



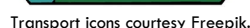
NH ROUTE 4A

TRANSPORTATION CORRIDOR

Lebanon to Wilmot



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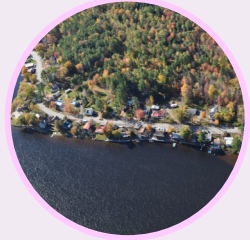


EXECUTIVE SUMMARY



EAST-WEST CONNECTOR

- NH Route 4A connects communities along a rural east-west corridor between Lebanon and Wilmot that parallels US Route 4 and Interstate 89.
- Major connecting roads (Main St in Enfield, N. Wilmot Rd, Four Corners Rd) connect this corridor to town centers.
- The Corridor runs through State and local conservation areas leading to a concern for wildlife crossings.



RECREATIONAL CORRIDOR

- While NH Route 4A is an east-west route for the region, Interstate 89 and US Route 4 provide the primary regional east-west connection for longer trips.
- Accordingly, NH Route 4A mostly serves more local trips within towns or connecting to 1-2 towns, and connections to US Route 4. The roadway is popular with cyclists and tourists, particularly during fall foliage season.
- Major recreation destination points along the corridor include downtown Enfield, Mascoma Lake, the Northern Rail Trail, the Enfield Shaker Museum, and numerous public land areas.
- NH Route 4A is part of the Enfield Shaker Village Scenic Byway, a State Scenic Byway.



RURAL ROADWAYS BETWEEN TOWN AND VILLAGE CENTERS

- NH Route 4A is largely rural and minimally-developed, passing by two Wildlife Management Areas (Enfield, McDaniel's Marsh), along Mascoma Lake, and through Gile State Forest.
- NH Route 4A provides connections between and through more developed areas, such as downtown Enfield, Enfield Village, and Wilmot Center.
- The connections with local cut-through roadways and other regional corridor highways are critical locations for traffic calming efforts in order to ensure safety for drivers, pedestrians, and bicyclists in more developed areas.





CORRIDOR INTRODUCTION



NH Route 4A Corridor - At a Glance

- **Municipalities:** Lebanon, Enfield, Grafton, Springfield, Wilmot
- **Major Destinations:** Downtown Enfield, Mascoma Lake, Enfield Shaker Village Scenic Byway, Lower Shaker Village
- **Primary Regional Functions:** Commuting; Freight; Tourism; Recreation

Who Lives in the NH Route 4A Corridor?

COMMUNITIES	2018 POPULATION (estimated)	2040 POPULATION (projected)	PROJECTED % CHANGE IN POPULATION	PROJECTED TOTAL POPULATION CHANGE
Lebanon	13,522	15,342	13.5%	+1,820
Enfield	4,714	4,944	4.9%	+ 230
Grafton	1,373	1,595	16.2%	+ 222
Springfield	1,349	1,512	12.1%	+ 163
Wilmot	1,384	1,591	15.0%	+ 207

Source: NH Office of Strategic Initiatives, NH Office of Employment Security

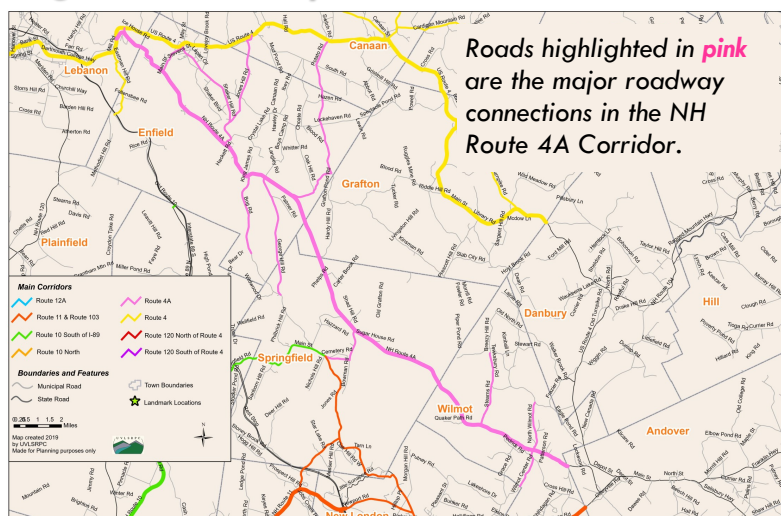
SPECIAL POPULATIONS IN THE CORRIDOR	TOTAL SPECIAL POPULATION IN CORRIDOR	% OF TOTAL CORRIDOR POPULATION
Youth (Age 15 and Under)	3,113	13.9%
Young Adult (Age 16-34)	6,055	27.1%
Middle Age (Age 35-64)	8,623	38.6%
Seniors (65+)	4,397	19.7%
Racial Minorities	1,606	7.2%
Low Income (<150% of Poverty Level)	3,138	14.0%
Single Parent Households	641	6.4%

