



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**Massachusetts Division**

July 10, 2023

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In Reply Refer To:  
HDA-MA

Dear Section 106 Consulting Parties,

The Federal Highway Administration (FHWA) is the lead federal agency for the Route 2A Resurfacing and Related Improvements project in Concord, Lincoln, and Lexington and is responsible for compliance with regulations implementing Section 106 of the National Historic Preservation Act of 1966, as amended [36 CFR 800]. FHWA, therefore, is pleased to address written comments and concerns expressed by the Section 106 consulting parties in response to FHWA's No Adverse Effect determination submitted to the State Historic Preservation Officer (SHPO) on January 10, 2023. The Massachusetts Department of Transportation (MassDOT), as you are aware, is the proponent for this federal aid transportation improvement project.

The purpose of this project is to maintain a safe and functional wearing surface along State Route 2A, implement traffic calming measures as the state highway passes through the Minute Man National Historical Park (MMNHP), and provide safety improvements for all users, including pedestrians and bicyclists. The wearing surface was previously replaced approximately 20 years ago and is now heavily distressed with an overall condition rating between fair and poor. The pavement exhibits alligator cracking, wheel rutting, eroded edges, and inadequate striping. MassDOT has also identified safety concerns along Route 2A, including excessive vehicular speeds, a lack of bicycle accommodations, and no designated crossings for pedestrians at existing desire lines.

Subsequent to receipt of your comments, and as stated at the April 7, 2023 consulting parties meeting, FHWA and MassDOT now acknowledge that the proposed project will have an adverse effect on the setting and feeling of the National Register-listed MMNHP. Both FHWA and MassDOT agree to move forward with an Adverse Effect determination under 36 CFR 800.5(a)(1). These effects include three proposed pedestrian crossings along Route 2A in Lincoln at Ranger Station/Bedford Lane, Bedford Road, and Mill Street, including installation of Rectangular Rapid Flashing Beacons (RRFBs) at Bedford Road; pedestrian refuge/splitter islands at the three pedestrian crossings, as well as the Sunnyside Lane and Airport Road intersections; the proposed intersection realignment at Lexington Road; and erosion repairs along existing gravel shoulders. All work will be undertaken within the State Highway Layout (SHLO) and no construction activities are proposed that will have an effect to contributing properties within the MMNHP, including buildings, stone walls, or grounds.

It is the determination of both FHWA and MassDOT that effects to the MMNHP have been avoided and minimized to the greatest extent feasible within the project's stated Purpose & Need. Avoidance and minimization are described in more detail below. FHWA and MassDOT are committed to consultation with Section 106 consulting parties and mitigation of the adverse effects will be codified through a Memorandum of Agreement. Please be aware that this project

is no longer on the Statewide Transportation Improvement Program in the current year and must be rescheduled to a later year. The project, therefore, will not advertise until Fiscal Year 2025 at the earliest and construction will not commence before early 2026, following the NPS's upcoming 250<sup>th</sup> anniversary commemoration in 2025 of the opening battle of the American Revolution.

FHWA and MassDOT have engaged in several public outreach efforts for this project. MassDOT convened stakeholder meetings in 2018 and 2019 that included representatives from the NPS and the three towns of Concord, Lincoln and Lexington. FHWA and MassDOT, together, have engaged in three Section 106 consulting parties' meetings in January and November 2022 and in April 2023. As you know, consulting parties' meetings have included attendees from the NPS, the SHPO, the Tribal Historic Preservation Officers (THPOs), the three Local Historical Commissions, the three Towns, the Battle Road Scenic Byway Commission, the National Trust for Historic Preservation, the Advisory Council on Historic Preservation, and the public.

As a result of that outreach, MassDOT has incorporated the following recommendations from the stakeholders' meetings and the Section 106 consulting parties' meetings into the project design to avoid and minimize effects on the setting and feeling of the National Register-listed MMNHP to the greatest extent feasible:

