Commonwealth of Massachusetts

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

Environmental Notification Form

For Office Use Only
EEA#: 16150
MEPA Analyst: Eva Murray

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: **Cape Cod Rail Trail Extension- Phase III**		
Street Address: **4.8-mile rail trail extension from Peter Homer Park in Yarmouth to Mary Dunn Road in Barnstable**		
Municipality: **Towns of Barnstable and Yarmouth**	Watershed: **Cape Cod**	
Universal Transverse Mercator Coordinates:	Latitude: **41° 40' 49.2240'' N to 41° 41' 6.6660'' N** Longitude: **70° 16' 50.8584'' W to 70° 13' 2.2440'' W**	
Estimated commencement date: **Spring 2022**	Estimated completion date: **Fall 2024**	
Project Type: **Transportation**	Status of project design: **25 % complete**	
Proponent: **MassDOT in coordination with the Towns of Barnstable and Yarmouth**		
Street Address: **10 Park Plaza Room 4260**		
Municipality: **Boston**	State: **MA**	Zip Code: **02116**
Name of Contact Person: **Bryan Cordeiro**		
Firm/Agency: **MassDOT**	Street Address: **10 Park Plaza**	
Municipality: **Boston**	State: **MA**	Zip Code: **02116**
Phone: **857-368-8813**	Fax: **857-368-0609**	E-mail: **bryan.cordeiro@state.ma.us**

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☐Yes ☒No

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

a Single EIR? (see 301 CMR 11.06(8))	☐Yes ☒No
a Special Review Procedure? (see 301CMR 11.09)	☐Yes ☒No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	☐Yes ☒No
a Phase I Waiver? (see 301 CMR 11.11)	☐Yes ☒No

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

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

The proposed work will exceed the following MEPA thresholds:
1) 301 CMR 11.03(1)(b)2., Creation of five or more acres of impervious area; and
2) 301 CMR 11.03(1)(b)3., Conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments of the Constitution of the Commonwealth to any purpose not in accordance with Article 97.

Which State Agency Permits will the project require?
None

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 acre

The proposed project is included in the Cape Cod Metropolitan Planning Organization's (MPOs) 2020-2024 Transportation Improvement Plan (TIP) and is anticipated to receive federal funding under the Congestion, Mitigation, and Air Quality (CMAQ) program. The Project is being undertaken by the Massachusetts Department of Transportation (MassDOT). The Project construction cost estimate is $9.9 million. The Project will also require an easement for 5.45 acres on the Hyannis Ponds Wildlife Management Area (WMA) from the Massachusetts Department of Fish and Game (Mass DFG) Division of Fisheries and Wildlife to the town of Barnstable. This easement will allow MassDOT to construct a portion of the Cape Cod Rail Trail (CCRT), Phase III. In exchange, the Town of Barnstable will grant conservation restrictions to Mass DFG on four adjacent Town of Barnstable parcels totaling 13.1 acres to mitigate direct impacts of the easement, and will also grant hunting rights to Mass DFG on 76 acres of a fifth, 133-acre parcel, known as the Bridge Creek Conservation Area to mitigate indirect impacts (loss of hunting opportunity) from the creation of the CCRT.

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	38.7 Ac		
New acres of land altered		17.1 Ac	
Acres of impervious area	3.9 Ac	5.65 Ac	9.55 Ac
Square feet of new bordering vegetated wetlands alteration		0	
Square feet of new other wetland alteration		0	
Acres of new non-water dependent use of tidelands or waterways		0	
STRUCTURES			
Gross square footage	0	0	0
Number of housing units	0	0	0
Maximum height (feet)	0	0	0
TRANSPORTATION			
Vehicle trips per day	0	0	0
Parking spaces	20	+115	135
WASTEWATER			
Water Use (Gallons per day)	0	0	0
Water withdrawal (GPD)	0	0	0
Wastewater generation/treatment (GPD)	0	0	0
Length of water mains (miles)	0	0	0
Length of sewer mains (miles)	0	0	0

Has this project been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

Has any project on this site been filed with MEPA before?
☐ Yes (EEA #_____) ☒No

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

Describe the existing conditions and land uses on the project site:

The proposed project (Project) will extend the CCRT from its current terminus at Peter Homer Park in Yarmouth westerly to Mary Dunn Road in Barnstable. The existing shared use path east of the Project extends on a former railroad right-of-way for 22 miles through the towns of Yarmouth, Dennis, Harwich, Brewster, Orleans, Eastham, and Wellfleet. The trail cross section includes a 10- to 12-foot paved surface and 0 to 3-foot shoulders for a total width of up to 18 feet. At all intersecting roadways, the existing trail has crossing signage and pavement markings that meets federal standards, and at roadways with higher vehicular use, the crossings include the use of Rectangular Rapid Flashing Beacons. An Environmental Notification Form (ENF) was previously filed for Phases I and II of the CCRT extension project (EEA #15215). This section is just east of the Project, and construction was completed in 2018.

