US Route 4 Corridor Scoping Study

Mendon, VT

PREPARED FOR

Town of Mendon
2282 US Route 4
Mendon, VT 05701
802.775.1662

PREPARED BY

VHB
40 IDX Drive
Building 100, Suite 200
South Burlington, VT 05403
802.497.6100

April 2024

The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration (FHWA) and the Village of Barnard, through the Vermont Agency of Transportation (VTrans) Municipal Assistance (MA). The contents of this report do not necessarily reflect the official views or policy of any of the above mentioned agencies.

Table of Contents

1 Introduction 1

1.1 Project Overview 2
1.2 Purpose and Need 2
1.2.1 Purpose of the Project 2
1.2.2 Needs for the Project 2
1.3 Project Schedule 3

2 Existing Conditions 4

2.1 Study Area Description 5
2.2 Transportation System Characteristics 6
2.2.1 Roadway Characteristics 6
2.2.2 Right-of-Way (ROW) 7
2.2.3 Utilities 7
2.2.4 Culverts 8
2.3 Safety Assessment 9
2.4 Natural, Cultural, and Historic Resources 10
2.4.1 Natural and Cultural Resources 10
2.4.2 Archaeological Resources 13
2.4.3 Historic Resource Identification 13
2.4.4 Destinations 14
2.5 Review of Previous Studies 17
2.5.1 Mendon Town Plan 17
2.5.2 Mendon on the Move 17
2.5.3 Rutland Regional Plan 18

3 Public Outreach 19

3.1 Project Team 20
3.2 Local Concerns Meeting 20
3.3 Draft Alternatives Presentation 21
3.4 Preferred Alternative Presentation 22

4 Alternatives Analysis 23

4.1 No Build 24
4.2 Alternative 1 24
4.3 Alternative 2 26
4.4 Alternative 3 29
4.5 Alternatives Evaluation Matrices 32
4.5.1 Cost, Safety, and Community Character 32
4.5.2 Anticipated Impacts 33
4.5.3 Anticipated Permitting 35

4.5.1 Advantages and Disadvantages 37
4.6 Climbing Lanes 41
4.7 Bus Stop Improvements 41
4.8 Strategic Crossings 41

5 Preferred Alternative 43

5.1 Preferred Alternative Conceptual Plan 44
5.1.1 Corridor Wide Lighting Improvements 45
5.2 Preferred Implementation Plan and Cost 46
5.1 Funding Opportunities 63

Appendices .....

No table of contents entries found.

List of Tables

Table No.	Description	Page
Table 1:	Natural and Cultural Assessment Desktop Review	11
Table 2:	Evaluation Matrix – Cost, Safety, and Community Character	32
Table 3:	Anticipated Impacts	33
Table 4:	Anticipated Permitting	35
Table 5:	Preferred Implementation Plan and Estimated Cost	50

List of Figures

Figure No.	Description	Page
Figure 1:	Study Area	5
Figure 2:	US Route 4 Corridor Segments	6
Figure 3:	2018-2022 VTrans Crash Data	9
Figure 4:	Environmental Conditions	10
Figure 5:	Concept Alternative 1: Segment 1	24
Figure 6:	Concept Alternative 1: Segment 2	25
Figure 7:	Concept Alternative 1: Segment 3	26
Figure 8:	Concept Alternative 2: Segment 1	26
Figure 9:	Concept Alternative 2: Segment 2 - Gateway Treatment	27
Figure 10:	Concept Alternative 2: Segment 3	28
Figure 11:	Concept Alternative 3: Segment 1	29
Figure 12:	Concept Alternative 3: Segment 1 – Safe Crossings	29
Figure 13:	Concept Alternative 3: Segment 2	30
Figure 14:	Concept Alternative 3: Segment 3	31
Figure 15:	Climbing Lanes	41
Figure 16:	Phase 1 Town Line Road to Medway Road	47
Figure 17:	Phase 2 Medway Road to Fox Hollow	48
Figure 18:	Phase 3 Town Line Road to Meadow Lake Drive	49
Figure 19:	Preferred Alternative – Phase 1 – Shorten Climbing Lane Segment 1	51
Figure 20:	Preferred Alternative – Phase 1 – Segment 1	52
Figure 21:	Preferred Alternative – Phase 1 – Segment 1 – Park Lane Crossing	53
Figure 22:	Preferred Alternative – Phase 1 – Meadow Lake Drive Crossing	54
Figure 23:	Preferred Alternative – Phase 1 – Segment 3 – Access Control	55
Figure 24:	Preferred Alternative – Phase 1 – Segment 3 – AT/LT Crossing	56
Figure 25:	Preferred Alternative – Phase 2 – Segment 3 – Woodard Road/ Forest Service	57
Figure 26:	Preferred Alternative – Phase 2 – Segment 3 – Old Turnpike Road Bus Stop	58
Figure 27:	Preferred Alternative – Phase 2 – Segment 3 – Remove Climbing Lane	59

Figure 28: Preferred Alternative – Phase 2 – Segment 3 – Mountain View Crossing 60
Figure 29: Preferred Alternative – Phase 2 – Segment 3 – VAST Crossing 61
Figure 30: Preferred Alternative – Phase 3 – Segment 1 – Shared-Use Path 62

1

Introduction

The US Route 4 Scoping Study indentifies opportunities to improve safety for all users along and across the US Route 4 corridor through the Town of Mendon. The study evaluates design alternatives that will enhance mobility for pedestrians, bicylists, and motorists. This study was developed with significant input from the public, representatives from the Town of Mendon and local stakeholders.

1.1 Project Overview

The Town of Mendon, with support from the Federal Highway Administration (FHWA) and the Vermont Agency of Transportation (VTrans) Municipal Assistance (MA), sought to identify and evaluate alternatives to improve the safety and mobility for pedestrians and bicyclists along US Route 4 through the Town. The Town of Mendon is seeking to create a Village feel, specifically around the area near Meadow Lake Drive, Sugar & Spice, and the Mendon Mini Golf & Snack Bar and extending to the Town Office.

The Study Area contains two wide vehicle travel lanes with disbursed turning and climbing lanes along the corridor. There are no pedestrian or bicyclist facilities along the corridor. There are several recreational opportunities on the east end of the project area, which includes the AT/LT crossing. The goal of this study is to identify and evaluate the design and construction of improvements throughout the Study Area that provide safer facilities for all modes of transportation, improve Village aesthetics and encourage safer vehicle speeds throughout the Study Area.

1.2 Purpose and Need

The Project Purpose and Need were defined with input from the Local Concerns Meeting. Throughout the study process, the core project team worked to refine the Purpose and Need, and ultimately alternatives were evaluated for their effectiveness in meeting the Purpose and Need.

1.2.1 Purpose of the Project

The purpose of the Town of Mendon US Route 4 Corridor Scoping Study is to identify improvements to enhance safety for all users along and across the US Route 4 corridor through the Town of Mendon while enhancing access and aesthetics to the Village District and recreational resources.

1.2.2 Needs for the Project

Deficiencies in the existing transportation infrastructure define the needs for this project, which includes the need for:

- **Pedestrian and Bicycle Accommodations:** The corridor lacks safe crossings, sidewalks, and bike lanes. There are many commercial and recreational resources along the corridor with no designated places to safely cross.
- **Vehicular Traffic Calming:** There are ongoing speeding issues along the corridor (85th percentile 55-64 mph) that create an inhospitable environment for cyclists and pedestrians.
- **Access Management & Intersection Operations:** Frequent vehicular access points create additional conflicts for cyclists and pedestrians traveling along the corridor.
- **Transit Improvements:** The corridor is served by Marble Valley Regional Transit System, however, stops along the corridor lack formal accommodations.

1.3 Project Schedule

The US Route 4 Scoping Study began in June 2023 with the founding of the Project Team. The project was completed according to the following schedule, with the next project phases – Funding Acquisition, Design and Construction – to be determined in the future.

- Project Kick-Off: June 2023
- Base Mapping/Existing Conditions: June 2023-June 2023
- Resource Constraints & Permitting Assessment: June 2023
- Local Concerns Meeting: June 6, 2023
- Develop Conceptual Alternatives: July 2023 – September 2023
- Alternatives Presentation Meeting: October 5, 2023
- Draft Scoping Report: October 2023
- Final Public Meeting: April xx, 2024
- Final Scoping Report: April 2024
- Funding Acquisition, Design & Construction: TBD

2

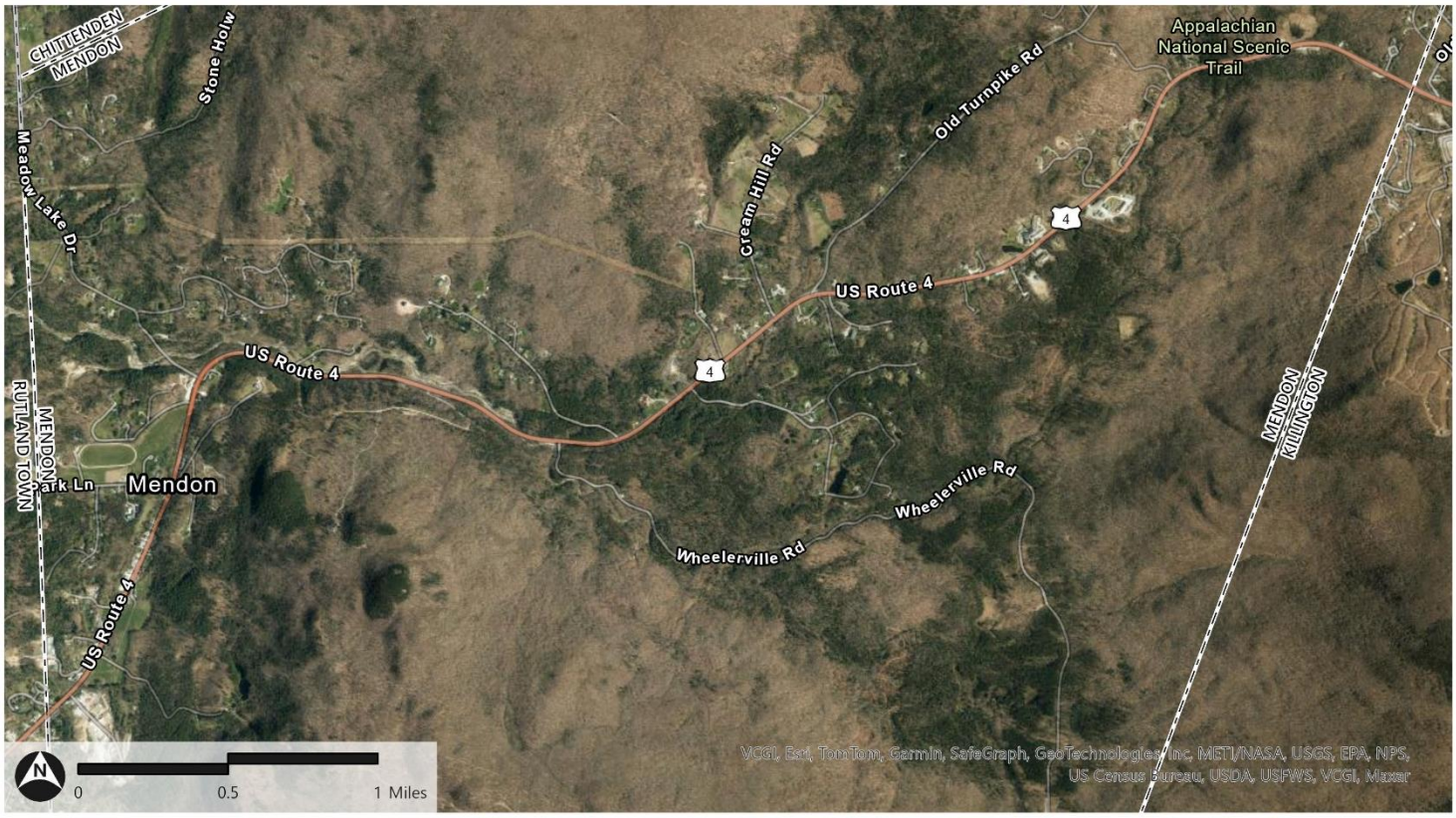
Existing Conditions

The first step of this Scoping Study was to identify the existing physical, environmental, and cultural conditions along the project corridor to identify issues and opportunities to be addressed through the study. This chapter includes an evaluation of the corridor's transportation system characteristics, utilities, historic safety data, and a review of previous studies completed within the project area.

2.1 Study Area Description

The Study Area includes roughly 6 miles of US Route 4 in the Town of Mendon, Vermont. The Study Area extends from Town Line Road (town line with Rutland) east to Old Coach Road (town line with Killington). US Route 4 serves as an east-west connection through the Town of Mendon to connect historic Rutland with the popular Killington-Pico ski areas. A map of the Study Area is shown in **Figure 1**.

Figure 1: Study Area



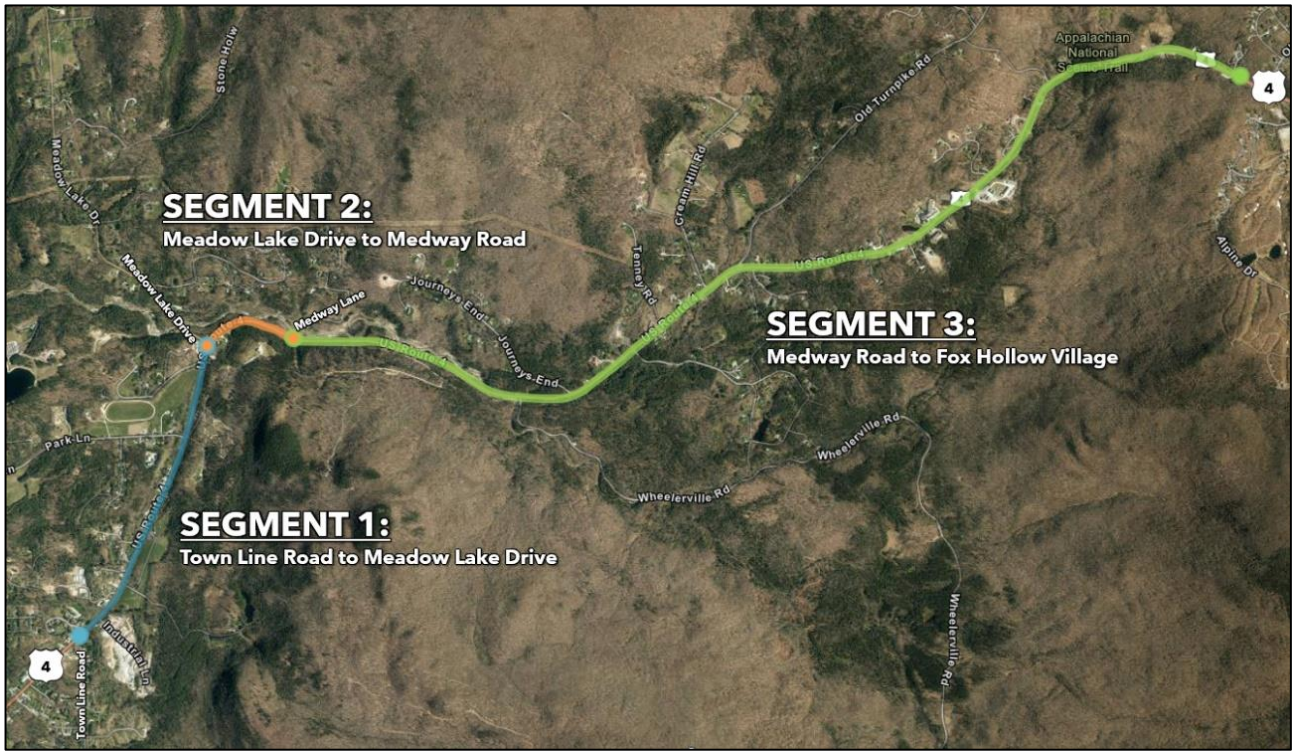
2.2 Transportation System Characteristics

The following section describes the relevant characteristics of the road network in the Study Area. Existing conditions identified as part of this study include traffic volumes, roadway geometry, multi-modal facilities, and other roadway elements.

2.2.1 Roadway Characteristics

Within this Corridor Scoping Study, US Route 4 was divided into three segments shown in **Figure 2** with each segment having its own future land use plan and roadway characteristics. The designated corridor segments and the roadway characteristics are summarized below.

Figure 2: US Route 4 Corridor Segments



US Route 4

Within the Study Area, US Route 4 is classified as a Principal Arterial. The roadway width ranges from 38 feet to 56 feet along the entire corridor and consists of 12 to 15 feet wide travel lanes with paved shoulders on both sides varying in width between three and eleven feet. According to the 2021 Average Annual Daily Traffic data there is approximately 10,187 to 11,532 vehicles per day that travel along the route.

US Route 4 Corridor Segment 1: Town Line Road to Meadow Lake Drive

The segment from Town Line Road to Meadow Lake Drive, designated as the Potential Village Center Zone, experiences traffic speeding issues attributed to the presence of wide lanes (14

feet) and broad shoulders (6 feet) on both sides of the roadway, coupled with an absence of traffic calming measures. The area includes several commercial sites but lacks specific pedestrian or bicycle facilities. Climbing lanes begin at Casella (near Town Line Road), extending westbound for 3,000 feet into the Village Center. The speed limit in the segment is 45 mph.

US Route 4 Corridor Segment 2: Meadow Lake Drive to Medway Road

The stretch between Meadow Lake Drive and Medway Road serves as a Rural Transition Zone, marking the shift from a high-speed, low-density area to the Village Center. This transition is marked by a 600-foot radius curve, which lacks any signage or features to signify the entry into a village. The roadway width on the curve is considerable (44.5 feet), and the transition occurs rapidly. Near the intersection of Meadow Lake Drive and US Route 4, important commercial destinations such as Sugar & Spice and Mendon Mini Golf & Snack Bar are located. However, these sites are not linked by pedestrian paths or safe crossing points.

US Route 4 Corridor Segment 3: Medway Road to Fox Hollow Village

The section from Medway Road to Fox Hollow Village, nearing the Killington Town Line, is characterized by its high-speed, low-density nature and designated as the Rural Zone. Travel lanes here are typically 12 feet wide, with shoulders varying from 5 to 7 feet. Climbing lanes are present in this segment from mile marker 1.6 through the end of the Study Area to the east at the Mendon/ Killington Town Line. This segment includes the US Forest Service Headquarters (USFS HQ). Additionally, there is a hotel area near the Killington Town line, offering opportunities for the repurposing of former hotel properties, some of which have already converted to seasonal employee housing.

2.2.2 Right-of-Way (ROW)

Within the Study Area, there is approximately 100 feet of State ROW or 50 feet from the center of the US Route 4 roadway.

2.2.3 Utilities

There are many overhead utility lines and utility poles along all roads in the Study Area. Most of the utility poles are located within the existing ROW and a majority are located close to the existing edge of pavement. Utility poles are not located predominantly on any one side of the road.

The electric lines and associated poles in the Study Area are owned by Green Mountain Power. Utility relocations may be required depending on the alternative chosen. The cost of pole relocation within Town or State ROW is the responsibility of the utility owner. There are approximately 275 utility poles within the Study Area existing ROW[1].

[1] Vermont Center for Geographic Information Interactive Map, Utilities *https://maps.vermont.gov/vcgi/html5viewer/?viewer=vtmapviewer*

2.2.4 Culverts

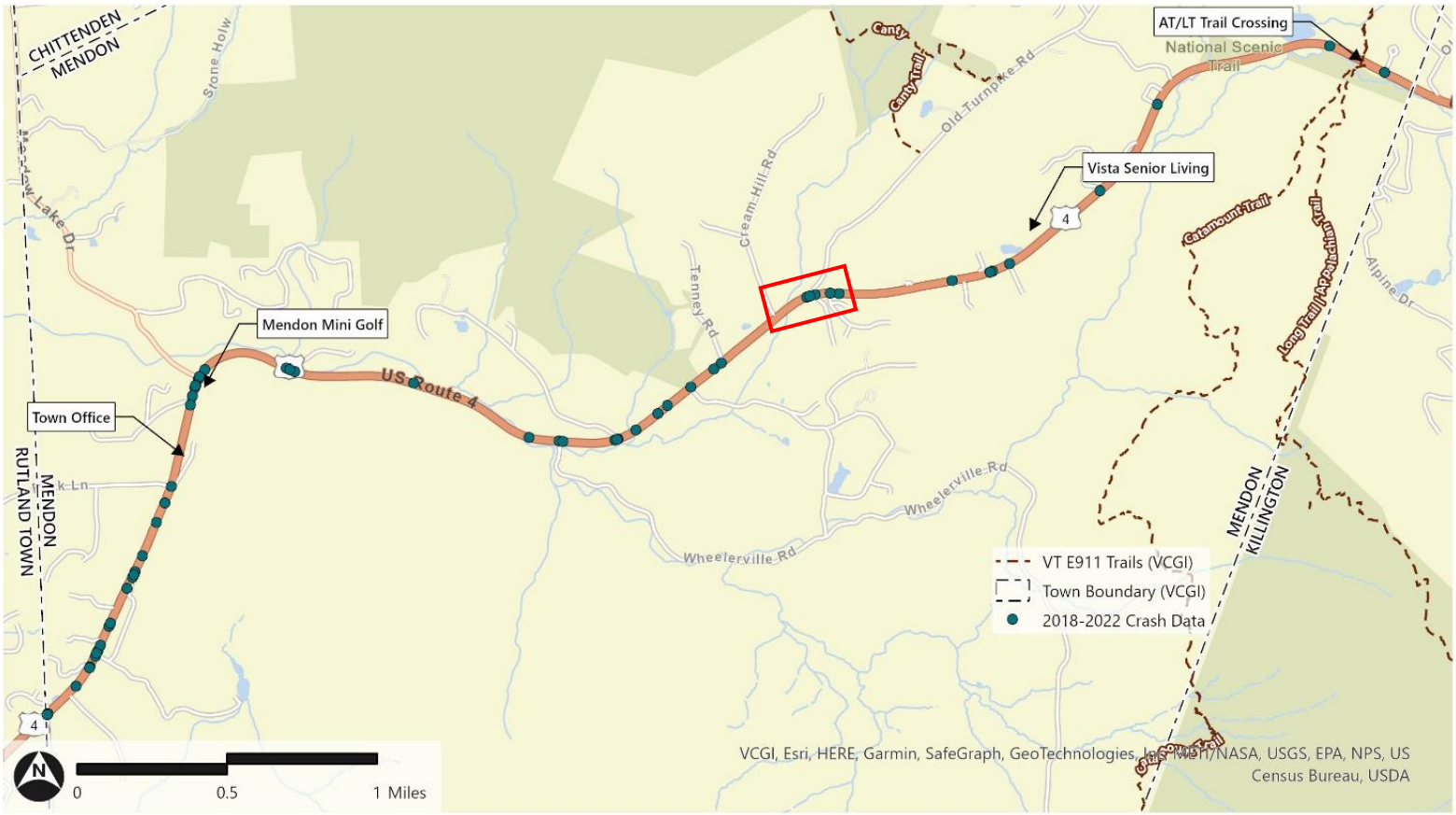
VHB reviewed VTrans' online culvert inventory and reviewed the culverts along US Route 4 through Mendon. There are 114 culverts in the Study Area, 97 culverts are in good condition, 11 are in fair condition, 3 are in poor, and 2 are unknown[2].

[2] 2 Vermont Association of Planning and Development Agency, VT Culverts ArcGIS Map https://vapda.maps.arcgis.com/apps/webappviewer/index.html?id=2eedb2a33b674abc9926298aa4dd9047

2.3 Safety Assessment

A review of reported crashes along the study corridor was conducted for the most recent five-year time period available (2018 – 2022). During this time period, there were 67 reported crashes. Two of the crashes were fatal (one of those crashes involved a pedestrian) and 12 resulted in injury. A map of crash locations is provided in **Figure 3** below. As of the most recent VTrans High Crash Locations publication no intersections along US Route 4 in Mendon are classified as High Crash Locations. There was one High Crash Linear Segment Location from approximately Cream Hill Road to Johns Way shown in **Figure 3** in the red box.

Figure 3: 2018-2022 VTrans Crash Data



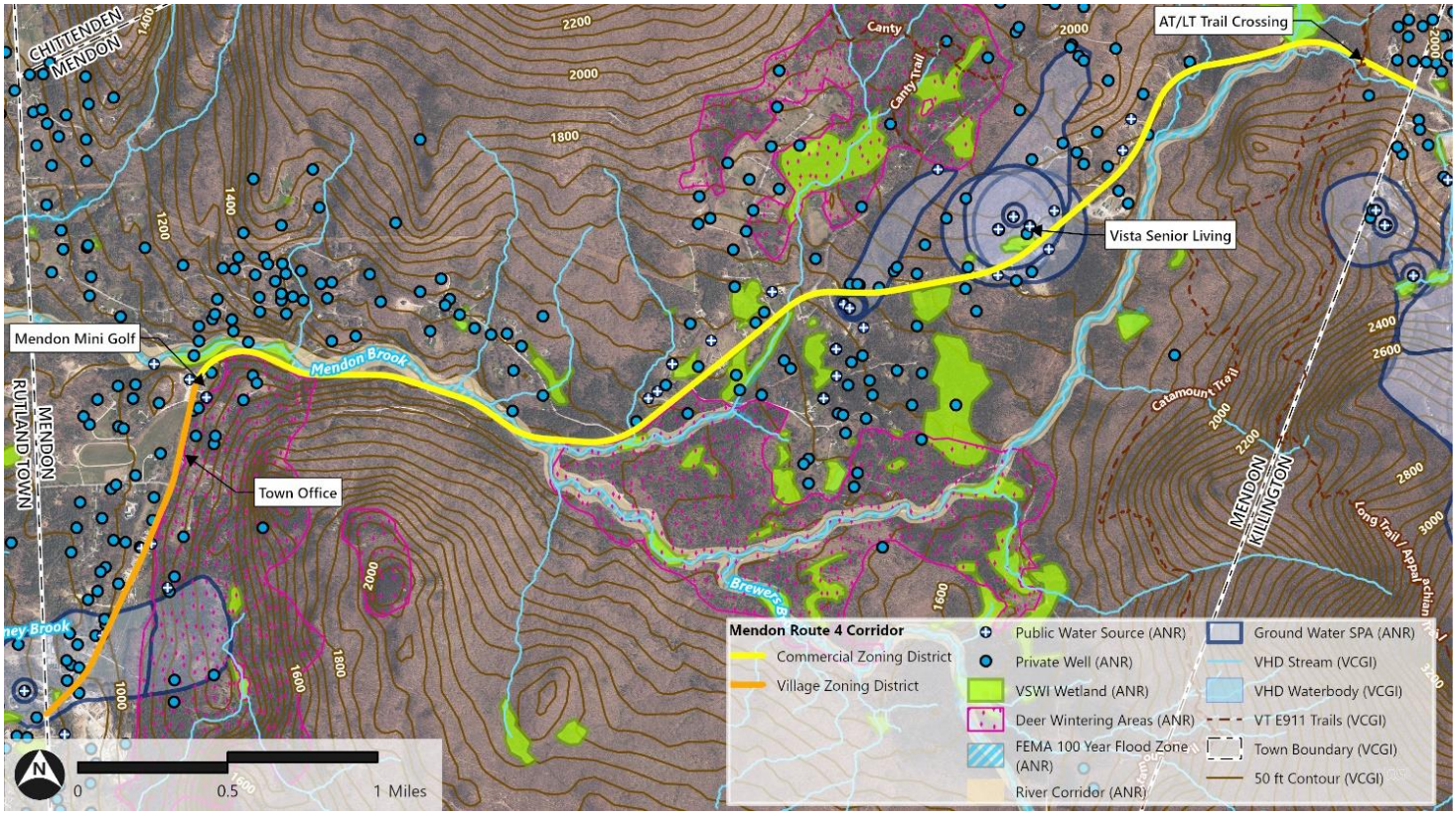
2.4 Natural, Cultural, and Historic Resources

A review of the natural, cultural, and historic resources was completed to identify areas of potential sensitivity, permitting requirements, or other constraints. These reviews identified one archaeologically sensitive area, 9 properties eligible for listing in the National Register of Historic Places, and 12 that are recommended for further study. A summary of these resource reviews appears in the following sections.

2.4.1 Natural and Cultural Resources

A desktop review and assembly of natural resources into maps based on the Agency of Natural Resources Atlas was conducted and is included in below in **Figure 4** and in Appendix C. In addition, an Archaeological Resources Assessment was completed by the University of Vermont and is included in Appendix D. The Above Ground Historic Resources Identification report completed by VHB is included as Appendix E. The natural and cultural resources assessment for the project was designed to include an evaluation for the presence/absence of each resource type and the potential impacts to determine the anticipated permit requirements for these alternatives.

Figure 4: Environmental Conditions



The natural and cultural assessment resource types evaluated include:

- Above ground historic;
- Agricultural lands;
- Archaeological;
- Fish and Wildlife;
- Rare, Threatened, & Endangered Species;
- Floodplains and River Corridors;
- Wetlands and;
- Surface Waters.

The assessment findings are summarized below by resource type:

Table 1: Natural and Cultural Assessment Desktop Review

Agricultural Soils	• Prime agricultural soil is present through the Village Zone and Transition Zone.
Archaeological:	There are no known archaeological sites within or immediately adjacent to the proposed scoping corridor. However, several sites, both historic and pre-Contact Native American, exist within 1.5 km of the scoping study corridor (see Section 2.4.2 for more detail).
Historic Resources:	• 9 properties recommended as eligible for listing in the National Register of Historic Places and 12 properties recommended for further evaluation. (see Section 2.4.3 for more detail).
Public Lands:	• Green Mountain National Forest and Rutland City Forest are present through the Rural Zone. Additionally, there is the Appalachian/ Long Trail, and Catamount Trail crossing on the western side of the Study Area.
Rare, Threatened & Endangered Species and Necessary Wildlife Habitat:	• There are no RTE species identified by the Vermont Fish and Wildlife Department present in the project area. • The Study Area in not within any state/federal Necessary Wildlife Habitat • There are large coverages of Deer Wintering Areas east of US Route 4 in the Village and Transition Zones as well as south of US Route 4 in the Rural Zone. These areas extend significantly into surrounding land and as such disruption to these wintering habitats will be minimal. • Any proposed tree clearing may have to adhere to time-of-year restrictions for the protection of the state listed

	endangered and federally-listed threatened northern long-eared bat (*Myotis septentrionalis*)
Wetlands:	• Sporadic wetlands mapped by the Vermont Significant Wetland Inventory are present in the Study Area, mainly through the Rural Zone. These wetlands are minimal and do not extend through the road corridor.
Surface Waters:	• Mendon Brook runs just north of US Route 4 along the Transition Zone and continuing adjacent to the road through the Rural Zone until it's crossing just before Wheelerville Road. • There are four small stream crossings in the Rural Zone located respectively near Journeys End Road, Cream Hill Road and two in the vicinity of the Killington Town Line. • The Transition Zone through half of the Rural Zone (Medway Road to Brad Mead Dr) is a surface water protection area while there is sporadic coverage of groundwater protected area throughout US Route 4.
Significant Natural Communities:	• Vermont Fish and Wildlife's Natural Heritage Inventory has mapped occurrences of an S2 (Rare) Species 1000 feet inset from the Transition Zone.
Floodplains and River Corridors:	• The Mendon Brook Corridor which runs in the vicinity of US Route in the Transition and Rural Zone is identified as being a flood hazard area.

Hazardous Sites:	• There are five hazardous waste sites located along US Route 4.
	  • Former Rutland Group Property across from Orchard Road.
	  • Bowen Property within the Village Center.
	  • Mendon Church across from Meadow Lake Drive.
	  • Cortina Inn east of Old Turnpike Road.
	  • AOT Garage east of Old Turnpike Road.
	  • There is one underground storage tank located in the vicinity of the US Route 4 and Town Line Road intersection.

2.4.2 Archaeological Resources

A Desk Review was conducted by Crown Consulting Archaeology, LLC and is included in the Appendices. In this review, Crown Consulting Archaeology, LLC consulted historic maps and the Vermont Division of Historic Preservation's (VDHP) 2015 predictive model matrix for identifying pre-Contact Native American archaeological sites.

There are no known archaeological sites within or immediately adjacent to the proposed scoping corridor. However, several sites, both historic and pre-Contact Native American, exist within 1.5 km of the scoping study corridor. The complete report can be seen in Appendix xx.

2.4.3 Historic Resource Identification

VHB has reviewed the area between Town Line Road to Meadow Lake Drive to identify historic resources, and to provide a scoping study level assessment of the historic resources in the project area that will experience greater impacts. This information will be used to support the Project planning efforts and acts as the first step in identifying resources protected under Section 106 of the National Historic Preservation Act ("Section 106" and "NHPA", 16 U.S.C. 470) and Section 4(f) of the Department of Transportation Act ["Section 4(f)"]. The complete report can be seen in Appendix xx.

VHB reviewed existing survey and other files available through the Vermont Division for Historic Preservation's ("DHP") Online Resource Center.[3] The reports and files reviewed for this report include the Vermont Historic Sites & Structures Survey ("VHSSS"), the listings in the National Register and Vermont State Register of Historic Places ("State Register"), and the Mendon town files. The purpose of reviewing this literature was to identify previously inventoried historic resources within the study area and to establish which sites had not been surveyed. In addition, historic maps and aerial photographs such as United States Geological Survey ("USGS") Topographic Maps, the 1858 Wallings Map, the 1875 F.W. Beers & Co. Map, available historic aerial imagery, and the Mendon land records, all available via various online repositories, were reviewed in order to determine which buildings were over 50 years old and therefore potentially historic.[4]

The historic resources study area includes the stretch of US Route 4 from the Town Line (west with Rutland) to Meadow Lake Drive. The historic resources study area includes all parcels with structures on either side US Route 4 for the length of the Project as part of the scoping study. While physical work is anticipated to be on the western side of US Route 4, the eastern side of US Route 4 is included in the Study Area as well, which is typical for similar projects.

A future project subject to Section 106 and/or Section 4(f) will formally review all of the properties in the Area of Potential Effect (APE), which is similar to the Project study area. Section 106 requires review of a project's scope of work and plans, and assessment of its effects on historic resources. The properties identified in this section as eligible or likely eligible should be considered in planning efforts in terms of impacts to the properties. Concerns for potential effects from linear projects typically equates to the amount of land from a parcel required for a project and how contributing features will be impacted, such as stone walls or tree removal, and how close a project is to a building on the historic property. Land incorporated into a

[3] www.orc.vermont.gov

[4] www.historicaerials.com; www.old-maps.com

transportation project from a historic property will likely result in a Section 4(f) historic de minimis determination.

Consultation with the VTrans Historic Preservation should begin early in the process. Based on this initial study, VHB does not anticipate adverse effects to result from the incorporation of pedestrian and bicycle facilities into the US Route 4 corridor.

2.4.4 Destinations

A number of area destinations are present in the corridor, most of which are located in the Village zone. Access to these locations for all modes should be considered.

Sugar & Spice

Sugar & Spice is a family restaurant and working sugar house on US Route 4 just south of Meadow Lake Drive.

Mendon Mini Golf & Snack Bar

Mini Golf & Snack Bar, located on US Route 4 and right across from Meadow Lake Drive and Sugar & Spice, offers residents and visitors a recreational experience infused with a distinct Vermont charm, making it a cherished local hangout for families.

Mendon Mountain Orchards

Established in 1982, Mendon Mountain Orchards in Vermont has a bakery, farm animals, and a gift shop. Surrounded by beautiful views, guests can stay overnight, enjoy freshly baked goods, learn about farming, and shop for local Vermont products. It's a suitable place for a quick visit or a weekend trip.

Green Mountain National Forest Service Office

The new office for the Green Mountain and Finger Lakes National Forests on Route 4 in Mendon represents a significant upgrade from its previous locations in Rutland City and downtown Rutland. The location is placed to enhance visitor access and increase awareness of the public ownership of the surrounding forested land. The building accommodates national and regional Forest Service employees, both seasonal and full-time as they serve the local community and attract new visitors, benefiting local businesses and raising the profile of the National Forest.

Recreation Opportunities

The region boasts impressive recreation opportunities. Lengthy or day hike opportunities, cross country skiing, and biking are a few of the local recreation options.

Aitken State Forest located in Mendon and the state land covers 918 acres and includes a hiking trail up Bald Mountain, hunting, camping, cross-country skiing, and snowmobiling. The Appalachian Trail/Long Trail crosses the southeast corner of the town, passing near the summit of Killington Peak. Additionally, the Green Mountain National Forest is just north of US 4 and the Canty Trail can be accessed from Old Turnpike Road.

2.5 Review of Previous Studies

To understand the context of this scoping study and align it with the Town's principles, previous planning documents were researched and reviewed. Through this research the Town of Mendon Town Plan and Mendon on the Move were identified and reviewed to inform this study. Mendon on the Move served as the primary source of background material on the Town's development philosophy and vision for improving the US Route 4 corridor.

2.5.1 Mendon Town Plan

In March of 2022, the 2020 Town Plan was readopted with the addition of the Energy Plan. The purpose of the Mendon Town Plan is to serve as a comprehensive guide and vision for the future development and land use of the town. It outlines the town's goals, objectives, and strategies for various aspects of community life, including transportation, housing, natural resources, economic development, and community facilities. The plan aims to provide a framework for making informed decisions and managing growth in a way that preserves the town's rural character, enhances the quality of life for its residents, and promotes sustainable development. It serves as a tool for guiding policymaking, land use regulations, and development projects in Mendon. Additionally, the plan helps to coordinate and align the efforts of different stakeholders, such as town officials, community members, and developers, towards a shared vision for the town's future.

The Plan included several transportation recommendations related to this Scoping Study:

- Improve traffic safety and traffic patterns.
- Promote a multi-modal transportation system by supporting infrastructure improvements.
- Manage growth and development through a safe, resilient, and sustainable transportation network.
- Develop a transportation network that respects the integrity of historical, natural, and residential environments.
- Encourage and maintain highway law enforcement patrols to control speeding.

2.5.2 Mendon on the Move

Produced by the Vermont Council on Rural Development with strong input from Mendon officials and community members, in June 2021, the Mendon on the Move Plan was finalized. The top two priorities of the Plan were to:

› Boost Outdoor Recreation

› Reimagine and Improve the Route 4 Corridor

A task group focused on the redevelopment and beautification of US Route 4, they discussed safety and traffic calming techniques such as gateway treatments and designating areas that the community would like to see pedestrian and bicycle facilities implemented. Additionally, it was highlighted to improve safety and aesthetics of bus stops.

2.5.3 Rutland Regional Plan

In June of 2018, the Rutland Regional Planning Commission re-adopted the Rutland Regional Plan. The purpose of the plan was to provide a guide for managing change within the region and provide a framework for individuals, businesses, and local governments to make decisions regarding growth and development. Its purpose is to offer guidance and support in navigating the processes and considerations related to managing change effectively in the region.

The Plan included several transportation recommendations related to this Scoping Study:

- Construct streets using "Complete Streets" principles in town centers, so that all roads serve all types of users.
- Widen shoulders, lanes, sidewalks, and bus turn outs where appropriate.
- Provide accessible and convenient transit service.
- Fund communities' planning and implementation of bike/pedestrian facilities.
- Educate bicyclists, pedestrians, and motorists about safe riding, walking, and driving.

3

Public Outreach

A robust public outreach process was conducted by engaging a diverse group of stakeholders on the project team and providing numerous opportunities for public input over the course of the study's development. Three public meetings were held for this project including an initial Local Concerns Meeting, an Alternatives Presentation, and a final meeting to present the Team's recommended Preferred Concept Plan to the Town of Mendon. Before bringing materials to the public, the Team convened to ensure all necessary components were considered and the Purpose and Needs of the project were being met.

3.1 Project Team

The Project Team consisted of a diverse group of stakeholders including representatives from the Town of Mendon, Vermont Agency of Transportation, and the Rutland Regional Planning Commission, who served as the municipal project manager.

This team served as an advisory body throughout the project and was responsible for vetting all materials and concepts before they were presented to the public for review and comment. The Project Team provided input and ultimately finalized the Purpose and Need statement which was used as the basis for all alternative concepts and evaluation. The Project Team also identified preferred alternatives throughout the Study Area.

3.2 Local Concerns Meeting

A Local Concerns Meeting was held on June 21, 2023, to solicit public input at the onset of the project. The attendees were provided with an overview of the project and asked to identify opportunities and concerns within the Study Area.

The most common themes in feedback were related to pedestrian and bicycle safety on Route 4, pedestrian crossing and vehicle traffic management and road safety. Other concerns identified included:

- Meadow Lake Drive intersection (in the designated Village Center) is a high volume vehicle and pedestrian traffic area of concern with Sugar & Spice and the Mini Golf & Snack Bar in the vicinity.
- Wheelerville Road, Journey's End Road, Woodward Road intersections – multitude of safety and speed concerns.
- Difficult to determine future re-use of properties in the former hotel zone, 50 mph speed limit in this zone viewed as an impediment to new commercial business.
- Safety concerns about access to new GMFH building and increase in visitors to this destination.
- Crossings and safety of on demand bus stops in the vicinity of Vista Senior Living and Mendon Mountainview Lodge.
- Unsafe snowmobile trail crossing in vicinity of former Snow Angel restaurant.

These concerns and opportunities were evaluated by the project team and served as the foundation for the alternatives and project focus areas that were evaluated as the study progressed. Public outreach materials, including the meeting presentation, and minutes can be found in Appendix xx.

3.3 Draft Alternatives Presentation

On October 5, 2023, the project team presented three draft alternatives for public input to help determine a preferred concept plan. This meeting was attended by a wide array of community members and project stakeholders. The alternatives presented to the public are described in further detail later in the report. The four alternatives included:

No Build – A baseline scenario in which no changes are made to the project area.

Alternative 1 – A scenario in which lane width reductions are made throughout the Study Area, and road width is reallocated to a double line buffered shoulder. Travel lane narrowing is aimed at discouraging speeding and shoulder modifications are aimed at increasing bicycle and pedestrian safety.

Alternative 2 – A scenario where all the changes from alternative two are carried out with the addition of a sidewalk on the west side of US 4 from Town Line Road to Meadow Lake Drive and an 8-foot shared use path on the north side of US Route 4 from USFS Headquarters to the AT/LT crossing. Safe crossings pair with this alternative to further promote safe pedestrian travel throughout and a gateway treatment is proposed for the transition zone.

Alternative 3 – A scenario where all the changes from alternative two are carried out with the addition of a shared use path on the west side of US 4 from Town Line Road to Meadow Lake Drive and an 8-foot shared use path on the south side of US Route 4 from USFS Headquarters to the AT/LT crossing. Safe crossings pair with this alternative to further promote safe pedestrian travel throughout.

3.4 Preferred Alternative Presentation

TBD

4

Alternatives Analysis

Each alternative for the project area was compared in a formal analysis. Factors such as addressing the project purpose and need statement, safety, anticipated permitting needs, project cost, natural resource impacts, and right-of-way impacts were used as evaluation metrics to help determine a preferred alternative for the corridor.

4.1 No Build

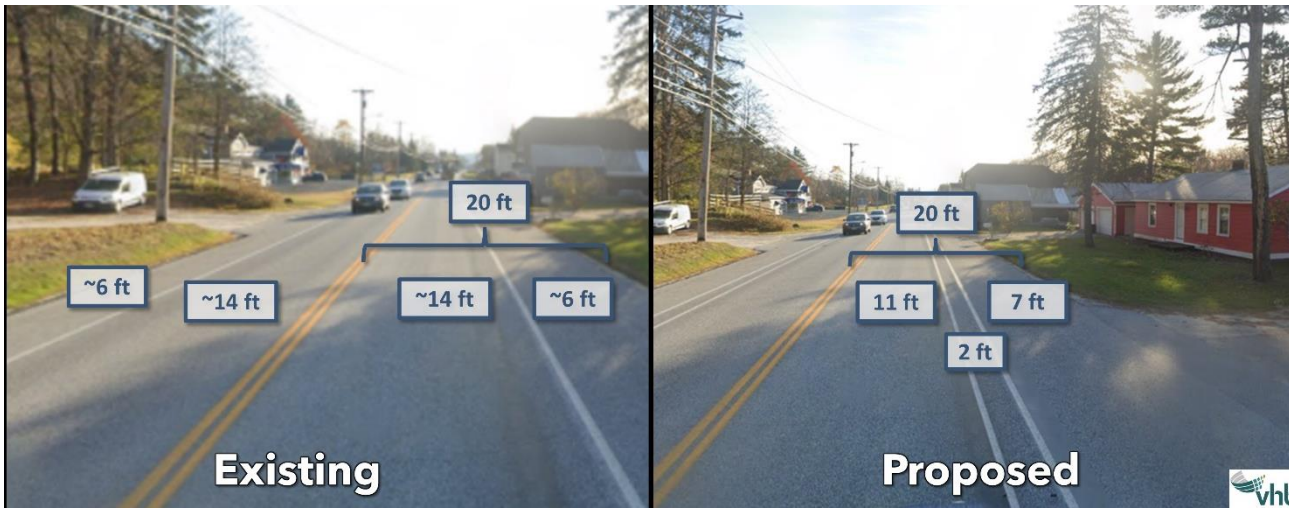
The No Build scenario represents a business-as-usual case where no infrastructure changes are implemented. This case was examined to determine a baseline condition against which to measure key factors in improving connectivity, mobility, and safety in the Village. Though the No Build scenario comes at no cost and minimal impacts, the No Build scenario does not satisfy the Purpose and Need of the project.

4.2 Alternative 1

Segment 1: Town Line Road to Meadow Lake Drive

Within Segment 1, it was proposed to reduce the lane width from 14 feet to 11 feet. The space gained from this reduction was suggested to be allocated for a 2-foot double line buffer on both sides of the travel lanes. The remaining area would be utilized for a shoulder, typically measuring seven feet in width. This proposed adjustment was aimed at enhancing safety and creating a more structured roadway layout.

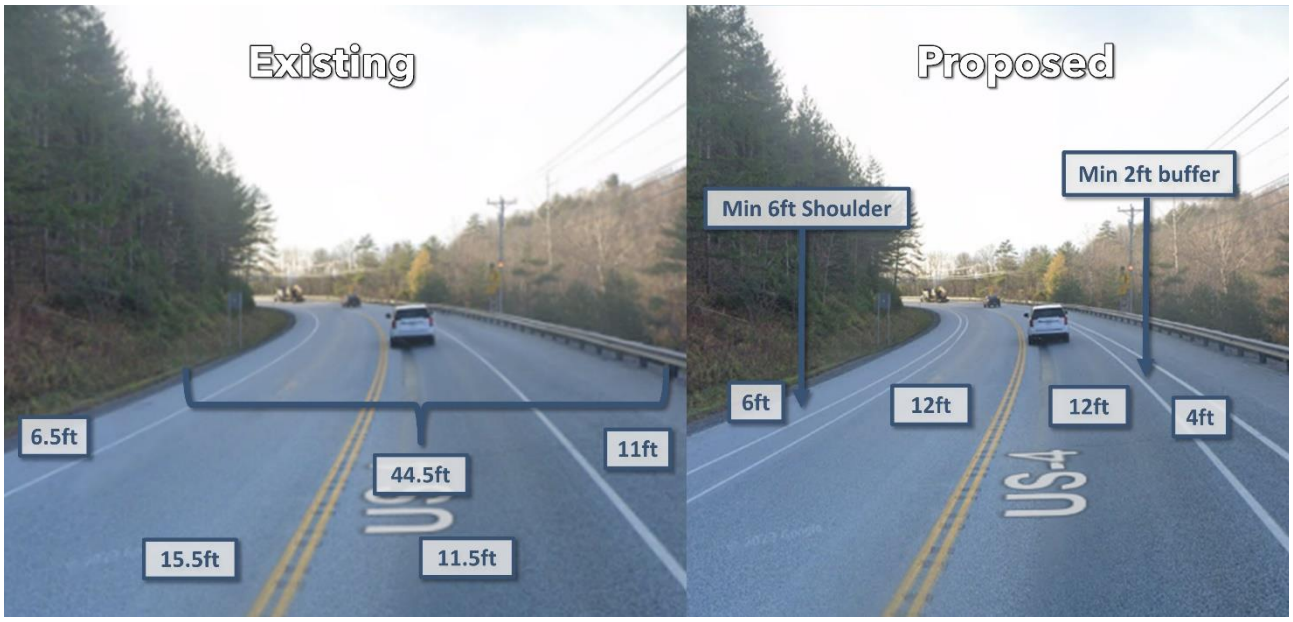
Figure 5: Concept Alternative 1: Segment 1



Segment 2: Meadow Lake Drive to Medway Road

Alternative 1 for Segment 2 proposed adjusting the lane width to a consistent 12 feet, down from the existing widths of ranging from 11.5 to 15 feet. Also included was the addition of a minimum 6-foot shoulder on both sides of the travel lanes and a minimum 2-foot double line buffer to be established in both directions.

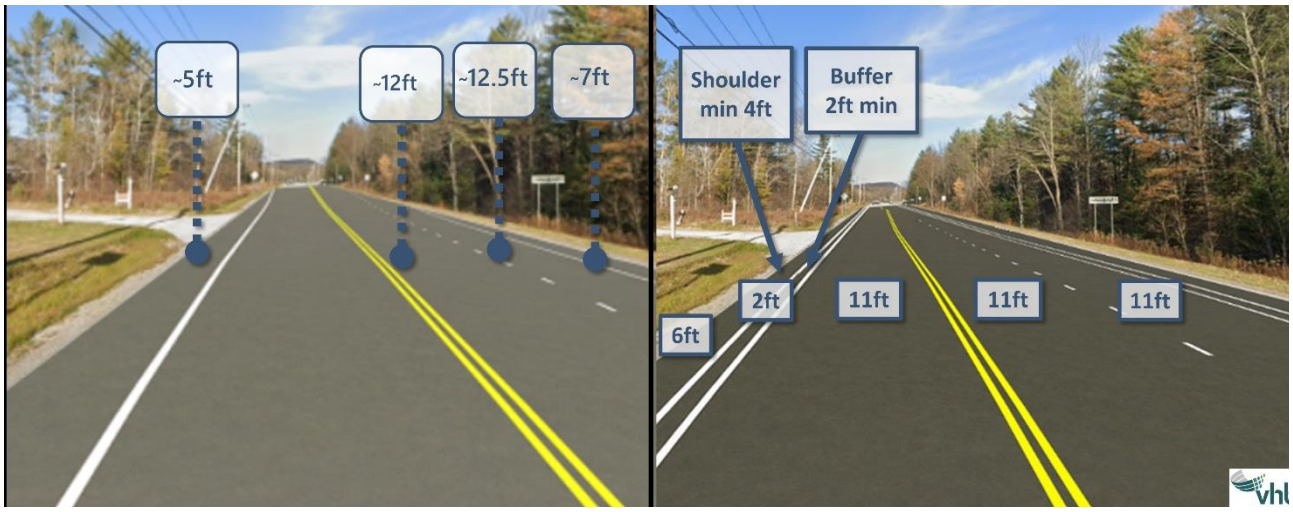
Figure 6: Concept Alternative 1: Segment 2



Segment 3: Medway Road to Fox Hollow Village

In Alternative 1 Segment 3 lanes would be reduced along the entire corridor to 11 feet wide. In addition, shoulders would be reduced to a minimum 4-foot shoulder and a minimum 2-foot double line buffer on both sides of the travel lanes.

Figure 7: Concept Alternative 1: Segment 3

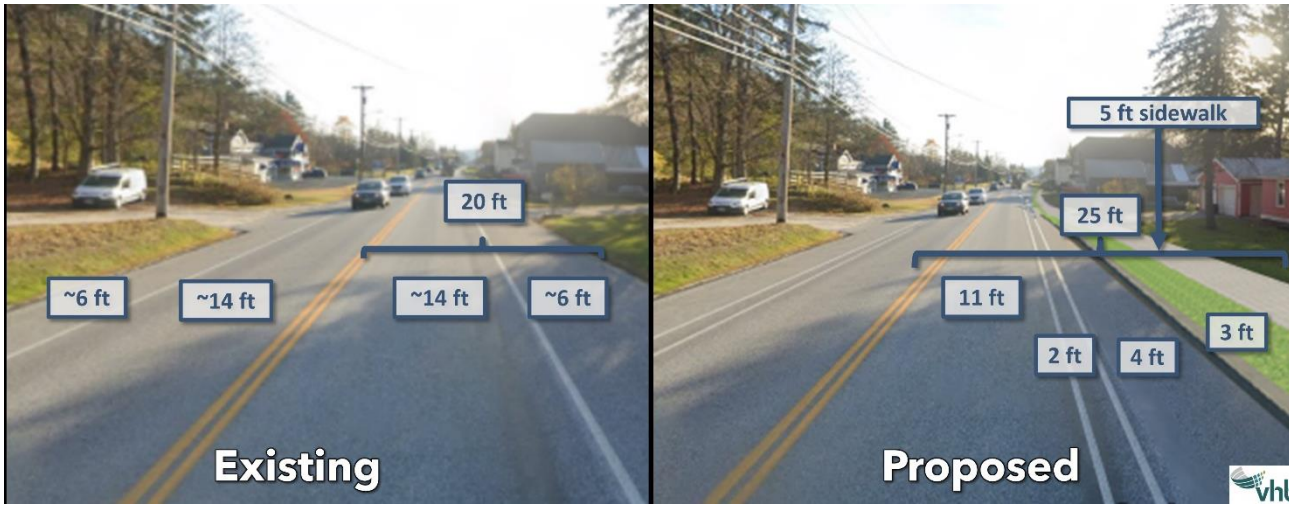


4.3 Alternative 2

Segment 1: Town Line Road to Meadow Lake Drive

For Alternative 2, Segment 1, it was proposed that the lane width be reduced to 11 feet. The space gained from this reduction would be allocated to create a 2-foot double line buffer in both directions of travel and a 4-foot shoulder. Additionally, the plan included a 3-foot grass buffer and a 5-foot sidewalk on the north side of US Route 4, extending throughout the Segment 1.

Figure 8: Concept Alternative 2: Segment 1



Segment 2: Meadow Lake Drive to Medway Road

Alternative 2 for Segment 2 encompasses the treatments outlined in Alternative 1, which includes adjusting the road width to a standard 12 feet from the existing range of widths. This alternative retains the minimum 6-foot shoulder in both travel directions and a minimum 2-foot double line buffer. Additionally, this alternative proposes a gateway treatment package. This package would feature welcome signs and delineated markings, designed to enhance the aesthetic appeal and clarity of roadway demarcations in this segment.

Figure 9: Concept Alternative 2: Segment 2 - Gateway Treatment

Segment 3: Medway Road to Fox Hollow Village

Alternative 2 for Segment 3 builds upon the foundations set by Alternative 1, which involves a lane width reduction to 11 feet throughout the segment. It retains the features of a minimum 4-foot shoulder and a minimum 2-foot double line buffer. Unique to Alternative 2, however, is the proposal of an 8-foot shared use path on the north side of US Route 4, extending from the USFS Headquarters to the AT/LT crossing. This addition is aimed at enhancing pedestrian and cyclist accessibility and safety. The implementation of this shared use path is flexible, proposed to be executed either in a single phase or in multiple phases, allowing for adaptability in planning and execution based on available resources and logistical considerations.

Figure 10: Concept Alternative 2: Segment 3

4.4 Alternative 3

Segment 1: Town Line Road to Meadow Lake Drive

In Alternative 3 for this segment, the proposed plan continues to include a reduction of the lane width to 11 feet with a 2-foot double line buffer on both sides of the travel lanes and a 4-foot shoulder. Additional width is proposed to instead accommodate a 3-foot grass buffer and an 8-foot shared use path along the west side of US Route 4, stretching from Town Line Road to Meadow Lake Drive. Furthermore, Alternative 3 also includes the installation of crosswalks at key locations as shown in **Figure** , enhancing pedestrian safety and accessibility in this Segment.

Figure 11: Concept Alternative 3: Segment 1

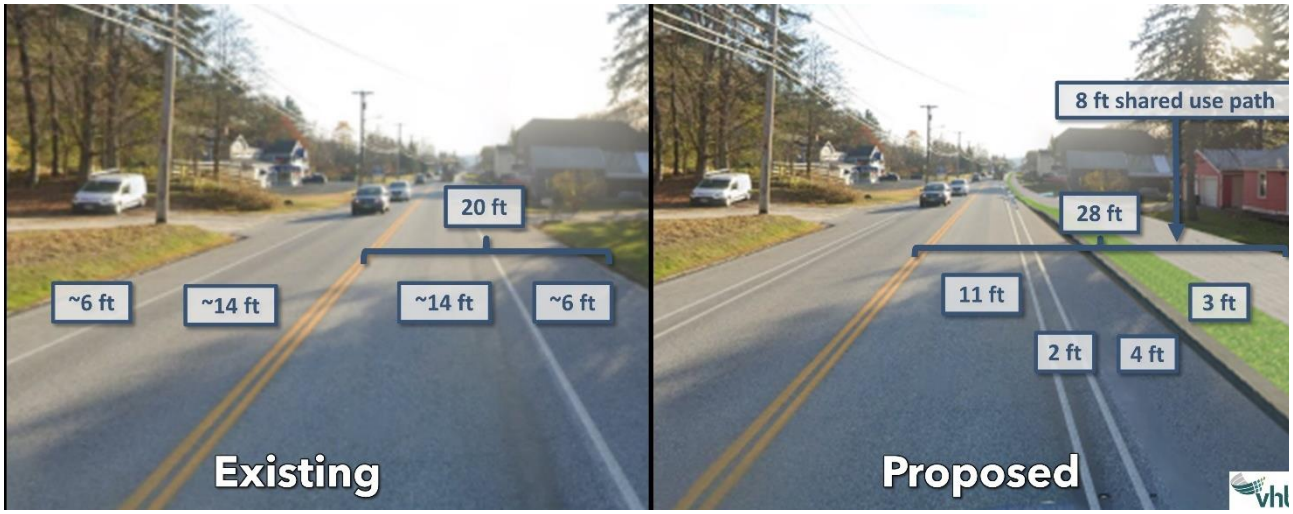
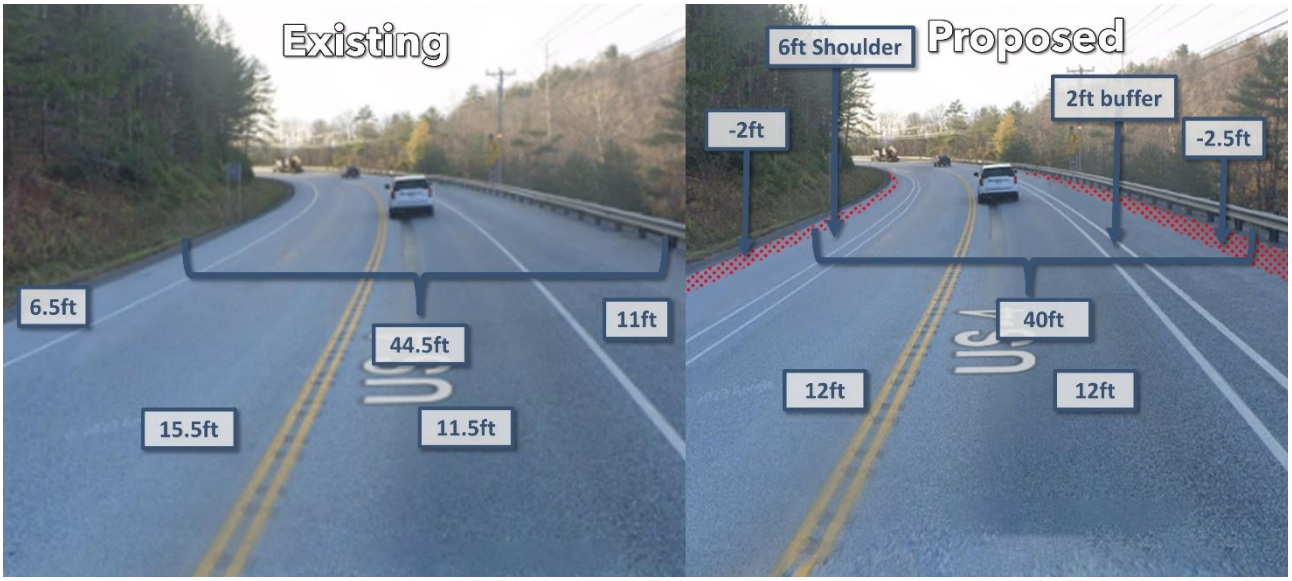


Figure 9: Concept Alternative 3: Segment 1 – Safe Crossings

Segment 2: Meadow Lake Drive to Medway Road

The proposed modification in Alternative 3 for Segment 2, suggests adjusting the lane width to a standard 12 feet, a reduction from the existing widths of 15 feet and 11.5 feet. Accompanying this lane width adjustment is the inclusion of a 2-foot double line buffer and a 6-foot shoulder. This proposal aims to marginally reduce the overall roadway width, which is intended to encourage slower vehicle speeds as drivers transition through the zone into Mendon.

Figure 10: Concept Alternative 3: Segment 2



Segment 3: Medway Road to Fox Hollow Village

Alternative 3 for Segment 3 includes the prior treatments outlined in Alternative 1 of lane width reduction 11 feet throughout and a minimum 4-foot shoulder and minimum 2-foot double line buffer. Newly proposed in Alternative 3 for Segment 3 is an 8-foot shared use path on the south side of US Route 4 extending from the USFS HQ to AT/LT crossing. This shared use path could be implemented in a single phase or multiple phases.

Figure 11: Concept Alternative 3: Segment 3

4.5 Alternatives Evaluation Matrices

The evaluation matrices of the alternatives presented are shown on the following pages. These matrices compare Cost, Safety, and Community Character, Anticipated Impacts and Anticipated Permitting.

4.5.1 Cost, Safety, and Community Character

The evaluation matrix shown in Error! Reference source not found. compares the costs, safety mobility, and community character for the alternatives.

Table 2: Evaluation Matrix – Cost, Safety, and Community Character

Segment 1: Town Line to Meadow Lake Drive				
Alternative				
	0 •No Build	**1** •Lane reduction •11 ft lanes •Buffered shoulders	**2** •Lane and shoulder width reduction •11 ft lanes •Sidewalk w/ buffer •6 ft shoulder •Safe Crossings	**3** •Lane and shoulder width reduction •Shared use path w/ buffer •Buffered shoulders •Safe Crossings
Cost				
Relative Cost Scale	-	$	$$$	$$$
Safety & Mobility				
Pedestrian Access & Safety	No Change	Slightly Improved	Improved	Improved
Bicyclist Access & Safety	No Change	Slightly Improved	Slightly Improved	Improved
Vehicle Safety	No Change	Improved	Improved	Improved
Community Character				
Aesthetics	No Change	Slightly Improved	Improved	Improved
Satisfies Purpose & Need	No	Slightly	Yes	Yes
Segment 2: Meadow Lake Drive to Medway Road				
Alternative				
	0 •No Build	**1** •12 ft lanes •Minimum 6 ft shoulder •Buffered shoulders	**2** •12 ft lanes •Minimum 6 ft shoulder •Buffered shoulders •Gateway Treatment •Delineated markings on curve	**3** •Lane reduction •11 ft lanes •6 ft shoulders •Buffered shoulders
Cost				

Relative Cost Scale	-	$	$$	$
Safety & Mobility				
Pedestrian Access & Safety	No Change	Slightly Improved	Slightly Improved	Slightly Improved
Bicyclist Access & Safety	No Change	Slightly Improved	Slightly Improved	Slightly Improved
Vehicle Safety	No Change	Improved	Improved	Improved
Community Character				
Aesthetics	No Change	Slightly Improved	Improved	Slightly Improved
Satisfies Purpose & Need	No	Slightly	Yes	Yes
Segment 3: Medway Road to Fox Hollow Village				
Alternative				
	0 •No Build	**1** •11 ft lanes •Buffered shoulders	**2** •12 ft lanes •6 ft min shoulders •Shared use path on north side of road	**3** •12 ft lanes •6 ft min shoulders •Shared use path on south side of road
Cost				
Relative Cost Scale	-	$	$$$	$$$
Safety & Mobility				
Pedestrian Access & Safety	No Change	Slightly Improved	Improved	Improved
Bicyclist Access & Safety	No Change	Slightly Improved	Improved	Improved
Vehicle Safety	No Change	Improved	Improved	Improved
Community Character				
Aesthetics	No Change	Slightly Improved	Slightly Improved	Slightly Improved
Satisfies Purpose & Need	No	Slightly	Yes	Yes

4.5.2 Anticipated Impacts

The evaluation matrix shown in Error! Reference source not found. compares the anticipated impacts for the alternatives. The alternatives were evaluated for impacts described in the MA Local Projects Guidebook for Locally Managed Projects including: ROW, utility, agricultural lands, archaeological lands, historic impacts, fish and wildlife, RTE, public lands, wetlands and new impervious surfaces.

Table 3: Anticipated Impacts

Segment 1: Town Line to Meadow Lake Drive

Alternative	0 •No Build	1 •Lane reduction •11 ft lanes •Buffered shoulders	2 •Lane and shoulder width reduction •11 ft lanes •Sidewalk w/ buffer •6 ft shoulder •Safe Crossings	3 •Lane and shoulder width reduction •Shared use path w/ buffer •Buffered shoulders •Safe Crossings
Impacts				
ROW Impacts	None	None	Yes	Yes
Utility Impacts	None	None	Potential	Potential
Agricultural Lands	None	None	Potential	Potential
Archaeological	None	None	Potential	Potential
Historic	None	None	Potential	Potential
Fish & Wildlife	None	None	None	None
Rare Threatened & Endangered Species	None	None	None	None
Public Lands - Sect. 4(f)	None	None	None	None
Wetlands	None	None	Potential	Potential
New Impervious Surfaces	None	None	Yes	Yes
Segment 2: Meadow Lake Drive to Medway Road				
Alternative				
	0 •No Build	**1** •12 ft lanes •Minimum 6 ft shoulder •Buffered shoulders	**2** •12 ft lanes •Minimum 6 ft shoulder •Buffered shoulders •Gateway Treatment •Delineated markings on curve	**3** •Lane reduction •11 ft lanes •6 ft shoulders •Buffered shoulders
Impacts				
ROW Impacts	None	None	Potential Temporary Impacts	Potential Temporary Impacts
Utility Impacts	None	None	None	None
Agricultural Lands	None	None	None	None
Archaeological	None	None	None	None
Historic	None	None	None	None
Fish & Wildlife	None	None	None	None
Rare Threatened & Endangered Species	None	None	None	None
Public Lands - Sect. 4(f)	None	None	None	None
Wetlands	None	None	None	None
New Impervious Surfaces	None	None	None	None
Segment 3: Medway Road to Fox Hollow Village				
Alternative				

	0 •No Build	1 •11 ft lanes •Buffered shoulders	2 •12 ft lanes •6 ft min shoulders •Shared use path on north side of road	3 •12 ft lanes •6 ft min shoulders •Shared use path on south side of road
Impacts				
ROW Impacts	None	None	Yes	Yes
Utility Impacts	None	None	None	None
Agricultural Lands	None	None	Potential	Potential
Archaeological	None	None	None	None
Historic	None	None	None	None
Fish & Wildlife	None	None	None	None
Rare Threatened & Endangered Species	None	None	None	None
Public Lands - Sect. 4(f)	None	None	None	None
Wetlands	None	None	Minor	Minor
New Impervious Surfaces	None	None	Significant	Significant

4.5.3 Anticipated Permitting

The evaluation matrix shown in Error! Reference source not found. compares the anticipated permitting for the alternatives considered.

Table 4: Anticipated Permitting

Segment 1: Town Line to Meadow Lake Drive				
Alternative				
	0 •No Build	1 •Lane reduction •11 ft lanes •Buffered shoulders	2 •Lane and shoulder width reduction •11 ft lanes •Sidewalk w/ buffer •6 ft shoulder •Safe Crossings	3 •Lane and shoulder width reduction •Shared use path w/ buffer •Buffered shoulders •Safe Crossings
Permitting				
Act 250	None	Not Anticipated	Not Anticipated	Not Anticipated
Section 404 - Wetlands (USACOE)	None	Not Applicable	Not Applicable	Not Applicable
Section 401 Water Quality Certification	None	Not Applicable	Not Applicable	Not Applicable
State Wetlands Permit	None	Not Applicable	Not Applicable	Not Applicable
Stream Alteration Permit	None	Not Anticipated	Not Anticipated	Not Anticipated

Construction Phase Storm Water Discharge Permit (General Permit 3-9020)	None	Not Anticipated	Yes	Yes
Operational Phase Storm Water Discharge Permit (General Permit 3-9015)	None	Not Anticipated	Yes	Yes
Flood Plains & River Corridor	None	Not Anticipated	Not Anticipated	Not Anticipated
Rare, Threatened, and Endangered Species	None	Not Anticipated	Not Anticipated	Not Anticipated
Section 1111 Permit	None	Yes	Yes	Yes
Segment 2: Meadow Lake Drive to Medway Road				
Alternative				
	0 •No Build	**1** •12 ft lanes •Minimum 6 ft shoulder •Buffered shoulders	**2** •12 ft lanes •Minimum 6 ft shoulder •Buffered shoulders •Gateway Treatment •Delineated markings on curve	**3** •Lane reduction •11 ft lanes •6 ft shoulders •Buffered shoulders
Permitting				
Act 250	None	Not Anticipated	Not Anticipated	Not Anticipated
Section 404 - Wetlands (USACOE)	None	Not Applicable	Not Applicable	Not Applicable
Section 401 Water Quality Certification	None	Not Applicable	Not Applicable	Not Applicable
State Wetlands Permit	None	Not Applicable	Not Applicable	Not Applicable
Stream Alteration Permit	None	Not Anticipated	Not Anticipated	Not Anticipated
Construction Phase Storm Water Discharge Permit (General Permit 3-9020)	None	Not Anticipated	Not Anticipated	Not Anticipated
Operational Phase Storm Water Discharge Permit (General Permit 3-9015)	None	Not Anticipated	Not Anticipated	Not Anticipated
Flood Plains & River Corridor	None	Not Anticipated	Not Anticipated	Not Anticipated
Rare, Threatened, and Endangered Species	None	Not Anticipated	Not Anticipated	Not Anticipated
Section 1111 Permit	None	Yes	Yes	Yes
Segment 3: Medway Road to Fox Hollow Village				
Alternative				
	0	**1**	**2**	**3**

	•No Build	•11 ft lanes •Buffered shoulders	•12 ft lanes •6 ft min shoulders •Shared use path on north side of road	•12 ft lanes •6 ft min shoulders •Shared use path on south side of road
Permitting				
Act 250	None	Not Anticipated	Not Anticipated	Not Anticipated
Section 404 - Wetlands (USACOE)	None	Not Applicable	Yes	Yes
Section 401 Water Quality Certification	None	Not Applicable	Potential	Potential
State Wetlands Permit	None	Not Applicable	Yes	Yes
Stream Alteration Permit	None	Not Anticipated	Yes	Yes
Construction Phase Storm Water Discharge Permit (General Permit 3-9020)	None	Not Anticipated	Yes	Yes
Operational Phase Storm Water Discharge Permit (General Permit 3-9015)	None	Not Anticipated	Yes	Yes
Flood Plains & River Corridor	None	Not Anticipated	Potential	Potential
Rare, Threatened, and Endangered Species	None	Not Anticipated	Not Anticipated	Not Anticipated
Section 1111 Permit	None	Yes	Yes	Yes

4.5.1 Advantages and Disadvantages

Alternative 1 – Segment 1

Advantages:

- Vehicle safety improved
- No impacts anticipated
- Least expensive alternative

Disadvantages:

- Only slightly meets purpose and need
- Only slightly improves pedestrian and bicyclist safety
- Section 1111 Permit required

Alternative 2 – Segment 1

Advantages:

- Vehicle and pedestrian safety improved

- Bicyclist safety slightly improved
- Satisfies purpose and need
- Aesthetics improved
- Safe crossing locations

Disadvantages:

- ROW impacts
- Construction Phase Storm Water Discharge Permit (General Permit 3-9020) required
- Operational Phase Storm Water Discharge Permit (General Permit 3-9015) required
- Section 1111 Permit required
- Costly

Alternative 3 – Segment 1

Advantages:

- Vehicle, pedestrian, and bicyclist safety improved
- Satisfies purpose and need
- Aesthetics improved
- Safe crossing locations
- Shared use path provides separated facilities

Disadvantages:

- ROW impacts
- Construction Phase Storm Water Discharge Permit (General Permit 3-9020) required
- Operational Phase Storm Water Discharge Permit (General Permit 3-9015) required
- Section 1111 Permit required
- More costly

Alternative 1 – Segment 2

Advantages:

- Vehicle safety improved
- No impacts anticipated
- Least expensive alternative

Disadvantages:

- Only slightly meets purpose and need
- Only slightly improves pedestrian and bicyclist safety
- Section 1111 Permit required

Alternative 2 – Segment 2

Advantages:

- Vehicle and pedestrian safety improved
- Bicyclist safety slightly improved
- Satisfies purpose and need
- Aesthetics improved

Disadvantages:

- ROW impacts
- Section 1111 Permit required
- More costly

Alternative 3 – Segment 2

Advantages:

- Vehicle, pedestrian, and bicyclist safety improved
- Satisfies purpose and need
- Slightly improved aesthetics

Disadvantages:

- ROW impacts
- Section 1111 Permit required

Alternative 1 – Segment 3

Advantages:

- Vehicle safety improved
- Slightly improves pedestrian and bicyclist safety
- No impacts anticipated
- Least expensive alternative

Disadvantages:

- Only slightly meets purpose and need
- Section 1111 Permit required

Alternative 2 – Segment 3

Advantages:

- Vehicle, pedestrian, and bicyclist safety improved
- Satisfies purpose and need
- Shared use path north side

- Aesthetics slightly improved

Disadvantages:

- ROW impacts
- Section 401 Water Quality Certification required
- Potential Section 401 Water Quality Certification required
- State Wetlands Permit required
- Stream Alteration Permit required
- Construction Phase Storm Water Discharge Permit (General Permit 3-9020) required
- Operational Phase Storm Water Discharge Permit (General Permit 3-9015) required
- Potential Flood Plains & River Corridor Permit required
- Section 1111 Permit required
- Significant amount of new impervious surfaces
- More costly

Alternative 3 – Segment 3

Advantages:

- Vehicle, pedestrian, and bicyclist safety improved
- Satisfies purpose and need
- Shared use path south side
- Aesthetics slightly improved

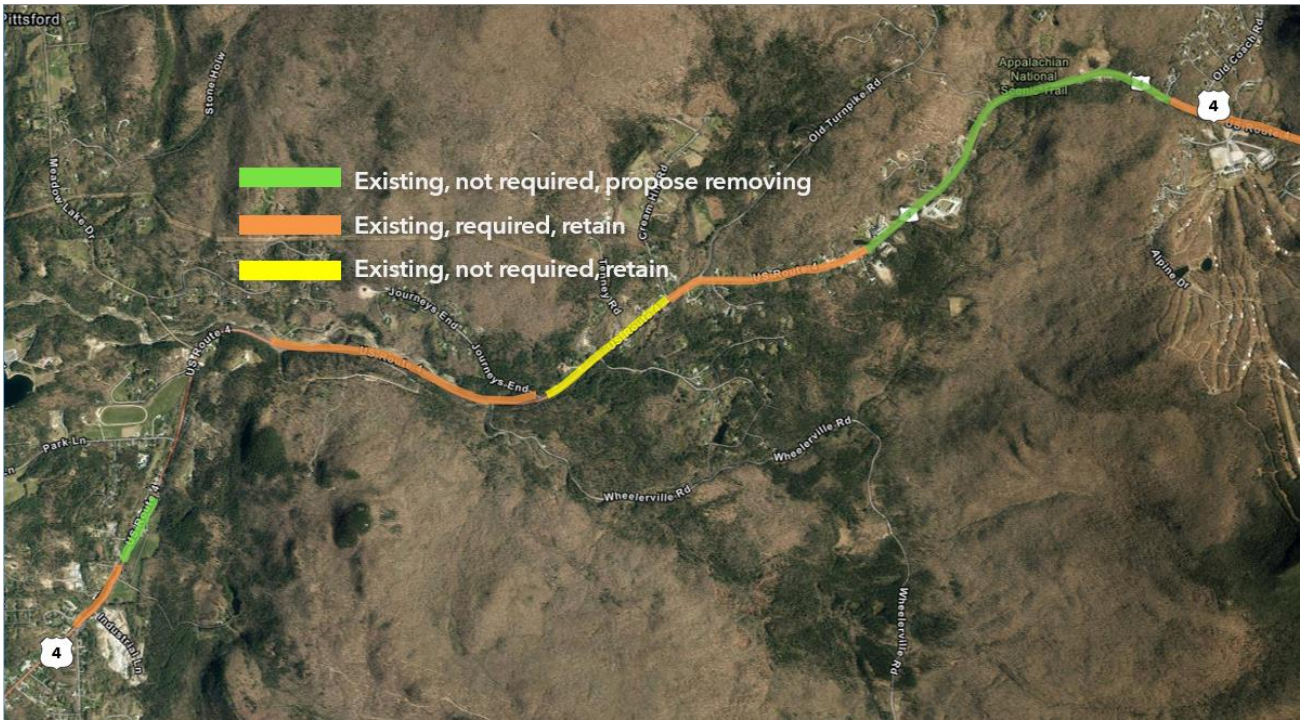
Disadvantages:

- ROW impacts
- Section 401 Water Quality Certification required
- Potential Section 401 Water Quality Certification required
- State Wetlands Permit required
- Stream Alteration Permit required
- Construction Phase Storm Water Discharge Permit (General Permit 3-9020) required
- Operational Phase Storm Water Discharge Permit (General Permit 3-9015) required
- Potential Flood Plains & River Corridor Permit required
- Section 1111 Permit required
- Significant amount of new impervious surfaces

4.6 Climbing Lanes

Also proposed was the removal of some climbing lanes along the US Route 4 Study Area corridor that are not required based on the percent grade threshold. Within the Village Center Zone this modification would aid in space reallocation towards uses more aligned with the goals of the Village (bike and pedestrian facilities). Reducing climbing lanes would also encourage traffic calming.

Figure 12: Climbing Lanes



4.7 Bus Stop Improvements

To enhance pedestrian safety along US Route 4, particularly for those accessing bus services, some accommodation outside of the travel lanes and shoulders is recommended. This measure aims to accommodate bus riders safely while waiting. Moreover, it is advised to redirect transit stops at areas with higher volumes, like the housing for the Killington Resort, to minimize the need for pedestrian crossings on the high-speed rural route, thereby reducing the risk of accidents.

4.8 Strategic Crossings

The alternatives for Segment 1 included strategic crossing locations between Sugar & Spice and the Mendon Mini Golf & Snack Bar, as well as between Allen Pools and Mendon Mountain Orchards. There are frequent pedestrian crossings occurring between these locations and providing signage would improve pedestrian safety. The proposed alternatives for Segment 3 include strategic crossings to enhance pedestrian safety and connectivity. These crossings are placed at high-traffic areas including the Appalachian Trail/Long Trail Crossing, Vista Senior

Living and the USFS HQ. Providing safer, more direct pedestrian routes and minimizes the need to cross at less secure, non-designated areas, the strategic crossings are designed to reduce pedestrian exposure to traffic on the high-speed corridor of US Route 4 by concentrating pedestrian activity at key points with improved signage visibility.

5

Preferred Alternative

Based on input from the public, representatives from the Town of Mendon, local stakeholders, and findings from the technical analysis, a preferred alternative was selected. The preferred alternative includes narrowing lanes to standard 11 feet along US Route 4, double line bicycle striping and road shoulder modifications. Also included in the preferred alternative is a gateway feature package, safe crossing locations along US Route 4, access management improvements, a bus shelter, and an 8-foot shared use path on the north side of roadway between Town Line Road to Meadow Lake Drive. The implementation plan for the preferred alternative is recommended to be developed with a multi-phase implementation. The preferred alternative and implementation plans are discussed in this chapter.

5.1 Preferred Alternative Conceptual Plan

The preferred alternative for the redevelopment of US Route 4, guided by feedback from the public, the Town of Mendon, and the project team, encompasses comprehensive changes across three segments. The changes through these segments reflects a thoughtful approach, tailored to the unique characteristics and needs of each zone - the Village Center, Transition, and Rural Zones. The plan aims to create a cohesive, safe, and accessible transportation network that resonates with the specific dynamics of each area.

Segment 1: Village Center Zone (Town Line Road to Meadow Lake Drive)

In the Village Center Zone, stretching from Town Line Road to Meadow Lake Drive, the goal is to create a safe and inviting environment for all users. The preferred alternative for this segment includes narrowing the travel lanes to 11 feet, with a two-foot striped buffer, and shoulders ranging from 4 to 9 feet in width. The two-foot striped buffer will serve as a protective barrier, enabling pedestrians and cyclists to travel safely within the shoulder.

This segment includes the shortening of the climbing lane that exists between the Casella facility and Gale Grove to 800 feet and end that climbing lane in front of Chalet Heights. Based on industry guidance, the climbing lane is not required in this area and encourages speeding to pass slower vehicles. The removal of the climbing lane in this area will allow for more narrow roadways slowing speeds making it a more appealing environment for bicyclists and pedestrians.

US Route 4 is served by the Rutland Killington Commuter which travels the full length of Mendon. There are no existing bus shelters in this segment. The preferred alternative includes a bus shelter in front of Mendon Mountain Orchard.

There are three locations where there will be signed crossing with lighting improvements in Segment 1. The locations are in front of Mountain Son, just west of Park Lane, and between Sugar & Spice and Mendon Mini Golf & Snack Bar. The lighting will include installing pedestrian level streetlights to ensure good visibility at the crossings.

To improve safety for all roadway users, the preferred alternative includes access management improvements between Mendon Mountain Orchard to T-E-D Associates. This includes narrowing drives in and out of businesses to meet maximum VTrans Standard widths for commercial and residential drives. Other key locations that require improved access management are in front of High Altitude Ski and Snowboard, and Depalo Coffee.

To create a community feel in the Village Center Zone, the preferred alternative includes radar feedback signs and banners on existing utility poles and light poles, and additional pedestrian level light poles.

In the long term the preferred alternative includes an 8-foot shared use path on the northside of the roadway from Town Line Road to Meadow Lake Drive.

Segment 2: Transition Zone (Meadow Lake Drive to Medway Road)

The Transition Zone aims to connect the Village Center Zone with the Rural Zone. This segment focuses on slowing vehicle speeds down as they are approaching the Village Center Zone and create a sense of place as they approach the various local businesses.

The preferred alternative in this segment includes reducing the travel lanes to 11 feet, with a two-foot striped buffer, and shoulders ranging from 4 to 9 feet in width. Additionally, to create a

sense of place, it is recommended to include banner signage on existing utility poles. To improve roadway safety, Medway Road should be narrowed to meet the maximum VTrans standard widths for side roads. The existing entrance can create an unsafe pull off environment. Lastly, this segment will include a radar feedback signage between Meadow Lake Drive and Medway Drive.

Segment 3: Rural Zone (Medway Road to Fox Hollow Village)

Segment 3 includes reducing the travel lanes to 11 feet, with a two-foot striped buffer, and shoulders ranging from 4 to 9 feet in width. Additionally, the preferred alternative includes removal of the eastbound climbing lane from Cabin Row and to have resume after Fox Hollow. This preferred alternative also includes lighting improvements at Wheelerville Road, Journeys End, and Old Turnpike Road intersections to improve safety along the corridor at dangerous intersections.

Old Turnpike Road will experience significant improvements. This will include narrowing of the entrance to the roadway, installation of a bus shelter, lighting improvements, and pedestrian crossing signage. There was a pedestrian fatality at this location while a person was waiting for the bus on the westbound side of the roadway. The narrowing of the entrance will help to moderate incoming traffic. This bus route is well utilized during the winter months to connect people to the ski resorts. Adding all of the new features would greatly improve the safety for people utilizing public transportation along the corridor. A bus shelter will also provide protection from the weather and include a safe location for people to wait. Additionally, a bus shelter is recommended in front of Mendon Mountain View across from Vista Senior Living which is now used as temporary housing for seasonal workforce.

The Town of Mendon has strategically identified three key crossing areas across US Route 4 to implement pedestrian crossing signage, ensuring the safety of both drivers and pedestrians including Old Turnpike Lane and in front of the new National Forest Service building. To help keep hikers safe, there are alert signages signifying AT/LT crossing locations before and after Follow Hollow. Additionally, there is a pedestrian crossing signage near the Vista Senior Center, which is located across from the proposed location for the new bus shelter in front of Mendon Mountain View. The town has also taken steps to keep snowmobile riders safe by installing specific crossing signage between Cortina Country Road and Barbers Loop.

5.1.1 Corridor Wide Lighting Improvements

A key focus of this Scoping Study is the safety of all users. As a result, the lighting in the corridor was reviewed and recommendations were made to complement the preferred alternative.

At Gate-Signed Crossings

At intersections and mid-block locations with proposed gate-signed crossings (Mountain Son Hotel, Park Lane, Meadow Lake Drive, Old Turnpike Road, and between Mendon Mountainview Lodge and Vista Senior Living), install lighting to illuminate pedestrians within the crossing area. Increased lighting in the crosswalk vicinity should be installed in Phase 1 to enhance safety of the gate-signed crossing. Locations of proposed light fixtures should be coordinated with the future shared-use path, to the greatest extent possible. Additional lighting may be required to highlight turning vehicles at the intersection itself.

From the perspective of oncoming traffic, lighting should be placed in advance of the crossing to cast light directly on the pedestrian and avoid backlighting. Lighting should be placed on both

sides of the street to provide adequate illumination levels and visibility. Existing utility poles may be utilized, where feasible, but illumination levels should be verified by the lighting consultant to ensure safe crossing conditions. The Town of Mendon should consider utilizing an ornamental fixture within the village to reduce the number of large utility poles/"cobra head" fixtures and to provide a more aesthetically pleasing environment.

At Prominent Intersections Outside of the Village

At prominent intersections outside of the village core (such Wheelerville Road, Journeys End, and Old Turnpike Road), lighting levels should be studied by a lighting consultant to confirm if additional fixtures are required for roadway safety.

Currently, Wheelerville Road and Journeys End have one lighting fixture located at the corner of Route 4. Additional lighting may be required to illuminate the intersection to safe levels. Where feasible, existing utility poles may be utilized. Otherwise, new poles may be required in strategic locations to highlight the intersection.

Though two light fixtures are in the vicinity of Old Turnpike Road, their actual distance from the intersection and turning vehicles is too far to support adequate illumination levels. Lighting should be provided closer to the corner of Route 4 and Old Turnpike Road to highlight intersection. Additional light fixtures should be provided to illuminate the pedestrian crossing, as outlined above.

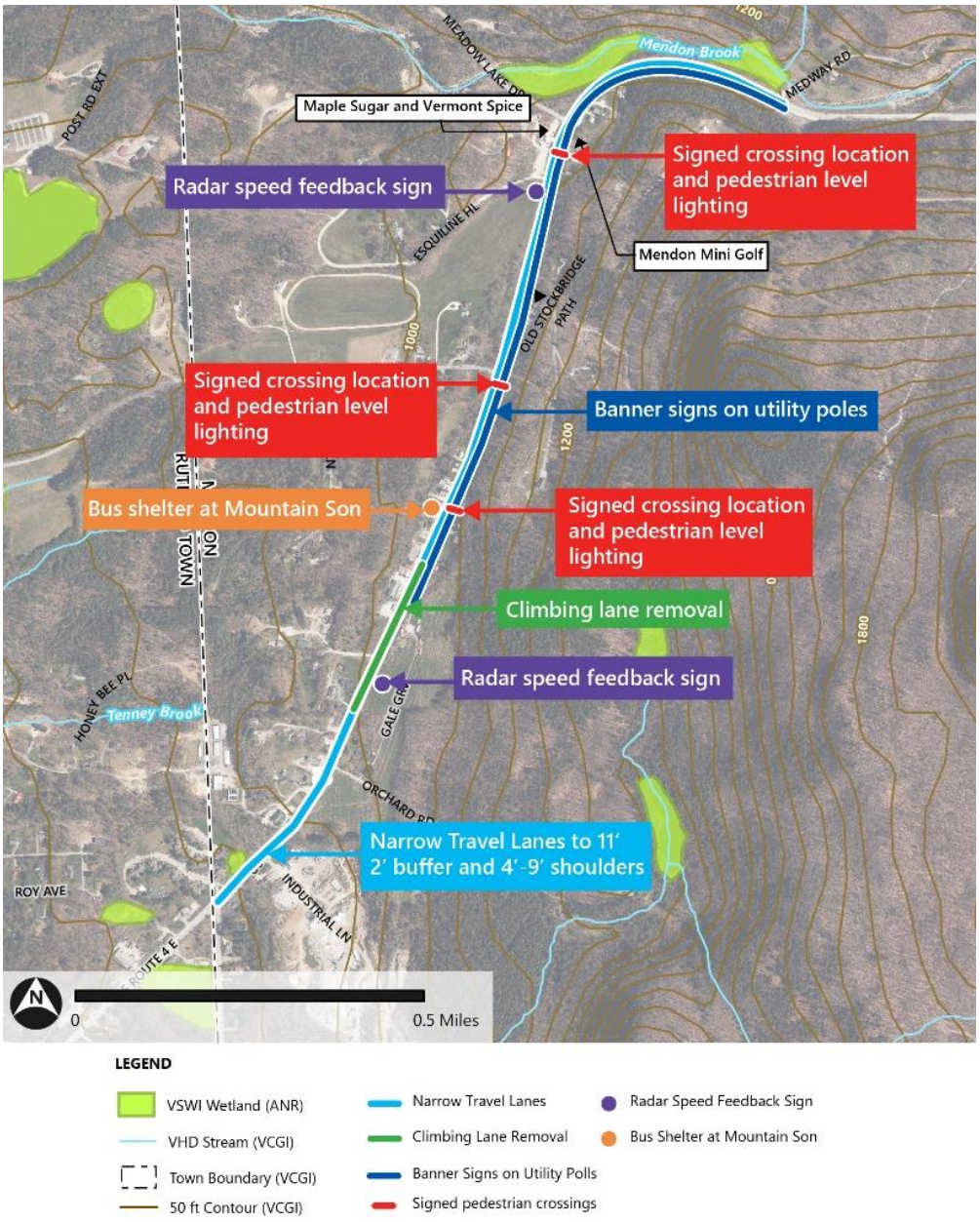
5.2 Preferred Implementation Plan and Cost

The successful completion of the full vision of the project is contingent on proper funding acquisition, permitting, design, and construction phases. The total project cost is estimated at approximately $4,110,000.

The project is structured into phases, each focusing on different segments and treatments. Phase 1 includes Segment 1, stretching from the Town Line to Meadow Lake, and Segment 2, from Meadow Lake Drive to Medway Road and Segment 3 Medway Road to the Killington town line. These segments will undergo modifications such as lane narrowing to 11 feet, bicycle striping, safe crossings, and the addition of town signs and gateway features. Phase 1 includes the elements from Alternative 1, this includes reduction of travel lanes to 11 feet between Town Line Road and Medway Road, shoulder reduction to 4 to 9 feet, double lined bicycle striping, access management and gateway improvements. Additionally, in Segment 1, there will be additional pedestrian crossing signage at the AT/LT crossing.

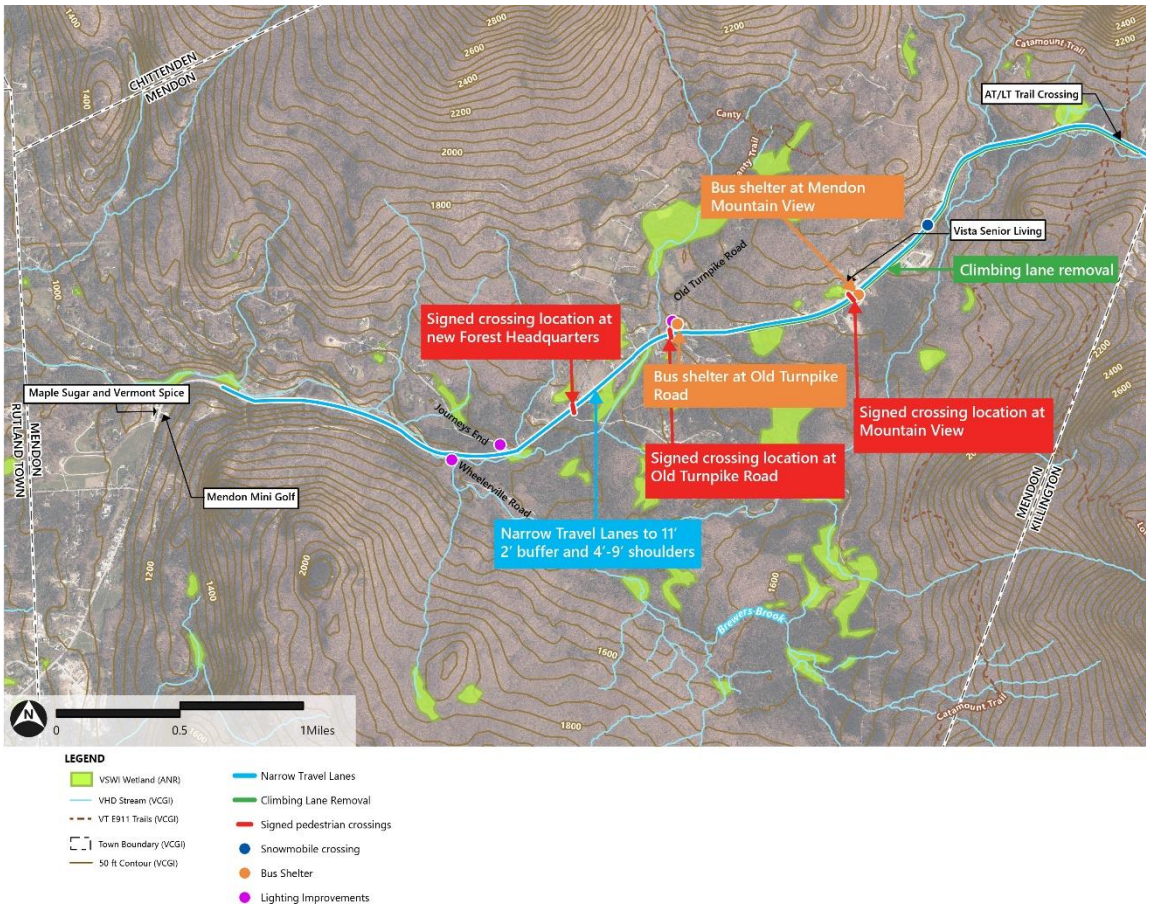
The estimated cost for Phase 1 is $730,000.

Figure 16: Phase 1 Town Line Road to Medway Road



Phase 2 concentrates on Segment 3 and includes reduction of travel lanes to 11 feet between Town Line Road and Medway Road, shoulder reduction to 4 to 9 feet, double lined bicycle striping, access management, lighting, pedestrian and snowmobile signage, and transit improvements. The estimated cost for Phase 2 is $1,430,000.

Figure 17: Phase 2 Medway Road to Fox Hollow



Phase 3 includes an off-road 8-foot shared use path on the north side of US Route 4 from Town Line Road to Meadow Lake Drive, Segment 1. The estimated cost for Phase 3 is $1,950,000.

Figure 18: Phase 3 Town Line Road to Meadow Lake Drive

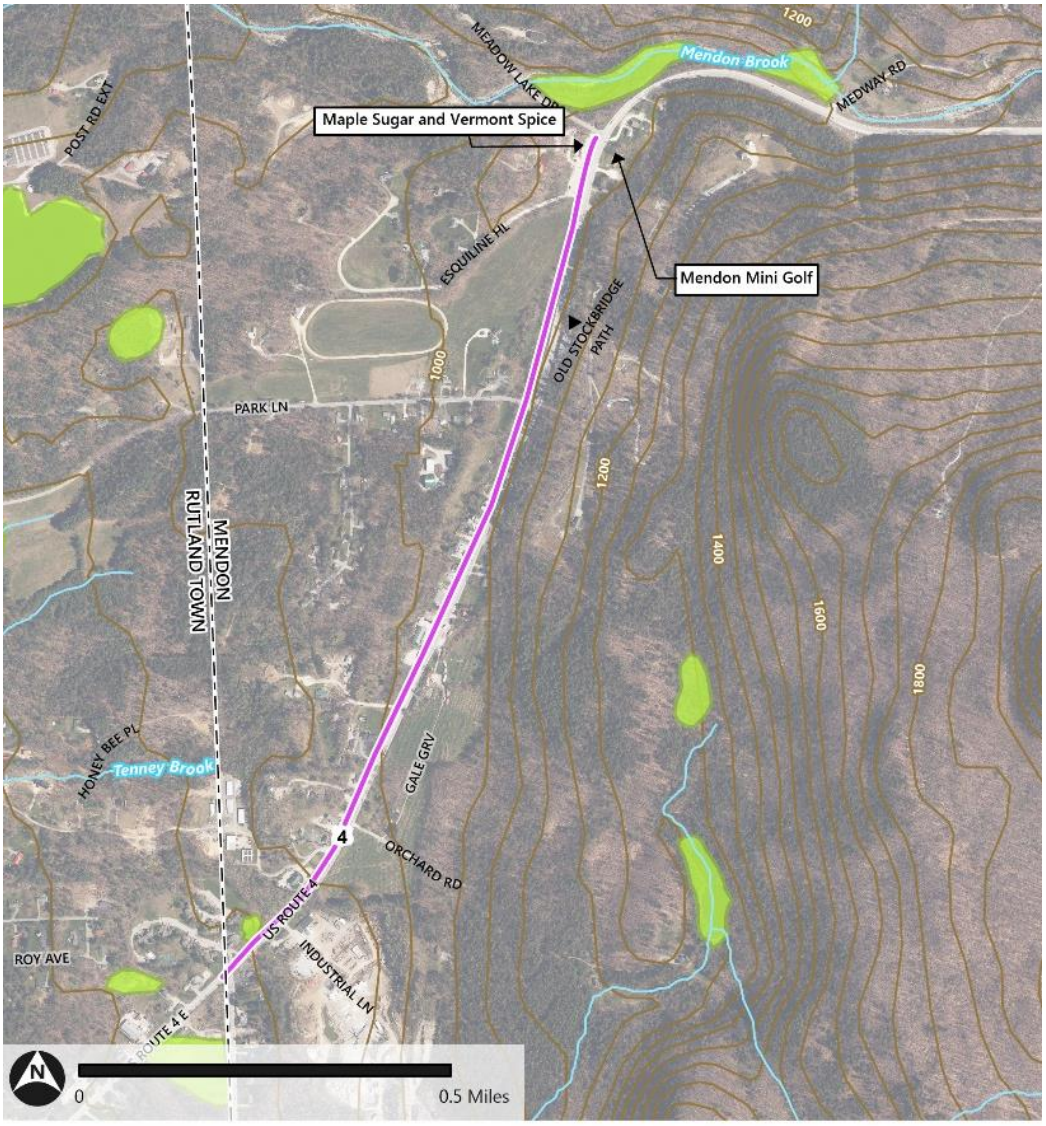


Table 5: Preferred Implementation Plan and Estimated Cost

Phase	Segment	Treatment	Estimated Cost
Phase 1	Segment 1: Town Line Road to Meadow Lake Drive Lake	- Narrow lanes to 11 ft - 4-9 ft shoulders - Bicycle striping - Access management - Climbing lane reductions - Pedestrian crossing signage - Gateway Treatments - Public transit improvements - Lighting Improvements	$730,000
	Segment 2: Meadow Lake Drive to Medway Road	- Narrow lanes to 11 ft - 4-9 ft shoulders - Bicycle striping - Access management - Banner Signage - Radar Speed Feedback - Lighting Improvements	
	Segment 3: Medway Road to Killington Town Line	- Narrow lanes to 11 ft - 4-9 ft shoulders - Bicycle striping - Access management - Climbing lane reductions - Pedestrian crossing signage - Lighting Improvements	
Phase 2	Segment 3: Medway Road to Killington Town Line	- Narrow lanes to 11 ft - 4-9 ft shoulders - Bicycle striping - Climbing lane reductions - Pedestrian crossing signage - Snowmobile crossing signage - Public transit improvements - Lighting Improvements	$1,430,000
Phase 3	Segment 1: Town Line Road to Meadow Lake Drive Lake	-8 ft shared use path northside of US Route 4	$1,950,000

Figure 13: Preferred Alternative – Phase 1 – Shorten Climbing Lane Segment 1

Figure 20: Preferred Alternative – Phase 1 – Segment 1

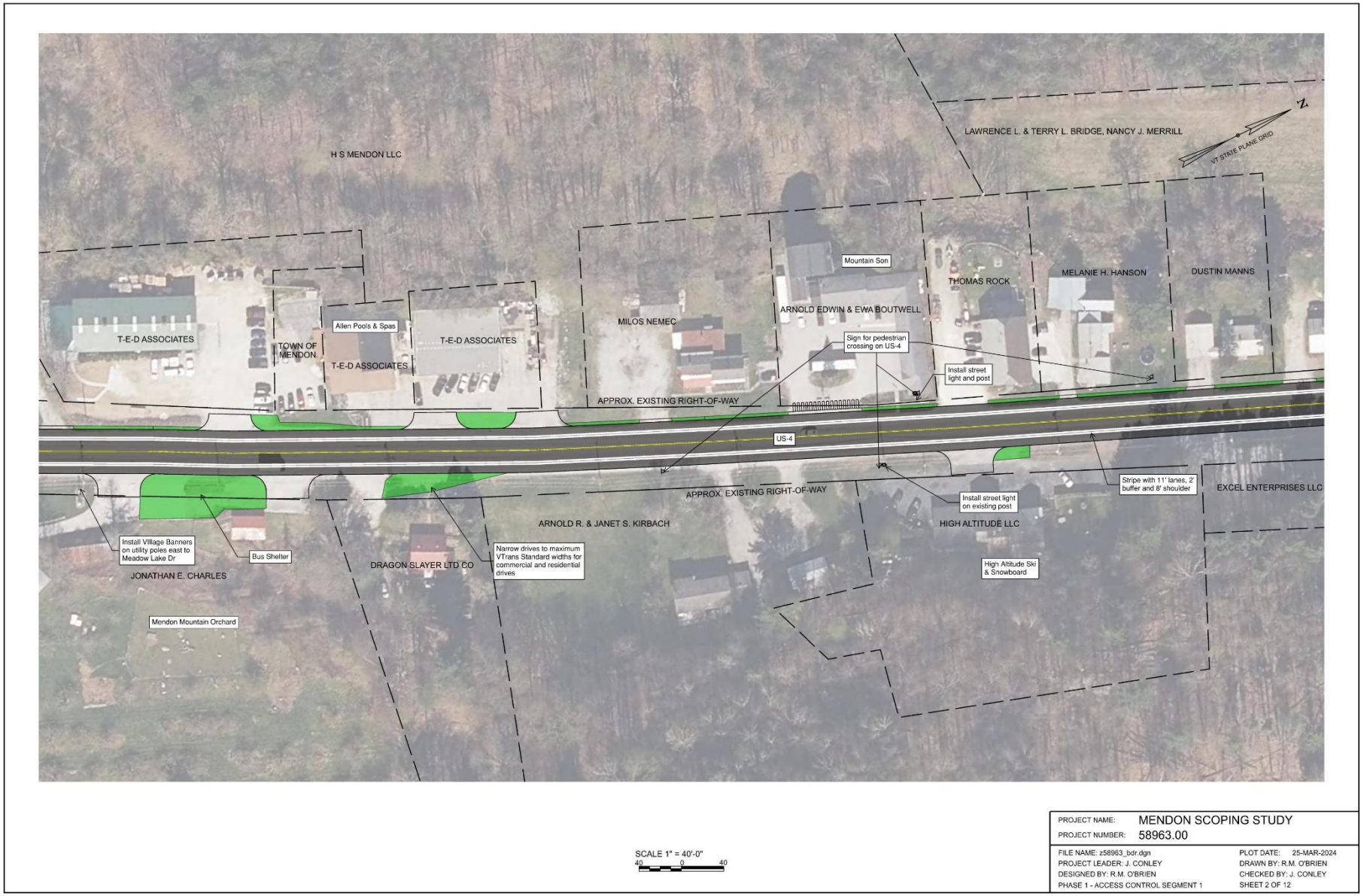


Figure 21: Preferred Alternative – Phase 1 – Segment 1 – Park Lane Crossing

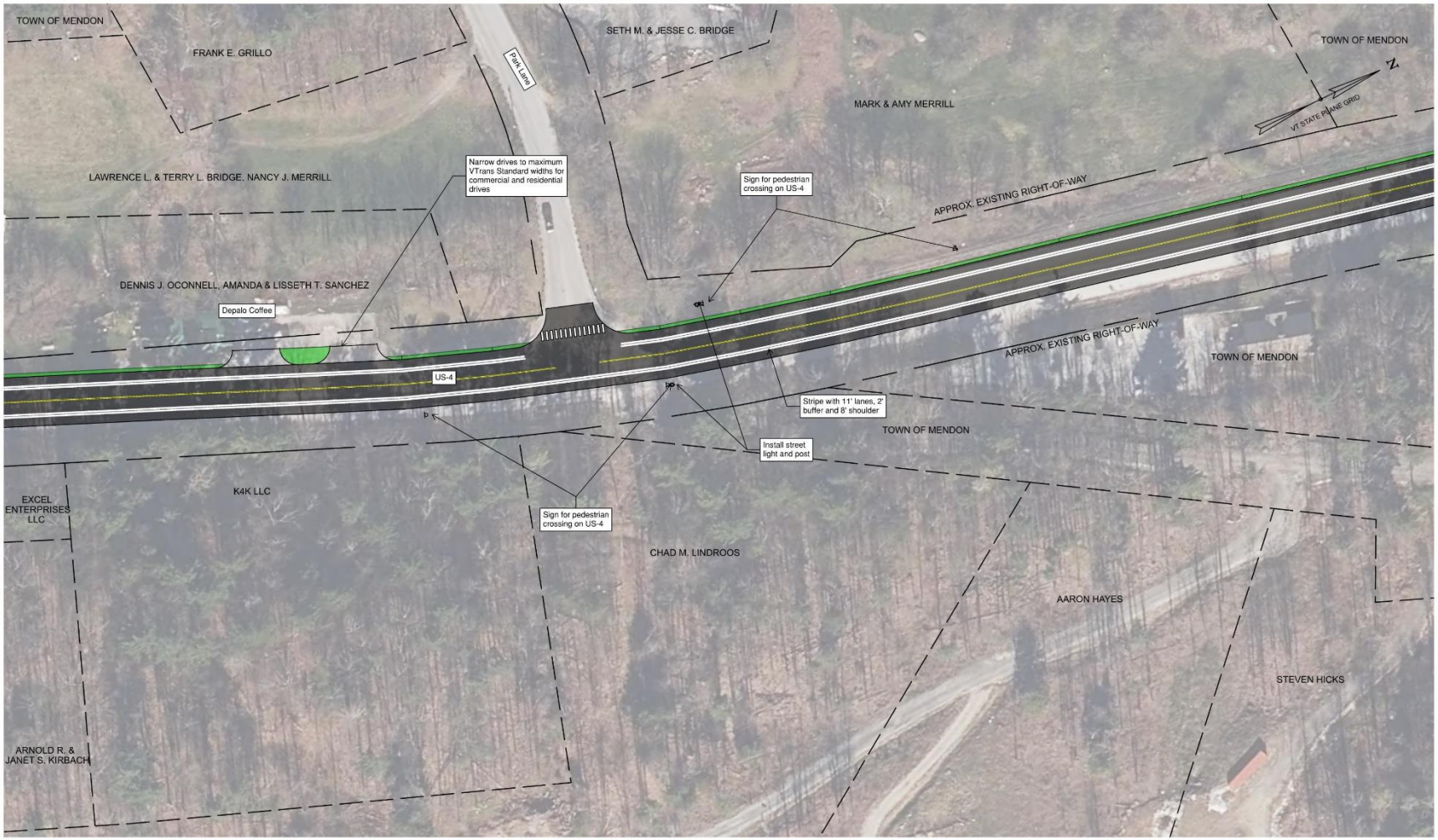


Figure 22: Preferred Alternative – Phase 1 – Meadow Lake Drive Crossing

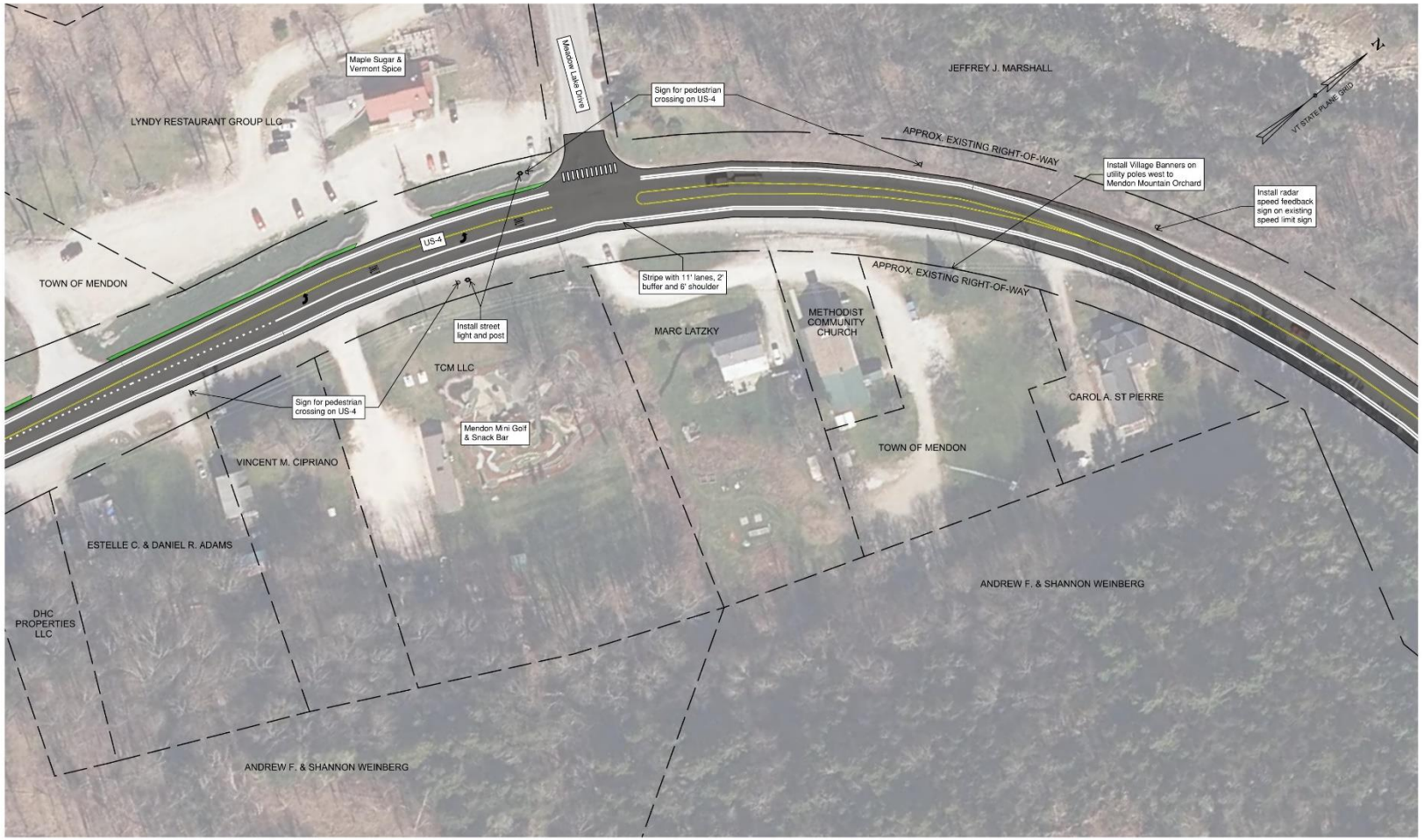


Figure 23: Preferred Alternative – Phase 1 – Segment 3 – Access Control

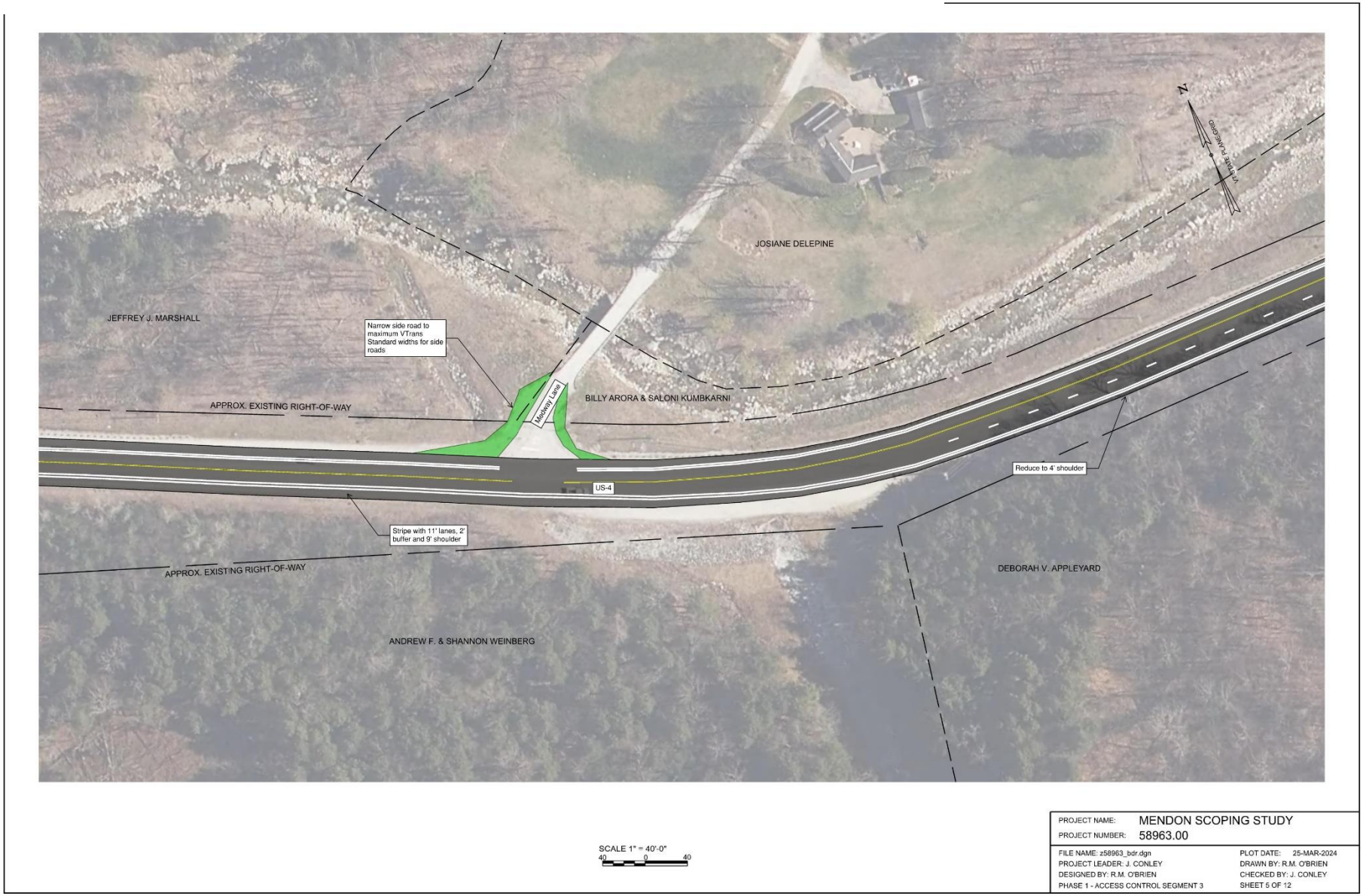


Figure 24: Preferred Alternative – Phase 1 – Segment 3 – AT/LT Crossing

Figure 25: Preferred Alternative – Phase 2 – Segment 3 – Woodard Road/ Forest Service

Figure 26: Preferred Alternative – Phase 2 – Segment 3 – Old Turnpike Road Bus Stop

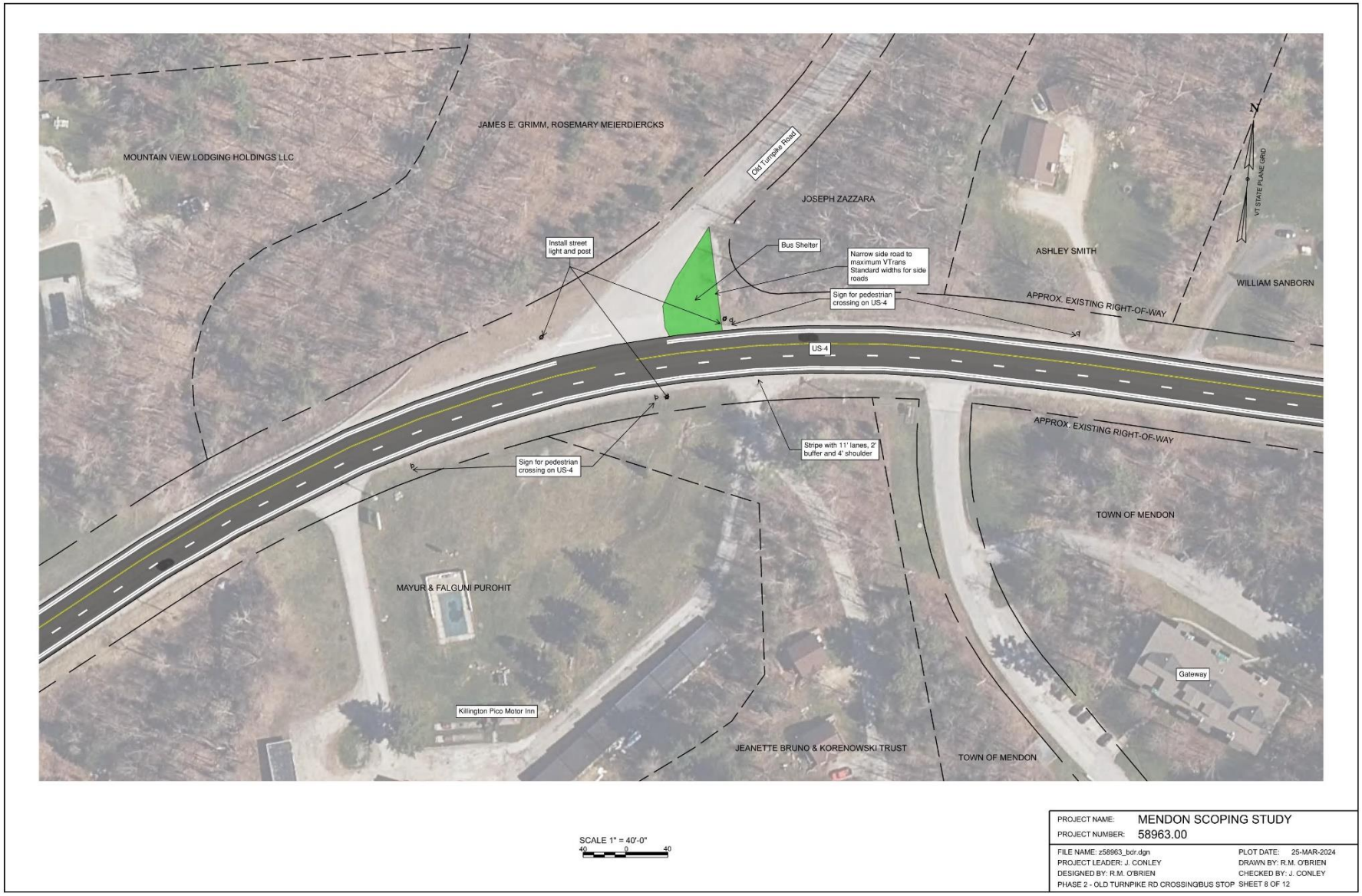


Figure 14: Preferred Alternative – Phase 2 – Segment 3 – Remove Climbing Lane

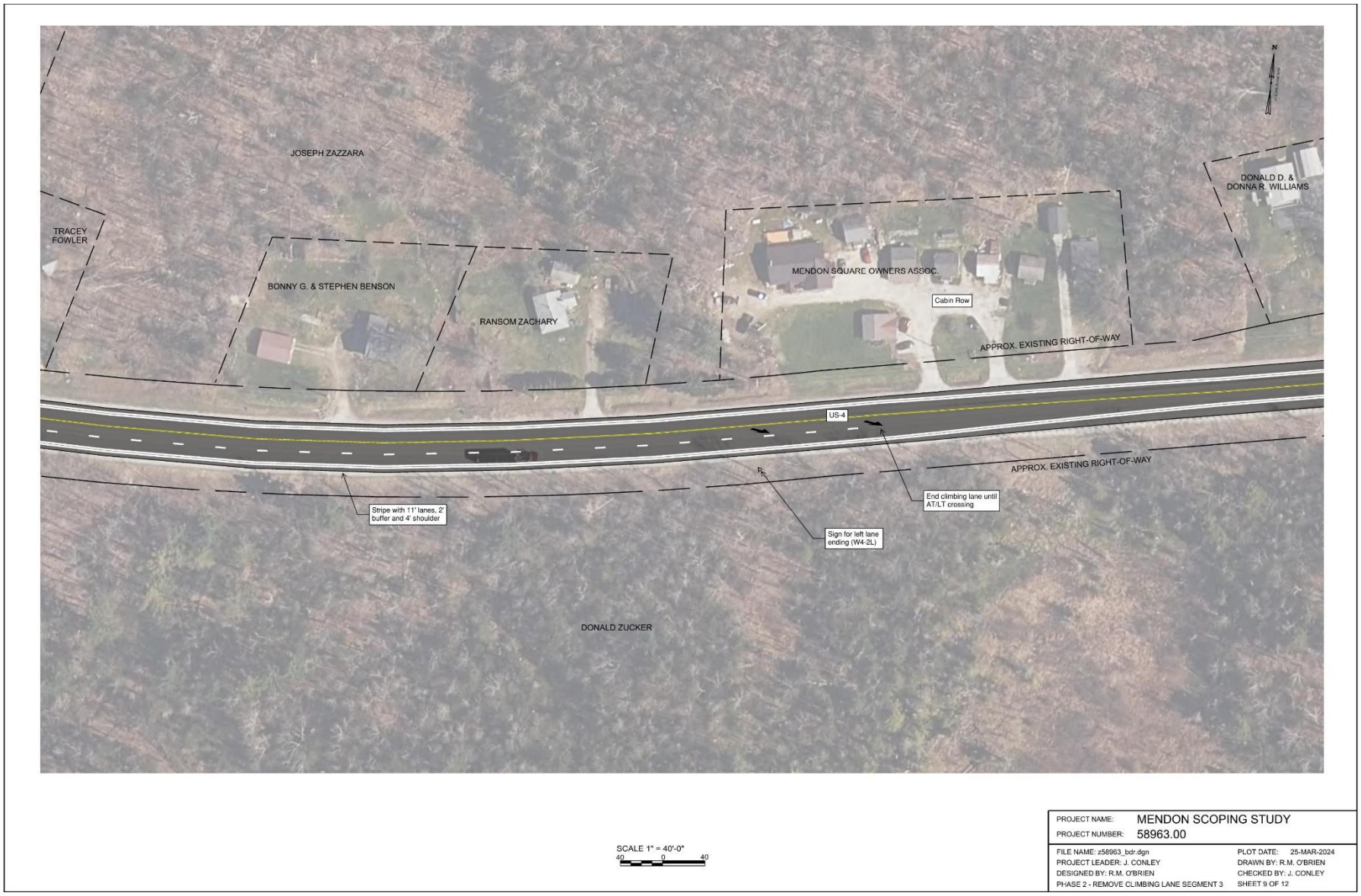


Figure 15: Preferred Alternative – Phase 2 – Segment 3 – Mountain View Crossing

Figure 29: Preferred Alternative – Phase 2 – Segment 3 – VAST Crossing

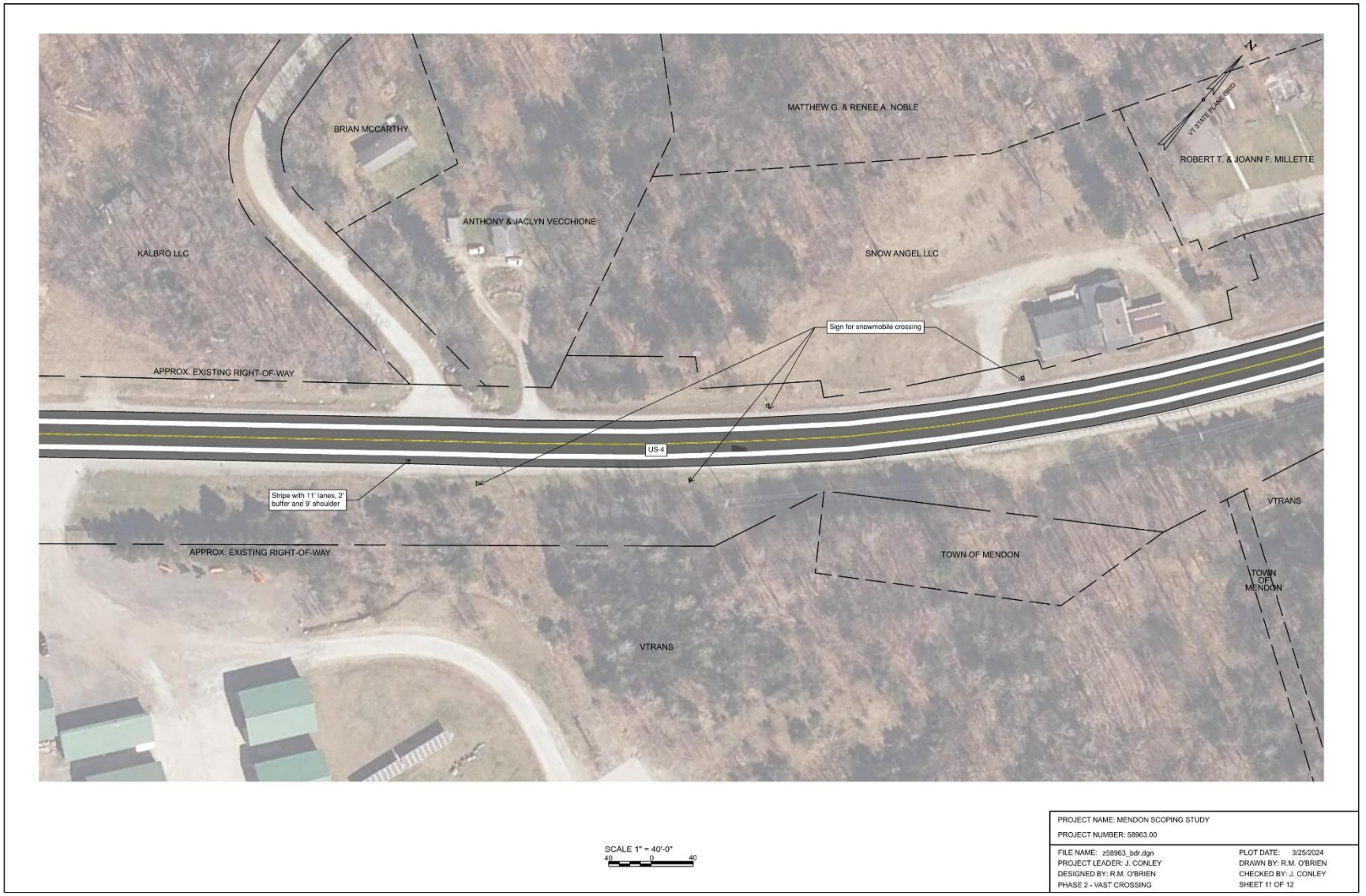
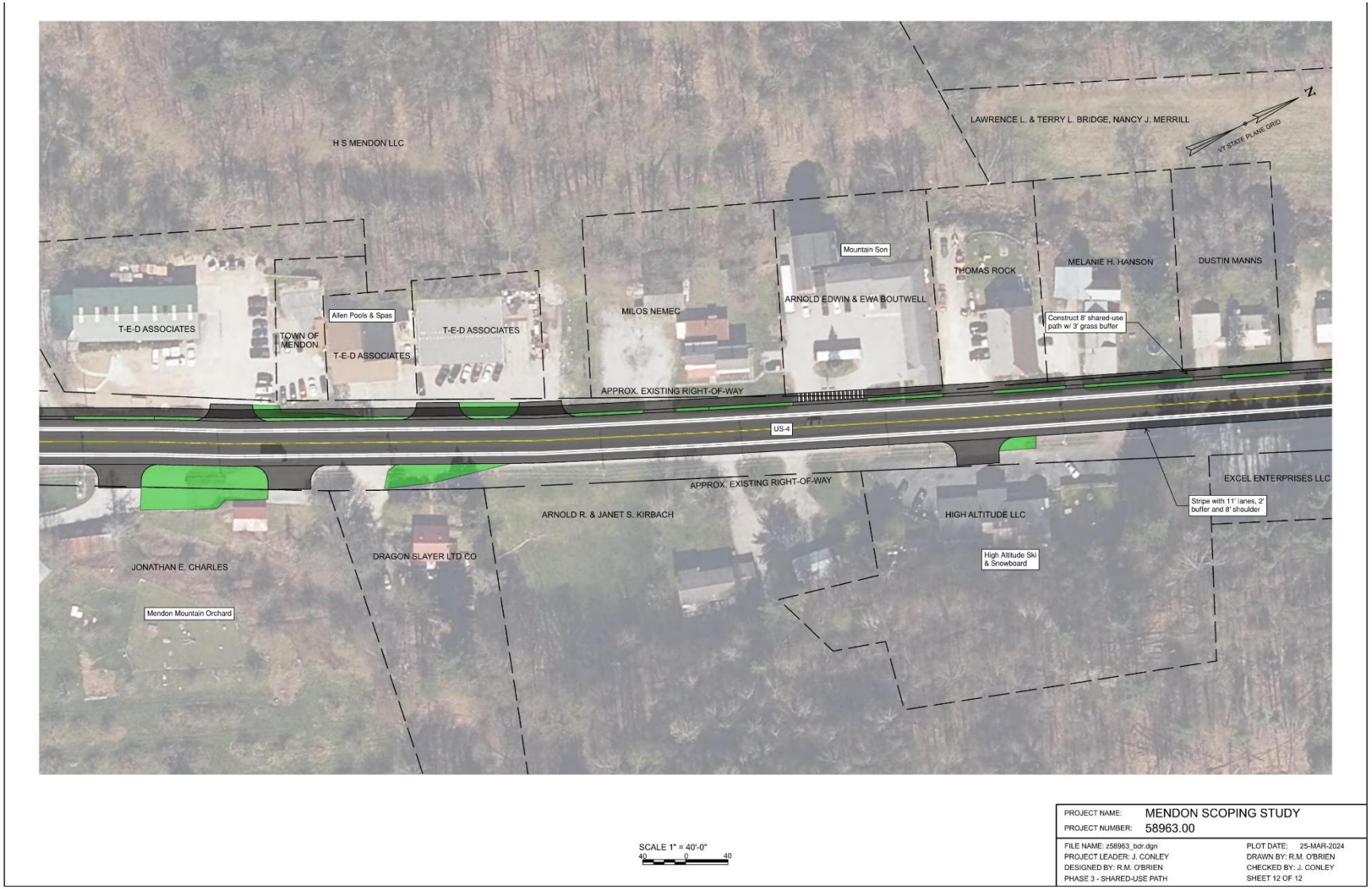


Figure 30: Preferred Alternative – Phase 3 – Segment 1 – Shared-Use Path



5.1 Funding Opportunities

The next steps for overall project development would include the pursuit of funding opportunities. There opportunities provide municipalities with the potential to implement larger scale projects that improve communities access to bicycle and pedestrian accommodations through competitive grant projects. One grant opportunity recommended is the Better Places Grant Program, which offers up to $40,000 focused on improving the vitality of designated downtown and Village Centers. Mendon recently designated the Mendon Village Center in June 2022.

The Transportation Alternative Program provides grant money for projects that support improving pedestrian and bicyclist infrastructure and other alternatives to driving. Additionally, AARP Vermont offers funding through their Placemaking Grant Program and other similar opportunities to promote livable communities.

Competitive VTrans grants could potentially fund a significant portion of the chosen alternative from this study's design and construction. An opportunity for a larger grant, such as that from the VTrans Bicycle and Pedestrian Federal Grant Program for improving pedestrian and bicycle infrastructure, could offer the necessary backing for designing and implementing the preferred alternative. The VTrans Bicycle and Pedestrian Federal Grant Program, funded federally, could offer up to 80% of a project's estimated cost, requiring a 20% match from local funds. The Vermont Community Development Grants is another potential grant opportunity for this work.