- Designed resurfacing project without any Right of Way acquisition on NPS property;
- Eliminated wider paved right shoulder within the SHLO, which would have provided better accommodations for bicyclists and pedestrians;
- Removed sidewalk construction along the length of Route 2A and on Bedford Road to avoid impacts to NPS property (MassDOT's Healthy Transportation Policy (P-13-0001) and Controlling Criteria Engineering Directive (E-20-001) would normally require sidewalks on both sides of the roadway);
- Eliminated proposed crosswalk at Minute Man Vocational Technical High School;
- Removed proposed Rectangular Rapid Flashing Beacons (RRFBs) from design at Mill Street and Ranger Station/Bedford Lane crosswalks;
- Reduced the height of the proposed RRFBs at Bedford Road by replacing solar panels on top of the structures with hard wiring through underground conduit;
- Changed RRFB pole and base color at Bedford Road from standard black to NPS brown;
- Revised splitter islands and pedestrian crossing refuge islands to include sloped granite edging and cobble surfaces and reduced the height of the islands from 6" to 4";
- Substituted granite cobble to replace colorized concrete truck apron at Bedford Road and reduced the width of the apron;
- Specified stabilized gravel road edge repairs along Route 2A, visually similar to the existing NPS parking lot surface material;
- Agreed to use NPS brown to powder coat the proposed new galvanized steel guardrail, including steel end treatments;
- Reduced number of traffic signs by eliminating splitter island "Keep Right" signs; and
- Added item for in-kind repair or replacement of wood split-rail fences along Route 2A located within SHLO.

The design changes listed above, some of which were proposed by the consulting parties, have been carefully considered to ensure that the project will continue to meet its stated Purpose &

Need and minimize effects on historic properties. Additional comments and proposals from consulting parties were received and FHWA's and MassDOT's responses are discussed below.

### **Bedford Road Crossing**

MassDOT has proposed the current design for a pedestrian crossing at Bedford Road as part of a network of safety improvements along Route 2A that includes crosswalks, RRFBs, narrower travel lanes, and raised splitter/pedestrian refuge islands. While safety improvements are important for all users along Route 2A within the project area, the proposed improvements are particularly important at Bedford Road. As the NPS recognizes several times in their letter, the location is currently an area of elevated concern for bicycle and pedestrian safety. This concern is clearly warranted, as evidenced by two instances of non-fatal collisions at Bedford Road, one between a vehicle and a bicyclist in 2012, and another between a motorcycle and a pedestrian in 2018. Despite critiques from various parties, FHWA and MassDOT stand by the validity of the April 2022 pedestrian/bicycle count, as further evidence of a demand by pedestrians and bicyclists to cross Route 2A in the vicinity of Bedford Road. In recognition of concerns about the timing of the last pedestrian count, MassDOT commits to conduct another count in July 2023 to further underscore the need for improved bicycle and pedestrian safety at Bedford Road.

As presently designed, the Bedford Road crossing is located to improve sight distance for vehicles and encourage left-turning cyclists to use the crosswalk and RRFBs to cross Route 2A. As stated in the 2018 "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations," research from the Texas A&M Transportation Institute has indicated that RRFBs are effective at increasing conspicuity at marked pedestrian crossings, with an average of 66% of drivers yielding to an actuated flashing beacon on roads with a 40 MPH speed limit, like Route 2A. Furthermore, USDOT guidance indicates that RRFBs should always be considered for implementation at marked pedestrian crossings on two-lane roads with a 40 MPH speed limit and 9,000-15,000 AADT, like Route 2A.

FHWA and MassDOT acknowledge the visual effects that the proposed RRFBs and other crosswalk design aspects will have on the Captain William Smith House and the nearby Battle Road trace along (former) Virginia Road. These impacts contribute to the adverse effects on the setting and feeling of the MMNHP. FHWA and MassDOT also acknowledge concerns about induced demand at pedestrian crossings on Route 2A, particularly at Bedford Road. FHWA and MassDOT note that pedestrians are free to cross Route 2A at all three proposed crosswalk locations. Providing a safe crossing at each of these locations is unlikely to encourage increased pedestrian and bicycle traffic but will allow existing users to move across the State highway with a greater degree of safety than presently available.

These crossings will also provide improved safety for pedestrians and bicyclists traveling toward the south, from the Environmental Justice community in the neighborhoods surrounding Hanscom Air Force Base. The purpose of this project, however, is not to improve access into the MMNHP for pedestrians from the Environmental Justice community, as suggested by the Concord Historical Commission (CHC) in their April 24, 2023, letter, but to provide those users and all pedestrians and bicyclists with a safer means to cross Route 2A from the north or the south. Available data from bicycle and pedestrian heat maps and MassDOT pedestrian counts suggest that residents of the neighborhoods surrounding MMNHP and Route 2A are the primary

users currently crossing the State highway, as most historic resources and sites associated with MMNHP are located on the north side of Route 2A.

The NPS has suggested eliminating the Bedford Road crossing entirely from the proposed project, instead directing cyclists and pedestrians toward the Bedford Lane crossing. This concept relies on redirecting bicyclists and pedestrians from Bedford Road onto Bedford Lane, which is a narrow residential cul-de-sac without shoulders that leads to an unimproved 800'-long footpath through the woods to the south of the NPS Ranger Station. Representatives of the Town of Lincoln have indicated that they do not support directing pedestrian and bicycle traffic along Bedford Lane as a replacement for the crossing at Bedford Road, as desire to cross Route 2A at Bedford Road is likely to remain, yet the crossing will continue to be unsafe. Town representatives also expressed concerns about directing users along the unimproved footpath through the woods on NPS property. Furthermore, the Lincoln Historical Commission (LHC) expressed support for the traffic calming measures and pedestrian accommodations currently proposed. In their letter of January 27, 2023, the LHC notes that the Bedford Road crossing in particular, "will provide an essential link between the [Battle Road] Trail and Lincoln's historical corridor, promoting equitable access ..."

FHWA and MassDOT respectfully request more information regarding the National Park Service's intentions at Bedford Road/Virginia Road to deter social trails, as well as options the NPS will pursue in the near-term to encourage pedestrian crossings at other points and redirect existing demand away from Bedford Road. FHWA and MassDOT understand the NPS concerns about social trails but can see an established desire at Bedford Road for neighbors of the MMNHP to access the Battle Road Trail. Perhaps MassDOT, FHWA and NPS can work together to acknowledge this desire at the Bedford Road crossing and either accommodate or redirect pedestrian access. FHWA and MassDOT are willing to support the NPS effort to design and repair their necessary service access along Route 2A in such a way that protects the character of the nearby Captain William Smith house, while allowing the proposed safer crossing at Bedford Road.

### **Stabilized Gravel Edge Repairs**

MassDOT has proposed stabilized gravel repairs along eroded portions of the existing gravel shoulders, encompassing approximately 4700 feet of shoulder along both sides of the roadway on a 2.1-mile stretch between Lexington Road in Concord and Old Massachusetts Avenue in Lexington. Road edge repairs are typically required in locations where drivers are leaving the paved roadway to move around stopped/ turning traffic at NPS parking lots and other sites that encourage stopping or slowing. MassDOT has presented stabilized gravel repairs as the preferred alternative to asphalt pavement milling mulch repairs. Asphalt milling mulch is the "black gravel" material that the CHC has noted, installed along the roadway shoulder at several locations throughout the project area. It is particularly visible along both sides of the road west of Mill Street, near the Paul Revere Capture Site. While the CHC has requested the use of loam and seed rather than stabilized gravel, this is not an acceptable alternative, as it erodes and ruts substantially faster than gravel. The reinforced gravel is the least visually intrusive option that can still provide a satisfactory repair. All proposed repairs will occur at locations where gravel shoulder material already exists today. Older pavement milling mulch repairs will typically be replaced by new gravel selected to blend visually. Grass and other vegetative roadside groundcover will grow back into the gravel edge within a couple of growing seasons.

### **Archaeological Survey**

MassDOT commits to archaeological testing within the Route 2A State Highway Layout as requested in the SHPO's letter dated February 9, 2023. The purpose of the archaeological survey is to identify any unidentified resources that may be present along sections of Route 2A. No archaeological survey work will take place on NPS property. Investigation will be performed at the three crosswalk locations, including the alignment for the RRFB electrical conduit at Bedford Road; the Airport Road and Lexington Road intersections, and gravel shoulder extensions at Sunnyside Lane and Airport Road. MassDOT has engaged Archaeological and Historical Services (AHS), Inc., to prepare an archaeological permit application for the proposed survey along Route 2A. MassDOT submitted the application to the State Archeologist in early May 2023. AHS notified the consulting parties on June 16, 2023, after receipt of the permit from the State Archaeologist. AHS will send follow up emails to the consulting parties when the survey is scheduled.

