	Town of Sudbury	Hop Brook Marsh
	Private	Stone
	Private	Maple Meadows
	Town of Sudbury	Wash Brook Parcel
Wayland/Sudbury	US Fish and Wildlife Service	Great Meadows NWR
Wayland	Private	Plain Road Area
	Town of Wayland	Several unnamed parcels
Weston	Town of Weston	Jerico Town Forest
	Weston Forest and Trail Assoc.	Gun Club Lane Property
	Town of Weston	Laxfield Road Property
	Town of Weston	Woodard Land Property
	Town of Weston	Unnamed
	Private	Mead
	Town of Weston	Sears Conservation Land
	Town of Weston	Forbes Conservation Land
	Weston Forest and Trail Assoc.	Hobbs Brook Road Property
Waltham	Historic New England.	Lyman Estate

Source: VHB, Inc./MassGIS



Land

Construction of the 10-foot wide and 23-mile long MCRT-WB would involve removing existing former railroad ties and rails, installing a gravel sub-base, and developing a 10-foot wide ADA compliant path for the trail either using Hot Mix Asphalt, stone dust, or stabilized soil materials that would be hard and stable. The path would include two 2-foot wide vegetated shoulders on either side of the path, totaling a 14-foot wide cross section within the 19-foot path development corridor. Additional grading would be needed adjacent to the shoulders to match ground level. See Attachment D, *Mass Central Rail Trail EENF Construction Detail Figures* for a typical cross-section of the proposed MCRT-WB (note the measurements and sizes in the figures may not correspond directly with the proposed MCRT-WB design).

There would be no new alteration of undeveloped land within the 23-mile long, 19-foot wide path development corridor due to the former use as a railroad corridor.

Total new impervious area from this path would be a maximum of 28 acres, dependent on surface materials chosen for the path development. This total acreage exceeds MEPA review threshold, 301 CMR 11.03(1)(a)(2), creation of ten or more acres of impervious area. The following table describes the area for the path development corridor, and impervious cover in each municipality the MCRT-WB would traverse. It is important to note that in each individual community, impervious cover is less than ten acres.

Table 9
Path Development Corridor and Impervious Cover Areas By Municipality

Community	19-Foot Path Development Corridor	Maximum Impervious Cover Area
Berlin	5.3 acres	2.8 acres ¹
Bolton	1,900 square feet	1,000 square feet
Hudson	15.9 acres	8.4 acres
Stow	6,213 square feet	3,270 square feet
Sudbury	10.6 acres	5.6 acres
Wayland	6.9 acres	3.6 acres
Weston	6.9 acres	3.6 acres
Waltham	6.9 acres	3.6 acres
Total	52.7 acres	27.7 acres

¹ Town has requested that the surface material of the trail be non-paved

Although the MCRT-WB would result in more than ten acres of impervious area, the project would span 23 miles across eight communities along a linear and narrow corridor. Compared to a non-linear corridor project, such as a site being developed on a traditional parcel of land, the increase in impervious area would not have the same impacts. As the MCRT-WB would be narrow, any stormwater that falls upon the impervious surface would immediately shed off onto surrounding vegetated or pervious areas. The stormwater would not be contained on the trail, as it would with typical projects that exceed this threshold. The existing surface material of the abandoned corridor could be considered currently impervious as it is composed of compacted gravel from years of informal use by walkers and bicyclists. Developing a more formalized trail over this surface would not significantly alter the rates and amount of stormwater filtration.



Temporary Construction Impacts

Construction of the MCRT-WB would require access throughout the length of the project by construction equipment including, trucks, loaders, excavators, compactors, pavers, cranes, painting equipment and pickups. Construction access would be obtained from the many road crossings along the alignment. Construction access pads consisting of crushed stone would be installed at all access points off public

ways to minimize tracking of soil on roadways. Sweepers would be used to clean street surfaces as needed.