The Project alignment will include the reconstruction of, and widening of an existing 8-foot paved shared use path in Yarmouth and a newly constructed shared use path in both Yarmouth and Barnstable (Figures 1 and 2). The total length of the Project is 4.8 miles and the new path will be 10 or 12 feet wide consisting of asphalt pavement. The Project design will be consistent with the existing CCRT design. The new path will cross town owned-lands and the state-owned Hyannis Ponds WMA through an easement with the Mass DFG and the Towns. The easement areas will remain under the original ownership, with the easement being managed by the DCR for the operation and maintenance of the shared use path.

The Project proposes a permanent easement on approximately 5.45 acres of land within the Hyannis Ponds WMA, owned by the Mass DFG. The easement area includes a strip of land (32 feet wide) to construct and maintain the Project across the northern end of the WMA, just south of the Route 6 State Highway Lay Out, extending from the boundary of the WMA west of Willow Street in Yarmouth, to a small parking lot at the intersection of Independence Drive and Mary Dunn Road. The easement area is within an upland oak forest and includes a small existing unpaved parking area.

Overall, 1.3 miles of the proposed 4.8-mile CCRT extension will be within Barnstable, and 3.1 miles will be within Yarmouth (approximately 2.0 miles of this is reconstruction). The Project will also contain an accessible approximate 0.4 mile spur trail in Yarmouth through the Higgins Crowell utility corridor which ends at Higgins Crowell Road.

The Project as proposed does not have significant impact on any natural, cultural, recreational, historical, or other resource. The Project will not alter any wetland area regulated as a Water of the U.S. and is not subject to jurisdiction under Sections 401 and/or 404 of the Clean Water Act. No impacts to any vegetated wetlands are anticipated. The Project has been designed to avoid all direct impacts to wetland resource areas.

Describe the proposed project and its programmatic and physical elements:

The proposed shared use path will consist of a 10- to 12-foot-wide paved surface, 0 to 3-foot gravel shoulders, and linear stormwater best management practices (drainage ditches) throughout the alignment. East of West Yarmouth Road to the Project limits, the path will be 10 feet wide. West of West Yarmouth Road the path will be 12 feet wide to Mary Dunn Road. From Peter Homer Park to just past the Bayberry Hills Golf Course (for a length of 8,060 feet), the proposed path will follow the alignment of an existing 8-foot wide paved path. West of the Bayberry Hills Golf Course, it leaves the existing 8-foot path alignment and heads to the north. Away from the primary Project

alignment, the existing 8-foot path continues to the west until it terminates at Higgins Crowell Road. This segment of path will be reconstructed as a 10-foot path by this Project.

The shared use path will include at-grade accessible intersections at three (3) cross streets including Forest Road, West Yarmouth Road, and the Bayberry Hills Golf Course driveway entrance with traffic control utilizing Rectangular Rapid Flashing Beacons. The Project will require a new bridge that will span over both Willow Street and the Massachusetts Coastal Rail Line. The approaches on each side of the proposed bridge will be retained using mechanically stabilized earthen walls. The Project will also contain an accessible approximate 0.4 mile spur trail through the Higgins Crowell utility corridor which ends at Higgins Crowell Road.

The Project will construct two parking lots and reconstruct a third existing lot. The existing gravel parking lot (20 spaces) is located along the Bayberry Hill Golf Course entrance road. The second lot will be located north of the Higgins Crowell Road rotary on the abandoned roadway (105 spaces). A third parking lot, also new (10 spaces), will be at the western terminus of the Path on Mary Dunn Road. The Bayberry Hills entrance road parking lot and Higgins Crowell Road parking lot will contain vehicular and bicycle parking, stormwater drainage basins, ornate brick pattern compass displays, informational boards, and seating benches. The Mary Dunn Road parking lot will include vehicular parking and stormwater treatment infrastructure.