Source: American Communities Survey 5-Year Estimates, 2014-2018

Who Works in the NH Route 4A Corridor?

Notably, the NH Route 4A corridor does not have any major employers. Commuting patterns along NH Route 4A mostly involve **regional travel** to access employment hubs via US Route 4 and Interstate 89, such as downtown Lebanon and Dartmouth-Hitchcock Medical Center. Some of the larger employers located in the corridor are the Town of Enfield and Evarts & Company lumber in Springfield. **Downtown Enfield** is a minor employment hub featuring a variety of retail, restaurant, and service-oriented employers.

Regional Roadway Connections





TRANSPORTATION TRENDS



The NH Route 4A corridor serves local and regional functions. NH Route 4A provides a key connection between Enfield and Lebanon, with a mix of drivers, bicyclists, and pedestrians using the roadway. Main Street in Enfield connects the downtown area to NH Route 4A, but also serves as the core of downtown and sees high pedestrian activity. Further east, NH 4A passes through rural areas and experiences low traffic volumes. Recreation access is a key function of the corridor, with Mascoma Lake, Lower Shaker Village, and numerous public land areas serving as popular destinations, in addition to recreational cycling and fall foliage tours along NH Route 4A.

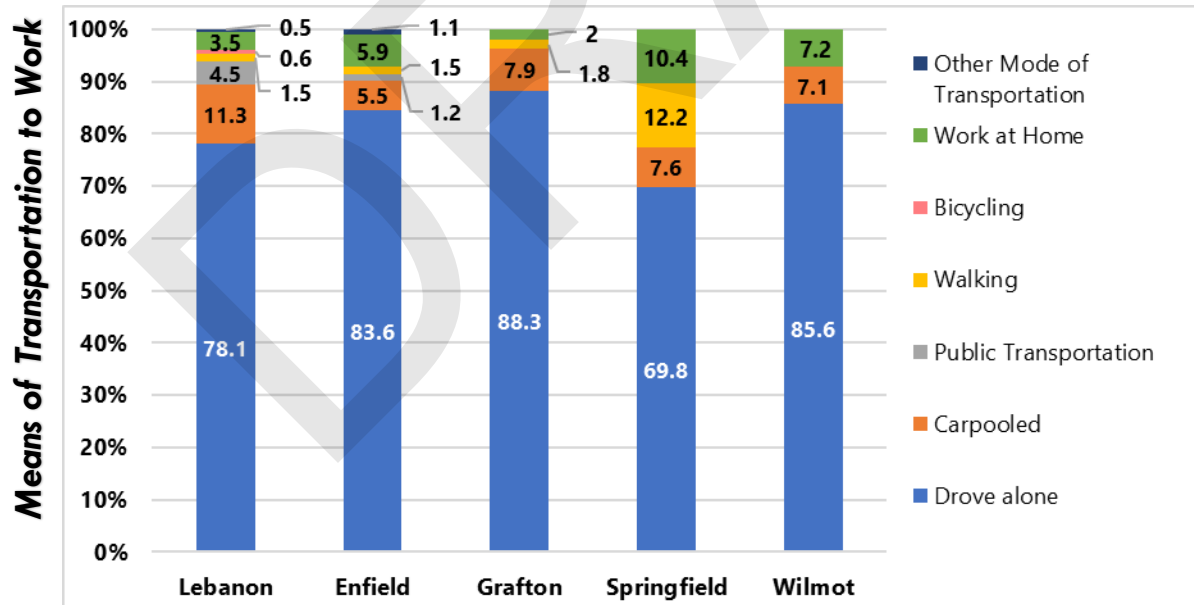
Vehicle Traffic Volumes on Regional Roadways

ROAD	TOWN/CITY	COUNT LOCATION	2019 AADT*
NH 4A	Lebanon/Enfield	NH 4A at Lebanon/Enfield town line	3,100
Main St	Enfield	Main Street under Northern Rail Trail	1,300
Shaker Hill Rd	Enfield	Shaker Hill Rd over Mascoma River	2,800
Shaker Hill Rd	Enfield	Shaker Hill Rd over Knox River	1,000
NH 4A	Enfield	NH 4A East of Cogswell Way	2,600
Potato Rd	Canaan	Potato Rd over Indian River	500
NH 4A	Springfield	NH 4A west of Four Corners Rd	840
Four Corners Rd	Springfield	Four Corners Rd south of Hazzard Rd	770
NH 4A	Springfield/Wilmot	NH 4A at Springfield/Wilmot town line	460
NH 4A	Wilmot	NH 4A west of Stearns Rd	480
North Wilmot Rd	Wilmot	North Wilmot Rd south of Richards Rd	360

COVID-19 Impacts on Travel

The COVID-19 pandemic has resulted in reductions in travel, increased unemployment, and increases in the number of employees working from home. Continued monitoring of these trends is needed to understand their long-term impacts on the transportation system.

*AADT = estimated Annual Average Daily Traffic (2019). Source: New Hampshire Department of Transportation



Source: American Community Survey 2014-2018 5-Year Estimate

The vast majority of residents of the NH Route 4A corridor drive to work alone. A high percentage of residents in Springfield (12.2%) walk to work, which is atypical for such a rural community. Commutes account for less than 20% of all personal trips nationwide; however, analysis of commute data is helpful for understanding travel patterns in the corridor.



TRANSPORTATION TRENDS (cont'd)



Multi-modal mobility refers to the ability of people to move around using modes of transportation other than a personal vehicle. Key factors for multi-modal mobility are **infrastructure** (e.g., sidewalks, bus stops), **services** (e.g., bus service), and **land use patterns** (i.e., the distance between various destinations, density of development). The **connections** between multi-modal infrastructure and services are also important - for example, the ability walk or bike safely to a bus stop encourages higher use of bus services.

This page presents an inventory of multi-modal infrastructure and services in the corridor. See page XX for a description of land use patterns.

Pedestrian & Bicycle Infrastructure

TYPE	TOWN/CITY	LOCATION
Multi-Use Paths	n/a	n/a
Rail Trails	Lebanon, Enfield, Canaan, Grafton	Northern Rail Trail (covered in US Route 4 chapter)
Sidewalks	Lebanon	NH 4A from Payne Rd to Enfield town line
	Enfield	Main St, Shaker Hill Rd, High St
Painted Bike Lanes	n/a	n/a
Sharrows	n/a	n/a
Painted Shoulders ≥5 feet	n/a	n/a

Public Transit

TYPE	TOWN/CITY	SERVICE PROVIDERS
Fixed Route Bus	n/a	n/a
Demand-Response Bus	n/a	n/a
Intercity Bus	n/a	n/a

Transportation Services

TYPE	COMMUNITY	SERVICE PROVIDERS
Door-to-door services (senior and disabled residents)	Lebanon, Enfield, Canaan, Grafton	Grafton County Senior Citizens

Rail Service

TYPE	TOWN/CITY	SERVICE PROVIDERS
Passenger rail service	n/a	n/a

Aeronautics

TYPE	TOWN/CITY	SERVICE PROVIDERS
Airport	n/a	n/a

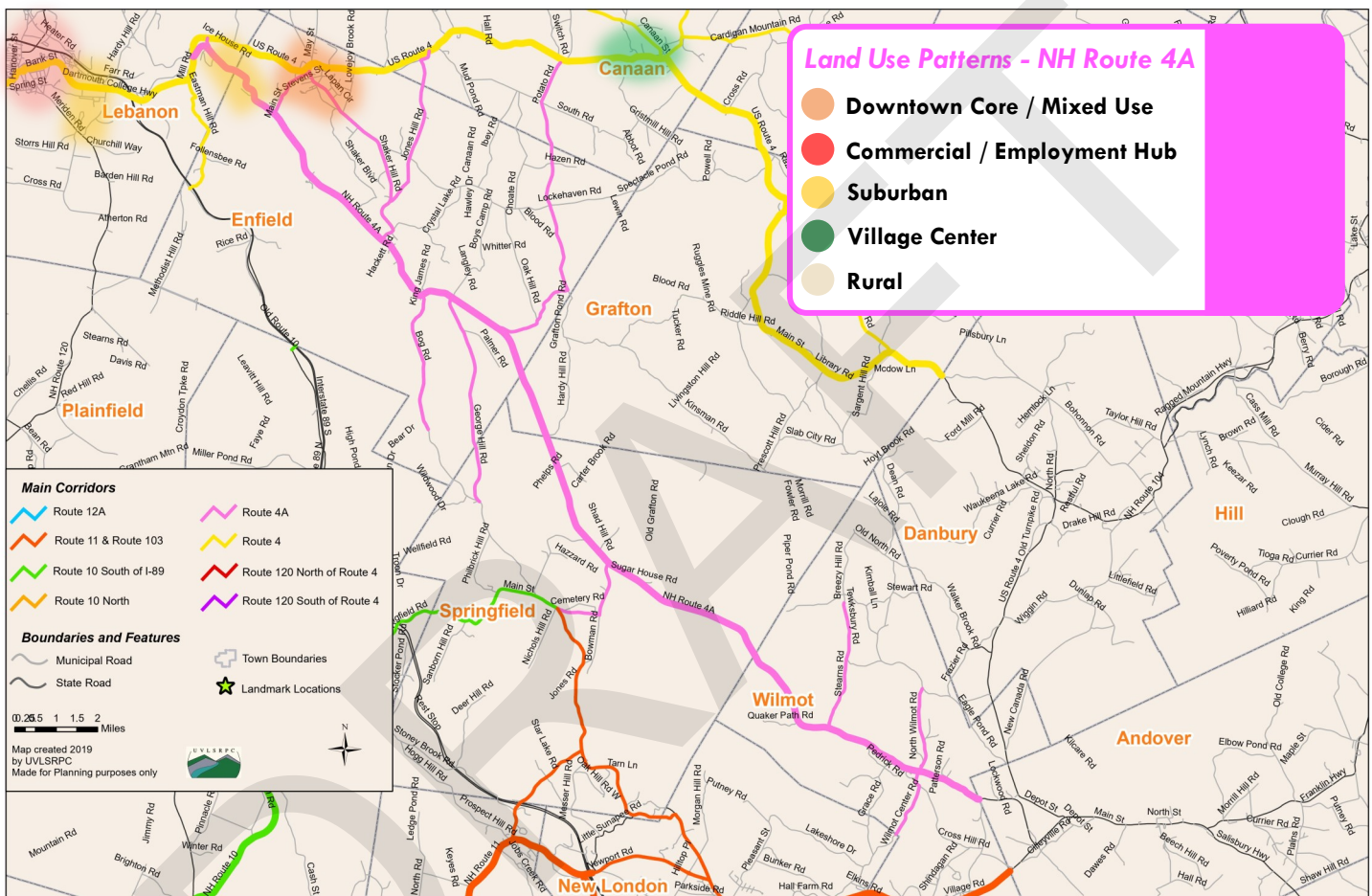


LAND USE & DEVELOPMENT



The NH Route 4A corridor is largely rural but does connect to downtown Enfield via Main Street. Some denser development is located along NH 4A in Lebanon and Enfield adjacent to Mascoma Lake. There are no major commercial or industrial clusters in the corridor.

Roads highlighted in **pink** on the map below are the major roadway connections in the NH Route 4A Corridor.



The Transportation & Land Use Connection

Land use has a **significant impact** on travel behavior. Development densities and types impact the **distance between destinations**, which affects **travel times** and **mode choices** (e.g., choosing to walk or drive). **Dense, mixed-use** development patterns promote walking, bicycling, and public transit use due to the proximity of trip destinations. **Suburban and rural** development patterns tend to promote single-occupancy vehicle trips. The **cost and availability of housing** factors in significantly to this equation as well.



Main Street and downtown Enfield



PUBLIC INPUT



Public Input Opportunities

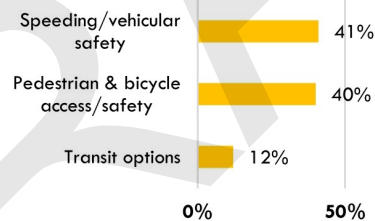
An **online survey** was distributed in fall 2020. Respondents were asked to describe their experiences traveling on major roadways in the corridor. 215 survey responses were received. 31 locations with transportation issues were marked on an **interactive online map**. Due to the COVID-19 pandemic, no in-person meetings were held. A virtual public forum was held via Zoom videoconference in December 2020 with 18 attendees.

Summary of Public Input

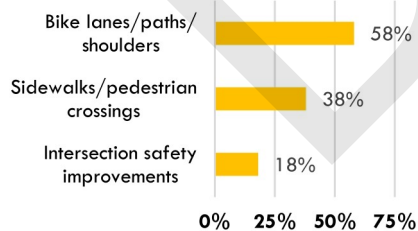
Highest Priority Roads:

1. **NH Route 4A in Enfield & Lebanon** (congestion, ped-bike access)
2. **Shaker Hill Rd (Enfield)** (roadway condition, drainage/icing)
3. **Main Street (Enfield)** (ped-bike access, parking)

Top 3 Overall Priorities for the Corridor



Top 3 Specific Desired Improvements



Popular Project Ideas:

1. Improve ped-bike connection between Main St and Lower Shaker Village in Enfield.
2. Improve intersection of US Route 4 and NH Route 4A in Lebanon.
3. Widen shoulders on NH Route 4A in Enfield and Grafton.

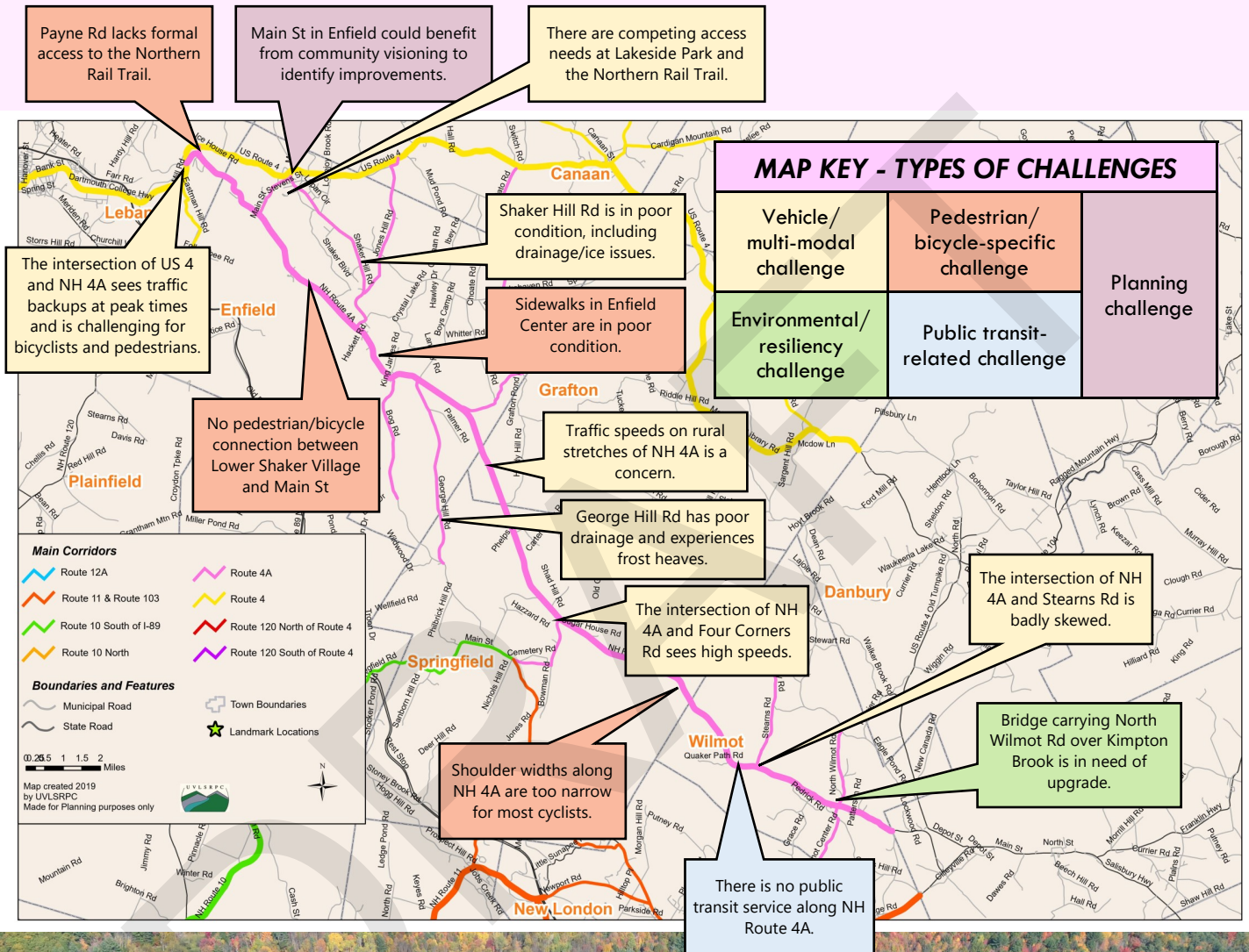
McDaniels Marsh, Springfield

4A

TRANSPORTATION CHALLENGES MAP



This map identifies the primary **transportation mobility, safety, and accessibility** challenges in the NH Route 4A Corridor. Major roadways in the NH Route 4A corridor are highlighted in **pink**.





ACTION PLAN: STRATEGIES



Regional Corridor Planning Strategies

These strategies will guide UVLSRPC's work to improve transportation mobility, safety, and access in the corridor:

1

Improve recreational access to recreation destinations for all modes of travel (driving, walking, and bicycling).

2

Improve **bicycle connections** along NH Route 4A between communities.

3

Improve safety for all regional roadway users (drivers, pedestrians, and cyclists).

4

Monitor and address the short-term and long-term impacts of the **COVID-19 pandemic** on transportation and human service needs, as well as travel patterns.

Currently Funded Regional Transportation Projects

The projects listed below are regionally-significant projects that are already funded and on track for implementation. To help implement these projects, UVLSRPC staff will provide technical assistance and support, as needed or requested.

PROJECT TYPES (COLOR-CODED)

Vehicle/Multi-Modal	Pedestrian & Bicycle	Plan or Study
Environmental Resiliency	Public Transit	

TOWN/CITY	PROJECT PARTNERS	LOCATION DESCRIPTION	PROJECT DESCRIPTION	PROJECT TIMELINE	PROJECT COST	FUNDING SOURCE(S)	PLANNING NOTES
Enfield	Town of Enfield; NHDOT	Shaker Boulevard	Rehabilitation of bridge carrying Shaker Boulevard over Knox River	Construction: FY 2029	\$525,000	NH State Aid Bridge Program	
Enfield, Springfield, Wilmot	Towns; NHDOT	NH Route 4A	Replace cable guardrail and terminals on NH Route 4A	Construction: FY 2022	TBD	Highway Safety Improvement Program	



ACTION PLAN: TIER I PROJECTS



Tier I Action Plan

To help implement Tier I projects, UVLSRPC staff will:

- Meet with project partners to discuss project development and implementation strategies for each Tier I project.
- Assist project partners with project development and funding applications, as needed.
- Tier 1 projects will be the initial priority for UVLSRPC staff assistance.