Potential construction activities would include removing steel rails and wood ties, installing erosion controls, clearing and trimming, filling, grading, compacting, paving, bridge preservation and rehabilitation, landscaping, drainage, and installing trail amenities.

Bridge preservation and rehabilitation would require sand blasting, welding, painting, abutment repointing, repair of concrete and carpentry to install a new wood deck and railing system. The bridge over the Sudbury River may require pile removal and driving new piles as well as replacing timbers. Abutment repairs at a number of bridges may also include temporary work along the Bank and in water for repointing and concrete repairs. Abutments repairs would be in-place, and the abutments would not be expanded.

Existing cross culverts also may need to be replaced or repaired if deteriorated. Culverts would be replaced with the same opening but improved materials may be used, such as using concrete pipe to replace corrugated metal pipes. Headwalls may be replaced or repaired based on the extent of deterioration.

Grading impacts for the rail trail would be limited to the existing elevated railroad embankment and would avoid adjacent wetlands areas to the maximum extent possible. Unavoidable impacts would be mitigated as discussed below. Other temporary impacts to the land area along the MCRT-WB would be restored using landscaping and loam and seed to stabilize the area.

Proposed Mitigation Measures

The MCRT-WB would consider various mitigation measures to offset any potential environmental impacts, and to increase the benefits associated with the project. MEPA additionally requires mitigation measures to be assessed as part of a completed EENF. Based on the environmental impact analysis, the MCRT-WB would include mitigation measures such as landscaping, wetland replacement, and educational interpretive signage in order to mitigate for impacts to land, wetland resource areas, and historic and archaeological resources.

A variety of native landscaping materials would be implemented into the MCRT-WB design at road crossings, trailheads, and areas with steep embankment slopes that exceed a 3:1 slope. Shrubbery would be planted at the tops of embankments, overlook areas, and stream crossings outside of the trail clear zone, to increase aesthetics and help to treat stormwater runoff. These landscape plantings would help to restore some of the natural environment feel of the MBTA-owned ROW corridor.

Invasive species controls would also be implemented as a mitigation measure to protect native vegetation.

Impacts to wetlands would be carefully examined during the preliminary and final design phases to reduce and minimize any alterations. Minor revisions or adjustments to the trail alignment within the 19-foot easement would be applied to avoid bordering vegetated wetland impacts where ever possible. In accordance with the Massachusetts Wetlands Protection Act and Section 401 and 404 of the Federal Clean Water Act, appropriate mitigation for the unavoidable impacts to bordering vegetated wetlands would be provided. Specifically, this mitigation would include the construction of wetland compensation areas sized to mitigate for lost Vegetated Wetland at greater than a 1:1 ratio. Wetland replacement areas would be determined throughout the MCRT-WB project design phases.

Minor impacts to floodplain (Bordering Land Subject to Flooding) may result from the slight filling along the embankment to create the rail trail. Filling for the construction of the rail trail in floodplain would be conducted to minimize or eliminate loss of floodplain storage volume. Where loss of flood storage is not avoidable, compensatory replacement areas would be constructed by removing materials at comparable elevations in other portions of the MBTA-owned ROW within the same floodplain.

Educational interpretive signage is a mitigative measure that would be implemented along the MCRT alignment. These could display information relevant to rare species that may inhabit a certain area, and could make trail users aware of their presence. Signage could also be placed in areas where salamanders or turtles frequently cross the trail. These interpretive signs serve to educate the public about the natural environment, and help to protect the species that inhabit these natural areas.

In accordance with Section 106 of the National Historic Preservation Act, the DCR would consult with the MHC and the appropriate local historic commissions regarding project-related impacts to historic and archaeological resources, if any, and to determine ways to avoid, minimize, or mitigate such impacts. Potential mitigation measures for historic and archaeological resources could include resource documentation, interpretive signage, or other preservation-related efforts benefiting the historic resources along the MCRT-WB.