The proposed Project results in an Article 97 land disposition for the shared use path segment located within the Hyannis Ponds WMA. This action exceeds the MEPA threshold: (301 CMR 11.03(1)(b)3.), conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments of the Constitution of the Commonwealth to any purpose not in accordance with Article 97. Construction of the CCRT will also create approximately 5.65 acres of new impervious area, exceeding a MEPA threshold for Land (301 CMR 11.03(1)(b)2).

The proposed Project also crosses the Bayberry Hills Golf Course, property owned by the Town of Yarmouth, and Yarmouth Water Supply Land, both properties subject to Article 97. The golf course property is already in passive recreational use and the shared use path is consistent with that use and will remain in ownership by the Town of Yarmouth. The proposed path on the golf course property will be 2-foot widening of the existing 8-foot path.

The Town of Yarmouth Water Supply land also allows passive recreational use, as stated in the Massachusetts Department of Environmental Protection's (MassDEP's) Policy 94-03, Section B.3, Passive Recreational Use of Zone 1. To confirm that the future shared use path is consistent with Policy 94-03, the Town contacted MassDEP's Drinking Water Program and asked for an advisory opinion. As stated in the letter dated October 10, 2008, it is MassDEP's opinion that the 'proposed path meets the intent of Policy 94-03, which allows for passive recreational use within Zone 1, including "walking, hiking, cross-country skiing, and bicycling", with written MassDEP's approval. The proposed path on this property will be 12 feet wide with 2-foot shoulders.

Both properties will remain in ownership with the Town of Yarmouth, and the construction of the path does not represent a change in use, ownership, or interest, and as such does not constitute an Article 97 Land Disposition.

Work associated with the construction of the Project will include: excavation, pavement milling, full depth hot mix asphalt pavement, grading (cut and fill), geometry improvements, hot mix asphalt sidewalks, granite curb, pavement markings, trail signage installation, additional safety/aesthetic elements, vegetation clearing, accessibility, landscaping, bridge construction over Willow Street, and other incidental work.

NOTE: The project description should summarize both the project's direct and indirect impacts (including construction period impacts) in terms of their magnitude, geographic extent, duration and frequency, and reversibility, as applicable. It should also discuss the

infrastructure requirements of the project and the capacity of the municipal and/or regional infrastructure to sustain these requirements into the future.

Describe the on-site project alternatives (and alternative off-site locations, if applicable), considered by the proponent, including at least one feasible alternative that is allowed under current zoning, and the reasons(s) that they were not selected as the preferred alternative:

A thorough alternatives analysis has been conducted to determine if the use of lands from the Hyannis Ponds WMA could be avoided or minimized. This alternatives analysis was developed to support the purpose of the Project, which is to create a safe and accessible shared use path that extends the CCRT and connects to other shared use path segments in a relatively direct route while minimizing impacts. The proposed Project is meant to provide a comfortable, off-road, shared use path that allows the user to have an enjoyable experience in the surrounding nature. This aligns with the Project need to address a gap in connectivity and fulfill regional and local plans. Seven alternatives were developed to connect the existing CCRT and Claire Saltonstall Bikeway. The preferred alternative was selected using evaluation criteria that satisfies the purpose and need of the Project, while limiting impacts to resources and properties. The analysis determined that there are no feasible alternatives that do not require an Article 97 disposition.

Alternative 1 – No Build

Alternative 1 would not construct the shared use path, extending the CCRT into Barnstable, and would leave a continued gap in the shared use path network on Cape Cod, which would not meet the purpose and need of the Project.

Alternative 2 – Route 6A Multi-Use Path

Alternative 2 is located entirely on existing public roads and connects Higgins Crowell Road, Willow Street (in Yarmouth), and Iyannough Road (Route 132) by Route 6A in Barnstable. This alternative is not feasible for the following reasons:

- Route 6A is a designated scenic roadway in both Yarmouth and Barnstable and is an old roadway with reduced setbacks for residential, commercial and church buildings. The width of the existing Route 6A Right-of-Way is insufficient to construct a 10-foot wide path without easements and extensive private property impacts along this historic roadway.
- Route 6A is in the Old Kings Highway Historical District. Approval of the path by the Historic District Commission would likely be opposed because of the adverse impact this infrastructure (which would require widening Route 6A in some locations) would present to the historic context.
- Construction of a 10-foot wide path may require the removal of public shade trees within the Historic District, which would trigger another MEPA threshold. The shared use path would require taking front yard landscaping, stone walls, hedges, fences, and parking areas. Removal of these trees and front yard amenities would significantly alter the aesthetics and character of Route 6A and community acceptance is very unlikely.

