

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

Environmental Notification Form

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| <i>For Office Use Only</i> | |
| EEA#: <u>16261</u> | |
| MEPA Analyst: <u>Eva Murray</u> | |

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.

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|---|---|---|
| Project Name: Route 151 (Nathan Ellis Highway) Corridor Improvements | | |
| Street Address: Nathan Ellis Highway – MA State Route 151 | | |
| Municipality: Mashpee, MA | Watershed: Buzzards Bay | |
| Universal Transverse Mercator Coordinates: 19 N 374274E 4608329N | Latitude: 41.616780 | Longitude: -70.509070 |
| Estimated commencement date: 2022 | Estimated completion date: 2025 | |
| Project Type: Roads | Status of project design: 25% comp. | |
| Proponent: Massachusetts Department of Transportation in conjunction with the Town of Mashpee Department of Public Works | | |
| Street Address: 350 Meetinghouse Road | | |
| Municipality: Mashpee | State: MA | Zip Code: 02649 |
| Name of Contact Person: Bryan Cordeiro, MEPA Coordinator | | |
| Firm/Agency: MassDOT | Street Address: 10 Park Plaza, Room 4260 | |
| Municipality: Boston | State: MA | Zip Code: 02116 |
| Phone: 857-368- 8813 | Fax: | E-mail: Bryan.cordeiro@dot.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)?

- **301 CMR 11.03(6)(b)1. b. Widening existing roadway by four or more feet for one-half or more miles**
- **301 CMR 11.03(6)(b)2. a. Widening an existing roadway that will alter the bank or terrain ten or more feet from the existing roadway for one-half or more miles**
- **301 CMR 11.03(6)(b)2. b. Cut five or more living public shade trees of 14 or more inches in diameter**
- **301 CMR 11.03 (3)(b) f. Alteration of ½ or more acres or more of other wetlands**

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 acres: **This project will be funded through a combination of federal funding (80%) and state transportation funding (20%).**

| Summary of Project Size & Environmental Impacts | Existing | Change | Total |
|---|-----------------|--|--------------|
| LAND | | | |
| Total site acreage | 27.8 acres | | |
| New acres of land altered | | 24.4 acres | |
| Acres of impervious area | 11.8 acres | 3.61 acres | 15.41 acres |
| Square feet of new bordering vegetated wetlands alteration | | 607 SF (permanent) 1,427 SF (temporary) | |
| Square feet of new other wetland alteration | | <u>Riverfront Area</u> 67,926 SF Perm. 16,467 SF Temp <u>LUWW</u> 125 SF Perm. 1,324 SF Temp <u>Bank</u> – 18 SF Perm 98 SF Temp <u>IVW</u> – 186 SF | |
| Acres of new non-water dependent use of tidelands or waterways | | None | |
| STRUCTURES | | | |
| Gross square footage | N/A | N/A | N/A |
| Number of housing units | N/A | N/A | N/A |
| Maximum height (feet) | N/A | N/A | N/A |
| TRANSPORTATION | | | |
| Vehicle trips per day | 22,600 (2017) | N/A | N/A |
| Parking spaces | N/A | N/A | N/A |
| 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? <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 | | | |

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

The Town of Mashpee and the Massachusetts Department of Transportation - Highway Division (MassDOT) are proposing to reconstruct and widen Nathan Ellis Highway (Route 151). The Project corridor extends approximately 2.2 miles from the Falmouth town line (approximately 400 feet east of the intersection of Route 151 with County Road/Ashument Road) east to the Mashpee Rotary at Route 28/ Great Neck Road (Appendix A, Figure 1). Although Route 151 has a State-route number, this section of roadway is Town-owned and maintained.

The proposed reconstruction will extend the service life of Route 151, improve traffic operations, create improved accommodations for bicyclists and pedestrians, and improve safety within the project limits in accordance with MassDOT's Healthy Transportation Policy (HTP). The purpose of the project is to fulfill these goals while minimizing environmental, historic, and economic impacts to the area.