The development of the MCRT-WB itself would help to mitigate:

- Air quality pollution caused by vehicles, as the MCRT-WB could potentially decrease vehicular usage;
- Public health issues, as the MCRT-WB would increase recreational opportunities for exercising and improving overall health; and
- Traffic congestion, as the MCRT-WB could serve as an alternative transportation option and remove existing vehicle traffic from the roadways.

The natural environment within the project area would be protected from existing encroachments and illegal dumping. A formalized trail used by the public would deter these activities from continuing into the future, and would create a more clean and protected natural environment.

This page intentionally left blank

Attachment B

Request to the Secretary of Environmental Affairs

This page intentionally left blank

Request to the Secretary of Environmental Affairs

Due to the nature of the Mass Central Rail Trail – Wayside Branch (MCRT-WB), the Department of Conservation and Recreation (DCR) respectfully requests that the Secretary of Environmental Affairs:

- find that the MEPA review process for the MCRT-WB project is adequately complied with through the information provided in this Expanded Environmental Notification Form (EENF); and
- consent to a waiver of the requirement for the preparation of an Environmental Impact Report (EIR), in accordance with 301 CMR 11.11.

This would allow the design of the MCRT-WB to proceed while also undergoing public review; would expedite the permitting process, which in turn would expedite the construction of the rail trail; and would preserve limited DCR funding that could otherwise be spent supporting DCR's goals and invested into the public's open space and recreation inventory.

Overall, the goal of the project is to construct an alternative transportation facility within the region and through various communities in order to provide the public an opportunity to enjoy its rich natural and cultural resources. Through the various federal and state permitting processes, DCR would provide appropriate public review of the project and mitigation for project-related environmental impacts. Throughout the project design process, DCR would seek to avoid and minimize impacts to all natural and cultural resources to the greatest extent practicable.

The project includes multiple segments, in different communities, that would be designed and constructed as funding became available. The project may not be designed and constructed as a single project, but phased and constructed in coordination with the host communities.

If the Secretary of Environmental Affairs does not consent to a full waiver of an EIR for the MCRT-WB project, DCR respectfully requests the Secretary to consent to a

Phase One waiver for the preparation of an EIR for the Wayland segment of the project. If granted, the section of the MCRT-WB located in Wayland would be able to move forward with design and construction. The Town of Wayland's community support for development of this segment and availability of funding makes the Wayland section of the MCRT-WB a logical first phase for the project.

EIR Waiver Request

When considered as a whole, the MCRT-WB exceeds two thresholds for the preparation of an EIR, namely, 301 CMR 11.03(1)(a)2, *creation of ten or more acres of new impervious area*, and 301 CMR 11.03(3)(a)(1)b, *alteration of ten or more acres of any other wetlands*.

In accordance with 301 CMR 11.11, DCR respectfully requests a waiver from the requirement to prepare an EIR for the entire MCRT-WB project. This request will first describe how the MCRT-WB project complies with the two general waiver requirements found in 301 CMR 11.11(1) and then will describe how the project complies with the EIR waiver requirements found in 301 CMR 11.11(3).

General Waiver Requirements

The Secretary of Environmental Affairs may waive any provision or requirement in 301 CMR 11.00 provided that strict compliance with the provision or requirement would:

- a) result in an undue hardship for the Proponent, unless based on delay in compliance by the Proponent; and
- b) not serve to avoid or minimize Damage to the Environment.

As described below, the MCRT-WB project meets both general waiver requirements.

Project Will Result in an Undue Hardship for the Proponent

The requirement to prepare an EIR would cause an undue hardship for the Massachusetts Department of Conservation and Recreation. The undue hardship is based on construction delay and financial considerations. The MCRT-WB project has been in the planning and proposal stages for decades. The *Central Massachusetts Rail Trail Feasibility Study (April 1997)*, which was directed by the Boston Metropolitan Planning Organization, determined the development of a rail trail along the former Massachusetts Central Railroad was feasible. As with many state agencies, DCR has

limited financial resources to support conservation and recreation goals and areas in the Commonwealth. Rather than expending funding on environmental analyses associated with the preparation of an EIR for the MCRT-WB, finances conserved could be utilized for constructing improvements and developing important conservation and recreation resources in order to meet the needs of the general public.