Alternative 3 – Mid-Cape (Route 6) Right-Of-Way

Alternate 3 would use undeveloped land within the State Mid-Cape Highway (Route 6) to connect the Dennis-Yarmouth CCRT to the Claire Saltonstall Bike Route located on Service Road in Barnstable. This alternative is not feasible because all available surplus land located within the State Mid-Cape Highway (Route 6) is reserved by the Commonwealth of MassDOT for future highway improvements/widening. MassDOT will not discontinue a portion of the existing right-of-way for the purposes of constructing the extension of the CCRT, therefore this alternative was dismissed from further consideration. This alternative would not align with the purpose of providing a

comfortable, off-road, shared use path that allows the user to have an enjoyable experience in the surrounding nature.

Alternative 4 – Cape Cod Rail Road Right-Of-Way

Alternative 4 would use undeveloped land within the Cape Cod Rail right-of-way, south of Route 6A, to connect the Dennis-Yarmouth CCRT to the Claire Saltonstall Bike Route located on Service Road in Barnstable. In 1994, the Cape Cod Commission commissioned a study which evaluated options to extend the CCRT from the existing trailhead in Dennis to the Cape Cod Canal. The option to construct a rails-with-trails within the Cape Cod Rail right-of-way was considered. The study concluded that, because of the many areas of regulated wetlands and salt marsh adjacent to the ROW, it would be challenging to plan and permit a rails-with-trails project that met the MassDEP Wetlands Protection Act performance standards, and that a new rail with trail would be unlikely to be eligible for a Variance from these standards. A Variance could potentially be avoided by placing a boardwalk at each wetland crossing; however, it would significantly increase the cost of the Project.

Alternative 5 – Shared Accommodation (Willow Street-Yarmouth Road--Iyannough Road)

Alternative 5 uses a 'share-the-road' concept along Willow Street, Yarmouth Road, and Iyannough Road. This 'Shared Accommodation' concept has two options:

- Option A: Shared Accommodations for all users: Under this concept, motorists and cyclist share the travel way without adding shoulders for bicycle/pedestrian accommodations. Signage is provided along the roadway and with pavement markings to notify both bicyclists and motorists to share the roadway. This concept is acceptable for use along roads where user demands and motor vehicle volumes and speeds are very low.
- Option B: Shared Bicycle/Pedestrian Accommodations: Under this concept, pedestrians and bicyclists share the roadway shoulder separated from the vehicle travel way in rural or sparsely developed areas. This concept is appropriate for area with infrequent pedestrian and bicycle use.

This alternative is not feasible for a variety of reasons including:

- Traffic volumes for both roads are in excess of 20,000 vehicles per day, which creates hazardous conditions for bicyclists and pedestrians.
- None of these roads have sufficient right-of-way to construct shoulders or bike lanes and would require additional right-of-way or easements from privately-owned land.
- Pedestrian and bicycle volumes are expected to be high and incompatible with safe operations of a shared use facility that is not separated from a roadway that supports high-volume vehicle traffic.
- The shared road options would not align with the purpose of providing a comfortable, off-road, shared use path that allows the user to have an enjoyable experience in the surrounding nature.

Alternative 6 – Multi-Use Path along North Edge of Hyannis Airport Property

Alternative 6 would use Barnstable Airport property along with other public and private property located along the south side of Route 6. A field study was conducted which concluded that, because of the many areas of regulated wetlands, it would be challenging to plan and permit a shared use path project that met DEP Wetlands Protection Act performance standards, and that a shared use path project would be unlikely to be eligible for a Variance from these standards. The proximity of the shared use path to a Zone II wellhead protection zone and the obstruction-free

area of the airfield also precludes constructing a shared use path on this alignment. A Variance could potentially be avoided by placing a boardwalk at each wetland crossing; however, it would significantly increase the cost of the Project. This alternative would not align with the purpose of providing a comfortable, off-road, shared use path that allows the user to have an enjoyable experience in the surrounding nature.