### **Steel-Backed Timber Guardrail**

As stated at the April 7, 2023 consulting parties meeting, FHWA and MassDOT both recognize the positive effect that replacement of existing galvanized steel guardrail with steel-backed timber guardrails would have on the setting and feeling of the historic district. Both agencies support the use of steel-backed timber guardrail and end treatments once they are approved in accordance with specifications in the Manual for Assessing Safety Hardware (MASH), although no substantial updates have been provided on the progress of MASH testing. MassDOT is unable to make any commitments relative to guardrail specification at this time, aside from reiterating that MassDOT will not install any guardrail system that is not MASH-approved.

### **Route 2A as a Historic Resource**

In their April 24, 2023, letter, the Concord Historical Commission expressed concerns about the integrity and protection of Battle Road, as a historically significant resource central to the history and interpretation of the MMNHP. As discussed in the MMNHP Cultural Landscape Report for Battle Road Unit (Dietrich-Smith, et al. 2005), Battle Road within the current project area has not remained in a constant unchanged state since the 18<sup>th</sup> century. The roadway that now serves as Route 2A has undergone several notable changes over the years, with realignment, widening, grade alterations and, ultimately, paving with bituminous asphalt.

Between 1802 and 1806, the towns of Concord, Lincoln and Lexington endeavored to straighten the "very crooked and circuitous" roadway at the direction of the Middlesex County Commission, bypassing the two northerly bends leading to Hartwell Tavern (former Virginia Road) and to Nelson Farm (former Nelson Road). NPS staff noted in their January 2023 letter that the realignment of North Great Road in Lincoln bisected Capt. Smith's Hill Pasture, thus diminishing the integrity and interpretive value of a significant topographical feature of the battlefield. The Middlesex County Commission directed circa 1838, and again in 1868, that North Great Road in Lincoln should be straightened, widened and hills regraded, ultimately resulting in a crowned roadway with the "center... 12 inches higher than at the sides" and "25 feet in width... throughout the whole." Finally, the roadway from Meriam's Corner in Concord, along North Great Road in Lincoln and continuing southeasterly along Marrett Road was developed as an early State Highway by the Massachusetts Highway Commission. From 1895 through 1898, the Highway Commission constructed a 21-foot-wide roadbed of broken stone,

overlaid with a 15-foot-wide macadam paved roadway and 3-foot-wide gravel shoulders. In addition to laying the new roadbed and paving, clay and sandy sections of the road base were dug out and replaced with more suitable materials, low and swampy areas were raised, and hill grades were lowered. Since the 1890s, Route 2A has been maintained and resurfaced as needed, largely within the footprint and alignment laid out in 1895. Still, the paved roadway as it exists today bears only minimal resemblance to the gravel road that followed the topography of the land, serving as a major east-west route through Concord, Lincoln, and Lexington, lined by farms and fields.

It is the determination of FHWA and MassDOT that the many changes that occurred along North Great Road over the course of the 19<sup>th</sup> century have diminished the integrity of Route 2A as a historic roadway. The integrity of design, materials, workmanship of the 18<sup>th</sup> and early 19<sup>th</sup> century roadway, and the feeling and association with both the battlefield of April 1775 and the agricultural landscape of the 18<sup>th</sup> and 19<sup>th</sup> centuries, has been lost due to modernization (including straightening, widening and grade changes) and addition of bituminous pavement beginning in 1895, as well as guardrails, traffic signals and signs, utility poles, fire hydrants and other features of the 20<sup>th</sup> and 21<sup>st</sup> century landscape. Furthermore, while buried archaeological remains may exist in areas adjacent to the roadway, it is highly unlikely that any intact sites and features within the roadway footprint remain due to excavation, grading and fill compacting activities that are common to modern road construction. Accordingly, though the roadway is important to the understanding of MMNHP and its historical significance, and the surrounding landscape should be treated with care, the road itself does not retain sufficient historic integrity to merit inclusion as a contributing resource within the National Register-listed historic district.

### **Creating New Park Access**

NPS staff have asserted in their letter that FHWA and MassDOT are creating a new, unauthorized access point into MMNHP near Bedford Road. However, NPS acknowledged several times throughout their letter that they are combatting “social trails” in the vicinity of the Captain Smith House, which is to say, that private citizens residing in the neighborhood have already created an ad-hoc access point, in addition to demonstrating a clear desire to cross Route 2A near Bedford Road. MassDOT notes that the public are free to travel along or across the State Highway and crossing Route 2A is a legitimate and legal use of the highway that shall not be impeded. Accordingly, FHWA and MassDOT recognize the permissible crossing near Bedford Road, and desire to make that movement safer for both pedestrians and bicyclists. The project, as designed, does not propose to place signs, construct trails or otherwise encourage the public to enter the MMNHP. NPS staff are free to deny unauthorized entry to the MMNHP by whatever means they deem appropriate.