Completion of the MCRT-WB project would provide substantial benefits for the Commonwealth, including enhanced access to the rich natural and cultural resources within the project area and the opportunity to improve air quality through the construction of an alternative transportation facility. Not only would the MCRT-WB serve as a recreational opportunity for its users, it would also improve public health, utilize an existing underdeveloped and abandoned area, decrease vehicular congestion and use by encouraging walking and biking to work, improve regional greenway and rail trail initiatives, educate the public of natural areas, and support various goals, plans, and initiatives of the state, region, and surrounding communities.

Process Will Not Serve to Avoid or Minimize Harm to the Environment

The preparation of an EIR would not serve to avoid or minimize damage to the environment. The environmental analysis performed as part of this EENF examined all potential impacts along the proposed MCRT-WB corridor. Some areas that may impact environmental resources could be avoided through alternative alignments. These have been described in the EENF, and would be further explored during the design phase. The overwhelming benefits represented by the MCRT-WB project outweigh the potential environmental impacts. Where the project exceeds thresholds for environmental impacts, the project would still have to undergo an extensive review by each of the towns along the alignment and the Massachusetts Department of Environmental Protection (MassDEP) and potentially the United States Army Corps of Engineers through separate regulatory review procedures.

As studies have already been completed for the MCRT-WB project, the preparation of an EIR would not serve to avoid or minimize harm to the environment. The information contained in this EENF serves to be sufficient in the analysis of environmental impacts associated with the MCRT-WB. Anticipated environmental impacts are now known for the development of the trail. As this analysis is advanced, mitigation options would be developed throughout later design phases to lessen any environmental impacts to the greatest extent practicable.



EIR Waiver Requirements

The MCRT-WB project also meets the EIR waiver requirements. The MEPA regulations state that a waiver from the EIR requirement, in accordance with 301 CMR 11.11(3), may be granted under the following circumstances:

- a) the project is likely to cause no harm to the environment; and
- b) ample and unconstrained infrastructure exists to support the project.

As described below, the MCRT-WB project meets both EIR waiver requirements.

Project is Likely to Cause No Harm to the Environment

As discussed in this EENF, the MCRT-WB project would not cause significant harm or impacts to the environment. The MCRT-WB would affect environmental resources, such as wetlands, rare species habitats, and cultural resources, but these would be avoided and minimized to the greatest extent practicable and feasible and appropriate mitigation would be provided for all unavoidable environmental impacts. The following is a brief description of anticipated project-related impacts to these resources and the measures proposed to mitigate these impacts.

Wetland Resources

Wetlands associated with streams and rivers are present at many locations along the MCRT corridor. Preliminary analysis of wetland resources shows that there would be potential impacts to floodplain (10.91 acres), BVW (4,146 square feet), and Riverfront Area (10.71 acres). The corridor crosses over streams and rivers via bridge structures or culverts. No new bridges or culverts are proposed, and work to these structures would be for the main purpose of creating safer and more stable crossings.

Regulated by the Massachusetts Wetlands Protection Act (WPA), impacts to wetlands would be minimal and avoided whenever possible during the development of the MCRT-WB. The existing embankment is elevated above the adjacent wetlands, waterways and floodplains causing only minimal, if any, impacts to these resources. Construction of the rail trail would largely be able to avoid wetland impacts. In occurrences where the rail trail is level with adjacent wetlands, the path development corridor may be shifted north or south within the MBTA-owned ROW to avoid the greatest amount of wetland areas. Where loss of flood storage is not avoidable, compensatory replacement areas would be constructed by removing materials at comparable elevations in other portions of the MBTA-owned ROW within the same floodplain.