Alternative 7 – Multi-Use Path along North Edge of Hyannis Ponds WMA

Alternate 7 would use property owned, maintained, and regulated by the Mass DFG, along with other public and private property, located along the south side of Route 6. Two options were evaluated along this corridor:

- Option A – use existing dirt roads. This option would use existing dirt roads winding through the northern portion of the WMA. Using the existing dirt roads would reduce the amount of tree clearing required. Mass DFG allows hunting within their property boundaries; however, this agency maintains specific guidelines that prohibit use of fire arms within 150 feet of public rights-of-way or the shared use path. The use of the northerly dirt road was determined by Mass DFG to have an unacceptable impact because the shared use path would prohibit shooting within an over 300 foot wide swath through the Mass DFG property, significantly reducing the available hunting area within the property.
- Option B – new alignment. This option would create a new shared use path as close as possible to the MassDOT Route 6 right-of-way line and would avoid wetland impacts and minimize impacts to other uses of the Mass DFG property. This option was selected as the preferred alignment.

Preferred Alternative

The preferred alternative has been developed considering a broad range of design criteria alternatives to blend the construction of this shared use path into the existing topography with minimal disruption to the environment. This alternative best meets the purpose and need of the Project, which is to create a safe and accessible shared use path that connects the CCRT to other shared use path segments in a relatively direct route while minimizing impacts. This addresses a gap in connectivity and fulfills regional and local plans.

Mass DFG requires that the preferred alternative be aligned as close to the northerly edge of the property line as possible to maximize the hunting limits allowable on the property and minimize impacts to other uses of the property. The resulting alignment forms a meandering path that varies in offset from the northerly property line from approximately 20 feet to 230 feet. The average offset distance is roughly 80 feet, measured to the southerly edge of the construction zone (See Figures 1 and 2). The path meanders to fit the topography of the land and reduce grading.

The Town of Barnstable requested that the Mass DFG grant a permanent easement for the proposed shared use path that includes the footprint of the paved path, the area extending an approximate 10-foot offset from the proposed edges of path pavement, the parking lot at Mary Dunn Road (on MassDOT property), drainage infrastructure, and sight shelfs supporting path construction (approximately 5.45 acres). Mass DFG also requested an additional easement, measuring 150 feet by 1.53 miles from the edge of pavement, within which hunting is prohibited in accordance with the Massachusetts hunting laws. This results in an increase in prohibited hunting area of approximately 24.3 acres on the WMA. The footprint easement would allow the construction and maintenance of the shared use path. Mitigation is proposed to compensate for the loss of land and the functional loss of hunting within 150 feet of the shared use path.

NOTE: *The purpose of the alternatives analysis is to consider what effect changing the parameters and/or siting of a project, or components thereof, will have on the environment,*

keeping in mind that the objective of the MEPA review process is to avoid or minimize damage to the environment to the greatest extent feasible. Examples of alternative projects include alternative site locations, alternative site uses, and alternative site configurations.

Summarize the mitigation measures proposed to offset the impacts of the preferred alternative:

To mitigate for the loss of land within the WMA, the Town of Barnstable will grant a permanent conservation restriction on four Town-owned parcels bordering the WMA, exceeding the amount of land that would be transferred. These parcels total 13.1 acres of land along Mary Dunn Road and Independence Drive. These lands are owned by the Town and a Conservation Restriction will be conveyed from the Town to Mass DFG (Figure 3).

Mass DFG also noted the development of the new path will exclude hunting within 150 feet of the new edge of pavement, in accordance with the Massachusetts Gun Law, impacting approximately 24.3 additional acres on the WMA. To offset the loss of hunting land, the Town will create a conservation restriction allowing hunting on approximately 76 acres of the 133-acre Bridge Creek Conservation Area as mitigation for the indirect impacts and make up for the loss of hunting area (Figure 4) at the WMA.

EEA's Article 97 Land Disposition Policy (1998) establishes several conditions for approval of a land transfer. The proposed land disposition meets these conditions.

1. The disposition of the subject parcel and its proposed use do not destroy or threaten a unique or significant resource.

The forested oak uplands immediately south of Route 6 are typical of the vegetation of most of Cape Cod and do not contain a unique or significant resource. The proposed shared use path will not be close to or threaten the coastal plain ponds that are the most significant resources within the WMA.