### **National Environmental Policy Act—Class of Action**

FHWA, as the lead federal agency, has determined that the Route 2A Resurfacing project qualifies as a Categorical Exclusion (CE) under the National Environmental Policy Act (NEPA). MassDOT will prepare the CE, but FHWA will maintain final approval authority over the document. NPS has suggested that the proposed undertaking will result in “significant impact on properties protected by Section 4(f) requirements or Section 106 of the National Historic Preservation Act,” and, therefore, does not qualify for classification as a CE. The environmental impacts that may be caused by this project, although adverse, are not significant and therefore do

not require the preparation of an Environmental Assessment nor the preparation of an Environmental Impact Statement under NEPA [40 CFR 1508.4].

Proposed construction activities resulting in adverse effects will be entirely within the State Highway Layout, with no direct physical impacts on buildings, features and sites that qualify the MMNHP for listing in the National Register of Historic Places. MassDOT has avoided construction activities that would increase the impervious surface of the roadway (such as roadway widening, shoulder paving, or sidewalk construction), as well as substantial impacts to the surrounding landscape throughout the corridor (tree clearing, stone wall removal or relocation, alterations to cross-culverts and other drainage structures).

FHWA acknowledges that MassDOT's proposed traffic calming measures and pedestrian/bicycle safety improvements along Route 2A constitute an adverse effect under Section 106 of the National Historic Preservation Act of 1966. FHWA has determined, however, that the project impacts resulting in adverse effects will not have a significant impact on properties protected by either Section 4(f) of the Department of Transportation Act of 1966 or Section 106 in accordance with the regulations implementing FHWA's NEPA process [23 CFR 771.117(b)(3)]. MassDOT has minimized the adverse effects to the greatest extent feasible while continuing to meet the Purpose & Need of the project and will propose mitigation commensurate with the effects. Section 106 consultation is an essential component of the NEPA process and NEPA will not be finalized until Section 106 consultation is complete.

#### **Section 4(f) of the Department of Transportation Act—Constructive Use**

FHWA has determined that the Route 2A Resurfacing project will not result in a constructive use of historic properties or public parkland in accordance with the regulations implementing Section 4(f) of the Department of Transportation Act of 1966. Those regulations define a constructive use as follows:

*A constructive use occurs when a transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished [23 CFR § 774.15(a)].*

Although FHWA acknowledges that MassDOT's proposed traffic calming measures and pedestrian/bicycle safety improvements along Route 2A constitute an adverse effect under Section 106 of the National Historic Preservation Act of 1966, those adverse effects are not "severe" nor do they cause "substantial impairment" to the activities, features, or attributes that qualify the property for protection under Section 4(f). The regulations implementing Section 4(f) provide FHWA with the sole authority to determine when a constructive use occurs [23 CFR § 774.15(c)]. Further consultation with the Secretary of the Interior and the Officials with Jurisdiction is not required if FHWA determines that a constructive use has not occurred.

#### **Potential Mitigation Measures**

MassDOT acknowledges comments relative to the installation of granite markers along bypassed alignments of Battle Road, such as the proposed intersection realignment at Lexington Road. MassDOT will consider options for incorporating NPS-standard details for granite Battle Road

markers into project plans. MassDOT also acknowledges comments relative to the Mill Street crosswalk and will continue to coordinate on refining the crossing alignment and minimizing the extent of connecting stabilized gravel paths.

FHWA and MassDOT would like to thank the consulting parties again for participating in the Section 106 process and taking the time to review the project documents and provide comments. FHWA requests that the consulting parties consider mitigation options for discussion at the next upcoming consulting parties meeting, anticipated to be scheduled in the summer of 2023. We look forward to completing the Section 106 consultation process with a Memorandum of Agreement to mitigate adverse effects on the National Register-listed Minute Man National Historical Park. If you have any questions or comments, please feel free to contact me at 617-494-3113 or [cassandra.ostrander@dot.gov](mailto:cassandra.ostrander@dot.gov).

Sincerely,

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