Although the project is anticipated to alter greater than ten acres of any other wetlands (Riverfront Area and Bordering Land Subject to Flooding) triggering MEPA threshold 301 CMR 11.03(3)(a)(1)b, these areas are previously-developed and consist of railroad ballast, ties and track in most locations. The proposed project would not alter the ability of these areas to protect the significant interests of the WPA. Considering the MCRT-WB project as a whole, the wetland impacts would not be considered significant.

The project would span 23 miles across eight communities along a linear and narrow corridor resulting in more than ten acres of impervious area triggering MEPA threshold 301 CMR 11.03(1)(a)2. The MCRT-WB project would not have the same impacts to impervious areas and infiltration rates as a non-linear project (such as site development where stormwater is retained for extended periods of time). As the MCRT-WB would be narrow, any stormwater that falls upon the impervious surface would immediately shed off onto surrounding vegetated, pervious areas. The increase in runoff rates are considered negligible due to the similarities between the existing surface and the proposed improvements. The existing surface material of the abandoned corridor could be considered currently impervious as it is composed of compacted gravel from years of train loads along the railroad alignment and informal use by walkers and bicyclists. Developing a more formalized trail over this surface would not significantly alter the rates and amount of stormwater filtration. The MCRT-WB would not be a pollutant source because the trail would be mainly used by pedestrians and bicyclists and contaminants would not accumulate as it would on a typical roadway. The project would be constructed in accordance with stormwater standards and DCR anticipates that each segment would be constructed in accordance with all regulatory performance standards.

Rare Species Habitats

According to the latest Massachusetts Natural Heritage and Endangered Species Program (NHESP) Atlas dated 2008, the rail trail corridor would pass through three priority and estimated species habitats: PH 1305/ EH 485, PH 687/ EH 648 and PH 1516/ EH 38. The NHESP has been consulted concerning the species found in these polygons and in a letter dated June 19, 2013 (Attachment G), has identified a number of state-listed rare species are present in the vicinity of the project corridor.

The four bird species found within polygons crossed by the MCRT-WB are species of large deep-water marshes, habitats that would not be affected by the proposed trail. The three turtle and one salamander species found within polygons crossed by the MCRT-WB may cross the trail to move between upland and wetland habitats used at different life history stages, or simply to move between similar habitat patches. The proposed MCRT-WB would remove the existing track and ties that create a barrier to the movement of these species and would improve habitat connectivity.

No take of an endangered species is anticipated as part of the MCRT-WB project. By removing the existing barrier created by the track and ties species can move more easily from one area to another. As a form of mitigation, DCR would implement interpretive educational signage along the MCRT corridor. These could display information relevant to rare species that may inhabit a certain area, and could make trail users aware of their presence. Signage could also be placed in areas where salamanders or turtles frequently cross the trail. These interpretive signs serve to educate the public about the natural environment, and help to protect the species that inhabit these natural areas. DCR will continue to coordinate with NHESP to minimize impacts to priority and estimated habitats and mitigate any potential unavoidable impacts during construction and operation of the MCRT-WB.

Cultural Resources

The MCRT-WB would be within, or near, historic and archaeological properties, including National and State Register-listed Historic Properties and Districts. As much of the MCRT-WB would be constructed along a former rail bed, physical impacts to historic and archaeological resources are expected to be minimal.

No adverse effects to cultural resources are anticipated because there are no National or State Register-listed Historic Properties that would be demolished or removed as part of the MCRT-WB project. National Register listed bridges would not be demolished or removed and inventoried bridges would be carefully rehabilitated in close consultation with the Massachusetts Historical Commission (MHC) in order to create a safe and stable shared-use path.

In accordance with Section 106 of the National Historic Preservation Act, DCR would consult with MHC and the appropriate local historic commissions regarding project-related impacts to historic and archaeological resources and ways to avoid, minimize, or mitigate such impacts. Potential mitigation measures could include resource documentation, interpretive signs, or other preservation-related efforts benefiting the historic resources of the area. As the corridor would cross near several historic districts and landmarks throughout its length, the MCRT-WB would provide path users with a gateway to these cultural resources and educational benefits.

Ample and Unconstrained Infrastructure Exists to Support the Project

Ample and unconstrained infrastructure exists to support the project. A rail trail does not require additional infrastructure facilities to support it, and no utilities are required. Throughout the entire alignment, the MCRT-WB would utilize previously developed areas (the former Massachusetts Central Railroad corridor) and existing parking lots.

Phase One Waiver Request

If the Secretary of Environmental Affairs does not grant the full EIR waiver request, DCR respectfully requests the Secretary consent to a Phase One waiver request for the Wayland segment of the MCRT-WB project. Doing so would assist in advancing a portion of the MCRT-WB project while further environmental analysis is performed for the remaining sections. A partial waiver of a mandatory EIR would allow DCR to proceed with phase one of the project prior to preparing an EIR. The MCRT-WB project meets the Phase One waiver requirements. The MEPA regulations state that a Phase One waiver, in accordance with 301 CMR 11.11(4), may be granted under the following circumstances:

- a) the potential environmental impacts of phase one, taken alone, are insignificant;
- b) ample and unconstrained infrastructure facilities and services exist to support phase one;
- c) the Project is severable, such that phase one does not require the implementation of any other future phase of the Project or restrict the means by which potential environmental impacts from any other phase of the Project may be avoided, minimized or mitigated; and
- d) the Agency Action on phase one will contain terms such as a condition or restriction in a Permit, contract or other relevant document approving or allowing the Agency Action, or other evidence satisfactory to the Secretary, so as to ensure due compliance with MEPA and 301 CMR 11.00 prior to Commencement of any other phase of the Project.

Taken alone, the potential environmental impacts associated with the Wayland segment of the MCRT-WB are insignificant. Described in more detail in the *Affected Environment and Environmental Consequences* section of Attachment A, 380 square feet of Bordering Vegetated Wetlands, 1.2 acres of previously developed Riverfront Area, and 4.4 acres of previously developed Bordering Land Subject to Flooding within railroad embankment would be potentially impacted by the Wayland segment. DCR anticipates the Wayland segment would be constructed in accordance with all regulatory performance standards. One priority/ estimated habitat of rare species and eight historic and cultural resources are located within the vicinity of the MCRT-WB through Wayland. The MCRT-WB would not adversely affect these resources.

Ample and unconstrained infrastructure exists to support the Wayland segment of this project. A rail trail does not require additional infrastructure facilities to support it, and no utilities are required. Throughout the Wayland segment, the MCRT-WB would utilize previously developed areas (the former Massachusetts Central Railroad corridor).

The MCRT-WB project in Wayland is severable and does not require the implementation of any other future phase of the project. The Wayland segment would have logical beginning and end points and would be able to serve its purpose without the presence of the other phases or segments of the project. Although the phases of the project developed together would have more of a beneficial impact and greater trail length, the Wayland segment would bring more benefits than no trail if the full EIR waiver is to be denied.

The Wayland segment of the MCRT-WB has been specifically chosen by DCR in consideration for a Phase One waiver request because of the Town of Wayland's community support for the trail and availability of funding to develop this segment. As is the case with the entire MCRT-WB corridor, final design of the path development corridor for the Wayland segment would aim to avoid as many wetland resource areas as feasible resulting in potentially less impact than what is currently proposed. Removal of the existing track and ties would benefit any rare species located in the vicinity because the track and tie barrier would no longer inhibit species' movement and would improve habitat connectivity. Path users could visit cultural resources such as historic districts and other historic structures along the Wayland segment bringing educational and cultural benefits to the area instead of negatively impacting these resources.

If the Phase One waiver is to be granted, any other future phases of the MCRT-WB project would be compliant with MEPA and the regulations under 301 CMR 11.00 prior to commencement of these future phases.

Conclusion

Although the MCRT-WB project taken as a whole exceeds thresholds requiring the preparation of an EIR, an EIR waiver is being requested. The project meets both the general waiver requirements and the EIR waiver requirements, described in 301 CMR 11.11.

Concerning the general waiver requirements, the preparation of an EIR would not serve to avoid or minimize harm to the environment because the analysis presented in the EENF demonstrates that all measures to avoid or minimize harm have been incorporated in the project design. Preparing an EIR would cause an undue hardship for the Massachusetts Department of Conservation and Recreation, which has limited funding for conservation and recreation related projects. Allocating valuable funds for additional environmental review through the preparation of an EIR would cause an undue hardship for DCR, as these funds would not be available for development of the MCRT-WB and other conservation and recreation projects or programs to benefit the general public and improve quality of life.

Concerning the EIR waiver requirements, construction of the MCRT-WB is likely to cause no harm to the environment. While the MCRT-WB would affect environmental resources, these impacts would be avoided and minimized as much as feasible and appropriate mitigation would be provided for all unavoidable environmental impacts. Where the project exceeds thresholds for environmental impacts, the actual impacts would be minimal considering the previously developed nature of the ROW corridor. The project would still have to undergo an extensive review by each of the towns along the alignment and the MassDEP through separate regulatory review procedures. The project would provide a net benefit to the environment by providing mitigation measures through landscaping, educational interpretive signage, and wetland replacement. The overwhelming benefits represented by the MCRT-WB project outweigh the environmental impacts.

Furthermore, ample and unconstrained infrastructure exists to support the project.

If the Secretary of Environmental Affairs does not consent to the request for a full EIR waiver, DCR respectfully requests that the Secretary consent to a Phase One waiver request for the Wayland segment of the MCRT-WB project. In regard to the Phase One waiver request requirements, Phase One of the project taken alone has potential environmental impacts that are insignificant, ample and unconstrained infrastructure exists to support Phase One, the project is severable and does not require the implementation of future phases of the project, and any other future phases of the project would be in compliance with MEPA and its regulations prior to their commencement. Granting the Phase One waiver request would assist in advancing a portion of the MCRT-WB project while further environmental analysis is performed for the remaining sections.

Public review and feedback of the MCRT-WB occurred during the preparation of the 1997 *Central Massachusetts Rail Trail Feasibility Study*. Additional public meetings would be held as the MCRT-WB project advances to later design phases.

This page intentionally left blank

Attachment C

Mass Central Rail Trail – Wayside Branch EENF Figures

This page intentionally left blank

Attachment D

**Mass Central Rail Trail – Wayside Branch EENF
Construction Detail Figures**

Provided on separate CD

This page intentionally left blank

Attachment E

Letters of Support

This page intentionally left blank

Attachment F

Mass Central Rail Trail – Wayside Branch

Evaluation of Existing Bridges

Provided on Separate CD

This page intentionally left blank

Attachment G

NHESP Letter Dated June 19, 2013

This page intentionally left blank

Attachment H

**Massachusetts Historical Commission Inventory
Forms**

Provided on Separate CD

This page intentionally left blank

Attachment I

EENF Distribution List

This page intentionally left blank

Secretary Richard K. Sullivan, Jr.
Executive Office of Energy & Environmental
Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Department of Environmental Protection
Commissioner's Office
One Winter Street
Boston, MA 02108

DEP Northeast Regional Office
Attn: MEPA Coordinator
205B Lowell Street
Wilmington, MA 01887

DEP/ Central Regional Office
Attn: MEPA Coordinator
627 Main Street
Worcester, MA 01608

Massachusetts Department of Transportation
Public/ Private Development Unit
10 Park Plaza
Boston, MA 02116

MassDOT – District 3
Attn: MEPA Coordinator
403 Belmont Street
Worcester, MA 01604

MassDOT – District 4
Attn: MEPA Coordinator
519 Appleton Street
Arlington, MA 02476

MassDOT – District 6
Attn: MEPA Coordinator
185 Kneeland Street
Boston, MA 02111

Massachusetts Historical Commission
The MA Archives Building
220 Morrissey Boulevard
Boston, MA 02125

Metropolitan Area Planning Council
60 Temple Place/ 6th floor
Boston, MA 02111

Central Mass. Regional Planning Commission
2 Washington Square
Union Station - 2nd floor
Worcester, MA 01604-4016

Waltham City Council
610 Main Street
Waltham, MA 02452

Waltham Planning Department
119 School Street
Top Floor
Waltham, MA 02451

Waltham Conservation Commission
119 School Street
Lower Level
Waltham, MA 02451

Waltham Health Department
119 School Street
Waltham, MA 02451

Weston Board of Selectmen
Weston Town Hall
P.O. Box 378, 11 Town House Road
Weston, MA 02493

Weston Planning Department
Weston Town Hall
11 Townhouse Road
P.O. Box 378
Weston, MA 02493

Weston Conservation Commission
Weston Town Hall
P.O. Box 378
Weston, MA 02493

Weston Board of Health
Weston Town Hall
Town House Road, P.O. Box 378
Weston, MA 02493

Wayland Office of the Board of Selectmen
41 Cochituate Road
Wayland, MA 01778

Wayland Planning Department
41 Cochituate Road
Wayland, MA 01778

Wayland Conservation Commission
41 Cochituate Road
Wayland, MA 01778

Wayland Health Department
41 Cochituate Road
Wayland, MA 01778

Sudbury Board of Selectmen
Flynn Building
278 Old Sudbury Road
Sudbury, MA 01776

Sudbury Planning Department
Flynn Building
278 Old Sudbury Road
Sudbury, MA 01776

Sudbury Conservation Commission
Department of Public Works Building
275 Old Lancaster Road
Sudbury, MA 01776

Sudbury Health Department
Department of Public Works Building
275 Old Lancaster Road
Sudbury, MA 01776

Stow Board of Selectmen
380 Great Road
Stow, MA 01775-2127

Stow Planning Board
380 Great Road
Stow, MA 01775-2127

Stow Conservation Commission
380 Great Road
Stow, MA 01775-2127

Stow Board of Health
380 Great Road
Stow, MA 01775-2127

Hudson Board of Selectmen's Office
78 Main Street
Hudson, MA 01749

Hudson Planning Board
78 Main Street
Hudson, MA 01749

Hudson Conservation Commission
78 Main Street
Hudson, MA 01749

Hudson Board of Health
78 Main Street
Hudson, MA 01749

Bolton Planning Board
663 Main Street
Bolton, MA 01740

Bolton Board of Health
663 Main Street
Bolton, MA 01740

Berlin Planning Board
23 Linden Street
Berlin, MA 01503

Berlin Board of Health
35 Jones Road
Berlin, MA 01503

Ms. Libby Herland
Project Leader
Eastern Massachusetts NWR Complex
73 Weir Hill Road
Sudbury, MA 01776

Ms. Lee Steppacher
Project Coordinator
Sudbury, Assabet and Concord Wild and Scenic
River
National Park Service
15 State Street
Boston, MA 02109

Bolton Board of Selectmen
663 Main Street
Bolton, MA 01740

Bolton Conservation Commission
663 Main Street
Bolton, MA 01740

Berlin Board of Selectmen
Municipal Building- 23 Linden Street
PO Box 274
Berlin, MA 01503

Berlin Conservation Commission
23 Linden Street
Berlin, MA 01503

Natural Heritage and Endangered Species
Program
MA Division of Fisheries & Wildlife
100 Hartwell St, Suite 230
West Boylston, MA 01583

Massachusetts Bay Transit Authority
Attn: MEPA Coordinator
10 Park Plaza, 6th Fl.
Boston, MA 02216-3966

Wendi Weber
Regional Director
U.S. Fish and Wildlife Service
Northeast Regional Office
300 Westgate Center Drive
Hadley, Massachusetts 01035-9587