2. Real estate of equal or greater fair market value or value in use, and significantly greater resource value is granted to the disposing agency.

The Town of Barnstable has acquired four additional parcels bordering on the WMA, totaling 13.1 acres and will grant a permanent conservation restriction to Mass DFG. These parcels are important to the protection of the coastal plain pond habitats.

3. The minimum acreage necessary for the proposed use is proposed for disposition.

The area proposed for disposition is the minimum necessary and includes the paved shared use path and an area extending 10 feet from each edge of the pavement to allow for continued maintenance of the shoulders. The path alignment has been designed to minimize impacts to the revised hunting setbacks which will be in place after path construction. The alignment has also been developed with consideration of minimizing impacts to the existing topography while maintaining appropriate sight lines and limits of work for the proposed construction.

4. The resources of the parcel proposed for disposition continue to be protected.

The shared use path will not affect the protection of the natural resources, vegetation and wildlife of the WMA. The proposed parking lot will improve pedestrian access to and use of the WMA by increasing parking.

5. The disposition serves an Article 97 purpose or another public purpose.

The disposition will allow the CCRT, a very popular public recreational amenity, to be extended and connect the existing CCRT and the Claire Saltonstall Bicycle Path.

If the project is proposed to be constructed in phases, please describe each phase:

The proposed Project is the third phase of a multi-phased project geared towards enhancing the shared use path network across Cape Cod. Ultimately, the CCRT in Yarmouth and Barnstable will be part of a 28-mile trail corridor that will extend from Wellfleet to Barnstable. The shared use path is being designed in segments by individual communities and is being designed and constructed in segments by the communities and MassDOT. Portions of the path were recently constructed just east of this Project in Yarmouth and Dennis (CCRT Extension - Phases 1 and 2).

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:

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

☐Yes (Specify_____)

☒No

RARE SPECIES:

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

☒Yes (Specify: Estimated Habitat No. 309, and Priority Habitat No. 315) ☐No

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: **Yarmouth Camp Ground Historic District**) ☐No

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

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. Upper Gate Pond off Mary Dunn Road is a Certified Vernal Pool approximately 0.5 miles south of the western end of the Project.

(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 _X_No; if yes, identify the water body and pollutant(s) causing the impairment:

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

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 Project will use linear BMPs (stormwater ditches) throughout the alignment. Stormwater infiltration basins will be installed at each of the three proposed parking lots to treat stormwater runoff. The basins will comply with the Massachusetts Stormwater Management Standards. The Project is located within the Cape Cod Watershed and near Mill Creek which has a Final TMDL for Pathogens approved on 8/28/2009 a Final TMDL for Nitrogen (total) dated 4/15/2015.

The following lists the Massachusetts Stormwater Management Standards, and how the shared use path project complies with the maximum extent possible. The proposed new parking lots will be designed to fully comply with the Standards.

Standard 1: (Untreated discharges)
No new stormwater conveyances (e.g., outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

There will not be a stormwater collection system, catch basins, piping or system outlets constructed as part of the shared use path. Stormwater drainage will be handled with a "country" drainage system, where stormwater will be allowed to sheet flow off the paved shared use path surface onto the adjacent vegetated surfaces.

The three parking lots will be constructed with an infiltration basin to accept and treat the runoff from the pavement. Stormwater will be directed to the basins through a stone filter strip or grassed swale directly from the pavement surface. No catch basins or a piping system will be used. The soils in all three locations are either Carver loamy course sand or Plymouth-Barnstable complex, hilly very bouldery. Both soil types are Hydrologic Soil Group A, with groundwater at or below 80 inches. These soils have high capacity for infiltration. No outlets from the basins are anticipated, so there will be no new untreated stormwater discharges. The parking lots will fully meet the no new untreated discharges standard.

Standard 2: (Peak rate control and flood prevention)
Stormwater management systems must be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for land subject to coastal storm flowage.

As noted above, there will not be a stormwater collection system for the shared use path and stormwater will be shed to the adjacent land surface. Cape Cod soils are very sandy and stormwater runoff is anticipated to quickly infiltrate with little or no concentrated surface flow. No increase in the peak discharge rates are anticipated.

The infiltration basins at the three parking areas will not be constructed with an outlet. All stormwater is planned to infiltrate so there will be no increase in the surface water peak discharge rate. The parking lots will fully meet the peak rate control standard.