The need for the project is directly related to the increase in mobility demands that have increased as commercial and retail uses, particularly at the Mashpee Commons development have increased. Improved bicycle/pedestrian facility along this corridor is desired to increase non-vehicular travel by providing an alternative means of mobility for residents, workers, and visitors traveling between these areas. There is also a need to rehabilitate the pavement, improve drainage conditions, upgrade intersection operations and road signs, provide pavement markings, and enhance streetscape conditions.

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

Roadway Conditions: The existing conditions along the Route 151 corridor consists of a two-lane roadway, 29- to 45-foot wide, generally having 12-foot travel lanes and 2- to 4-foot shoulders. The Mashpee Rotary, at the eastern project limits, is an intersection of Route 151, Great Neck Road, and Route 28. Traffic volumes (2017) along the corridor range from 15,200 vehicles per day (VPD) west of the Mashpee Rotary to 22,200 VPD at the Falmouth town line.

The signalized intersections within the Route 151 project corridor include:

- Route 151 at Market Street/Mashpee Commons Drive
- Route 151 Frank E. Hicks Drive/Jobs Fishing Road
- Route 151 at Old Barnstable Road

Route 151 at Market Street/Mashpee Commons Drive: The westbound roadway approach to the signalized intersection of Route 151 at Market Street/Mashpee Commons Drive features three lanes; a left-, through-, and right-turn lane. The three other approaches feature two lanes; a combined through/left and a right-turn lane. This intersection operates (2017) at Level of Service (LOS) C during both the AM and PM peak periods.

The traffic analysis determined that by 2031 if no improvements are completed (No-Build Condition) this intersection is forecast to operate at LOS C (AM Peak) and LOS D (PM Peak).

Route 151 Frank E. Hicks Drive/Jobs Fishing Road: Each roadway approach to the signalized intersection of Route 151 Frank E. Hicks Drive/Jobs Fishing Road feature two travel lanes; a through/right-turn lane and a left turn lane. This intersection operates (2017) at LOS B during the AM peak period and LOS D during the PM peak period.

The traffic analysis determined that by 2031 if no improvements are completed (No-Build Condition) this intersection is forecast to operate at LOS C (AM Peak) and LOS F (PM Peak).

Route 151 at Old Barnstable Road: The roadway approaches to the signalized intersection of Route 151 at Old Barnstable Road features two travel lanes; through and left-turn lanes. This intersection operates at LOS C during both the AM and PM periods.

The traffic analysis determined that by 2031 if no improvements are completed (No-Build Condition) this intersection is forecast to operate at LOS D during both the AM and PM peak periods.

The unsignalized intersections within the project limits include:

- Route 151 at Algonquin Avenue
- Route 151 at Ninigret Avenue
- Route 151 at Massasoit Avenue
- Route 151 at Old Brickyard Road
- Route 151 at Winslow Drive
- Route 151 at James Circle

Several traffic movements at unsignalized intersections along the Route 151 corridor operate at LOS F, including James Circle/Winslow Drive, Ninigret Circle, and Algonquin Avenue. According to the Roadway Safety Audits completed by the Cape Cod Commission in 2014 and 2018, the crash rate at the Route 151 at Old Barnstable Road, Ninigret Avenue, Algonquin Avenue, and Jobs Fishing Road/Frank E. Hicks Drive intersections exceed the District 5 average.

Pedestrian/Bicycle Facilities: There is a shared-use path parallel to the roadway on the north side of Route 151 that extends approximately 0.75-miles from the intersection of Route 151 and Frank E. Hicks Drive/ Jobs Fishing Road eastward to the Old Barnstable Road intersection (street locations shown on figures and construction plans). The path is currently approximately 7.0- to 8.0- feet wide. The path does not extend east of Frank E. Hicks Drive/ Jobs Fishing Road which would provide an uninterrupted connection to the Mashpee Commons shopping area. Other than the share-use path, there are currently no pedestrian or bicycle facilities along the Route 151 corridor.

