

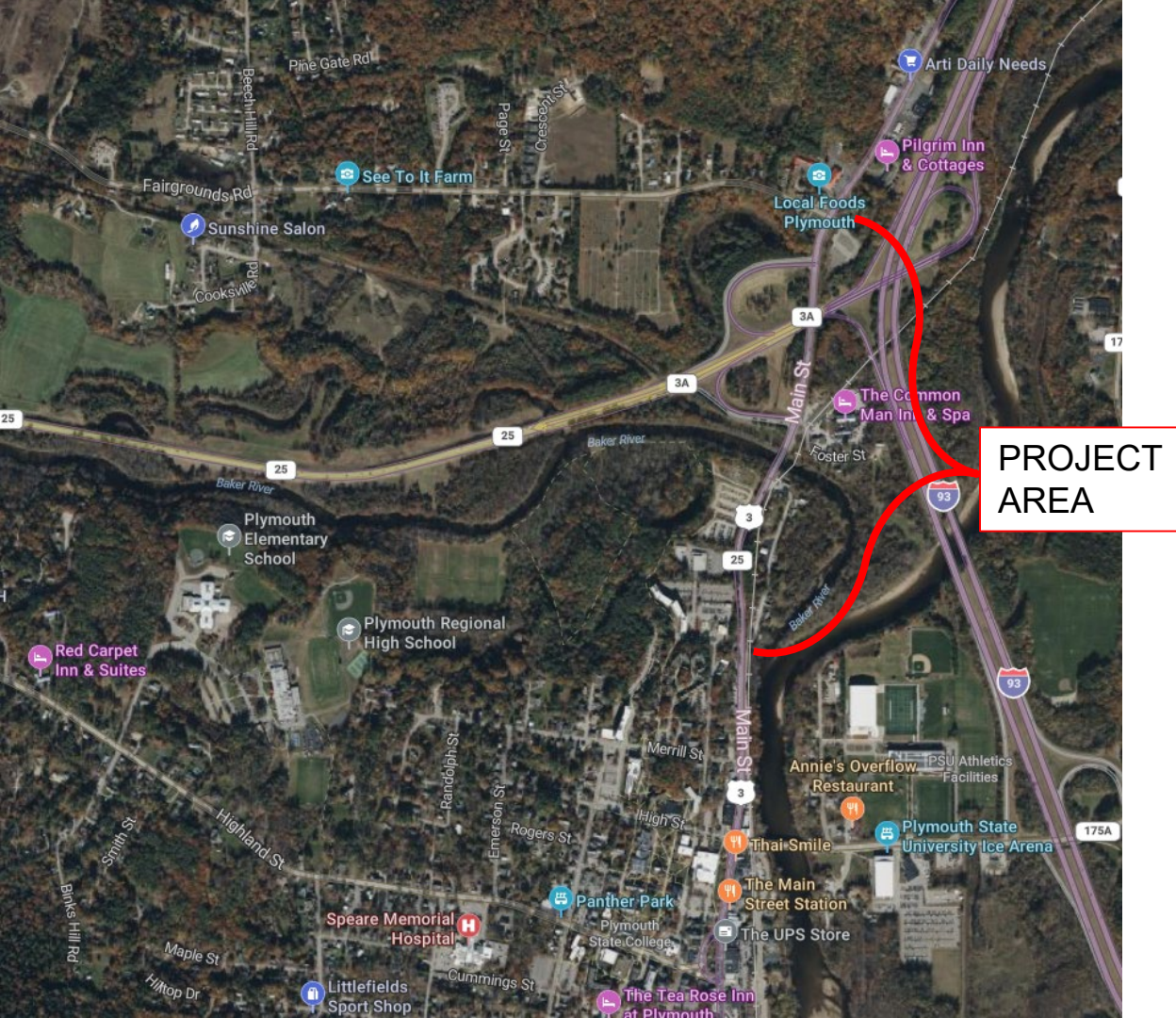
2027-2036 NHDOT Ten-Year Plan

Connecting North Plymouth: Improvements to US-3 North of Tobey Road
Improving safety, mobility, and vibrancy in Plymouth and beyond

Joseph Perez, Planner, Town of Plymouth

LRPC TAC meeting October 2, 2024





PROJECT
AREA



Project Purpose & Background

Purpose:

- Improve US Route 3/Main Street in Plymouth, NH to address safety concerns & provide multi-modal transportation facilities.
- Enhance northern end of Main Street to meet the needs of surrounding & future land use.

History:

- Transportation improvements in this area have been recognized in Planning documents and reports since at least 1995.
- Land use changes over last 30 years have increased the need for safety improvements.
- Area serves as a northern “gateway” to Plymouth and the rest of the Lakes Region
- In 2022, project was proposed for the 2025-2034 TYP. Conceptual engineering was completed by HEB under their contract with LRPC.
- In 2023, project listed as a top regional priority project in the 2023 Lakes Region Bicycle/Pedestrian Plan.