Standard 3: (Recharge to Groundwater)
Loss of annual recharge to ground water shall be eliminated or minimized using infiltration measures, including environmentally sensitive site design, low impact development techniques, best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from the pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.

The sandy soils of Cape Cod will readily accept the surface flow from the shared use path. Although the shared use path will be paved and increase impervious area by 4.53 acres, stormwater runoff will be shed to the adjacent land surface and distributed along the entire 4.8-mile length of the shared use path. No stormwater will be collected and discharged at an outfall that could reduce recharge to groundwater. An additional 1.12 acres of impervious area will be created by the three paved parking areas, sidewalks and access roads associated with the parking lots.

The infiltration basins for the three parking lots will be constructed within HSG A soils and will be designed to infiltrate all the stormwater runoff from the pavement. The parking lots will fully meet the requirements for groundwater recharge.

Standard 4: (80% TSS Removal)
Stormwater management systems must be designed to remove 80% of the average annual postconstruction load of Total Suspended Solids (TSS). This standard is met when:

- Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan and thereafter are implemented and maintained;
- Stormwater BMPs are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and
- Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.

The shared use path has been designed with a "country" drainage system; i.e. without curbs. Stormwater will be allowed to sheet flow onto adjacent pervious areas for treatment and infiltration. This is a Low Impact Design technique and uses the adjacent vegetated areas to filter and treat stormwater runoff in sheet flow. Furthermore, pedestrians and bicyclists using the path will not contribute contaminants to the path surfaces, and there will be no winter maintenance of the path, such as plowing or deicing. Therefore, there will be little or no nutrients or other contaminants on the path surface to be washed off with stormwater runoff. Runoff will be considered clean and does not need treatment.

The parking lots will be constructed with infiltration basins to collect and treat stormwater. Stormwater will be pretreated by stone filter strips or grassed swales prior to release to the infiltration basins. TSS removal from stormwater will be very high since all water will be infiltrated and no water will be released as surface flow.

Standard 5 (Higher Potential Pollutant Loads (HPPL)
For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention, all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt and stormwater runoff, the proponent shall use the specific stormwater BMPs determined by the Department to be suitable for such use as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53, and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

The Project area is not identified as a land use of higher potential pollutant load.

Standard 6 (Critical Areas)
Stormwater discharges to a Zone II or Interim Wellhead Protection Area of a public water supply and stormwater discharges near or any other critical area require the use of the specific source control and pollution prevention measures and the specific stormwater best management practices determined by the Department to be suitable for managing discharges to such area, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, considering site-specific factors. Stormwater discharges to Outstanding Resource Waters or Special Resource Waters shall be set back from the receiving water and receive the highest and best practical method of treatment. A "stormwater

discharge," as defined in 314 CMR 3.04(2)(a)1. or (b), to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of the public water supply.

The Project site will cross a critical area including the Zone I of several Yarmouth Water Department wells. The Project team requested an advisory opinion from the MassDEP Drinking Water Program regarding establishing a shared use path within a Zone I. As stated in the letter dated October 10, 2008 (see Attachment C - Correspondence), it is MassDEP's opinion that the 'proposed path meets the intent of Policy 94-03, which allows for passive recreational use within Zone I, including "walking, hiking, cross-country skiing, and bicycling", with written MassDEP's approval.

The proposed parking lots will not be within a critical area.

Standard 7: Redevelopment

A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural stormwater best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

A portion of the Project will be a redevelopment project. The new 10-foot wide shared use path in Yarmouth will reconstruct an existing 8-foot wide path for approximately two miles. Reuse of the 8-foot path in the creation of the 10-foot path is redevelopment. The remainder of the proposed Project does not constitute a redevelopment project. However, the Stormwater Management Standards shall apply to the maximum extent practicable for footpaths, bike paths and other paths for pedestrian and/or nonmotorized vehicle access (310 CMR 10.05(6)(m)6).

The proposed parking lots will be new development and will fully comply with the Massachusetts Stormwater Management Standards.

Standard 8: (Erosion, Sediment Control)

A plan to control construction-related impacts, including erosion sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan), must be developed and implemented.