Drainage System: Currently, The existing stormwater management facilities located within the project limits are comprised of an open and closed drainage system consisting of overland flow, cross-culverts, catch basins, manholes, leaching basins, piping, and outfalls which ultimately discharge into various wetlands and wetland systems associated with both the Childs River and the Quashnet River.

Land Uses: The land uses surrounding Route 151 from the Mashpee Rotary to the Falmouth town line include commercial and retail business at the eastern end of the corridor (including the Mashpee Commons commercial shopping area), and residential neighborhoods. Mashpee High School and several public- and privately-owned open space properties are also present along the project corridor.

Environmental Resources: Two streams cross under Route 151 within the project corridor; the Childs River and the Quashnet River. Bordering vegetated wetlands and certified- and potential-vernal pools exist adjacent to the roadway in several locations. Priority and Estimated Habitat for rare species exists east of Algonquin Avenue (EH 245 / 246 and PH 217 / 218). See Appendix A - Figures 2 and 4 and Appendix B - Construction Plans. Figure 5 depicts the pubic- and privately-owned open space parcels adjacent to Route 151 within the project corridor.

Describe the proposed project and its programmatic and physical elements:

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.

Proposed Project:

The Town of Mashpee and the Massachusetts Department of Transportation - Highway Division (MassDOT) are proposing to reconstruct and widen 2.2 miles of Nathan Ellis Highway (Route 151) from the Falmouth town line east to the Mashpee Rotary.

Roadway Improvements:

As shown on Appendix B – *Construction Plans*, Route 151 is proposed to be reconstructed to provide a single 11.0-foot travel lane with 5.0-foot shoulder in each direction within the project limits.

To improve traffic operations at the signalized intersection of Route 151 at Old Barnstable Road, the northbound and southbound approach to the intersection would be widened to provide three lanes; a left-, through-, and right-turn lane. Similarly, the eastbound approach at the Frank E. Hicks Drive/Job's Fishing Road would be widened to provide three lanes (see Appendix B, *Construction Plans*, Sheets 13 and 20, respectively). All signalized intersections would be provided with crosswalks and pedestrian-activated signal phases.

A center/left-turning lane would also be provided to access several residential neighborhoods at the unsignalized intersections of Route 151 at Old Brickyard Road, Massasoit Avenue, Ninigret Avenue, and Algonquin Avenue. However, left-turn movements at the unsignalized intersections of Route 151 at James Circle/Winslow Drive, Ninigret Circle, and Algonquin Avenue would continue to operate at LOS F. This failing LOS is forecast as a result of increased traffic volumes (due to forecast growth in population and employment in the Mashpee/Falmouth area) and desired safety modifications in the signal timing to allow greater time between traffic movements and increased time for pedestrian crossing.

Pedestrian/Bicycle Facilities

The existing variable-width shared-use path on the north side of Route 151 would be widened to provide a consistent 10-foot width and extended 1.2 miles from the current western terminus at Old Barnstable Road westward to the Falmouth town line. The shared-use path would also be extended approximately 0.25 miles east to provide a connection to the Mashpee Commons commercial area. A 5.0- to 7.0-foot wide grass strip would separate the shared-use path from the roadway. The proposed 5.0-foot wide shoulders on each side of the roadway would accommodate on-street bicycling throughout the corridor (Appendix B – *Construction Plans*). The extended shared-use path and new sidewalk will be a substantial safety improvement for students, staff, and employees of Mashpee High School which is located within the project corridor.

The separated shared-use path is included in accordance with MassDOT's Engineering Directive E-20-001 which requires construction of a separated bicycle lane for all roadways with a posted speed limit greater than or equal to 40 miles per hour (the posted speed limit on Route 151 is 45-50 mph), or for roadways with traffic volumes which exceed 10,000 vehicles per day (Route 151 traffic volumes exceed 22,000 vehicles per day).

A new ADA-compliant 5.0-foot wide sidewalk would be constructed on the south side of Route 151, extending approximately 1.6 miles from Winslow Drive to Jobs Fishing Road. Crosswalks are provided at several locations to provide a pedestrian connection between the shared-use path and sidewalks. A 5.0-foot wide grass strip will separate the sidewalk from the roadway.