Project Need

Safety Issues:

- Inadequate stopping sight distance
- Inadequate intersection sight distance from Armory Rd.
- Narrow Shoulders
- No existing pedestrian infrastructure
- No accommodation for bicyclists



Lack of Multi-modal Transportation Facilities:

- Need for pedestrian connectivity to downtown
- Need for pedestrian connectivity to affordable housing on Fairgrounds Rd.
- Need for pedestrian connectivity between University housing/commuter lot to campus
- Inadequate shoulder width for bicyclists
 - Bicycle Shop on Foster St.
 - Future planned recreational trail connection to Landon Woods trails

Project Need: Mix of land uses, proximity to downtown

- Connects downtown area (shopping, dining, & entertainment) to hotels, recreation area, & affordable housing on Fairgrounds Road.
- NH National Guard Armory: Large vehicles & other traffic entering/exiting have limited sight distance resulting in altered traffic pattern (right turn only).
- Plymouth State University (~4,000 students):
 - 250 space student parking lot.
 - Langdon Woods dormitory & parking – 376 students
 - Co-gen plant (LNG trucks)
- Recreation: Access point to the Community Garden and Langdon Woods hike/bike trails.
- Bicycle/pedestrian crossing over Baker River.
- Future Land Use: Opportunity for housing & commercial, prime location between I-93 Exits 25 & 26.





Overall Safety Concerns:

- Plymouth Police Dept. identifies the project area as 2nd greatest safety challenge in Plymouth.
- Plymouth PD has record of 85 motor vehicle accidents since 1/1/2000. (Average = 3.7/year)
- Since 2019, frequency of motor vehicle accidents has increased from one collision every 3.2 months to one collision every 2.4 months.
- Plymouth State University & the Common Man advise students/guests to avoid walking on the road due to the dangerous conditions. Potential users are advised to walk through the woods or drive, which still poses a risk (as shown by the crash data).
- Speed limit on Main Street increases to 40 at the top of the hill just south of Armory Road intersection
- Since 2014, AADT have averaged just over 5,000.
- BUT, traffic count data is collected during summer & do not include trips resulting from Plymouth State University's students, staff, & faculty.
- Truck traffic accounts for 7% of the trips through the project area. National Guard & Plymouth State CoGen plant are key freight users.



At Armory
Road/National
Guard Armory -

Looking south
on Main St/US
Rt 3





At Armory Road, Looking North/South
on Main Street/US Rt. 3

**Vertical and horizontal curve
dangerously limits sight distance**



NH National Guard has shared plans to construct a new, larger, 33,000 sf “readiness center” to replace the existing Armory featuring 50 parking spaces. It will fulfill a variety of readiness needs with training areas, office space, classrooms, assembly spaces, and a community-oriented design. The space would also be made available for a wide variety of community uses.



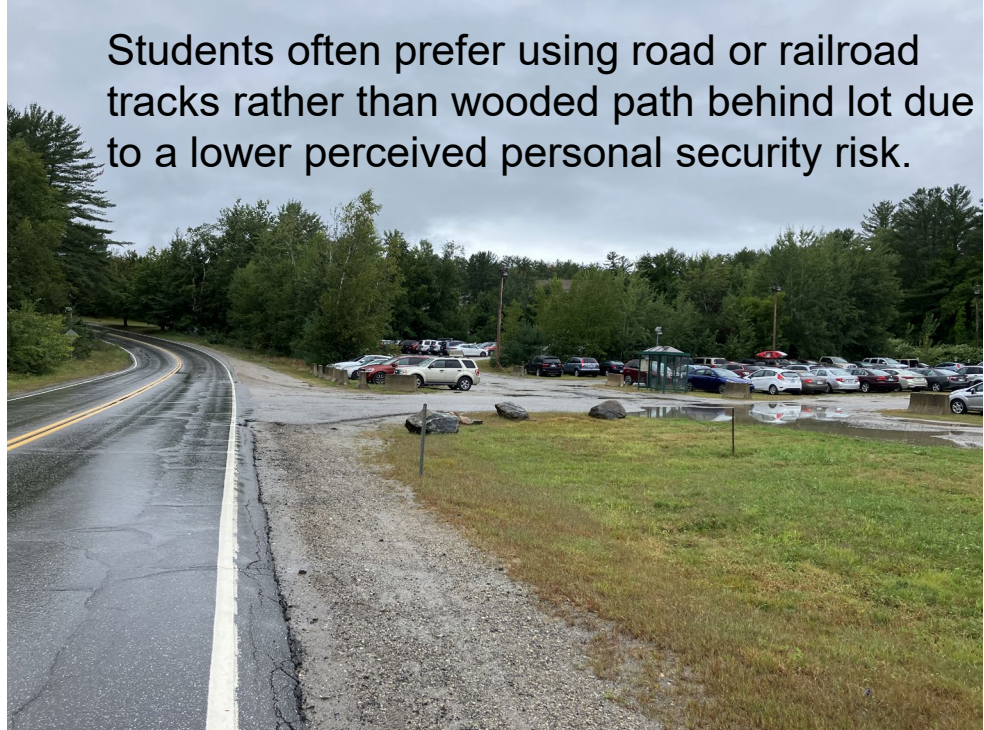
New / Old Business:

NH Air National Guard - Presenting plans for a new facility

Plymouth State University Student Parking Lot

A white rectangular sign with a red border and black text. The text reads: "PLEASE DO NOT WALK ROAD TO CAMPUS USE DESIGNATED PATHWAY IN BACK OF PARKING LOT". The sign is mounted on a metal post in a grassy area.

PLEASE DO NOT
WALK ROAD TO
CAMPUS USE
DESIGNATED PATHWAY
IN BACK OF
PARKING LOT

A photograph showing a paved road with a white line on the right side, leading to a parking lot. The parking lot is filled with cars, and there are trees in the background. The sky is overcast.

Students often prefer using road or railroad tracks rather than wooded path behind lot due to a lower perceived personal security risk.



RR Tracks - Active RR parallels roadway & often used as pedestrian walkway as perceived to be safer

Tourism and northern gateway: C-Man Inn, Fosters Restaurant, Bike Shop, Car Rental Business, Rt. 25 & I-93 North access to downtown/recreation



Warning on “The Lodge” website regarding pedestrian safety (Property is located at the Fairgrounds Road intersection)

Guests of The Lodge also enjoy full access to all amenities offered at The Common Man Inn & Spa, just a .04 mile drive down the road. This includes soaking in a rock waterfall hot tub, taking a swim and lounging around a heated indoor pool, relaxing in a sauna, and enjoying some down time in the fireside lounging areas in the lobby. The Inn’s lobby also has a business center for guest use. View all of The Common Man Inn & Spa’s amenities [here](#).

Don’t forget to check out [The Spa at The Common Man Inn](#) and book a rejuvenating treatment, or two!

Note: Though The Lodge and the Inn are close in proximity (just .04 miles!), the stretch of road between them includes interstate on and off ramps and isn’t conducive to walking. Guests should plan to drive between the two properties.

rock waterfall hot tub

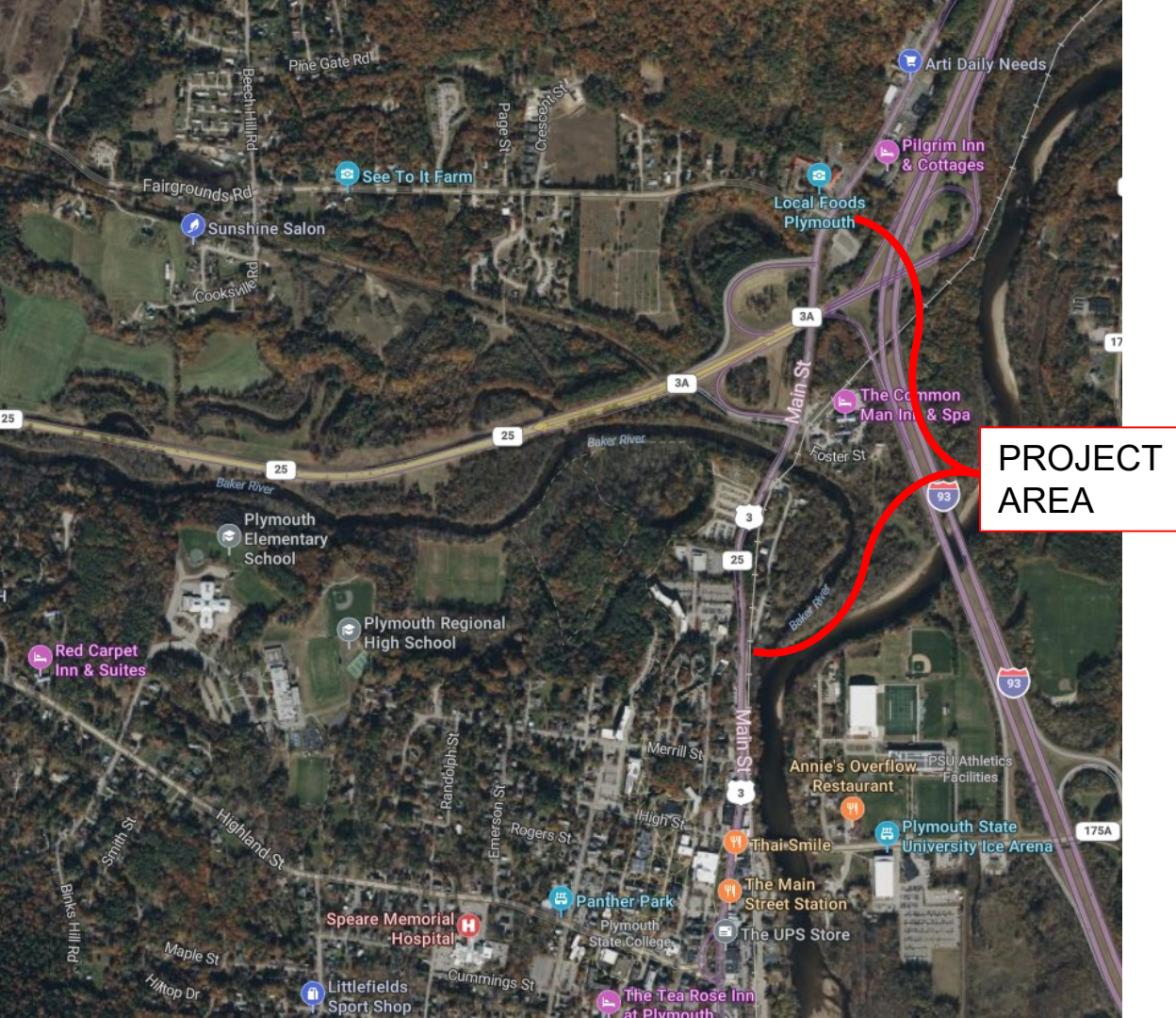


fireside lounging areas



This section of Route 3 serves as an important connection to downtown for many different types of road users





PROJECT
AREA



Improvements on US-3 (Southern section)

Tobey Road to Baker River bridge

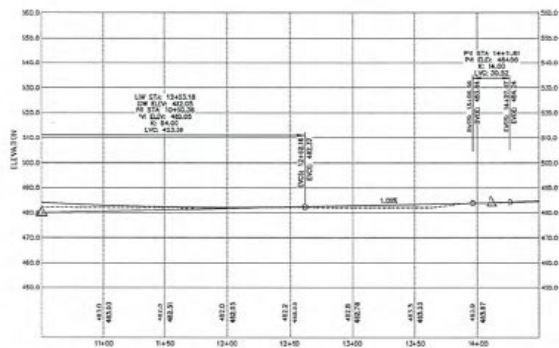
- Improve stopping sight distance & intersection sight distance by correcting horizontal and vertical alignment issues. (“Straighten + flatten” the road)
- Provide 5’ shoulders for bicyclists on both sides of US-3
- Provide a 5’ concrete sidewalk along the west side of US-3



Improvements on US-3 (Northern section)

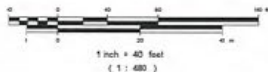
Baker River bridge to Fairgrounds Road

- Provide a 5' concrete sidewalk along the west side of US-3.
- Provide a marked pedestrian crossing at Foster Street.



Proposed US-3 Profile Sta. 11+00-14+00

Scale:
Horizontal: 1"=40'
Vertical: 1"=20'



Copyright		2022	HEB Engineers, Inc.	
No.	Revision		DATE	BY



HEB Engineers, Inc.
www.hebengineers.com
NH Office (603) 251-6934
Post Office Box 440
North Conway, NH 03860
ME Office (207) 891-8283
Post Office Box 345
Bridgton, ME 04005

Substrate	—
Reagents	—
Solvent	—
pH (aq)	—
Yield (%)	—
Notes	1 st run 40%

US-3 Site Sketch
for the
US 3 Plymouth
located in
Plymouth, NH
prepared for
Lakes Region Planning Commission

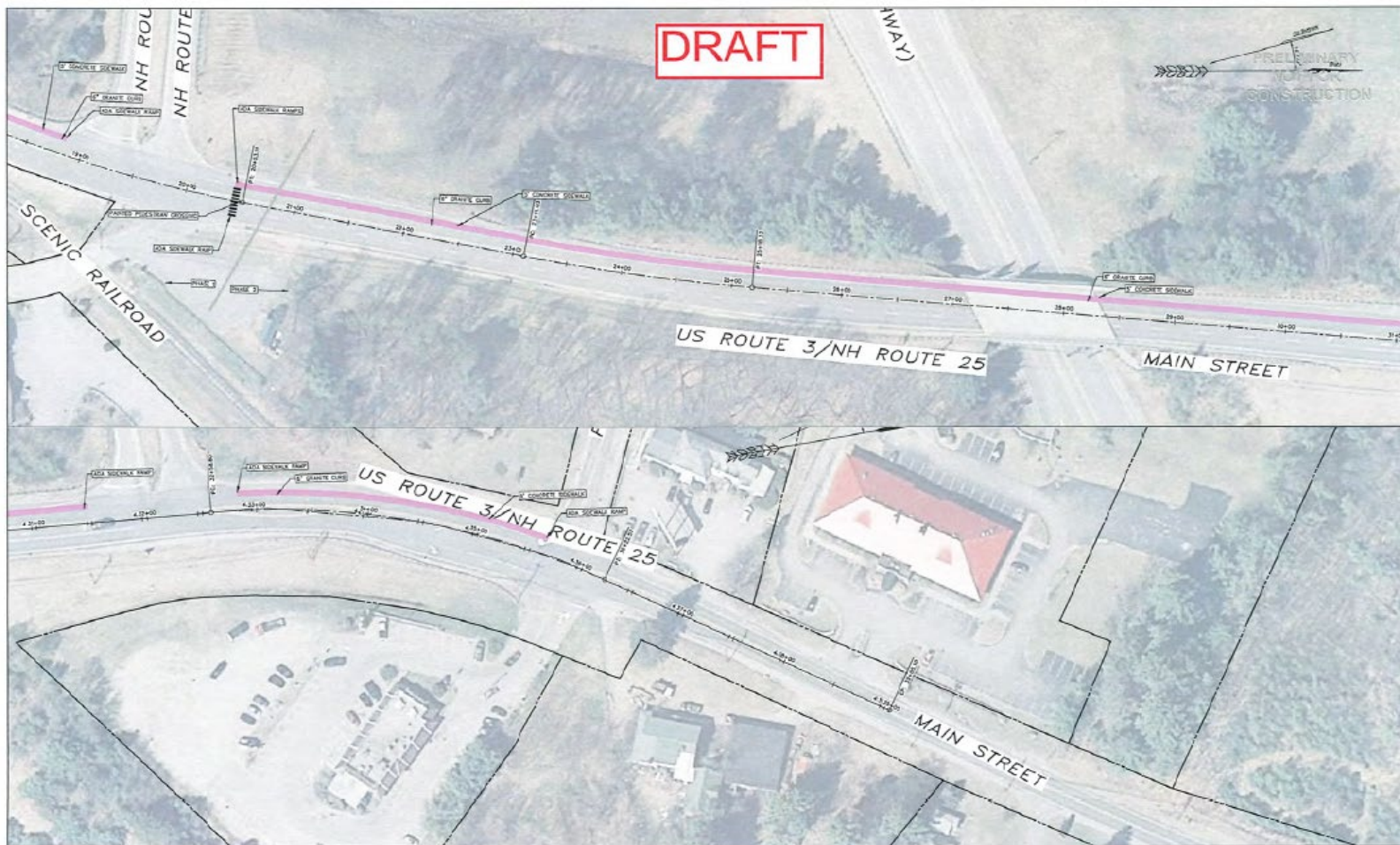
2022-105
SK-1



DRAFT

SK-1
SHEET 1 OF 4

2022-105
US-3 Site Sketch
US 3 Plymouth



Project Outcomes

- ★ Economic Development
- ★ Equity, Environmental Justice, & Accessibility
- ★ Mobility
- ★ Natural Hazard Resiliency
- ★ Network Significance
- ★ Safety
- ★ State of Repair
- ★ Support





Project Outcomes

Network Significance:

- ★ Route 3 provides access to downtown Plymouth & Speare Memorial Hospital, NH National Guard Armory, PSU.
- ★ Corrects alignment & sightline issues at New Hampshire National Guard.
- ★ Improves safety & access to Plymouth State University's dorm, parking lots, and Co-gen plant.
- ★ No other feasible alternatives for pedestrians & bicycles.



Economic Development:

- ★ Safer multi-modal connection to Downtown amenities will help area businesses.
- ★ Project area has several significant redevelopment sites.
 - Housing, office, commercial
 - Tourism – between Lakes Region & White Mountains - Common Man businesses bring as many as 1,500 visitors to the region each weekend.

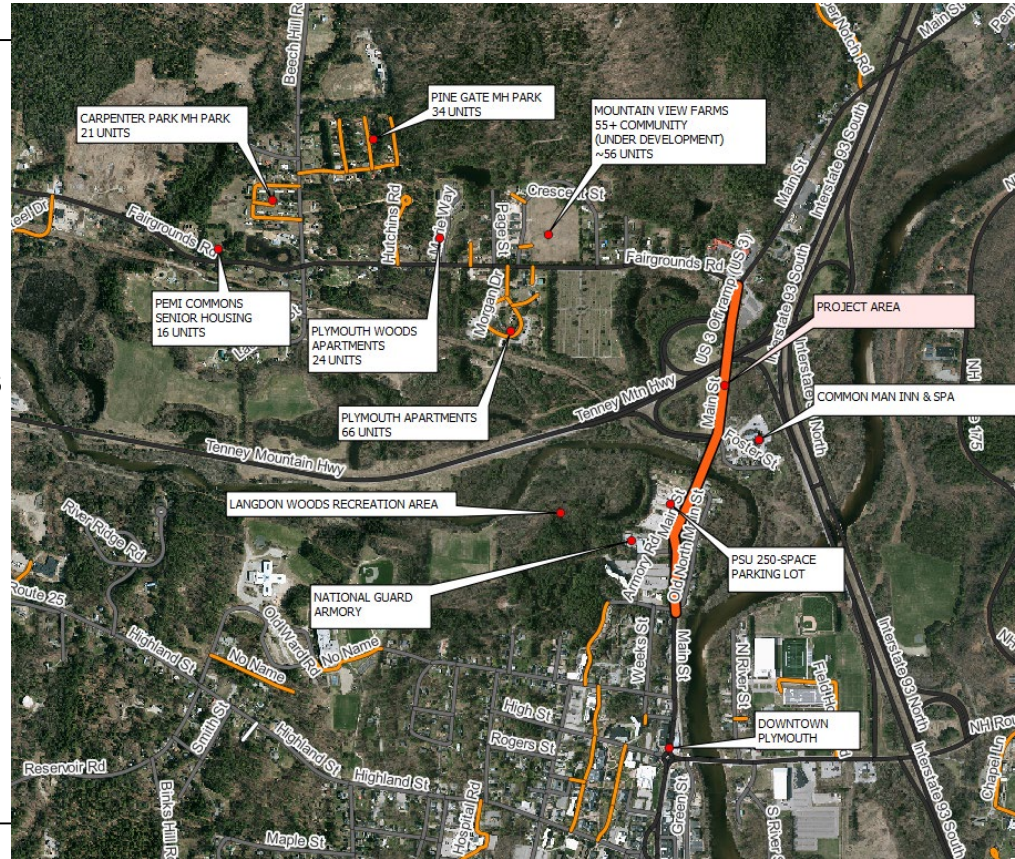




Project Outcomes

Equity, Environmental Justice, & Accessibility:

- ★ Connects affordable housing areas (3 manufactured housing neighborhoods + 2 apartment complexes) to opportunities for employment, medical, education, & services on Main Street/Downtown Plymouth.
- ★ Creates ADA compliant transportation facilities where currently there is none.
- ★ Plymouth's Master Plan calls for ensuring Plymouth is "a walkable and accessible community for people of all ages and ability levels."



Project Outcomes

Safety:

- ★ Improve stopping sight distance & intersection sight distance
- ★ Create sidewalk
- ★ Create wider shoulders
- ★ Create marked pedestrian crossing at Foster Street



Mobility:

- ★ Create multi-modal transportation facility
- ★ Pedestrian: Provide a 5' concrete sidewalk along the west side of US-3
- ★ Bicycle: Provide 5' shoulders for bicyclists on both sides of US-3

Project Outcomes

State of Repair:

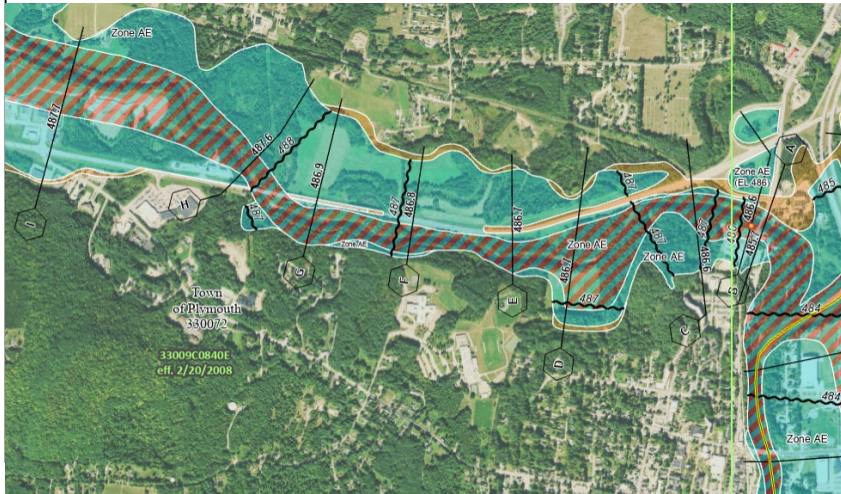
- ★ Overall condition of US-3/Main Street in project area is not poor, but condition of bicycle & pedestrian facilities is nonexistent.
- ★ Walkway exists on bridge over Baker River, but not maintained, lacks proper curb ramps.
- ★ Sidewalks in Plymouth are & will continue to be maintained by the Town.
- ★ Reducing the slope of the hill within the project area may reduce the need for road salt.
- ★ Minimal underground utilities within the project area, reducing the project costs & future road disturbance.



Project Outcomes

Natural Hazard Resiliency:

- ★ Baker River flood area
- ★ Address during NEPA/Environmental Review

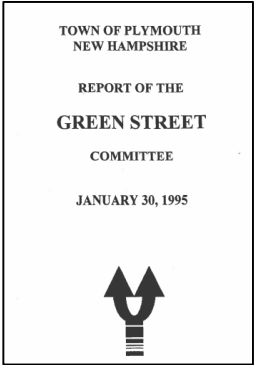
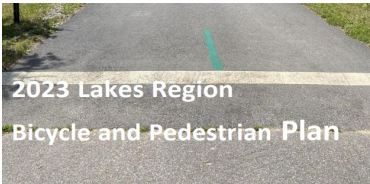
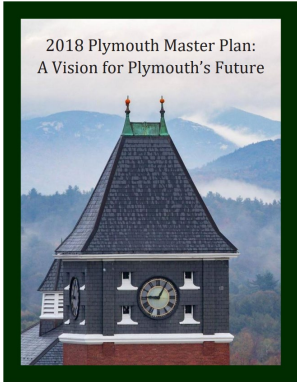


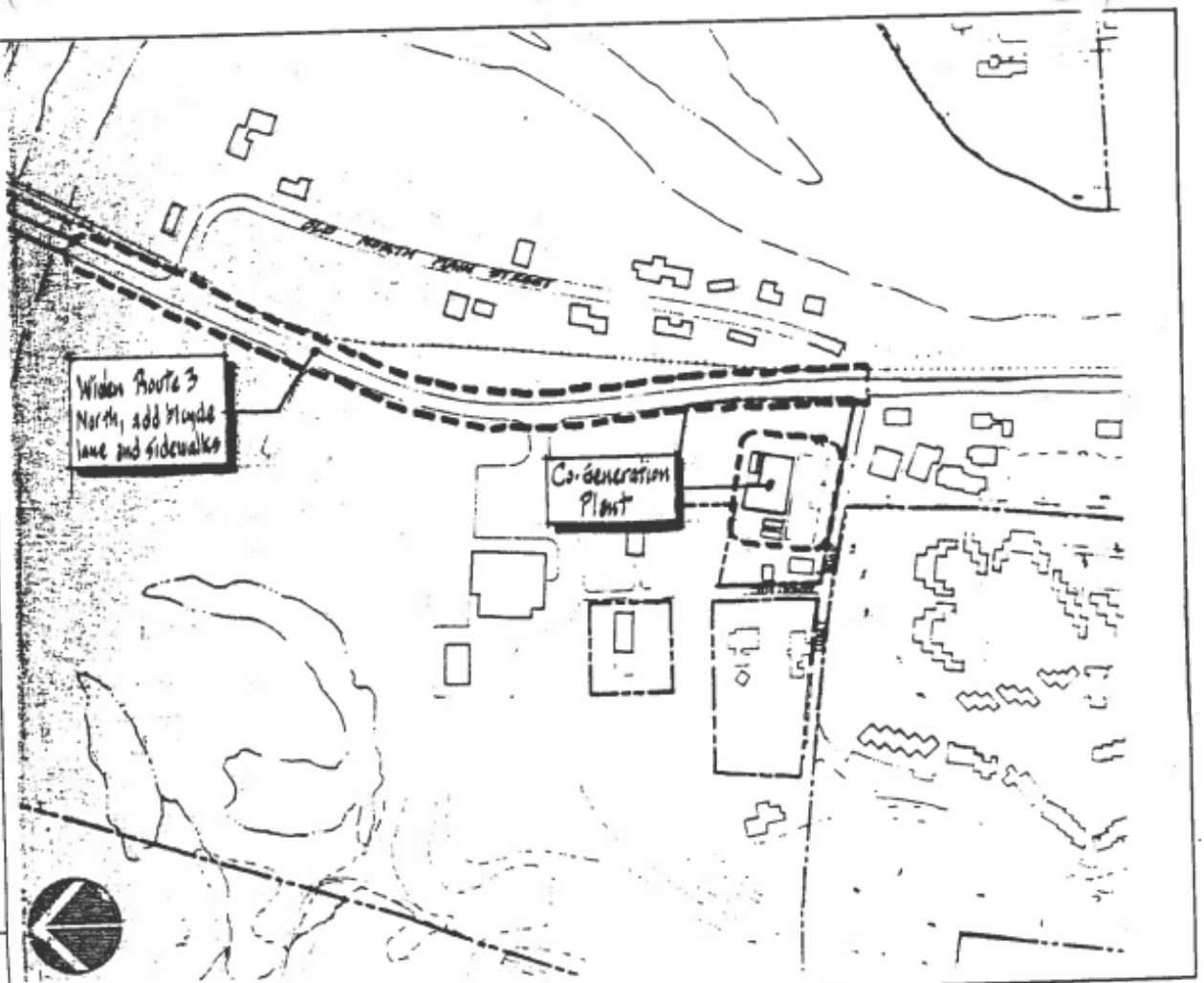
Other Issues:

- ★ Historic resources/marker
(Asquamchumauke plaque placed by DAR ca 1940)
- ★ Opportunity to highlight plaque, currently difficult to access and obscured.



Broad Community Support





Christopher P. Williams, Architects
P.O. Box 600, North, New Hampshire 03055-0600
603-875-2022

GREEN STREET STUDY
Town of Plymouth and
Plymouth State College

Fig. 7



2023 Lakes Region Bicycle and Pedestrian Plan

- “LRPC therefore recommends that this project be considered in future years when the funding is available because it provides many contributions towards the 2023 vision of this report. (Pg. 36)

Project Recommendations

The Lakes Region Planning Commission has identified multiple bike and pedestrian projects that will greatly benefit the infrastructure across the region. These projects were selected based on the goals from this report that they will address, the needs of the community, and feasibility considerations with the funding and resources available. LRPC recommends that these projects should be considered as priorities for the upcoming Ten Year Plan, or other funding sources. The highlights below detail how each project exemplifies the goals of this Bike and Pedestrian Plan and will help bring to life the vision of a walkable and bikeable Lakes Region.

Plymouth North Main Street Safety Improvements

The Town of Plymouth proposed a project for the improvement of US-3 (Main Street) to be included in the 2025-2034 NHDOT Ten Year Plan. The proposal includes a correction of horizontal and vertical road alignments to improve sightlines, as well as adding in pedestrian infrastructure such as sidewalks, curb ramps, and crosswalks along the project area spanning along US 3 from Tobey Road to Fairgrounds Road. The project areas and major destinations are shown in the photo further below.

The Town expressed great need for this project because it was determined to be an extremely unsafe area for both pedestrians and drivers. Crash data from the Plymouth Police Department has shown a recent increase in frequency of crashes at the Amory Road intersection. In fact, the proposal states that this section of the US 3 road is the 2nd greatest safety challenge

area and the only one yet to be addressed. The Town notes that there has been a lot of interest in this project due to the high volume of traffic in this section from the NH Army National Guard Amory, Plymouth State University parking, and the nearby downtown area. The 2018 Plymouth Master Plan (see Appendix C) supports the construction of safe bike and pedestrian mobility, which will be accomplished through this project.

The benefits of this project along Main Street in Plymouth address the goals of Design, Safety, Connectivity, Equity, and Economy and Health.

Design – The Town’s planners, LRPC, and NHDOT are currently working together throughout the planning and design process to incorporate sufficient bike and pedestrian elements to reduce the vulnerability of users.

Safety – One of the major motives of this project proposal is to improve the safety of both pedestrians and drivers by altering the street design and elements. The goal is to create safer conditions for all road users with these improvements.

Connectivity – The stretch of US 3 from Tobey Road to Fairgrounds Road offers access to many different types of destinations including Plymouth State University, the National Guard Amory, the downtown area, and the development at Foster Street with the Common Man Inn and Foster’s Boiler Room Restaurant. By improving pedestrian access to these destinations, Plymouth would greatly increase the connectivity for bicyclists and pedestrians between more rural areas and the vibrant downtown.



35

Economy and Health – The accessibility to the destinations mentioned above will also promote economic development because more transportation users have access to these stores and restaurants. It allows bicyclists and pedestrians to use these modes of transit for everyday actions such as errands and social outings. Hopefully, this will encourage people to use these modes of active transportation more often, which will eventually improve public health as well.

Equity – In 2019, Plymouth was designated as an opportunity zone by the US Department of Transportation. These zones “are economically distressed communities, defined by individual census tract, nominated by America’s governors, and certified by the U.S. Secretary of the Treasury” (USDOT). Since the proposed project is meant to help promote local economic activity, it will be supporting a Lakes Region community in need. This project demonstrates how bike and pedestrian infrastructure can be used to

address issues of transportation and economic inequalities among communities.

The LRPC Transportation Advisory Committee met in the spring of 2023 to rank all of the proposed projects based off of a number of criteria including safety, mobility, equity, and economic development. The Plymouth project scored 3rd ranked priority for the 2025-2034 Ten Year Plan, only behind the second ranked by 0.08 of a point. Although it scored highly among the TAC, the Plymouth Main Street project was too expensive to fund with the allocated TYP amount from NHDOT. LRPC therefore recommends that this project be considered in future years when the funding is available because it provides many contributions towards the 2023 vision of this report. This project will be very important to the future of downtown Plymouth in both its physical and economic development.



36