PROJECT TYPES (COLOR-CODED)

Vehicle/Multi-Modal	Pedestrian & Bicycle	Plan or Study
Environmental Resiliency	Public Transit	

Tier I Projects

MUNICIPALITY	PROJECT PARTNERS	LOCATION DESCRIPTION	PROJECT DESCRIPTION	LAND USE(S)	MODE FOCUS	PLANNING NOTES
Enfield	Town of Enfield	Main St	Conduct Main St visioning study that includes pedestrian and bicycle access, traffic flow and safety, and streetscape.	Downtown Core/Mixed Use	Vehicle; Pedestrian & Bicycle; Public Transit	
Enfield	Town of Enfield; NHDOT	Shaker Hill Rd	Rehabilitate/reconstruct Shaker Hill Rd east of Lockhaven Rd, including improved drainage, lighting and pedestrian/bicycle access.	Rural; Suburban	Vehicle; Pedestrian & Bicycle	Shaker Hill Rd is a Tier IV state highway and is not eligible for federal aid through the NH Ten-Year Plan. The roadway is in poor condition and has suffered from deferred maintenance. Identifying a funding source is the primary barrier to completing improvements.
Enfield	Town of Enfield; NHDOT	NH Route 4A	Improve signage for snowmobile trail crossings across NH Route 4A.	Rural	Vehicle	
Enfield; Lebanon	Town of Enfield; City of Lebanon; NHDOT	NH Route 4A	Implement recommendations from Enfield Shaker Village Scenic Byway Corridor Management Plan	Rural; Suburban	Vehicle; Pedestrian & Bicycle	
Corridor	Towns; NHDOT	NH Route 4A	Add school bus stop signs to alert drivers in high-speed areas of NH Route 4A.	Rural	Vehicle	



ACTION PLAN: TIER II PROJECTS



Tier II Action Plan

To elevate Tier II projects to Tier I, UVLSRPC staff will:

- Meet with project partners to discuss any needed studies, planning, and/or data collection to support project development.
- Provide technical assistance, guidance, and support to project partners in completing needed studies/data collection and/or project development, as needed.

PROJECT TYPES (COLOR-CODED)

Vehicle/Multi-Modal	Pedestrian & Bicycle	Plan or Study
Environmental Resiliency	Public Transit	

Tier II Projects

MUNICIPALITY	PROJECT PARTNERS	LOCATION DESCRIPTION	PROJECT DESCRIPTION	LAND USE(S)	MODE FOCUS	PLANNING NOTES
Enfield	Town of Enfield; NHDOT	George Hill Rd	Address pavement condition, drainage, and frost heaving on George Hill Rd.	Rural	Vehicle; Pedestrian & Bicycle	George Hill Rd is a Tier IV state highway and is not eligible for federal aid through the NH Ten-Year Plan. Further assessment is needed to identify appropriate improvement strategy.
Enfield	Town of Enfield; NHDOT	NH Route 4A; Main St	Improve parking and pedestrian access to Shakoma Beach.	Rural	Vehicle; Pedestrian	This area is in need of a comprehensive strategy including parking and safe pedestrian crossings across NH Route 4A.
Enfield	Town of Enfield; NHDOT	Lakeside Park; Main St	Develop comprehensive access improvements for Lakeside Park and Northern Rail Trail.	Suburban	Vehicle; Pedestrian & Bicycle	Limited parking availability is a challenge for park and trail access.
Enfield	Town of Enfield; NHDOT	NH Route 4A	Upgrade existing sidewalks through Enfield Center and implement additional pedestrian access improvements.	Village Center	Pedestrian	Existing sidewalks are in poor condition and have minimal grade separation with the roadway. Sidewalk network could potentially be expanded westward. Sidewalk improvement project would be an opportunity for additional traffic calming.
Enfield	Town of Enfield; NHDOT	NH Route 4A; Lower Shaker Village	Improve pedestrian access in Lower Shaker Village; including NH 4A crossing.	Village Center	Pedestrian	Pedestrian circulation is a challenge particularly during events. Need identified in scenic byway Corridor Management Plan.
Corridor	Towns/Cities; NHDOT	NH Route 4A	Construct bicycle shoulders (5+ feet) along NH Route 4A.	Rural; Suburban	Bicycle; Pedestrian	Further assessment is needed to understand barriers to shoulder expansion (e.g., culverts, guardrails, right-of-way) and priority sections.



ACTION PLAN: TIER II PROJECTS



Tier II Projects (continued)

MUNICIPALITY	PROJECT PARTNERS	LOCATION DESCRIPTION	PROJECT DESCRIPTION	LAND USE(S)	MODE FOCUS	PLANNING NOTES
Corridor	Towns/Cities; Advance Transit; NHDOT	NH Route 4A	Conduct a transit needs assessment for the NH Route 4A corridor.	Multiple	Public Transit	This study could also include the identification of park-and-ride locations or pedestrian/bicycle improvements to connect residents to existing transit services along US Route 4.
Lebanon	City of Lebanon; Friends of NRT; U.V. Trails Alliance	Northern Rail Trail; Payne Rd	Create a formal access to the Northern Rail Trail from Payne Rd.	Suburban	Pedestrian; Bicycle	Feasibility assessment is needed to determine access route.
Lebanon	City of Lebanon; NHDOT	NH Route 4A; US Route 4	Improve intersection of US Route 4 and NH Route 4A	Rural	Vehicle; Pedestrian; Bicycle	This intersection was improved recently; however, it is still a challenge for vehicles entering US Route 4 from NH Route 4A due to high vehicle traffic volumes and speeds. Further planning is needed to identify and justify potential improvements.
Springfield	Town of Springfield; NHDOT	Four Corners Rd; NH Route 4A	Conduct intersection study to identify safety concerns and potential improvements.	Rural	Vehicle	Further analysis of crash history, speeds, and intersection design is warranted before considering potential improvements.
Springfield	Town of Springfield; NHDOT	NH Route 114, Bowman Rd; Four Corners Rd	Improve pedestrian and bicycle travel around Kolemook Lake	Rural	Pedestrian & Bicycle	



ACTION PLAN: TIER III PROJECTS



Tier III Action Plan

To elevate Tier III projects to Tier I or II, UVLSRPC staff will:

- Meet with project partners to discuss 1) any needed studies, planning, and/or data collection to support project development; and 2) defining or improving project scopes/goals.
- Provide technical assistance, guidance, and support to project partners in completing needed studies/data collection and/or project development, as needed.

PROJECT TYPES (COLOR-CODED)

Vehicle/Multi-Modal	Pedestrian & Bicycle	Plan or Study
Environmental Resiliency	Public Transit	

Tier III Projects

MUNICIPALITY	PROJECT PARTNERS	LOCATION DESCRIPTION	PROJECT DESCRIPTION	LAND USE(S)	MODE FOCUS	PLANNING NOTES
Enfield	Town of Enfield; NHDOT	NH Route 4A	Improve pedestrian access along NH Route 4A from the Lebanon city line to Shaker Bridge/Main St.	Suburban	Pedestrian	Sidewalks exist along NH Route 4A in Lebanon, ending at the Enfield town line. This section of NH Route 4A has many residences and sees many crossing pedestrians. Development directly adjacent to the roadway limits the available space for a sidewalk.
Enfield	Town of Enfield; NHDOT	NH Route 4A	Improve pedestrian and bicycle access along NH Route 4A from the Shaker Bridge/Main St to Shaker Dog Park.	Rural	Pedestrian & Bicycle	This section of NH Route 4A is an important recreation corridor connecting Main St to Mascoma Lake, Lower Shaker Village, and several public land areas. A utility right-of-way running along NH Route 4A could host a multi-use path in this area. Further planning work is needed to identify potential improvements.
Enfield	Town of Enfield; NHDOT	Main St; Northern Rail Trail	Improve underpass under Northern Rail Trail, including drainage	Downtown Core/Mixed Use	Vehicle; Pedestrian & Bicycle	Bridge carrying Northern Rail Trail is in poor condition; narrow underpass has poor drainage. Main St is a Tier IV state highway and is not eligible for federal aid through the NH Ten-Year Plan.
Corridor	Towns; NHDOT	Connecting roadways between US Route 4 and NH Route 4A	Monitor and maintain connecting roadways and bridges (e.g., Potato Rd)	Rural	Vehicle	Connecting roadways between US 4 and NH 4A are key for regional mobility.