Stormwater System Improvements:

The goal for the design the stormwater management system includes installation of specific BMPs to improve water quality and comply with the MassDEP stormwater standards, MassDOT Impaired Water Bodies Program, and EPA's NPDES MS4 general permit. The project is located within the Cape Cod Watershed and discharges stormwater within subwatersheds for the Childs River and the Quashnet River which both flow from the north to the south.

The stormwater Best Management Practices (BMPs) proposed for the roadway drainage system includes, often in series, deep sump catch basins and subsurface infiltration BMPs to provide Total

Suspended Solids (TSS)/pollutant removal and to promote infiltration in compliance with the MassDEP stormwater standards for redevelopment projects.

Potential Environmental Impact:

The following describes the potential impact to wetlands and other natural resources.

Wetlands - The project would impact bordering vegetated wetlands (BVW) and Isolated Vegetated Wetland (IVW), including permanently impacting approximately 607 sf and temporarily impacting a total of 1,427 sf of BVW. 186 sf of Isolated Vegetated Wetland (IVW) would be permanently impacted. The Project would permanently impact 125 sf and temporarily impact 1,324 sf of Land Under Water. Impact to Bank totals 142 linear feet of permanent impact and 98 linear feet of temporary impact. Wetlands temporarily impacted during construction will be restored to pre-construction conditions. An 875-sf wetland mitigation area is proposed at Wetland H, northwest of the Childs River.

To minimize impact to wetland resources, rare species habitat, and vernal pools, construction of 10 retaining walls (totaling 2,025 linear feet) and 2 rockfill embankments is proposed.

Riverfront Area – The project would occur within 84,393 sf of the 200' Riverfront Area (67,926 sf of permanent disturbance and 16,467 of temporary disturbance). As Route 151 crosses perpendicularly over the Childs River and the Quashnet River, the majority of Riverfront area work (61,214 square feet or 72%) of this Riverfront Area disturbance is within paved areas of the existing roadway, associated embankment, and other previously disturbed areas.

Trees – The proposed roadway widening, sidewalk construction, and extension of the multi-use trail would require the removal of approximately 85 mature trees. As mitigation, the planting of 135 trees and 217 shrubs is proposed along the Project corridor (see Appendix C – Landscape Plan). An invasive plant management strategy, designed to identify, remove, and control the spread of invasive plant species, will also be implemented.

In accordance with the Massachusetts Public Shade Tree law (Part 1, Title XIV, Chapter 87) of the Massachusetts General Laws (<https://malegislature.gov/laws/generallaws/parti/titlexiv/chapter87>) MassDOT has initiated coordination with the Anthony Milano, Mashpee Interim Tree Warden, to ensure project compliance with the Public Shade Tree law. A duly noticed public hearing will be held to solicit public comments on the proposed tree removal.

Vernal Pools - There would be no impact to the existing certified- and potential-vernal pools adjacent to Route 151.

Rare Species Habitat – The Mass Natural Heritage and Endangered Species Program has indicated no significant concern related to the project's potential impact on rare species habitat, assuming (as currently proposed) the project does not involve new direct discharge of untreated stormwater or other direct impact within the habitat area.

Due to the planned tree removal, MassDOT completed an acoustic bat survey on July 15 and 16, 2019 to detect the presence of Northern Long-eared bat (NLEB, *Myotis septentrionalis*) within 0.25 miles of the Route 151 project corridor. The NLEB is a species listed as Endangered under the Massachusetts Endangered Species Act. No NLEB were detected during the acoustic survey.

Essential Fish Habitat - Based on recent coordination with the MA Division of Fisheries and Wildlife (DFW) and the Mashpee Herring Warden, the Childs River north of Barnstable Road in Mashpee does not function for diadromous fish migration. DFW has focused efforts to support fish migration between Waquoit Bay and John's Pond via the Quashnet River.

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:

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*