The majority of the shared use path alignment is not close to any wetland resources and generally crosses well vegetated stable landscape underlain with sandy soils. Construction will be limited to a narrow, linear area and will maintain a low profile. The opportunity for erosion from rain fall or stormwater runoff is minimal and there are no sensitive resources nearby. Traditional erosion controls are generally not needed. In addition, at the road crossings and parking lots along public roads, where catch basins and stormwater collection systems may be present, the catch basin inlets will be protected with inlet filter controls consisting of SiltSack® or other equivalent product or approved filter methodology.

Standard 9: (Operation and Maintenance)

A long-term operation and maintenance plan must be developed and implemented to ensure that stormwater management systems function as designed.

There will be no stormwater management components along the shared use path that will warrant periodic maintenance. The only routine maintenance will consist of mowing the grassed shoulders,

picking up trash, and potentially sweeping sand off the path surface. Pavement markings and signage will be maintained as needed. There will be no routine maintenance of the path during winter months such as snow plowing or deicing. In time, the pavement surface will require resurfacing. However, this will be conducted as needed and is not routine maintenance subject to an operations and maintenance plan.

The parking lots will be maintained in the winter with plowing only. No deicing agents will be used to clear snow and ice during winter months. An Operations and Maintenance Plan will be prepared for the stormwater basins associated with the parking areas.

Standard 10 (Illicit Discharges)
All illicit discharges to the stormwater management system are prohibited.

A stormwater collection system will not be constructed for the shared use path portion of this Project that could allow an illicit connection and discharge. Therefore, there is no opportunity for an illicit discharge. The parking lots will have small collection systems that discharge to a detention basin adjacent to the parking area. Since the collection system will be constructed by this Project, there will be no sanitary connections allowed.

Summary
The proposed Project consists of new construction of a shared use path and therefore must comply with the stormwater management standards to the maximum extent practicable. The three proposed parking areas are new and have been designed to fully meet the standards.

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 _X_ No __ ; if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification):

Based on a review of the MassDEP Bureau of Waste Site Cleanup (BWSC) online database, three state-listed disposal sites were identified in the vicinity of the Project. The presence of a disposal site indicates that a release of oil and/or hazardous materials (OHM) has occurred and/or been reported to MassDEP. The MassDEP data has been reviewed and only one disposal site at the Yarmouth Transfer Station has the potential to impact the Project site (RTN 4-21635). Response actions at the disposal site included the deployment of absorbent materials and vacuuming impacted stormwater from a nearby catch basin. A Class A-2 Response Action Outcome was submitted for this disposal site in January 2009.

Although the disposal site located at the Barnstable Fire Training Academy associated with RTNs 4-190 and 4-20021 was determined unlikely to impact environmental conditions within the Project area based on the distance relative to the Project, both the Barnstable Fire Training Academy and the Barnstable Municipal Airport were identified as potential sources of Per and Polyfluoroalkyl Substance (together, PFAS). According to an October 2017 Immediate Response Action (IRA) Status Report submitted under RTN 4-190, elevated concentrations of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOA) were identified above the Reportable Concentrations (RCs) established as of December 27, 2019 in the vicinity of the Barnstable Fire Training Academy and the Barnstable Municipal Airport. Elevated concentrations of PFAS were detected approximately 1,000 feet south of the Project; however, groundwater is not anticipated to be encountered as part of construction of the Project. Therefore, the management of PFAS impacted groundwater (if present) would not be required.

Is there an Activity and Use Limitation (AUL) on any portion of the project site? Yes ___ No _X__;

if yes, describe which portion of the site and how the project will be consistent with the AUL:
N/A.

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: N/A

SOLID AND HAZARDOUS WASTE:

If the project will 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:

Trees that will be removed may be used for lumber, cordwood or chipped. Wood chips may be used to create landscape mulch, be taken to a wood fired electric generation facility, or a compost facility. Some asphalt solid waste will be generated from replacing the existing 8-foot wide shared use path with the new 10-foot wide path and other minor pavement modifications associated with roadway crossings. Any asphalt solid waste will be recycled for reuse as new asphalt pavement or asphalt millings may be reused on site as mulch under guard rails to suppress weed growth.

(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:

MassDOT requires that contractors install emission control devices in all off-road vehicles. MassDOT's Revised Diesel Retrofit Specification states emissions control standards must be met, or technology must be used for non-road, diesel powered construction equipment in excess of 50 horsepower on MassDOT job sites.

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 ___ No _X_ ; if yes, specify name of river and designation: