North Country Council
Regional Transportation Plan
2015 UPDATE

North Country Council, Inc.
www.nccouncil.org

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Adopted by:
North Country Council Transportation Advisory Committee on 6/9/15
North Country Council Board of Directors on 6/10/15

The preparation of this plan has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

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***Beginning August 3, 2015, North Country Council's new address will be:*
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CONTENTS

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SECTION I INTRODUCTION

NORTH COUNTRY COUNCIL

North Country Council (NCC) is a Regional Planning Commission established pursuant to RSA Chapter 36 to promote coordinated development through the preparation of comprehensive plans and studies. It is the mission of North Country Council to encourage effective community and regional planning for the development of economic opportunity and the conservation of natural, cultural and economic resources. This is accomplished by providing information, regional advocacy, technical assistance, community education, and direct service to the region, its organizations, and political subdivisions. The Council also serves as the collective voice for the constituent towns in their dealings with state and federal agencies by representing and protecting regional interests.

North Country Council serves:

- 51 communities
- 25 unincorporated places
- The northern third of New Hampshire
- All of Coos County and parts of Grafton and Carroll Counties
- About 3,418 square miles
- About 90,659 people (2012 Population Estimates, NH Office of Energy and Planning)

TRANSPORTATION PLANNING IN THE NORTH COUNTRY REGION

RSA Chapter 36 requires regional planning commissions to prepare a coordinated plan for the development of the region. Funding from the Federal Sustainable Communities Regional Planning Initiative through a grant to the state's nine regional planning commissions administered by HUD enabled North Country Council to conduct a three year public engagement process from 2011-2014 to identify the region's high priority needs and develop a set of consensus-based strategies for addressing those needs. That process led to the adoption of ***A Plan for New Hampshire's North Country***. That document serves as the overarching guide for the development of the region pursuant to RSA Chapter 36. Funding from FHWA administered by NH Department of Transportation enabled the development of this Regional Transportation Plan examining the transportation system in more detail and recommending activities to further the implementation of the regional plan.

The region's transportation system is comprised of the facilities and programs for transporting people and goods from one place to another. The region's transportation facilities include highways, from Interstate 93 to Class V roads maintained by municipalities, airports, rail, and bike/pedestrian paths. The health and well-being of individuals is dependent upon the effectiveness and condition of the transportation system, as is the economic competiveness of the region.

The Regional Transportation Plan is a policy document that will guide North Country Council (NCC), the New Hampshire Department of Transportation (NHDOT), member communities and partner organizations in making important decisions regarding transportation and other key issues. This plan describes the existing transportation system in the region, including the current trends and patterns, and outlines local and regional priorities to help guide future growth of a safe and efficient transportation system while preserving the qualities that make the North Country region unique.

The Regional Transportation Plan will assist the Transportation Advisory Committee in reviewing and prioritizing projects for federal and state funding, e.g., Ten Year Transportation Improvement Plan (TYP) and the Transportation Alternatives Program (TAP). The policies outlined in this plan will also provide guidance to communities in making decisions that incorporate transportation projects with land use planning.

In regards to the Ten Year Transportation Improvement Plan (TYP) project prioritization, NCC's Transportation Advisory Committee reviews and ranks new projects that are submitted for consideration. The scoring strategy below was used in the 2015 TYP cycle and was reviewed and endorsed by NHDOT.

NCC TYP Scoring Strategy - 2015

1.) Staff reviews current TYP projects
   a. Provides TAC with list of projects in the Ten Year Plan.
   b. Provides TAC with letters of support from communities that submitted them.
   c. Confirms that all of the projects in the existing TYP are still needs/priorities.
   d. If there are clearly projects that are NOT supported within NCC communities that are in the approved TYP, NCC staff will contact communities for a letter from the town so the project can be pulled.

2.) Review all new Project Proposals & Attachments
   a. Staff provides score sheets, criteria descriptions and rating system information to TAC
   b. Staff provides information and data to TAC (traffic counts, if project accommodates a bus route or bike/ped facility, etc.)

3.) Score all new projects
   a. Score based on information provided (outlined above).
   b. Each TAC member should review TYP Threshold Criteria and determine if the project is Feasible and Supported. Guidelines for determining this will be provided to the TAC. TAC members MUST take notes in the Comments section explaining why it is NOT feasible and/or NOT supported.
   c. NCC will determine if the project is Eligible for another FHWA funding source

4.) TAC submits scores by predetermined deadline
   a. NCC staff compile scores and apply weightings to all new projects

b. NCC staff provide the scores and discuss the Feasibility, Support, and Eligibility Threshold Criteria with the TAC at determine if any projects should NOT be sent on to DOT for inclusion in the TYP.
    i. A draft list of priorities (showing the funding cut-off level allocated to the NCC region) is provided to the TAC for review.
c. NCC votes on the priorities being submitted to NHDOT for inclusion in the Ten Year Plan.

5.) NCC staff submits confirmation of existing TYP Priorities and New Project Priorities (with project proposals and attachments) to the New Hampshire Department of Transportation.

This document builds on and updates the June 2009 ***North Country Council Regional Transportation Plan***. The process for developing the 2009 plan began with public meetings held throughout the region and numerous work sessions held with the NCC Transportation Advisory Committee. The document was adopted by the North Country Council Representatives as part of the Regional Plan in October 2009 and readopted by that body in November 2014. This document takes a closer look at specific transportation-related needs in each of the region's labor market area-based travelsheds.

EVOLVING FEDERAL POLICY

North Country Council seeks to further the goals originally undertaken by the Intermodal Surface Transportation Equity Act of 1991 (ISTEA) and its successors, the Transportation Equity Act of the 21st Century (TEA-21), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFTEA-LU), and the current transportation bill Moving Ahead for Progress in the 21st Century (MAP-21). These laws encourage comprehensive transportation planning on local, regional, state, and federal levels. The initial ideas of ISTEA have been carried forward to support the expanded intermodal transportation policies of TEA-21, SAFTEA-LU and most recently in MAP-21.

INTERMODAL SURFACE TRANSPORTATION EQUITY ACT OF 1991 (ISTEA)

On December 18th, 1991, President Clinton signed ISTEA into law in order to provide $155 billion in funding for highways, highway safety, and intermodal transportation between the fiscal years of 1992 through 1997. The purpose of ISTEA was to "develop a National Intermodal Transportation System that is economically efficient, environmentally sound, provides the foundation for the Nation to compete in the global economy and will move people and goods in an energy efficient manner."

As defined by the Federal Highway Administration (http://ntl.bts.gov/DOCS/ste.html), the main features of ISTEA included:

NATIONAL HIGHWAY SYSTEM (NHS) – The NHS, which consisted primarily of existing Interstate routes and a portion of the Primary System, was established to focus Federal resources on roads that are the most important to interstate travel and national defense, roads that connect with other modes of transportation, and are essential for international commerce.

FLEXIBILITY – State and local governments were given more flexibility in determining transportation solutions, whether transit or highways, and the tools of enhanced planning and management systems to guide them in making the best choices.

TECHNOLOGY – New technologies, such as intelligent vehicle highway systems and prototype magnetic levitation systems, were funded to push the Nation forward into thinking of new approaches in providing 21st Century transportation.

ALTERNATIVE FUNDING – The private sector was tapped as a source for funding transportation improvements. Restrictions on the use of Federal funds for toll roads were relaxed and private entities were now allowed to own such facilities. ISTEA continued discretionary and formula funds for mass transit.

ENVIRONMENTAL ENHANCEMENTS – Highway funds were available for activities that enhanced the environment, such as wetland banking, mitigation of damage to wildlife habitat, historic sites, activities that contributed to meeting air quality standards, a wide range of bicycle and pedestrian projects, and highway beautification.

HIGHWAY SAFETY – Highway safety was further enhanced by a new program to encourage the use of safety belts and motorcycle helmets.

UNIFORMITY – State uniformity in vehicle registration and fuel tax reporting was now required. This was to ease the recordkeeping and reporting burden on businesses and contribute substantially to increased productivity of the truck and bus industry.

TRANSPORTATION EQUITY ACT OF THE 21ST CENTURY (TEA-21)

On June 9th, 1998, TEA-21 was enacted, authorizing Federal surface transportation programs for highways, highway safety, and transit over the six year period from 1998-2003. The key focuses of TEA-21 were improving safety, protecting public health and the environment, and creating opportunity for all Americans. The $198 billion in funds that were made available by TEA-21 reached a historic landmark for investment in the Nation's highways and transit systems.

As defined by the Federal Highway Administration (http://www.fhwa.dot.gov/tea21/index.htm), the main features of TEA-21 included:

REBUILDING AMERICA

- This included balanced investment in highways, transit, intermodal projects, and new technologies.

IMPROVING SAFETY

- Incentive grants to increase seat belt use and to fight drunk driving by encouraging states to adopt 0.08 blood alcohol concentration standards.
- National "One Call" notification program for pipeline safety.
- Strong programs to continue making roads and rail-highway grade crossings safer.
- Improved truck safety program to get bad drivers and vehicles off the road.

PROTECTING THE ENVIRONMENT

- Expanded Congestion Mitigation and Air Quality Improvement and Transportation Enhancements programs to help communities improve the environment.
- Advanced Vehicle Program to develop clean, fuel-efficient trucks.
- Continued programs for National Scenic Byways, bicycle and pedestrian paths, recreational trails, and roadside wildflower plantings.
- Increased tax-free transit benefits to encourage transit ridership.

CREATING OPPORTUNITY

- Innovative jobs access program to help those moving from welfare to work.
- Continued, effective Disadvantaged Business Enterprise program.
- Strong labor protections for transportation workers.

SAFE, ACCOUNTABLE, FLEXIBLE, EFFICIENT TRANSPORTATION EQUITY ACT: A LEGACY FOR USERS (SAFETEA-LU)

SAFETEA-LU was signed into law on August 10, 2005 and became the largest surface transportation investment in the history of the United States, providing $244.1 billion in funding for highways, highway safety, and public transportation.

The main challenges that this law addresses include improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment. SAFETEA-LU attempts to give flexibility to Federal, State and Local programs that focus on issues of national significance as well as those on the community level.

The main features of SAFETEA-LU, as defined by the Federal Highway Administration, can be found at http://www.fhwa.dot.gov/safetealu/summary.htm.

SAFETY – SAFETEA-LU establishes a new core Highway Safety Improvement Program that is structured and funded to make significant progress in reducing highway fatalities. It creates a positive agenda for increased safety on our highways by almost doubling the funds for infrastructure safety and requiring strategic highway safety planning, focusing on results. Other programs target specific areas of concern, such as work zones, older drivers, and pedestrians, including children walking to school, further reflect SAFETEA-LU's focus on safety.

EQUITY –The new Equity Bonus Program has three features. First, building on TEA-21's Minimum Guarantee concept, the Equity Bonus program ensures that each State's return on its share of contributions to the Highway Trust Fund (in the form of gas and other highway taxes) is at least 90.5 percent in 2005 building toward a minimum 92 percent relative rate of return by 2008. Second, every State is guaranteed a specified rate of growth over its average annual TEA-21 funding level, regardless of its Trust Fund contributions. Third, selected States are guaranteed a share of apportionments and High Priority Projects not less than the State's average annual share under TEA-21.

INNOVATIVE FINANCE – SAFETEA-LU makes it easier and more attractive for the private sector to participate in highway infrastructure projects, bringing new ideas and resources to the table. Innovative changes such as eligibility for private activity bonds, additional flexibility to use tolling to finance infrastructure improvements, and broader TIFIA and SIB loan policies, will all stimulate needed private investment.

CONGESTION RELIEF – SAFETEA-LU gives States more flexibility to use road pricing to manage congestion, and promotes real-time traffic management in all States to help improve transportation security and provide better information to travelers and emergency responders.

MOBILITY & PRODUCTIVITY – SAFETEA-LU provides a substantial investment in core Federal-aid programs, as well as programs to improve interregional and international transportation, address regional needs, and fund critical high-cost transportation infrastructure projects of national and regional significance. Improved freight transportation is addressed in a number of planning, financing, and infrastructure improvement provisions throughout the Act.

EFFICIENCY – The Highways for LIFE pilot program in SAFETEA-LU will advance longer-lasting highways using innovative technologies and practices to speed up the construction of efficient and safe highways and bridges.

ENVIRONMENTAL STEWARDSHIP – SAFETEA-LU retains and increases funding for environmental programs of TEA-21, and adds new programs focused on the environment, including a pilot program for non-motorized transportation and Safe Routes to School. SAFETEA-LU also includes significant new environmental requirements for the Statewide and Metropolitan Planning process.

ENVIRONMENTAL STREAMLINING – SAFETEA-LU incorporates changes aimed at improving and streamlining the environmental process for transportation projects. These changes, however, come with some additional steps and requirements on transportation agencies. The provisions include a new environmental review process for highways, transit, and multimodal projects, with increased authority for transportation agencies, but also increased responsibilities (e.g., a new category of "participating agencies" and notice and comment related to defining project purpose and need and determining the alternatives). A 180-day statute of limitations is added for litigation, but it is pegged to publication of environmental actions in the Federal Register, which will require additional notices. Limited changes are made to Section 4(f). There are several delegations of authority to States, including delegation of Categorical Exclusions for all states, as well as a 5-state delegation of the USDOT environmental review authority under NEPA and other environmental laws. The air quality conformity process is improved with changes in the frequency of conformity determinations and conformity horizons.

MOVING AHEAD FOR PROGRESS IN THE 21ST CENTURY (MAP-21)

MAP-21 was signed into law in July of 2012 and it extends the goals of SAFETEA-LU to fund surface transportation programs at over $105 billion for fiscal years (FY) 2013 and 2014. This is the first long-term highway authorization enacted since 2005.

MAP-21 is a performance-based surface transportation program that is geared towards creating a programmatic framework for investment and creating efficiencies in streamlining reporting. One of the goals is to improve the policies that were developed in the past to build upon on many of the highway, transit, bike, and pedestrian programs and policies established in 1991 under ISTEA.

These federal funding authorizations determine the transportation programs that are funded and the funding levels that will come into the State of New Hampshire. One of the effects MAP-21 had on the region is that it consolidated the federal Surface Transportation Program. This reduced the number of federal programs from nearly 85 to fewer than 30. For example, Transportation Enhancement (TE), Safe Routes to School (SRTS), and Scenic Byways all became part of FWHA's Transportation Alternatives Program (TAP.) This changed a number of factors, like how SRTS used to have its own pot of funding and had no match requirement. Now applicants need to compete with a much large pool to access these funds through the TAP program, and there is a match requirement of 20%. The NCC region did very well with this program and had a number of projects funded. Now there is more competition for these dollars and it is unlikely that more than one TAP project will be funded in the NCC region in each funding round.

In addition, some types of projects previously funded under the prior programs are not being funded by NHDOT. Eligible activities in the 2014 application cycle included:

- Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation.
- Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.

- Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.
- Eligible Safe Routes to School program infrastructure activities under Section 1404 of SAFETEA-LU.

In MAP-21, the Surface Transportation Program (STP) and Transportation Alternatives Program (TAP) also sub-allocated the funding into categories based on population, including 200,000 or more; 5,000-200,000; and less than 5,000. This means that some funding must be awarded to rural areas.

Federal funding authorizations also determine priorities for what types of projects will be funded. In MAP-21, the goal was to develop a program that is performance based, streamlined, and addresses multi-modal concerns to help the nation deal with local and regional transportation issues. The issues that MAP-21 focuses on included improving safety, maintaining the condition of existing infrastructure, reducing traffic congestion, making improvements to make transportation systems more efficient, improving and protecting the environment, and improving bike and pedestrian options to improve livability in states and regions.

North Country communities should focus on projects that align with the priorities of MAP-21 and understand that funding rounds will become more competitive as we move forward.

SECTION II PUBLIC ENGAGEMENT PROCESS AND RESULTS

Funding from the Federal Sustainable Communities Regional Planning Initiative through a grant to the state's nine regional planning commissions administered by HUD enabled North Country Council to conduct a three year public engagement process from 2011-2014 to identify the region's high priority needs and develop a set of consensus-based strategies for addressing those needs. That process led to the adoption of ***A Plan for New Hampshire's North Country***. That document serves as the overarching guide for the development of the region pursuant to RSA Chapter 36. Through that comprehensive regional plan review, public input, hearing and adoption process, the June 2009 North Country Council Regional Transportation Plan, primarily a policy document, was readopted, and the October 2014 ***Coordinated Public Transit and Human Service Transportation Plan for Coos, Carroll, and Northern Grafton Counties*** was adopted. The Sustainable Communities Initiative Regional Planning Program included transportation planning as a focus area. This enabled structuring the public engagement process in a manner which would provide valuable direction for establishing priorities for this Regional Transportation Plan update as well. As described below, the region's transportation leaders were included on the Advisory Committee, transportation-specific questions were included on the survey conducted by the UNH Survey Center, and a transportation "station" was set up at the open houses held in the fall of 2014 to collect public input on priorities. This process was augmented by booths set up at three locations around the region to collect additional information specific to transportation, and a written solicitation for input on transportation-related needs that were sent to every selectboard/city council and planning board in the region.

COMPREHENSIVE PLANNING - MANY VOICES

NORTH COUNTRY REGIONAL PLAN ADVISORY COMMITTEE

An Advisory Committee was formed to assist North Country Council staff by providing input at several key stages of the development of the new regional plan, ***A Plan for New Hampshire's North Country***. The Advisory Committee provided valuable guidance on public engagement and strategy development throughout the process. The Advisory Committee included representation from North Country Transit, Carroll County RCC, Grafton-Coos RCC, Carroll County Transit, Transport Central, and the NCC Transportation Advisory Committee. In addition, the late Executive Councilor Raymond Burton provided valuable input on transportation issues on the Advisory Committee from the perspective of both constituents and GACIT.

FACILITATED PUBLIC MEETINGS

At the start of the project in fall 2012 a series of six widely-advertised public meetings were held around the region:

Albany Town Hall -September 25
Littleton Area Senior Center - October 25
Colebrook Town Hall - November 27
Plymouth Town Hall - October 16
Haverhill Municipal Building - November 8
Berlin City Hall - November 1

Discussion focused around two questions: what qualities of the North Country residents value most highly, and what the highest priority needs are.

LISTENING POSTS

In collaboration with the other regions, boxes containing comment cards and flyers about the project were produced and distributed around the region. Residents and visitors had the opportunity to report "what is best about this area" and "what could make it even better." Boxes were put in town offices, libraries, Laundromats. Results were entered into the on-line survey (below) to make them available to the public.

WEBSITE

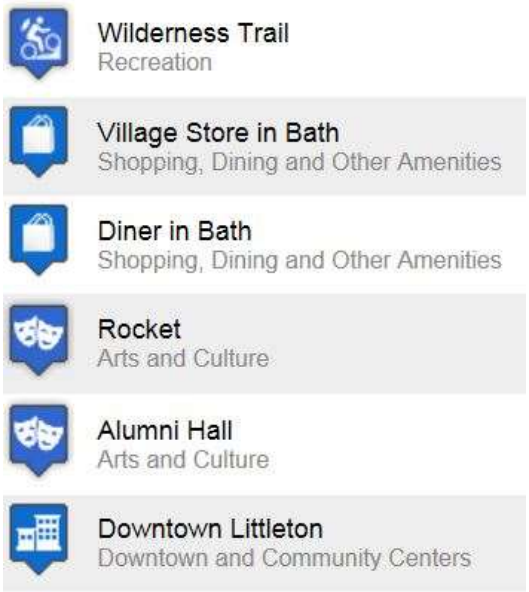
In concert with the other eight regional planning commissions North County Council utilized a website under the project name Granite State Future to advertise upcoming meetings, post meeting results, and collect input.

ON-LINE SURVEY

An on-line survey tool was incorporated into the Granite State Future website to provide anyone who did not have access to a listening post, or who chose to answer the questions on-line, another avenue to tell planners about their priorities. In addition, the QR code for the website was included in the annual report sent to each member community for the town report. One hundred seventy-two comments were provided via the comment cards (above) and on-line survey.

ON-LINE FORUM

Another feature on the Granite State Future website was the On-line Forum. This tool enabled the user to pin comments in various categories to a map of the region.



The on-line forum also enabled users to add comments of a more regional nature without

pinning them to the map, and “vote” the comments of others up or down. One-hundred seventeen comments were received via the on-line forum.

ONE-ON-ONE CONVERSATIONS

Staff went on the road to directly ask residents "what is best about this area" and "what could make it even better." This provided an opportunity to ask clarifying questions and have additional discussion on issues of concern to residents. A table was staffed at the 2012 and 2013 Lancaster Fair, and visits arranged with specific locations throughout the region such as a local food shelf, and meetings of local groups such as the Grange.

UNH SURVEY CENTER

With input from North Country Council staff and the state's eight other regional planning commissions, the UNH Survey Center developed a survey covering several topics of interest. The Survey Center staff conducted the survey by telephone in each of the regions, making sure to collect enough responses to obtain a statistically significant sample for each region. Due to the size and diversity of the North Country Region, North Country Council commissioned oversampling to ensure a statistically significant comparison among the group of communities in Coos County, those in Carroll County and those in northern Grafton County.

UNH COOPERATIVE EXTENSION & NH LISTENS

UNH Cooperative Extension staff conducted small group interviews with a number of focus groups who were identified by the regional planning commissions as having some needs and concerns that are not always conveyed through "traditional" public participation methods. These included disabled residents, those with low incomes, minorities, senior citizens, youth, homeless, recent immigrants, and veterans.

NH Listens held two Listening Sessions in the North Country for this project - in Plymouth and Berlin. These sessions followed a standard format with break-out group discussion facilitated by volunteers with the help of by sample questions, followed by free flowing discussion.

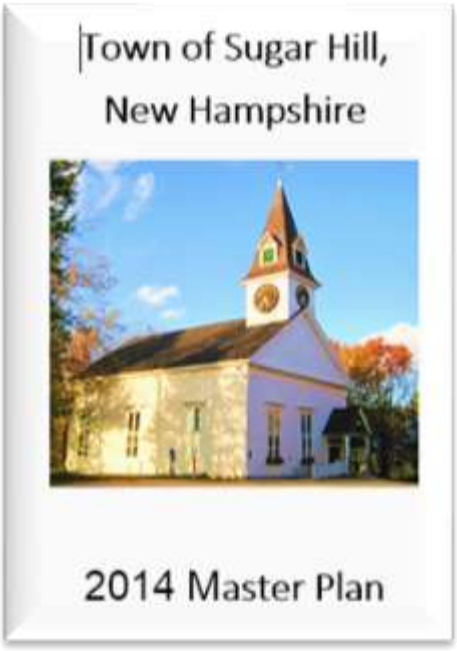
NORTH COUNTRY REPRESENTATIVES

North Country Council Representatives (regional planning commissioners) held a series of meetings on a range of topics of concern, covering data and trends regarding the region's housing, transportation,

economic development, energy and natural resources. Subsequent meetings focused on the input received through the public engagement process, needs, priorities and strategies. The region's experts on economic development and transportation were invited to those discussions to participate in brainstorming.

MASTER PLANS

Municipal master plans represent the community consensus on goals, priorities and needs. North Country Council staff reviewed those that were available in the Council library or on-line as one of the starting points for development of proposed strategies for the region.



MUNICIPAL SURVEYS

Surveys were mailed to every member of a selectboard/city council or planning board in the region to obtain information on the region's needs and priorities specific to municipalities.

OPEN HOUSES

Each North Country Council Representative, selectboard/city council and planning board was provided a copy of the preliminary draft plan for review and comment prior to initiating the formal public hearing process. Copies of the preliminary draft were also sent to members of the Council's Comprehensive Economic Development Strategy Committee and Transportation Advisory Committee. The public was provided a copy in each library in the region, with notification via a widely distributed press release.

A series of open houses was held around the region in September 2014 to give residents the opportunity to engage in one-on-one dialog with Council staff about the preliminary draft. The open houses were held

from 5:30 PM to 7:00 PM at the following town offices:

Albany, September 8
Stratford, September 16
Gorham, September 18
Haverhill, September 23
Franconia, September 29
Rumney, September 30

Notice of the open houses was included with the preliminary draft plans, sent to the region's newspapers, posted on the Council website and sent to all of the Council's email contacts. These open houses enabled over fifty North Country residents to engage in one-on-one conversations with Council staff about issues of concern and priorities, and brainstorm about strategies for addressing North Country issues.

BOOTHS

To solicit more detailed information specific to transportation priorities, booths were set up at in three locations around the region.

- Center Conway Shaws, October 16, 2014
- Colebrook LaPerle's IGA, Colebrook, October 17, 2014
- Littleton Walmart, October 18. 2014

ADDITIONAL OUTREACH TO MUNICIPALITIES

In a parallel effort with the solicitation of Ten Year Plan projects in 2015, each municipality was given the opportunity to submit information on other local transportation issues.

WHAT THEY TOLD US

The number one concern of every group of residents providing input, at public meetings, community groups, the on-line survey, was the lack of good paying jobs in the region. It is clear that many North Country residents are having trouble meeting basic needs because of the lack of jobs that pay a livable wage. Many people are underemployed, or having to cobble together part-time seasonal jobs to try to make ends meet. With the rising cost of housing and energy, people feel the gap is widening between wages/incomes and what is needed to meet basic needs.

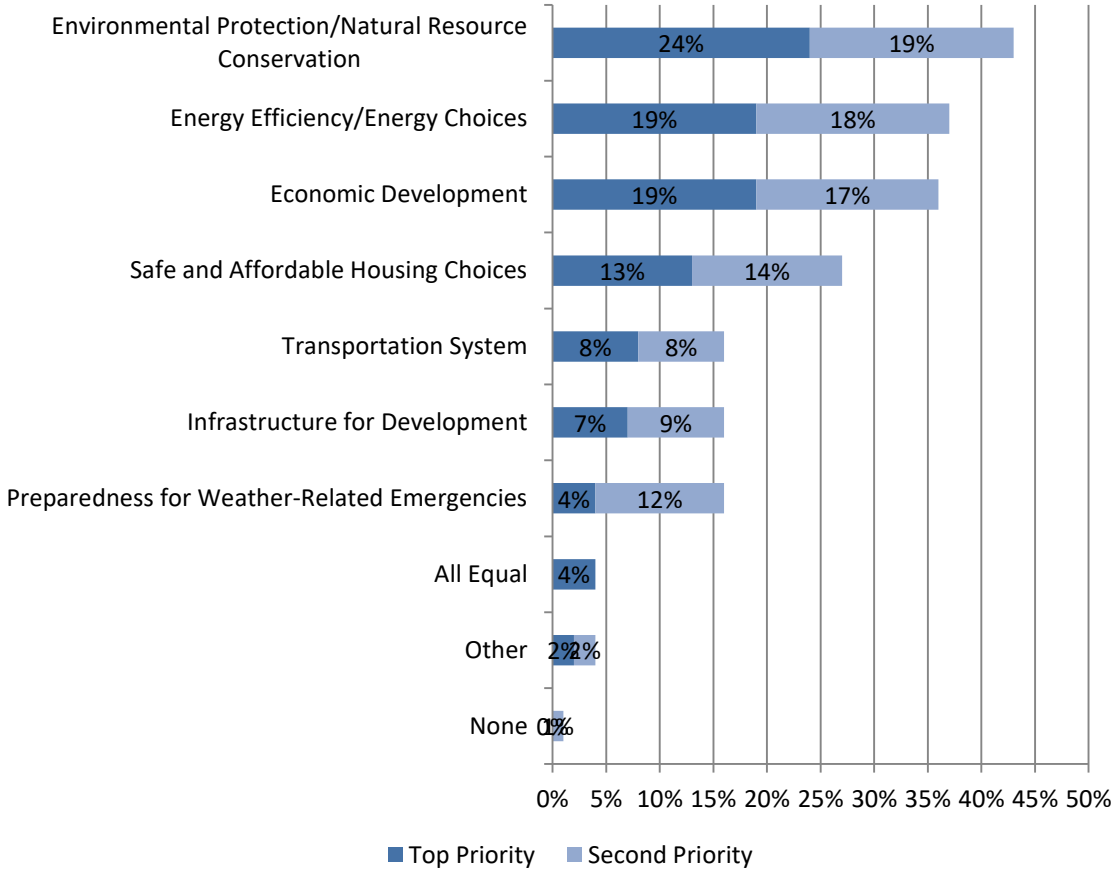
Meeting basic needs was also the most common theme for the sessions New Hampshire Listens held around the state, including Berlin and Plymouth, and for the focus group conversations UNH Cooperative Extension held with seniors, youth, and other subsets of the population who we thought may have needs that were different from those regional planners typically hear from. Residents in both the NH Listens sessions and the focus groups shared concern for livable wage jobs with benefits, safe affordable housing, education for themselves and their children to ensure they could compete for good jobs. Each group recognized the importance of transportation to connect all the needs of daily life.

NH Listens & UNH Extension

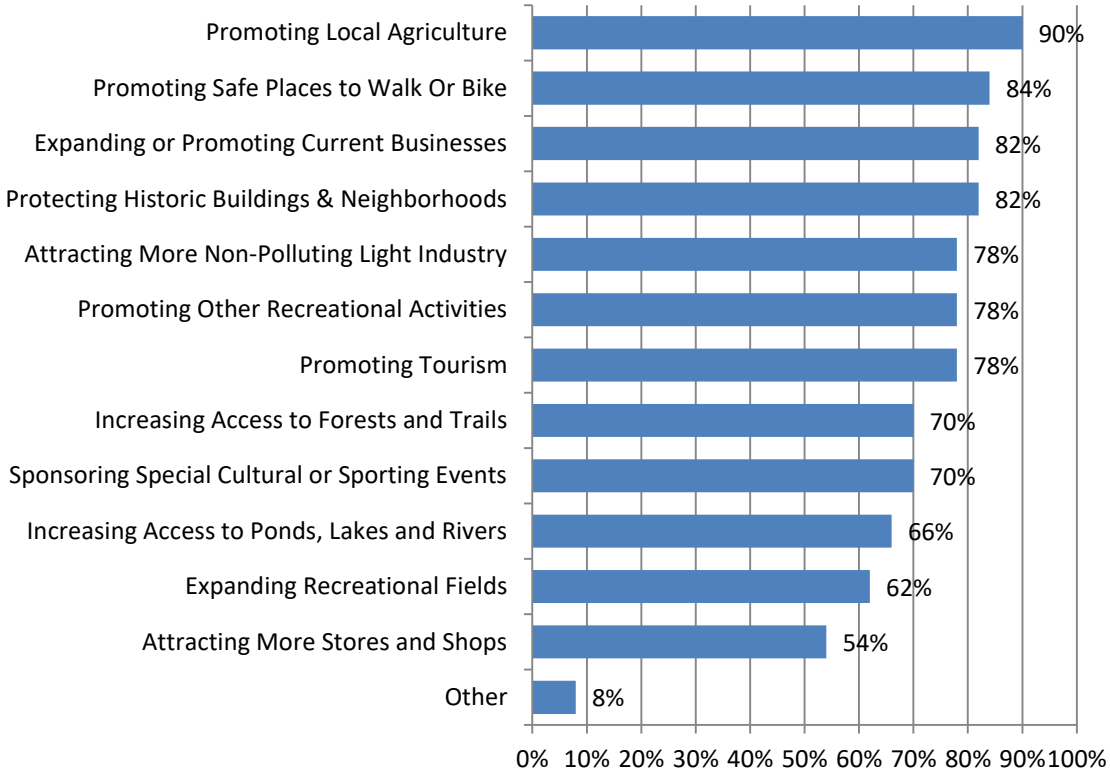
Focus Groups	Listening Sessions	Combined
Transportation	Employment and Education	Transportation
Housing	Keeping and Educating Youth	Housing
Jobs	Aging Population	Jobs
Access to Social Services	Transportation	Schools/Education
Youth recreation	Housing	Higher Education

The UNH survey enabled a more in-depth look at some of these areas, to identify priorities and learn more about what kinds of approaches residents would support.

PRIORITIES FOR INVESTING PUBLIC DOLLARS

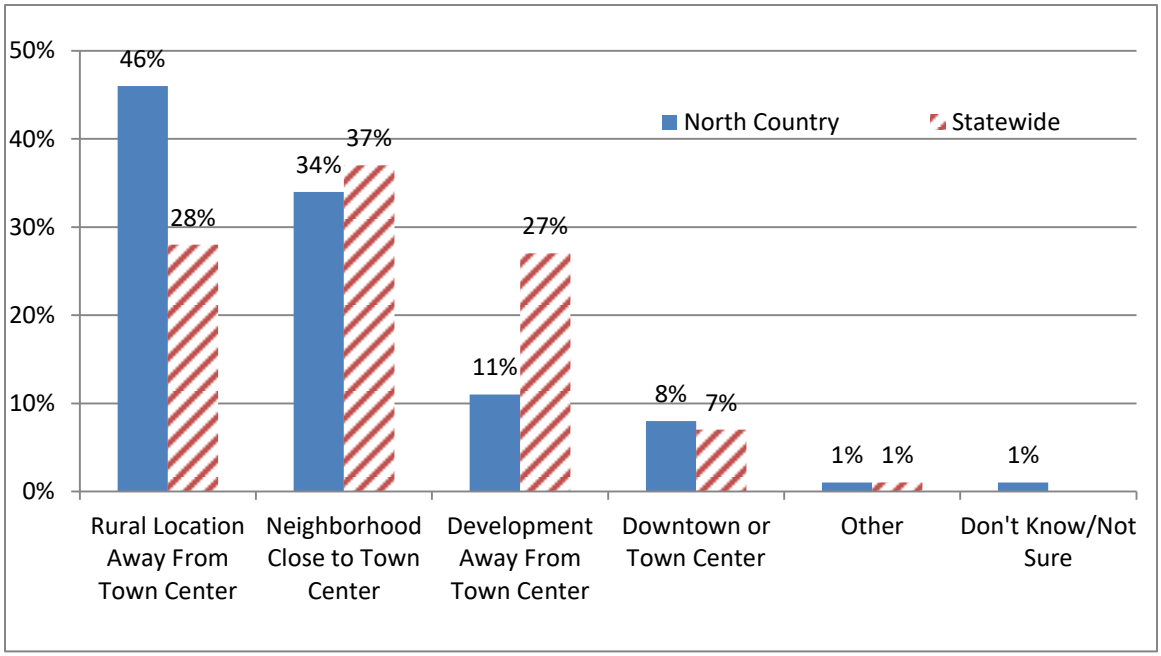


WHAT SHOULD BE ACTIVELY ENCOURAGED IN YOUR COMMUNITY?



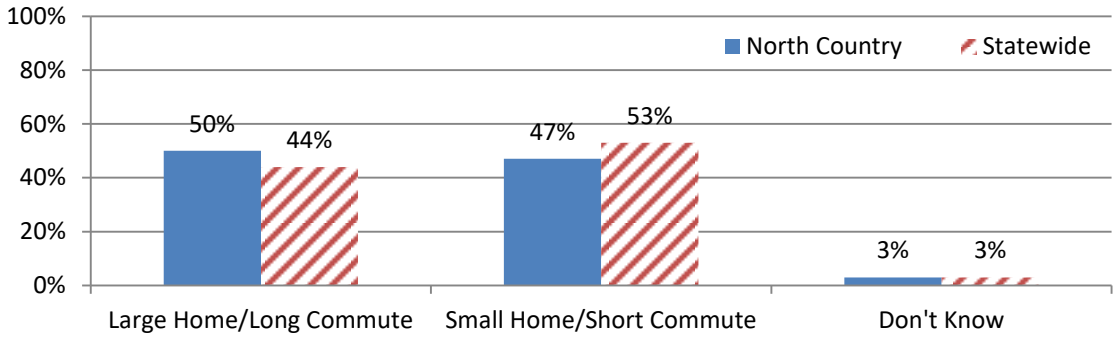
Questions were included on the survey aimed at learning about preferences for development patterns. Residents were asked what kind of neighborhood they live in now. As expected, North Country residents' answers look quite different than the statewide responses viewed as a whole. For both state-wide and North Country samples, a bit over one-third of respondents described where they live as a "neighborhood close to a town center"; however, North Country residents were much more likely to describe where they live as a "rural location" away from a town center vs. the statewide sample where people were much more likely to describe their home as a "development" away from a town center.

HOW WOULD YOU CLASSIFY THE NEIGHBORHOOD WHERE YOU LIVE?



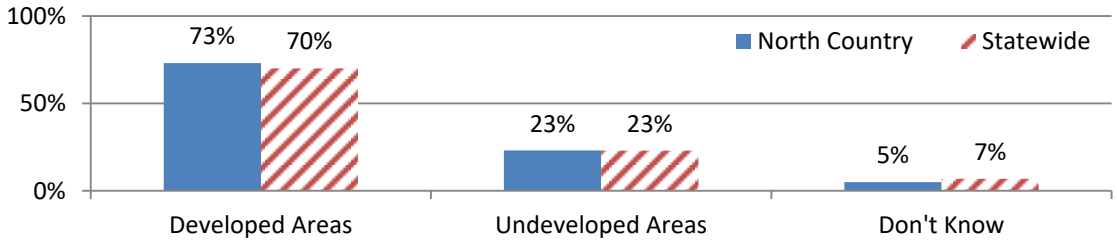
When asked what type of neighborhood they would prefer, given a choice between a large home with a long commute or a small home with a short commute, responses also differed between the North Country and the state as a whole, with a few more North Country residents reporting a higher preference for a larger home over a shorter commute.

LARGE HOME WITH LONG COMMUTE OR SMALL HOME WITH SHORT COMMUTE?



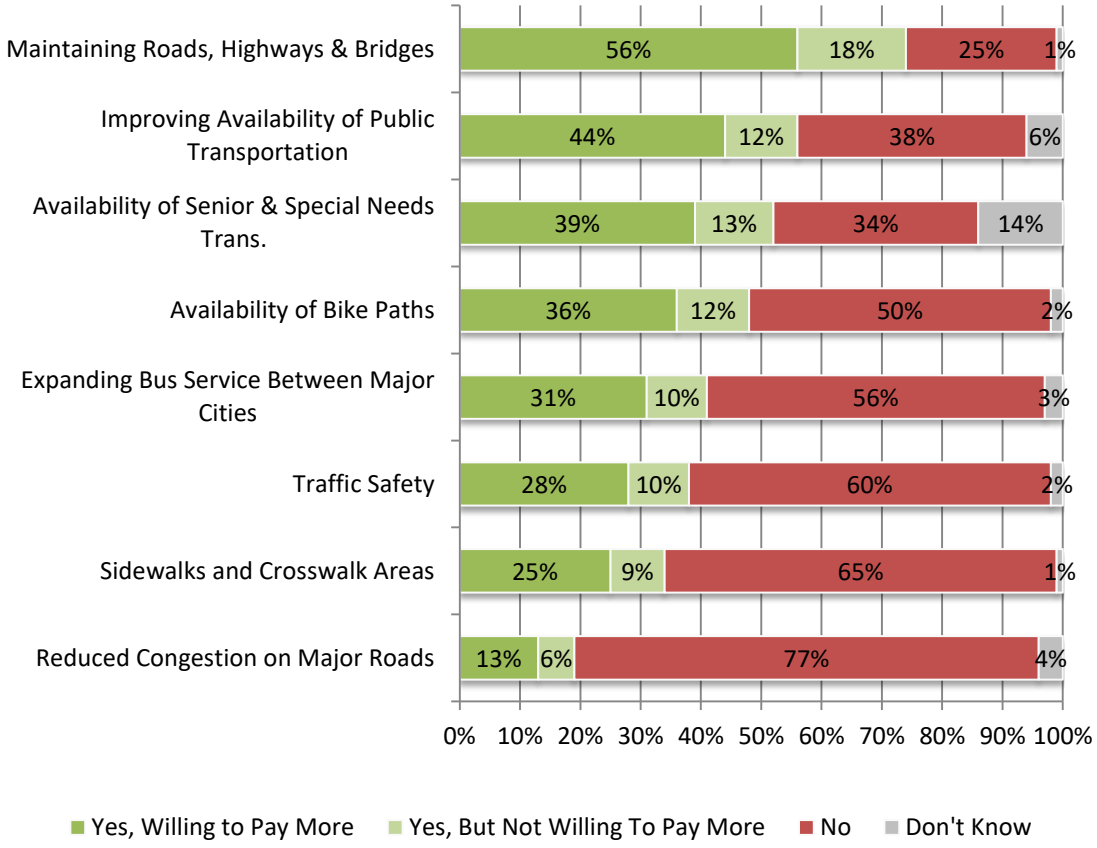
Similar results were seen when respondents were asked to choose between a mixed neighborhood with stores and a neighborhood that is residential only - North Country respondents chose a residential-only neighborhood slightly more often than statewide respondents. Seventy-three percent (73%) or respondents, slightly more than statewide, favored locating future development in parts of the North Country that are already developed.

WHERE SHOULD FUTURE DEVELOPMENT OCCUR IN YOUR PART OF THE STATE?



As shown earlier, transportation was a pretty low priority for public investment for most respondents. Drilling down a bit more into the specifics of that topic, respondents felt that the highest priority for transportation spending was maintaining roads, highways and bridges. In fact, the majority of respondents reported that they would be willing to pay more for this additional maintenance.

SHOULD POLICY MAKERS INVEST MORE MONEY IN TRANSPORTATION?



MUNICIPAL SURVEY

North Country Planning Boards, Selectboards and the Berlin City Council were each mailed a packet of surveys for each member to fill out. The survey asked a series of questions about regional and local needs and priorities, development patterns and other community planning issues.

Municipal officials identified emergency services, **transportation**, economic development, and education as the four areas of existing or emerging needs that can best be addressed by more than one community working together. Other areas mentioned by several respondents were social issues, recreation/trails, energy, and water resource issues.

The highest priorities for regional planners were identified by municipal officials as protecting water quality and improved high speed internet. Closely following were energy efficiency, attracting new businesses that pay livable wages, training and guidance for planning boards, and sharing of municipal services and purchases.

NCC REPRESENTATIVES TRANSPORTATION ROUNDTABLE

On January 29, 2014 to kick off this Regional Transportation plan update, North Country Council Representatives held a discussion with the public on the transportation needs of the North Country. Panelists from several organizations, including NHTA, NCC TAC, Grafton-Coos RCC, and Carroll County RCC assisted NCC staff in providing background, leading the discussion and answering questions.

There was agreement among panelists that the highest priorities for transportation in the North Country are:

* Support for existing public transportation services and busses

* Increased maintenance of highways and bridges

* Better coordination of transportation services for non-drivers to increase service and reduce waste

* Increased use of rail to reduce wear and tear from trucks on highways

*Recognition that transportation is needed to connect people with jobs and school, not just medical appointments

Other points made in the course of the discussion of needs, strategies and things NCC can do to help:

- Need to make the point to towns and other funders that the cost of not providing transportation is much higher, for example health care costs from missed medical appointment or lack of contact with others.
- There is a statute that allows towns to charge $5 on the registration fee for any transportation need in the community. About 31 towns in the state are using this – e.g. Lebanon for public transportation, Hanover for bike/ped, Concord for building roads.
- Federal money all needs local match – from 20% to 50%.
- Educating towns and the public about the need for and benefits of public transportation is something NCC could help with. One way would be through guidance to advisory councils.
- It was suggested that NCC could organize the requests so each provider isn't asking each town for support. It also pointed out that that might put NCC in a difficult position since we are supported by town dues.
- Large employers could organize van pools and then let smaller businesses participate to enable them to recruit employees from rural areas. There has also been some experience that van pools up here don't work even for large employers unless more of a disincentive to driving.
- There is concern about the work force decreasing as the population ages.
- It was pointed out that the term "buses" in a rural area might mean 8 passenger van, or 16, or 24 after demand increased.
- Some felt volunteer drivers are the most appropriate approach for our rural area. Others pointed out that the Carroll County busses for example all have lifts for those who can't walk or do stairs.
- Those providers with vans dispatch them to pick up the riders along the way who are going in same direction vs if relying on volunteer drivers only it is usually wasteful with very often several following the same path.
- Plymouth State University could operate Wildcat Transit on a schedule that meets commuter needs as well as student needs like it is done in Durham and the Upper Valley. Right now the schedule changes when classes end.
- Grafton County Senior Citizens Council provides 45,000 rides per year with the 10 senior center vans for medical appointments and shopping. The 3 vans in Plymouth provide 14,000 rides per year to area towns. They were purchased through DOT with 80% federal funds and 20% state and local fundraising. DEAS point of service money has enabled them to serve disabled residents who are not over 65. The senior centers also have volunteer drivers for medical appointments.
- The state's rideshare programs are working together to try to get DOT to restart funding for the on-line ride matching service.

- NH provides less funding for public transportation than most states.
- There is concern about gas tax money going to other agencies.
- Planning ahead is important; we should all continue to work toward getting needs on the 10 year plan.
- The safety community should be involved in our discussions since they also have to respond to emergencies on the roads.
- A donor program could be set up like the organ donor one to establish an endowment for transportation.
- There is discussion of an overnight train from Portland to Montreal that would stop in berlin or Gorham and connect to Boston or the Downeaster.

VISION FOR THE FUTURE

The vision statements below are intended to give direction for policies, programs, partnerships, and projects throughout the North Country in the coming years. They have evolved over time with input from many sources. They should be revisited periodically and vetted with the region's residents on an ongoing basis.

> ***"Community" in the North Country will continue to mean independent-minded people helping each other.***

The North Country landscape will continue to be defined by its working forest and farms; its patchwork of villages and community centers; and its scenic and natural resources, with room for both wildlife and outdoor recreationists. Our rural character will be sustained by high quality, natural resource-based clusters of industries including agriculture, energy, tourism, manufacturing, the arts and other industries that help to maintain our open spaces and our connections to the past.

We will be strengthened by improved educational and cultural opportunities, competitive telecommunication, transportation and entrepreneurial infrastructures, and a broad base of employment offering economic opportunity in a region fully informed about and engaged by modern technologies, training, and the needs of business.

An increased number of young people will choose to live in the region due to the increase in livable wage jobs, high quality outdoor environment, strong sense of community, housing choices, and improved measures of well-being such as health and education; they will bring new energy and new ideas.

Everyone will have access to both transportation and safe affordable housing.

REGIONAL STRATEGIES GUIDING THE TRANSPORTATION PLAN

The strategies below from ***A Plan for New Hampshire's North Countr***y, the North Country Council's new regional plan, represent those with particular importance for planning the region's transportation system.

RECOGNIZE AND FOCUS ON OUR DOWNTOWNS AS AREAS OF OPPORTUNITY.

- Prioritize projects that will strengthen the ability of our downtowns and villages to provide homes and livable wage jobs for those that live there.

ENSURE VISITORS TO NEW HAMPSHIRE'S NORTH COUNTRY HAVE A POSITIVE EXPERIENCE.

- Maintain and staff an adequate number of rest areas, with a priority on those at key gateways to the region.
- Manage peak traffic in areas prone to congestion through both highway improvements and provision of transportation alternatives.
- Strengthen the Scenic Byways as one option for those

desiring a self-guided Natural and Cultural Heritage tour.

- Incorporate consideration of the needs of the growing number of senior visitors into transportation planning, visitor services and activities.

REDUCE THE COST OF LIVING IN THE NORTH COUNTRY

REDUCE THE AMOUNT OF ENERGY USE REQUIRED

Increase the opportunity to live within walking distance of jobs and services.

For those who do not live in walking distance of jobs and services, increase access to alternatives to single occupant vehicles such as RideShare and vanpools.

REDUCE SINGLE OCCUPANT VEHICLES

Reduce the number of single occupant vehicles by providing alternatives such as carpooling and van pools through North Country Rideshare.

Support the efforts of New Hampshire's regional RideShare programs and Commute Green New Hampshire to develop a coordinated system providing ease of access to transportation alternatives.

INTERMUNICIPAL COOPERATION

Build on the many great examples throughout the region of communities sharing equipment and personnel to ensure that local property taxes are not unnecessarily paying to duplicate efforts.

MAKE BEST MANAGEMENT PRACTICES A WAY OF LIFE

PROTECT WATER QUALITY

Protection of the region's environment and natural resources in general, and drinking water resources in particular, was ranked one of the highest priorities by residents. The region's water resources play a crucial role in community and economic development, as well as forming a key ingredient for the tourism and recreation industries upon which the region's economy depends. Some of the strategies for protecting water quality in the North Country are:

- Continue to integrate Best Management Practices into all activities with the potential to cause pollution of surface or groundwater directly or indirectly through increased stormwater runoff and/or erosion.
- Continue to increase the public's understanding of the interaction between human activities and water quality, including for example, road de-icing, agricultural, improperly maintained septic systems, underground storage tanks, and improper disposal of hazardous wastes.

REDUCE STORMWATER RUNOFF

Incorporate improvements in stormwater management in every road, sidewalk/trail, and parking lot project.

Incorporate best management practices for sedimentation and erosion control into all development projects and other activities which disturb vegetation and soil.

INFRASTRUCTURE

Prioritize improvements to our existing roads, sidewalks, water supply and wastewater systems that are necessary for the continued health and safety of residents and businesses, those which will prevent additional future costs from deferred maintenance, and those which will enable increased development in existing villages and downtowns.

Promote and assist with the improvement and modernization of the region's stormwater infrastructure.

Inventory and assess the region's culverts and promote a regular program of upgrading those that are undersized or inadequately designed to handle the flow of stormwater and debris, or causing bank erosion threatening critical infrastructure. These should be prioritized according

to highway classification and function, traffic volumes, and availability of alternate routes. Obstacles to aquatic organism passage should be eliminated during reconstruction.

AIR QUALITY

Strive to reduce the region's carbon emissions through energy efficiency and increased use of renewable energy.

RECOGNIZE THE POWER OF COMMUNITY

Like many rural areas, the North Country is full of great examples of organized groups of volunteers getting things done, helping the community and each other. The barn raisings of yesterday are an often- cited example. Today we see the same spirit of groups of people helping each other with a variety of needs of daily life, from volunteer drivers to "energy raisings."

Build upon examples around the North Country, as well as other similar rural areas, of organized efforts to facilitate people helping each other with basic needs, such as community-organized rides for nondrivers, elder care networks, and homeshare programs.

Develop a social infrastructure to address the needs of our aging population for those things not generally considered "basic needs" but just as important to physical and mental health. These include whatever activities they enjoyed throughout their lives, such as social interaction with all age groups, getting outdoors safely to enjoy nature, participating in worship, shopping, eating out, and/or going to concerts or movies.

Support the efforts of local organizations striving to increase residents' access to basic needs. Examples include the efforts in Berlin to develop a Coop grocery store, and the work of groups such as AHEAD and the

IT'S INDEPENDENT PEOPLE HELPING EACH OTHER

Morrison to increase the supply of residential options for the region's elderly and disabled.

Partner with educational institutions to engage younger residents in volunteer activities. This will both increase the capacity of the volunteer activity and provide "real world" education for the students.

Ensure that the value of the work of volunteers is acknowledged.

Explore opportunities to create volunteer pools among organizations conducting similar activities; exploring opportunities for additional inter-municipal cooperation.

Utilize the time of volunteers as efficiently as possible. This includes such things as: ensuring that meetings are productive and engage all participants, and; coordinating the timing of activities of similar organizations.

MITIGATE THE IMPACTS OF EXTREME WEATHER EVENTS

Increase implementation of local hazard mitigation plans by integrating hazard planning with other local planning activities.

Keep people and property out of mapped and other known flood hazard areas.

Map erosion hazard areas (where the course of the river is likely to move) and incorporate into flood hazard mitigation activities.

Identify critical infrastructure in flood hazard and erosion hazard areas. Prioritize protection, relocation, and identification of alternatives. Protect and restore flood storage capacity upstream from villages and downtowns. This means, for example, maintaining the capacity of wetlands and floodplains to store floodwaters and, in some cases, restoring the river's access to the floodplain.

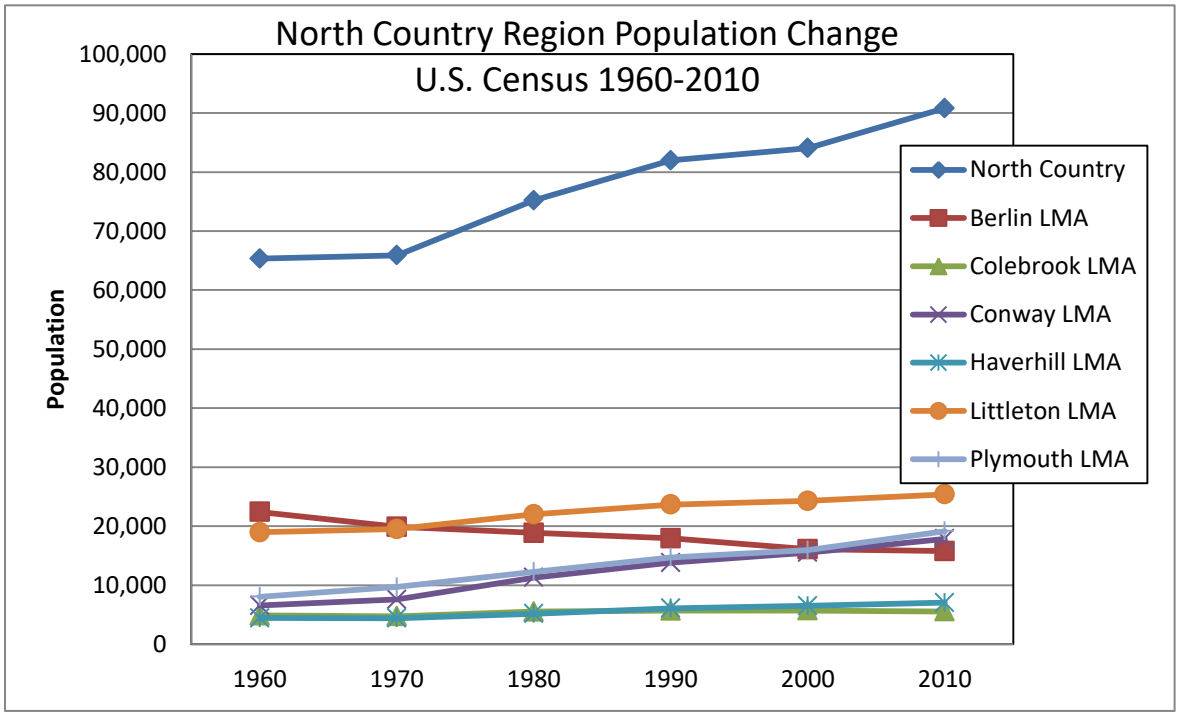
Inventory and assess the region's culverts and promote a regular program of upgrading those that are undersized or inadequately designed to handle the flow of stormwater and debris, or causing bank erosion threatening critical infrastructure. These should be prioritized according to highway classification and function, traffic volumes, and availability of alternate routes. Obstacles to aquatic organism passage should be eliminated during reconstruction.

SECTION III REGIONAL OVERVIEW

DEMOGRAPHICS

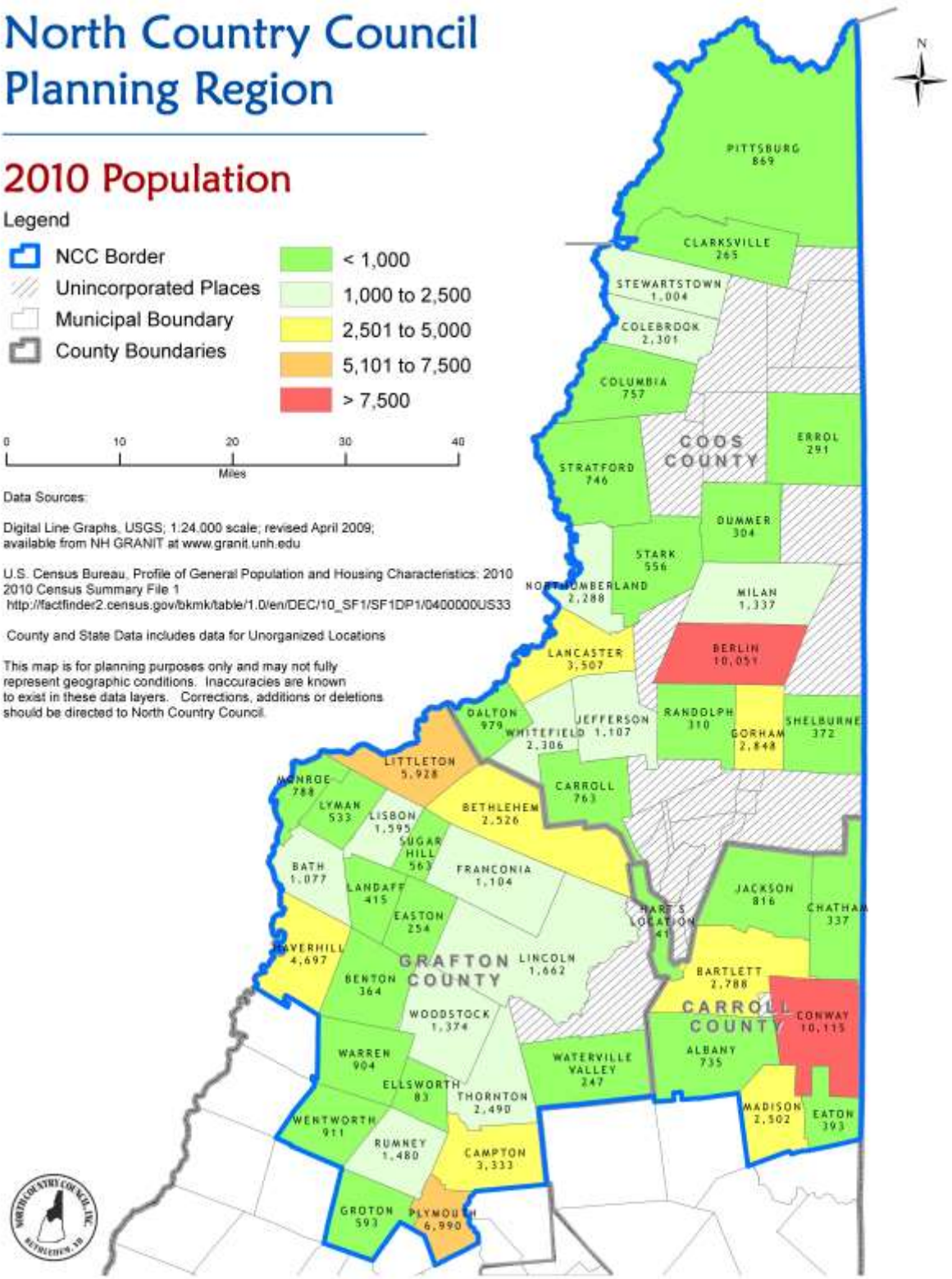
As of the 2010 U.S. Census the year-round population of the North Country Council Planning Region was 90,813. The largest communities were Conway (10,115) in Carroll County and Berlin (10,051) in Coos County. Due to the large geographic area covered by the region, several smaller communities also serve the role of socioeconomic centers for the surrounding communities. These are: Plymouth (6,990), Littleton (5,928), and Haverhill (4,697), all in northern Grafton County, and Colebrook (2,301) in Coos County. The vast majority of North Country towns have fewer than 2,500 residents; many have fewer than 1,000 residents. The region also includes the state's 25 Unincorporated Places where 94 residents were counted in 2010.

The North Country Council Planning Region's population has grown substantially over the past fifty years; however, this growth has not been uniform across the region. The graph below shows the population growth for the region as a whole, along with the population change for each labor market area subset. As shown, most of the growth has been in the Littleton, Conway and Plymouth areas. The Berlin area has lost population, while Colebrook and Haverhill have remained fairly steady.

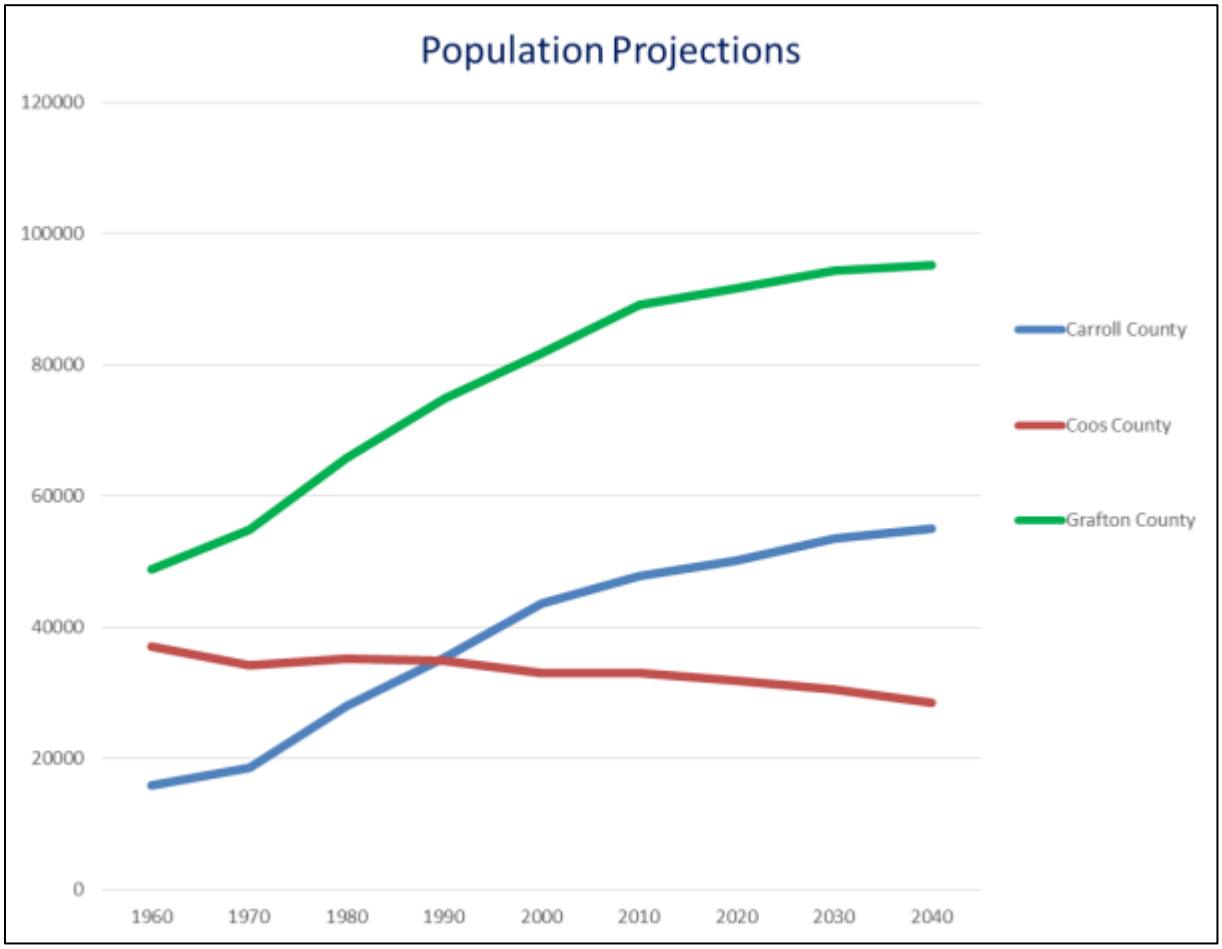


North Country Council Planning Region

2010 Population

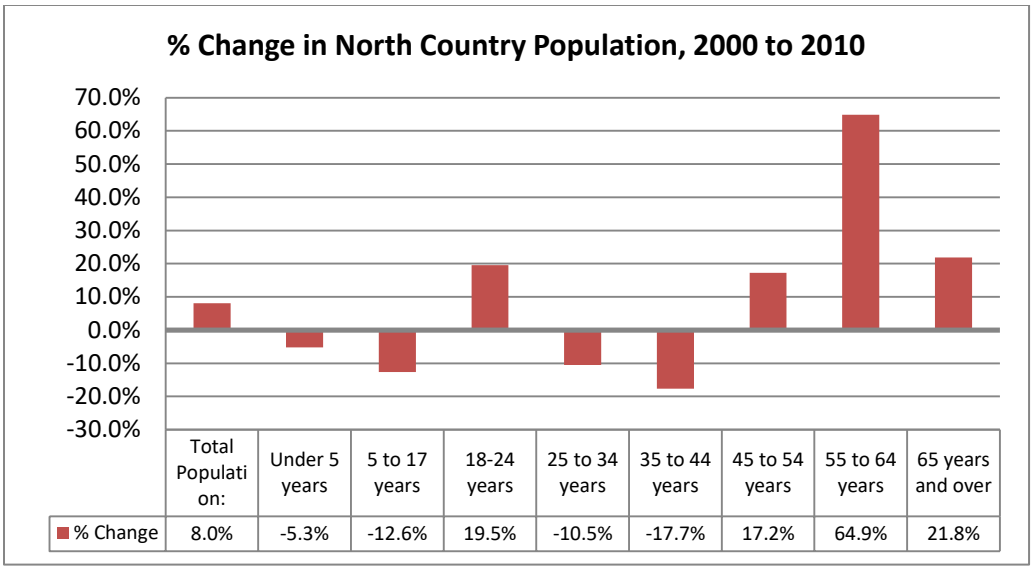


Population projections for the three counties – Coos, Grafton and Carroll - show continued population loss in Coos County, and continued but slower growth in Carroll and Grafton Counties over the next several decades.[1]



The population trends have not been uniform among age groups. As for the rest of the state, the largest increase in population by far in the North Country planning region has been in the 55-64 age group. Smaller increases were seen in the 18-24, 45-54 and 65 and over age groups. The population of children under 18 decreased, as did the population 25-44.

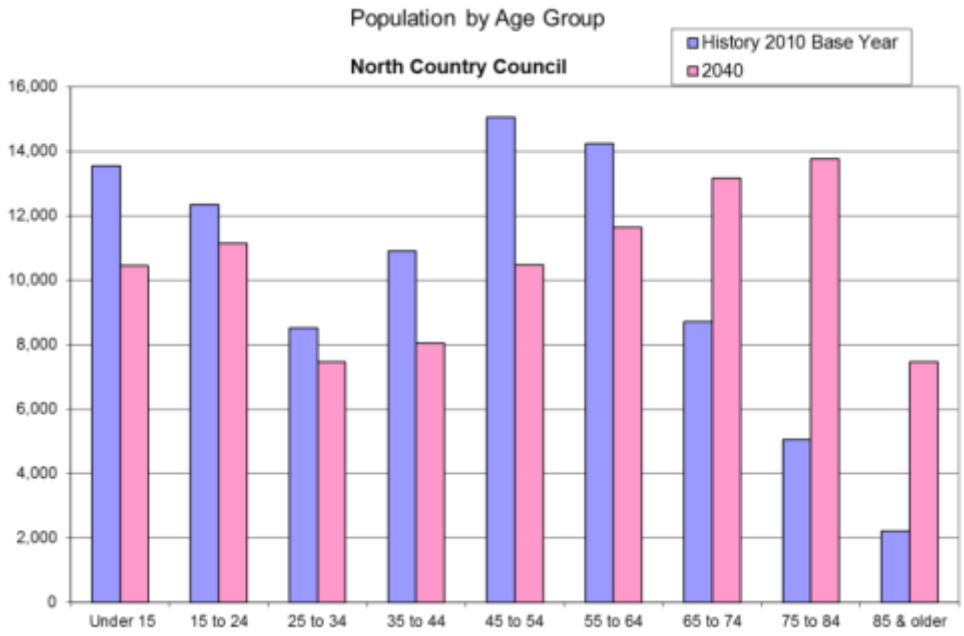
[1] Population projections are performed at the county level due to the availability of demographic data. The North Country Council Planning Region includes all of Coos County, northern Grafton County, and northern Carroll County.



	Total Population:	Under 5 years	5 to 17 years	18-24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years and over
% Change	8.0%	-5.3%	-12.6%	19.5%	-10.5%	-17.7%	17.2%	64.9%	21.8%

(U.S. Census 2000, 2010)

As shown in the table below, the shift toward the older age categories is expected to continue in the next several decades.



(NH Center for Public Policy Studies, 2013 Headship Model)

Seasonal homes and tourism affect traffic patterns and volumes throughout much of the North Country region. The growth in the number of seasonal homes has followed a different pattern than year-round population change. Although the year-round population was dropping in Coos County due to job losses, the number of seasonal homes increased by 18% in the Berlin LMA between 2000 and 2010 and by 45% in the Colebrook LMA during the same period (US Census). In the Conway LMA in Carroll County, both year-round population and seasonal homes grew by about 15% from 2000 to 2010 (US Census). In two of the region's three LMAs associated with Grafton County job centers, Littleton and Haverhill, growth in seasonal homes (30% and 29% respectively) far exceeded the growth in year-round population (4% and 8% respectively). Only in the Plymouth LMA, comprised of the remainder of the region's Grafton County towns, did the growth rate of year-round population (18%) exceed the growth rate of seasonal homes (12%).

More data are needed on seasonal traffic patterns in the region. Tourism in North Country is predominantly based on outdoor recreation and scenic drives. Peaks are associated with school vacations and holiday weekends, as well as special events. Many activities are weather dependent, affected by availability of snow or temperatures suitable for snow-making, fall foliage, or fair weather for summer activities.

Looking at employment as an indicator of changes in commuter traffic, NHES Economic & Labor Market Information Bureau projects slow job growth in the North Country's Service Industry jobs and virtually no growth in Goods-Producing jobs.

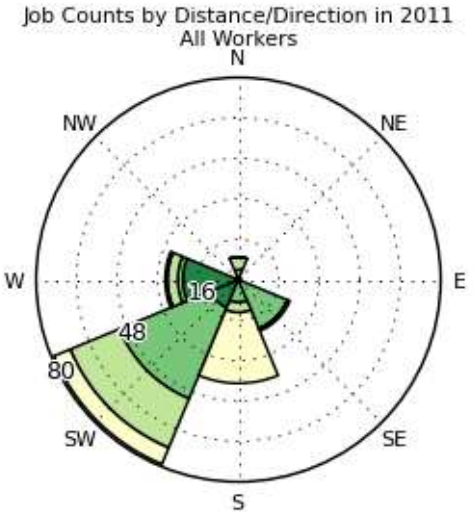
		Estimated	Projected	2010-2020 Change	
NAICS Code	**Industry**	**2010**	**2020**	**Numeric**	**Percent**
	Total Employment	**46,410**	**47,591**	**1,181**	**2.5%**
101000	***Goods-Producing Industries***	***5,660***	***5,670***	***10***	***0.2%***
11	Agriculture, Forestry, Fishing and Hunting	969	950	-19	-2.0%
21	Mining	35	32	-3	-8.6%
23	Construction	1,527	1,645	118	7.7%
31-33	Manufacturing	3,129	3,043	-86	-2.7%
102000	***Service-Providing Industries***	***37,246***	***38,629***	***1,383***	***3.7%***
22	Utilities	201	188	-13	-6.5%
42	Wholesale Trade	549	530	-19	-3.5%
44-45	Retail Trade	7,866	7,619	-247	-3.1%
48-49	Transportation and Warehousing	974	939	-35	-3.6%
51	Information	418	382	-36	-8.6%
52	Finance and Insurance	850	827	-23	-2.7%
53	Real Estate and Rental and Leasing	486	493	7	1.4%
54	Professional, Scientific, and Technical Services	654	638	-16	-2.4%
55	Management of Companies and Enterprises	474	500	26	5.5%
56	Administrative and Support and Waste Management Services	564	583	19	3.4%
61	Educational Services	4,468	4,722	254	5.7%
62	Health Care and Social Assistance	5,763	6,660	897	15.6%
71	Arts, Entertainment, and Recreation	1,724	2,018	294	17.1%
72	Accommodation and Food Services	7,189	7,554	365	5.1%
81	Other Services (Except Government)	1,356	1,311	-45	-3.3%
	Government	***3,710***	***3,665***	***-45***	***-1.2%***
	Self-employed and Unpaid Family Workers	***3,504***	***3,292***	***-212***	***-6.1%***
1. Does not include employment at Federal Correctional Institution, Berlin					
2. Employment for public schools and colleges is included in sector 61, *Educational Services.*					

(Source: NHES ELMI, Long Range Projections for Planning Regions, North Country Council Region)

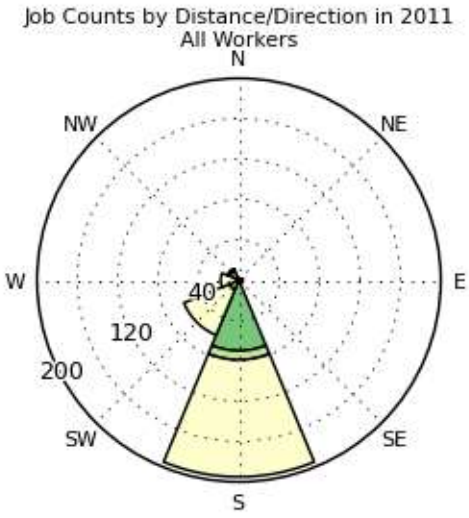
COMMUTING PATTERNS

Section IV examines the status of the transportation infrastructure in each of the region's commuting pattern-based travelsheds. The map of the region's labor market areas utilized in the development of ***A Plan for New Hampshire's North Country - Regional Plan for the North Country Council Planning Region*** are shown on the map that follows[2]. Some major changes have occurred in the region's employment picture since those labor market areas were delineated. Mills have closed, manufacturing has declined, retail centers have grown, the Balsam's Resort closed, and prisons were built. For this reason, commuting patterns were examined to verify that the labor market areas accurately represented subregional travel patterns within the region. In two cases it was found that commuting patterns had changed in a manner that indicated some adjustment in subregional boundaries was required.

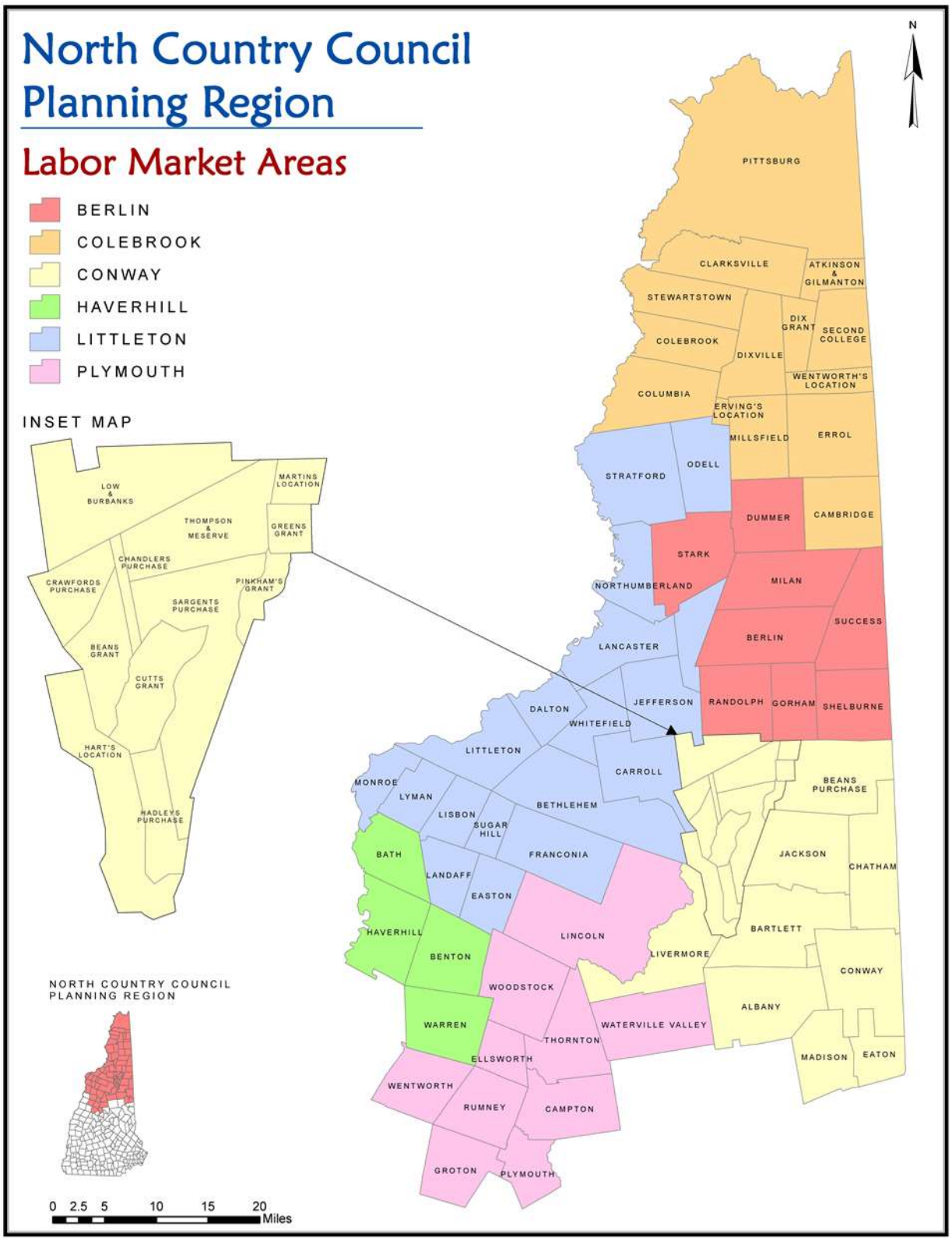
This chart shows commuting patterns for Stark residents generated by the U.S. Census Bureau's ***OnTheMap*** application. Formerly grouped with the Berlin Labor Market Area (LMA), the majority of Stark residents are now commuting to destinations in the Littleton Labor Market Area, to the east and southeast of Stark. Stark was grouped in the Littleton LMA travelshed.



The next chart from ***OnTheMap*** shows the commuting patterns for Errol residents. Formerly grouped with the Colebrook Labor Market Area (LMA), the majority of Errol residents are now commuting to destinations to the south of Errol. Errol and the adjacent Unincorporated Place Cambridge were grouped with the Berlin LMA travelshed for the purposes of this plan.



[2] NHES recently released an updated LMA map.


North Country Council
Planning Region
Labor Market Areas
BERLIN
COLEBROOK
CONWAY
HAVERHILL
LITTLETON
PLYMOUTH
INSET MAP
N
PITTSBURG
CLARKSVILLE
ATKINSON & GILMANTON
STEWARTSTOWN
DIX GRANT
SECOND COLLEGE
COLEBROOK
DIXVILLE
WENTWORTH'S LOCATION
COLUMBIA
ERVING'S LOCATION
MILLSFIELD
ERROL
STRATFORD
ODELL
DUMMER
CAMBRIDGE
STARK
NORTHUMBERLAND
MILAN
SUCCESS
BERLIN
LANCASTER
JEFFERSON
RANDOLPH
GORHAM
SHELBURNE
DALTON
WHITEFIELD
LITTLETON
CARROLL
BEANS PURCHASE
MONROE
LYMAN
LISBON
BETHLEHEM
SUGAR HILL
FRANCONIA
JACKSON
CHATHAM
BATH
LANDAFF
EASTON
BARTLETT
HAVERHILL
LINCOLN
LIVERMORE
BENTON
CONWAY
WOODSTOCK
ALBANY
WARREN
WATERVILLE VALLEY
THORNTON
MADISON
EATON
ELLSWORTH
WENTWORTH
RUMNEY
CAMPTON
GROTON
PLYMOUTH
LOW & BURBANKS
MARTINS LOCATION
THOMPSON & MESERVE
GREENS GRANT
CHANDLERS PURCHASE
CRAWFORDS PURCHASE
PINKHAM'S GRANT
SARGENTS PURCHASE
BEANS GRANT
CUTTS GRANT
HART'S LOCATION
HADLEYS PURCHASE
NORTH COUNTRY COUNCIL PLANNING REGION
0 2.5 5 10 15 20 Miles

The location of jobs presents challenges to the residents of this rural region. As shown below, the number of employed residents in Coos County exceeds the number of primary jobs in Coos County by over 2,700. Almost one-third (31.9%) of Coos County's working residents have to commute more than 50 miles per day to work; the statewide average is 8.4%.

	Carroll County	Coos County	Grafton County
Number of Employed Residents	16,284	13,792	36,171
Number of Primary* Jobs	17,336	11,035	46,250
Workforce **Deficit**/**Surplus**	**1,052**	**2,757**	**10,079**

(Source: U.S. Census Bureau, OnTheMap Application, and LEHD Origin-Destination Employment Statistics, Beginning of Quarter Employment, 2nd Quarter of 2002-2011)

Note: County figures include the entire county, including communities outside the NCC planning region in Carroll and Grafton Counties. The majority of jobs in Grafton County are south of the North Country region in the Hanover-Lebanon area.

For the majority of North Country residents there is no feasible means of transport other than the private automobile. The exceptions are the 8% that live in downtowns where they can walk to at least some jobs, shops and services (UNH RPC survey, 2013); or those who live on the limited public transit routes in Conway; Berlin and Gorham; and Lancaster, Whitefield and Littleton; and a handful who use alternative transportation such as bicycles. The result is that a large percentage of the household budget is needed for transportation. As shown below, housing costs vary throughout the region and are proportionate to incomes, transportation costs are about the same throughout the region. This makes transportation costs especially onerous for households in Coos County where the median income is much lower and transportation costs represent a higher proportion of the household budget.

County	**Median Income Family of Four**	**Housing Cost**	**as % of household income**	**Transportation Cost**	**as % of household income**
Carroll County	$50,865	$13,225	26%	$14,741	29%
Coos County	$37,853	$10,220	27%	$13,249	35%
Grafton County	$53,353	$14,405	27%	$14,405	27%

(Source: Location Affordability Portal, HUD and DOT, 2014)

HIGHWAYS AND BRIDGES

New Hampshire's highway network is made up of private, municipal, state and federal highways. Unlike some states, New Hampshire does not have county roads. The New Hampshire Highway system as established by the state legislature (RSA 229:5) includes the following categories:

Class I, Primary State Highways shall consist of all existing or proposed highways on the primary state highway system, excepting all portions of such highways within the compact sections of the cities and towns listed in RSA 229:5, V, provided that the portions of the turnpikes and the national system of interstate and defense highways within the compact sections of these cities and towns shall be class I highways

Class II, Secondary State Highways shall consist of all existing or proposed highways on the secondary state highway system, excepting all portions of such highways within the compact sections of the cities and towns listed in RSA 229:5 V.

Class III, Recreational Roads shall consist of all recreational roads leading to, and within, state reservations designated by the legislature.

Class III-a, Boating Access Highways shall consist of new boating access highways from any existing highway to any public water in this state. All class III-a highways shall be limited access facilities as defined in RSA 230:44. Class III-a highways shall be subject to the layout, design, construction, and maintenance provisions of RSA 230:45-47 and all other provisions relative to limited access facilities, except that the executive director of the fish and game department shall have the same authority for class III-a highways that is delegated to the commissioner of the department of transportation for limited access facilities. A class III-a highway may be laid out subject to the condition that it shall not be maintained during the winter months. A class III-a highway may be laid out subject to gates and bars or restricted to the accommodation of persons on foot, or certain vehicles, or both, if federal funds are not used. The executive director of fish and game may petition the governor and council to discontinue any class III-a highway.

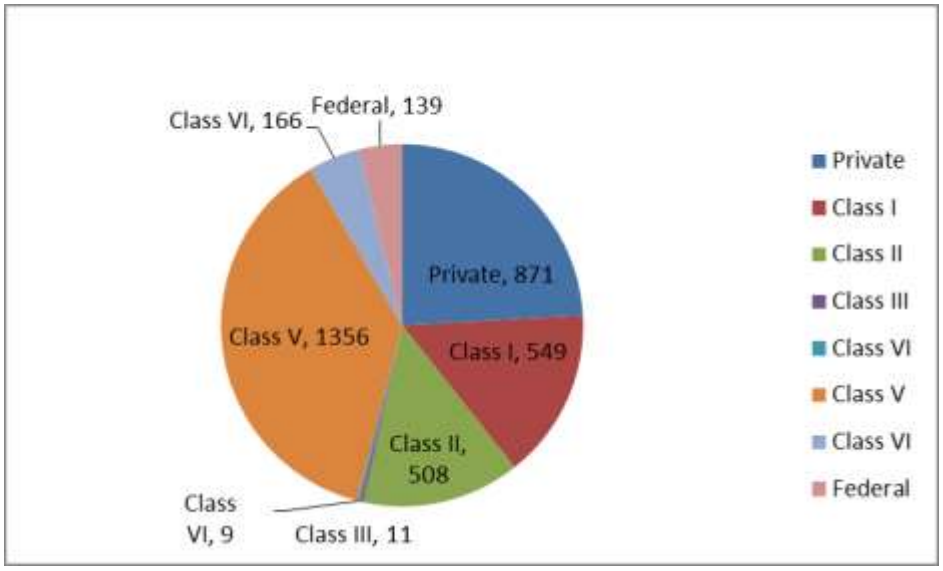
C*lass IV, Urban Street Compacts*, shall consist of all highways within the compact sections of cities and towns listed in RSA 229:5 V. The compact section of any such city or town shall be the territory within such city or town where the frontage on any highway, in the opinion of the commissioner of transportation, is mainly occupied by dwellings or buildings in which people live or business is conducted, throughout the year and not for a season only. Whenever the commissioner reclassifies a section of a class I or class II highway as a class IV highway, the commissioner shall prepare a statement of rehabilitation work which shall be performed by the state in connection with the turnback. No highway reclassification from class I or II to class IV shall take effect until all rehabilitation needed to return the highway surface to reputable condition has been completed by the state. Rehabilitation shall be completed during the calendar year preceding the effective date of the reclassification. A copy of the commissioner's statement of work to be performed by the state shall be attached to the notification of

reclassification to class IV, and receipt of said statement shall be acknowledged, in writing, by the selectmen of the town, or the mayor of the city, affected by the reclassification.

Class V, Municipally Maintained Roads, shall consist of all other traveled highways which the town has the duty to maintain regularly and shall be known as town roads. Any public highway which at one time lapsed to Class VI status due to 5-years' non-maintenance, as set forth in RSA 229:5, VII, but which subsequently has been regularly maintained and repaired by the town on more than a seasonal basis and in suitable condition for year-round travel thereon for at least 5 successive years without being declared an emergency lane pursuant to RSA 231:59-a, shall be deemed a Class V highway.

Class VI, Unmaintained Highways, shall consist of all other existing public ways, and shall include all highways discontinued as open highways and made subject to gates and bars, except as provided in paragraph III-a, and all highways which have not been maintained and repaired by the town in suitable condition for travel thereon for 5 successive years or more except as restricted by RSA 231:3, II.

As shown in the graph below, municipally-maintained roads are the largest category in the North Country Region, forming 56% of the public roads (not counting federal WMNF roads).



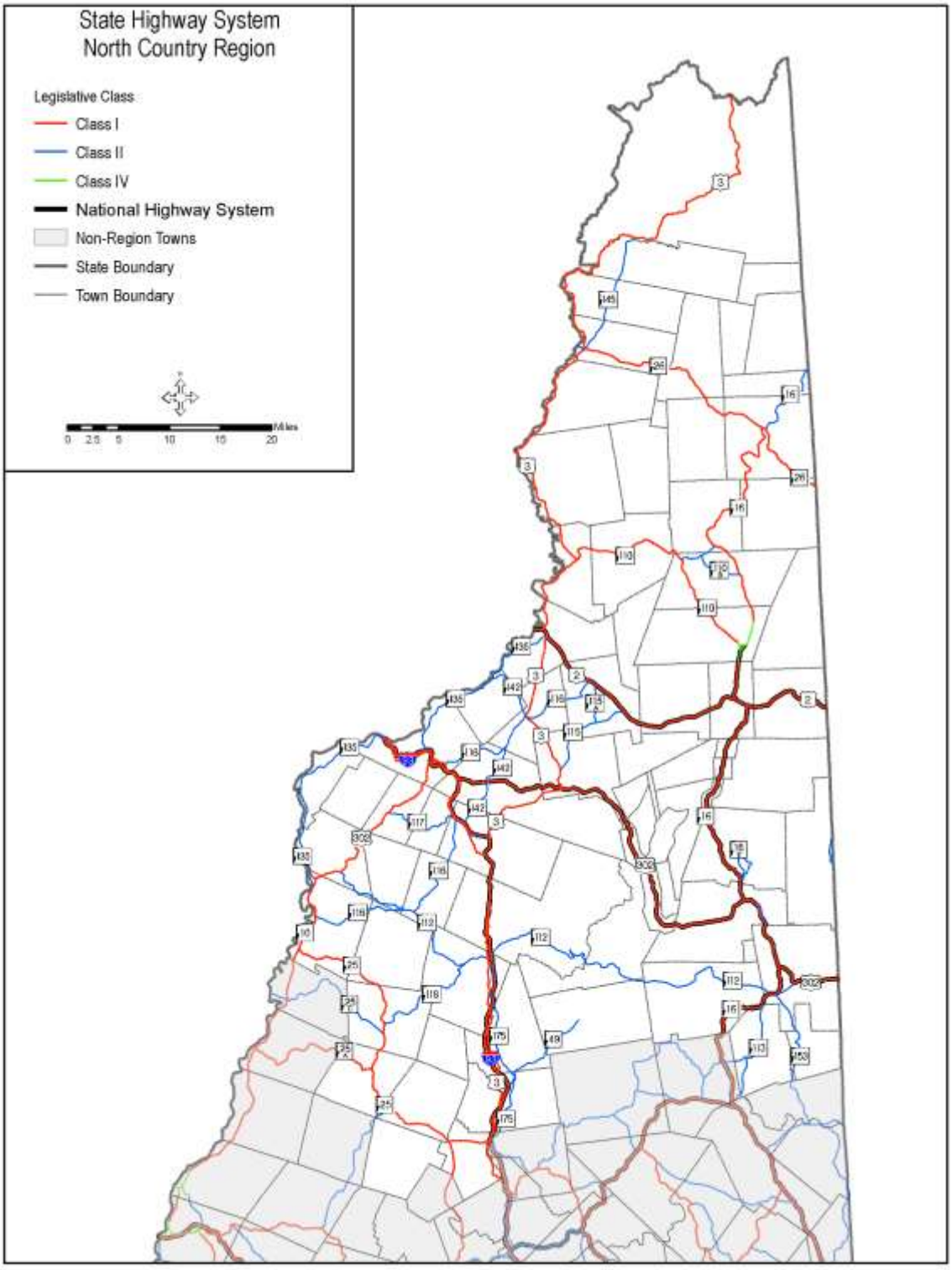
Road Class Mileage

The table below shows the mileage by road class for each labor market area-based travelshed as well as the total mileage by class and by travelshed. The Littleton LMA travelshed has a significantly larger number of total miles than any other area in the NCC planning region, with nearly half of those miles being made up of Class V roads. In fact, nearly 38% of all road miles in the NCC region are Class V roads. There are very few miles of Class III and IV roads in the region, making up .3% and .2% the total miles respectively. Nearly 30% of the miles of private roads in the region are located in the Colebrook LMA travelshed. The Plymouth and Conway travelsheds have nearly the same total miles, at 728 and 726 respectively. The mileage of Class II, III, IV and V roads in these regions are nearly identical.

	Mileage by Road Class by Labor Market Area Travelshed						
	Berlin	**Colebrook**	**Conway**	**Haverhill**	**Littleton**	**Plymouth**	**Totals**
Private	94	243	209	26	133	166	871
Class I	79	66	63	25	181	135	549
Class II	37	43	116	34	161	117	508
Class III	2	5	2	0	2	0	11
Class IV	9	0	0	0	0	0	9
Class V	122	148	251	136	443	256	1,356
Class VI	4	23	37	15	60	27	166
Federal	26	0	48	0	38	27	139
Total Miles	373	528	726	236	1,018	728	3,609

(Source: New Hampshire Department of Transportation)

As shown on the following map, the region has several corridors on the National Highway System. These highways, I-93, US 2, US 302 and part of NH 16, were identified as those important to the nation's economy, defense, and mobility.


State Highway System
North Country Region
Legislative Class
Class I
Class II
Class IV
National Highway System
Non-Region Towns
State Boundary
Town Boundary
0 2.5 5 10 15 20

The region's highway network is essential for bringing in both goods and visitors from other areas. In the North Country Region most food and other goods arrive by truck. Manufacturing and production of food staples have both been declining. This makes the region's highway network essential to meeting everyday needs. I-93 connects the region with southern New Hampshire and Boston to the south, and to Canada, western Massachusetts, Connecticut and New York via I-91 in Vermont just west of Littleton. Classification counts conducted in the region by NCC for NHDOT from 2010 through 2014 show an average of 8.34% trucks and buses on the region's state highways, however data specific to freight in the North Country region are not available. NHDOT is scheduled to begin work on a Freight Plan in the near future. The results will be incorporated into future updates of this plan.

Tourism has played an important role in the region's economy since the first settlers came to the White Mountains and opened up their homes to guests and mountaineers. Tourists initially came by rail, but this mode of travel was long ago replaced by the automobile. This means traffic volumes fluctuate in many locations with the seasons, long weekends, peak foliage season, good ski weather, school vacations, and special events, posing a special challenge to transportation planners.

Within the Region, the vast majority of residents rely on the private automobile and publicly-maintained roads to get to work, school, medical appointments, and for other necessities. Highways are classified by their function relative to other highways as described below.

Functional Highway Classification System for Rural Areas – The Functional Classification System is the process by which streets and highways are grouped into classes or systems, according to the type of service they are intended to provide. The rural roads are classified into four major systems: principal arterials, minor arterial roads, major and minor collector roads, and local roads. (Source: Federal Highway Administration, http://www.fhwa.dot.gov)

Rural Principal Arterial System consists of a connected rural network of continuous routes that serve high speeds, high traffic volumes and high level-of-service where there is limited access to interchanges.

Rural Minor Arterial System links cities and larger towns (and other traffic generators, such as major resort areas, ski areas, recreation/tourist attractions, etc.) and form an integrated network providing service within the counties and the rest of the state. This system serves longer-distance travel between population centers with access that is controlled through the spacing of intersections and limits to locations of driveways.

Rural Collector Road System - Rural collector routes generally serve travel between counties and link local streets to arterial highways.

Rural Local Road System - The rural local road system serves primarily to provide access to adjacent land and to over relatively short distances and low speeds. Local roads consist of the rural mileage that is not classified as part of the principal arterial, minor arterial, or collector systems.

Reduced funding levels at the federal and state levels have caused growing concern about the state's transportation infrastructure. The pavement on New Hampshire's highway system needs regular maintenance in order to support the level-of-service for which the roads were designed. Surfaces that are not maintained properly increase travel time; decrease the capacity of the road; create unsafe conditions for the traveling public; and increase maintenance costs for the state, municipalities, and the traveling public (cost of personal vehicles). The cost to rehabilitate roads increases dramatically when maintenance is delayed for too long.

The New Hampshire Department of Transportation (NHDOT) develops pavement management plans annually to determine which roads need to be maintained and/or rehabilitated. These plans are developed based on the suggestions of maintenance personnel that drive and work on the roads on a daily basis as well as the information that is provided by pavement condition data collection.

NHDOT focuses most efforts to keep the roadways that are the most widely used in good condition. Due to the amount of traffic on these particular roads, they are most likely to have been constructed or reconstructed with a good base. Less traveled roads that are in poor condition, though treated regularly, are most often times considered to be in fair condition. The Highway Maintenance Districts have begun a plan of "Low Cost Reconstruction" to address these some of these roads. This plan includes upgrading highway drainage, recycling pavement, and resurfacing and is less expensive than typical reconstruction. In an effort to keep the roads passable, most often they only receive thin overlays periodically to seal and bind together the existing pavement. NHDOT has started to include crack sealing as part of the yearly resurfacing plan. Studies have shown that crack sealing can extend a life of a pavement by 2 years.

Municipalities are facing similar challenges. As the Region has lost manufacturing jobs, employment has shifted toward lower paying retail and service sector jobs. The majority of residents own their homes; increasing property taxes compared with nonlivable wage paychecks of fixed incomes put increasing pressure on local leaders to delay needed road maintenance, increasing costs in the future.

Maintenance and preservation of the roads that exist today is critical. Deferring maintenance will lead to higher costs associated with rehabilitation or reconstruction in the future. The resources that are available must be allocated responsibly to ensure that the state transportation system is realizing the greatest value in each dollar spent. It is important for both the state and municipalities to follow a systematic process for planning road improvements that will ensure that the added costs associated with deferred maintenance are avoided. NHDOT adopted a Pavement Strategy to address this need in March 2015 (see Appendix A). The strategy is based on a system of four tiers:

- Tier 1 – Interstates, Turnpikes & the divided section of Route 101
- Tier 2 – Major corridors (like US 3, US 4, US 202, and Route 16)
- Tier 3 – Collectors (like Route 112, Route 31, and Route 155)
- Tier 4 – Secondary highways and unnumbered routes

(Source: NHDOT Pavement Strategy - Summary, March 2015)

The Strategy calls for prioritizing investment based on those priorities as follows:

Pavement Strategies	Tier 1	Tier 2	Tier 3	Tier 4
Preservation	High	High	Moderate	Moderate
Rehabilitation	High	Low	Low	Low
Reconstruction	-	-	-	-
Maintenance Paving	-	Moderate	Moderate	Moderate

(Source: NHDOT Pavement Strategy - Summary, March 2015)

A system for prioritization is needed regardless of the level of funding available. However it is essential that regional priorities be incorporated into the state decision-making process. In some cases a Tier 2, 3 or 4 highway may be among the highest priorities for maintaining the region's economy. (In Section IV, North Country Council's regional priorities are described for each of the region's six travelsheds.) In addition, NHDOT should review the effectiveness of the Pavement Strategy annually with the District Engineers to ensure that it is achieving the desired cost effective preservation and maintenance as applied to specific highway segments.

NHDOT has identified unnumbered state highways as the lowest priority for improvement and maintenance (NHDOT, The Roads to New Hampshire's Future, 2013). There are opportunities that NHDOT makes available to communities with these roadways where NHDOT will prioritize them for State Aid Highway funds to improve them. These funds require a 1/3 local match. At the completion of the project, the town can then take ownership of the road. This program has a lot of potential to bring some of these highways that are important to towns but not important components of the state's highway network under local maintenance. However, room for negotiation is required to ensure that the road is brought up to a standard acceptable to the community. In addition, the cost sharing needs to be reexamined in light of the fact that the municipalities are gaining an additional maintenance burden and were not responsible for the existing deferred maintenance.

North Country Council recently resumed offering member towns assistance with using UNH T2 Center's Road Surface Management System (RSMS) software, a tool for determining where highway maintenance funds will mean the smartest investment in the long run. Haverhill was performed in 2014 as a pilot project. Capital budgets (CIP) and reserve funds for large transportation improvement projects are another way that municipalities can ensure that property tax impacts are evenly spread out. North Country Council plans to continue to offer member communities assistance with both RSMS and CIPs as funding is available. Both tools have evolved over the years as needs have changed. FWHA is expected to issue new guidance relative to road surface management systems in 2015. It is important that any system utilized be compatible with the Statewide Asset Data Exchange System (SADES) and be usable on the region's many unpaved roads.

Bridges

There is a critical need to maintain and preserve state and municipal bridges. Red List Bridges are those where one or more major structural element is rated as poor condition or worse, or require weight limit posting. There are currently 153 State Red List Bridges in New Hampshire; 28, or 18%, are located in the North Country Council Region. There are 344 Municipal Red List Bridges in New Hampshire; 52 (15%) are located in the NCC region. All bridges are inspected at least once every two years. State red list bridges are inspected twice every year and municipal red list bridges are inspected once every year. Following inspection of municipal bridges, NHDOT provides the report to the municipality and the municipality can then request that the bridge be added to the Municipal Red List.

NHDOT adopted a Bridge Strategy in March 2015 (see Appendix B). The strategy is based on a system of five tiers.

High Investment Bridges (HIB) – Largest & most costly bridges (Memorial, I-95, Amoskeag, etc.)

- Tier 1 – Interstates, Turnpikes & the divided section of Route 101
- Tier 2 – Major corridors (like US 3, US 4, US 202, and Route 16)
- Tier 3 – Collectors (like Route 112, Route 31, and Route 155)
- Tier 4 – Secondary highways and unnumbered routes

(Source: NHDOT Bridge Strategy - Summary, March 2015)

The Strategy calls for prioritizing investment based on those priorities as follows:

Bridge Strategies	HIB	Tier 1	Tier 2	Tier 3	Tier 4
Maintenance	High	High	High	High	High
Preservation	High	High	High	High	High
Rehabilitation	High	High	High	Moderate	Low
Reconstruction	High	High	Moderate	Low	Low

(Source: NHDOT Bridge Strategy - Summary, March 2015)

A system for prioritization is needed regardless of the level of funding available. However it is essential that regional priorities be incorporated into the state decision-making process. In some cases a Tier 2, 3 or 4 bridge may be among the highest priorities for maintaining the region's economy. In Section IV, North Country Council's regional priorities are described for each of the region's six travelsheds, and red-listed bridges in each travelshed are identified.

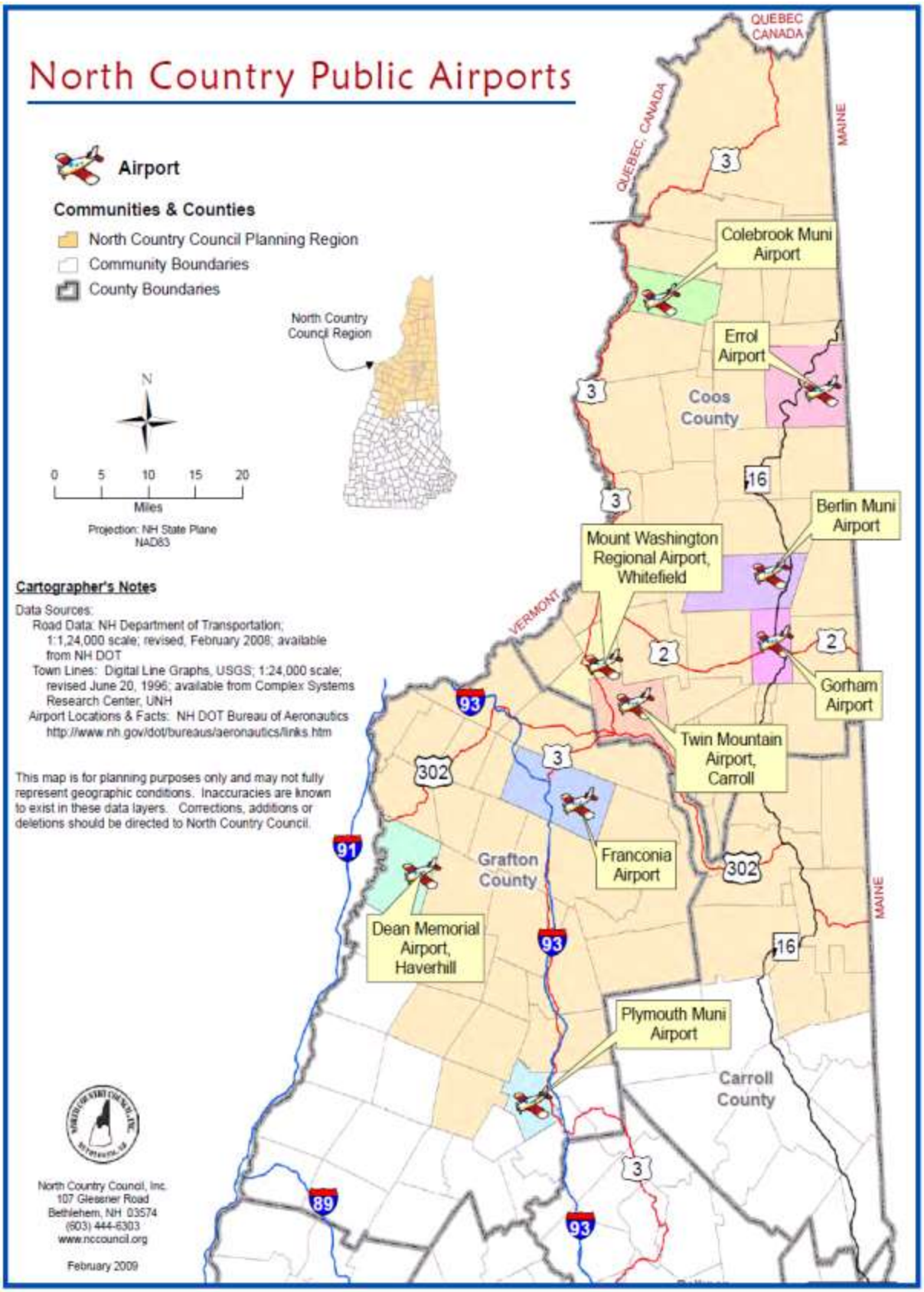
Asset Inventories

An additional service NCC staff has begun is culvert inventories. The goal is to help member communities identify undersized and inadequately designed culverts and identify priorities for redesign and replacement before a damaging blow-out or bypass occurs. The town of Carroll was done as a pilot. NHDOT and DES provide the software and methodology for uniformity state-wide.

AERONAUTICS

Communities in the North Country are served by the nine local airports. Although aviation is not the most common form of travel in the North Country, it is growing in popularity. More funding and time is being put into developing the regional airports and their master plans. Most airports in the North Country are used for recreation, business and personal travel. In addition, the Franconia Airport is home to the Franconia Soaring Center which is used for gliders. Major shippers like Federal Express and UPS do not yet have any regular destinations at any of the North Country airports.

There are additional airports located outside of the North Country Council planning region that also serve North Country residents. The Manchester-Boston Regional Airport is the airport most commonly used by residents of the North Country with a wide range of scheduled passenger flights. It is a major source of air travel for the entire state of New Hampshire. It is served by the following major airlines: Air Canada, Continental Express, Delta Connection, Northwest Airlines, Southwest Airlines, United Airlines, United Express, US Airways and US Airways Express. Scheduled services for passenger flights are also available at Portland International Jetport (PWM) in Portland, Maine, and at the Lebanon Airport (LEB) in West Lebanon, New Hampshire, where daily commercial service connects passengers to Logan International Airport (BOS) in Boston, Massachusetts.


North Country Public Airports
Airport
Communities & Counties
North Country Council Planning Region
Community Boundaries
County Boundaries
North Country Council Region
N
0 5 10 15 20
Miles
Projection: NH State Plane NAD83
Cartographer's Notes
Data Sources:
Road Data: NH Department of Transportation; 1:1,24,000 scale; revised, February 2008; available from NH DOT
Town Lines: Digital Line Graphs, USGS; 1:24,000 scale; revised June 20, 1996; available from Complex Systems Research Center, UNH
Airport Locations & Facts: NH DOT Bureau of Aeronautics http://www.nh.gov/dot/bureaus/aeronautics/links.htm
This map is for planning purposes only and may not fully represent geographic conditions. Inaccuracies are known to exist in these data layers. Corrections, additions or deletions should be directed to North Country Council.
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Bethlehem, NH 03574
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February 2009
QUEBEC CANADA
QUEBEC, CANADA
MAINE
VERMONT
Colebrook Muni Airport
Errol Airport
Coos County
Berlin Muni Airport
Mount Washington Regional Airport, Whitefield
Gorham Airport
Twin Mountain Airport, Carroll
Franconia Airport
Grafton County
Dean Memorial Airport, Haverhill
Plymouth Muni Airport
Carroll County
3
16
2
93
302
91
89

RAIL

In the late 1800's, the North Country became the hub of commercial logging in the State of New Hampshire. At that time, railroads were built to transport logs to the pulp and paper mills in Groveton and Berlin. Although the most popular use for rail in the North Country region was for logging, it quickly became a popular mode of transportation for tourists who wanted to visit and enjoy the scenic and natural wonders of the region.

The rail system in New Hampshire has changed over the years. Rail is no longer considered to be as vital a mode of transportation as it used to be. In fact, as of 2001, the rail system in New Hampshire was only 1/3 of the size it was when the 20th century began. In the North Country Region, there is no access to passenger rail as a means of transportation; the only remaining passenger rails are excursion trains. The main freight line remaining is the Saint Lawrence and Atlantic Line (SLR). This Line extends 157 miles from Portland, Maine to the Vermont-Quebec border. SLR crosses the Canadian border at Norton, Vermont, connecting with its sister railroad, the Saint Lawrence & Atlantic Railroad (Quebec) (SLQ). SLQ interchanges with Canadian National at Ste. Rosalie, Quebec. SLR interchanges with New Hampshire Central Railroad in North Stratford and with Pan Am Railways at Danville Junction, Maine. The Saint Lawrence and Atlantic is a key connection for moving freight into and out of northern New England.

The Saint Lawrence and Atlantic Line in New Hampshire is entirely within the North Country Region. It is approximately 52 miles long and is mostly Federal Railroad Administration (FRA) Class 3 with a maximum freight speed of 40 mph due to the topography of the line. Approximately 16 miles of this line in New Hampshire is rated at 263,000 pounds maximum gross weight. The balance of this line is rated at 286,000 pounds. This is the only main line in Northern New England capable of double stack service over its entire length. Commodities transported include aggregates, brick and cement, chemicals, food and feed products, forest products, intermodal, and steel and scrap. (Source: New Hampshire State Rail Plan, 2012)

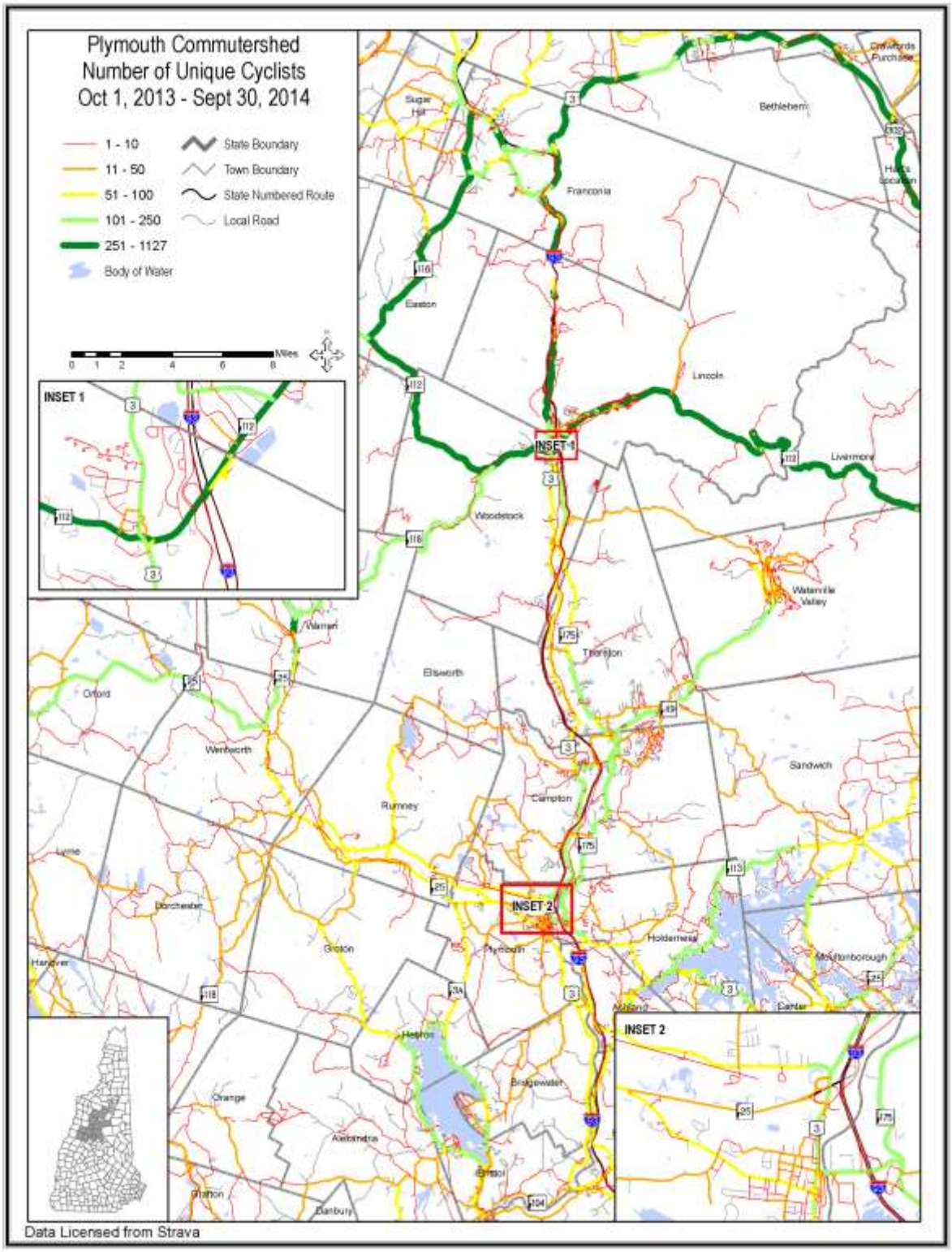
BICYCLES AND PEDESTRIANS

The North Country region's highway system not only supports cars and trucks, but also a growing number of residents and visitors interested in walking and bicycling. This includes commuters, those who want to live in downtowns and villages where they can walk to shopping and other errands, and those getting exercise for health and recreation.

The US Census 2009-2013 American Community Survey (5-Year Estimates) shows that approximately 4,608 people, or 5.7% of the people commuting to work in Coos, Carroll and Grafton Counties, walk to work.

In New Hampshire's North Country, tourism is an important component of the economy. Many of the tourists visit the region in the spring, summer and fall seasons to take advantage of the recreational opportunities found in biking, hiking, walking, and riding all-terrain vehicles. During the winter seasons, cross-country and down-hill skiing, snowshoeing, mushing with sled-dogs, winter hiking, and snowmobiling are very popular. In addition to the steady influx of tourists taking advantage of these recreational opportunities, there are also a large number of New Hampshire residents who participate in these activities as alternative travel modes, for health and fitness purposes, and/or to improve the environment by reducing air pollution and traffic congestion. The popularity of recreation and physical activities, as well as the lack of affordable mobility options, has increased the demand for suitable and accessible bicycle and pedestrian facilities. The following map reports only the number of bicyclists using an online tool called "Strava." As shown, even this subset of the cycling population represents significant enough numbers to warrant safety considerations. Data on bicycle and pedestrian usage from sources such as Strava should be used to inform plans for shoulder widening. Similarly, data on shoulder with and other safety considerations should be incorporated into resources for bicyclists such as the NH Regional Bicycle Maps.

The size and safe design and upkeep of the highway shoulder is paramount to the safety of bicyclists and pedestrians, as well as that of drivers passing them with oncoming traffic. Since most North Country highways are shared roadways, a paved shoulder a minimum width of 4 feet is required for bicycle safety (AASHTO Guide for the Development of Bicycle Facilities). Where gutters and curbs are present, or high traffic volumes, higher speeds, or substantial truck traffic, a minimum paved width of 5 feet is required (AASHTO). Where wider shoulders are desired for other purposes, such as disabled vehicles, enforcement and maintenance activities, providing an area for drivers to maneuver to avoid crashes, and increasing safety by providing a stable, clear recovery area for drivers who have left the travel lane, or improving stopping sight distance, the additional width should be level with the paved portion of the shoulder but may be unpaved. Paved shoulders wider than five feet may actually decrease bicycle or pedestrian safety because they encourage faster driving speeds and are often used to pass on the right.


Plymouth Commutershed
Number of Unique Cyclists
Oct 1, 2013 - Sept 30, 2014
1 - 10
11 - 50
51 - 100
101 - 250
251 - 1127
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 1 2 4 6 8
INSET 1
INSET 2
INSET 1
INSET 2
Data Licensed from Strava

TRANSIT

North Country Council Representatives adopted the October 2014 ***Coordinated Public Transit and Human Service Transportation Plan for Coos, Carroll, and Northern Grafton Counties*** on November 19, 2014 as part of the regional plan pursuant to RSA Chapter 36. Please see that document for a complete description of the status of public transit in the North Country Region.

REGION-WIDE TRANSPORTATION POLICIES

The following Transportation Policy Statements were readopted by the North Country Council on November 19, 2014 as part of the regional plan pursuant to RSA Chapter 36, and reviewed/updated by the TAC as part of this Regional Transportation Plan update.

GENERAL

1. Encourage and support the consensus that North Country transportation interests must work together within a regionally oriented framework to promote clear and attainable long-range transportation planning which is of benefit to all. These ideals of cohesive, long-range, comprehensive transportation planning are the direct results of transportation planning monies and work efforts espoused by the implementation of **The Intermodal Surface Transportation Equity Act of 1991 (ISTEA), the Transportation Equity Act of the 21 Century (TEA-21), and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)**. These transportation mandates have been carried forward under the auspices of **the MAP-21, the Moving Ahead for Progress in the 21st Century Act**, which was signed into law by President Obama on July 6, 2012. MAP-21 is the first long-term highway authorization enacted since 2005 and is creates a streamlined and performance-based surface transportation program building on many of the highway, transit, bike, and pedestrian programs and policies established in 1991.
2. Encourage and promote the viability of alternative forms of transportation including, but not limited to, bicycle paths, pedestrian ways, passenger and freight rail lines, multimodal transfer facilities, aviation and rural mass transit systems.
3. Encourage consideration of local and regional interests when decisions regarding surface and air transportation corridors (rail, highway, air) and utility transmission corridors (electricity, gas, oil, water and other utilities including fiber optics) are made at the state and federal levels.
4. Encourage consideration of the local consequences of construction of transportation facilities because "least cost routes" may have more than offsetting negative effects on local interests.
5. Encourage the utilization of existing rights-of-way in order to minimize the necessity for new construction alignments while maintaining the preservation of scenic roads.
6. Encourage the development and maintenance of transportation facilities designed to meet the special needs of the transportation disadvantaged.
7. Encourage the development or upgrading of transportation systems while avoiding undue and unnecessary negative impacts to open space, scenic vistas, parklands and historic places.
8. Encourage the use of existing utility corridors for additional utility easements and help promote use of these corridors as venues for multi-use trails where appropriate and within the confines of both landowner and utility company preferences.
9. Ensure that any proposed land use development directly considers and properly plans for the resultant transportation system impacts which are intrinsic to land development by its nature.

This consideration is directly reflected in highway system access and egress and the designation of curb cuts, signalization needs and speed zone assignment.

10. Support the maintenance and improvement of the transportation infrastructure necessary to sustain local economies and build subregional job centers.

HIGHWAYS AND BRIDGES

1) North Country Council will work with municipalities to implement good road standards in local regulations.

2) North Country Council will work with municipalities to require developers to contribute a fair share into transportation projects that are made necessary by specific development proposals.

3) North Country Council will seek funds to gather data on seasonal traffic issues to better understand and address local concerns.

4) State agencies should work with partners to balance the needs of through traffic, local traffic, and tourist traffic.

5) State agencies should work with partners to maintain and preserve the highway system. State agencies and municipalities are encouraged to prioritize maintenance and preservation of existing infrastructure over the development of new infrastructure.

6) NH Department of Transportation should improve and maintain all Class I and Class II highways to an acceptable level.

7) NH Department of Transportation should improve unnumbered state highways to local road standards before giving them to towns.

8) Addressing the remaining numbered state highway segments with substandard lane widths should be a high priority of NHDOT.

9) Expansion of system capacity should only be considered when traffic calming and access management are inadequate for resolving safety and/or congestion problems, or when increased traffic volumes will be consistent with regional land use and economic development objectives.

10) North Country Council will work with local partners and the New Hampshire Department of Transportation on corridor management planning, land use planning, and access management to maintain safety conditions and highway capacity.

11) State agencies and municipalities are encouraged to repair or reconstruct bridges that have been identified as being “functionally obsolete” or “structurally deficient.”

12) State agencies and municipalities should use Road Surface Management Systems as a tool to maintain roads.

13) North Country Council will seek funds to work with partners to identify dangerous intersections and to perform a "Road Safety Audit" each year on the areas that have been identified.

14) Regional impacts on the environment and quality of life should be a consideration for all highway and bridge projects. Furthermore, the preservation of trees, natural resources, working landscapes, scenic areas, and historic/cultural resources should be a consideration for all highway and bridge projects.

15) North Country Council will work with municipalities to adopt access management and driveway design standards.

16) Permits should not be granted to applicants if the proposed development is likely to cause decreased safety or if the projected traffic exceeds the capacity of the existing infrastructure during peak hours.

17) State agencies and local partners should work towards developing, maintaining, and expanding alternative modes of transportation (i.e., transit, walking/bicycling, carpooling, etc.) to resolve, prevent traffic congestion, and reduce energy consumption.

18) State agencies should consider improvements and increased maintenance of major travel and freight routes in the North Country.

19) State agencies and municipalities should preserve historic or unique bridges through maintenance and rehabilitation projects when feasible.

20) North Country Council will continue to work with state agencies and municipalities to preserve and promote scenic byways and natural, historic and cultural resources through the Scenic Byways Program.

AERONAUTICS

1) When competing for scarce public funds, priority should be given to improvements of regional airports that support tourism and business needs.

2) One of the major issues currently discussed regarding aviation in the North Country is the feasibility of installing an Instrument Landing System (ILS) in the Mount Washington Regional Airport in Whitefield. The ILS is a ground-based precision instrument approach that provides guidance to pilots as they approach a runway. This is done through the combination of radio signals and in some cases the display of bright lights. Radio signals and lights assist pilots in making safe landings during instances of reduced visibility caused by weather like rain, fog and snow, all of which are very common in the

mountainous North Country. The New Hampshire Department of Transportation (NHDOT) views the ILS as a safety factor as well as an opportunity to boost the economy of the North Country. The installation of ILS system at Mount Washington Regional Airport is a regional priority.

3) There should be more focused efforts on providing connections between the North Country's airports and the other modes of transportation to improve mobility options and reduce the number of single occupancy vehicles, thus reducing energy consumption.

4) North Country Council should advocate for improvements to transportation linkages between the region and the major airports serving residents and businesses.

5) The North Country communities and airport managers should continue to create/maintain a balance between the growth of the region's airports and the protection of environmental resources.

6) Various organizations in the region, including North Country Council, local and regional economic development agencies, Chambers of Commerce, and other tourism groups, should coordinate efforts to help plan for an increased use of regional airports by tourists.

7) The North Country should support legislation to preserve existing public-use airports in the state, whether publicly or privately-owned.

8) Focused efforts should be made towards making an overall improvement to the safety and efficiency of the region's airport system.

The following recommendations for the 2010 New Hampshire Aeronautical Budget were discussed and voted on at the North Country Council Transportation Committee Meeting on February 18th, 2009.

- Increase the NHDOT / Aeronautics budget to at least $125,000.
- Increase the NH State Match from a 50-50 program to an 80-20 program.
- Return ALL the Aeronautical Fees collected to the NHDOT – Bureau of Aeronautics for use in aeronautic programs, rather than allowing those monies to be absorbed into the State's General Fund.

RAILROADS

1) The State should take a leadership role in improving rail connections between New Hampshire, surrounding states, and Canada.

2) When competing for scare public funds, priority should be given to rail improvement projects that will result in the creation of livable wage jobs, and those associated with a relatively high volume of freight.

3) Work towards an approach to railroad planning that will incorporate and promote strong Class 1 railroad systems in the US and Canada.

4) Incorporate land use planning, economic development and consideration for environmental resources into the current and future railroad planning efforts.

5) State agencies should work with local partners to determine the need and feasibility of increasing rail service in the North Country. Although it is important for the North Country to keep pace with the industry, a regional solution must be developed.

6) Explore funding options through the Federal Railroad Administration and the NH Department of Transportation to allow for increased rail service and to reopen high-priority inactive rail lines.

7) Explore funding options through the Federal Railroad Administration and the NH Department of Transportation to allow for rail replacements and improvements along the St. Lawrence & Atlantic line. Rail replacements will allow for higher weight limits in rails cars, thus increasing the amount of freight traveling in and out of the North Country. This will provide an incentive for businesses to relocate to the North Country and will lead to job creation and will stimulate the economy of the region.

8) State agencies should work with local partners to preserve all railroad rights-of-way (abandoned, inactive, and active lines) for future transportation and recreational purposes.

9) State agencies should work with local partners to promote future multi-modal linkages that incorporate rail.

10) Grade separation of highway-rail crossings should be preserved and grade crossings should be improved where applicable.

11) Trail-related improvements to abandoned rail corridors should continue even if rail service may return in the future. Improvements such as drainage and brush clearing are consistent with State policy on rail preservation.

BICYCLES AND PEDESTRIANS

1) Pedestrians and bicyclists should have safe and adequate access along public roads in villages and downtown areas as well as links to critical facilities including schools, recreation areas, and other important civic and service destinations.

2) Local and regional organizations should work to enhance existing infrastructure and plan for future infrastructure that would allow for safe and comfortable bicycle and pedestrian travel.

3) Towns and schools should work with North Country Council and the Department of Transportation on programs and infrastructure to fund safe routes for children to walk from densely developed areas to nearby schools.

4) When possible, municipalities and state agencies should acquire enough right-of-way during roadway construction and reconstruction projects to accommodate safe bicycle and pedestrian systems.

5) All sidewalks and crosswalks should provide safe mobility for all users and should be properly aligned and have sloped handicapped ramps.

6) All future development of retail and service centers should incorporate pedestrian access in the plans in order to minimize conflicts between vehicles and pedestrians.

7) Educational programs should be offered through towns, schools, and other advocacy agencies to promote safe practices of walking, bicycling, and driving.

8) North Country Council should work with towns, state agencies, and local organizations to coordinate bicycle and pedestrian facilities to provide continuous connections with mixed traffic, on-street lanes, paths and trails.

9) Transit providers should consider installing bicycle racks on vehicles.

10) State agencies should work with partners to maintain and continue to improve maps and brochures of bicycle routes and facilities for commuters, tourists, and other users. This should include enhanced information regarding the character of the roadways, e.g., which routes are "family friendly."

11) State agencies should work with local partners to encourage multiple uses of rail corridors when appropriate, including recreational use with rail use.

12) Trail-related improvements to abandoned rail corridors should continue even if rail service may return in the future. Improvements such as drainage and brush clearing are consistent with State policy on rail preservation.

13) Federal and state agencies and local partners should work together to provide adequate access to recreational trails for bicycles and pedestrians, including parking where appropriate and necessary.

14) North Country Council will work with local planning boards to review and update master plans in order to accommodate bicycle and pedestrian travel

15) North Country Council should stay abreast of the needs of the disabled and associated ADA requirements, including Segway® use, and encourage integration into bike/pedestrian facilities (including paths/trails and access).

REGION-WIDE TRANSIT POLICIES AND PRIORITIES

The following Transit Priorities were adopted by the North Country Council on November 19, 2014 as part of the regional plan pursuant to RSA Chapter 36, and reviewed/updated by the TAC as part of this Regional Transportation Plan update. In future updates, NCC will incorporate the information and

analysis from the Planned "Statewide Transit Assessment Study", as this will benefit the recommendations developed for each travelshed. This study will involve long-term planning efforts and will assist the region in determining what the needs are, where there are gaps in service, identifying potential transit expansion priorities or new services, identifying potential locations for Park & Rides, etc. This assessment could also assist NCC and the Regional Coordination Councils in prioritizing projects for future funding.

In the event that NCC considers identifying priority locations for Park & Rides, staff will utilize the "Park & Ride Toolkit" that was recently developed by Southwest, Central and Strafford regional planning commissions, and a NH DOT steering committee. This toolkit is a "how-to" guide for municipalities and organizations that may be interested in developing park and ride lots. The "toolkit" was developed to guide municipalities through all of the phases involved in building a park and ride lot, including doing a needs assessment, design, evaluation, and monitoring and maintenance.

1) ***Evaluate and Enhance Existing Transportation Services –*** Transportation providers should work with state agencies, private and nonprofit agencies, employers, and communities to identify and apply to appropriate funding sources that will enable them to make improvements or expansions to meet the transportation needs of North Country and Carroll County residents.

   Projects/Tasks:

   - Meeting Basic Mobility Needs and Activities of Daily Living
   - Timely Purchase of replacement Vehicles to Prevent Gaps in Service
   - Purchasing ADA-accessible Vehicles
   - Expanding Existing Deviated Route and Demand Response Systems
   - Developing Park and Ride Facilities
   - Developing New Deviated Route Transit Systems and Demand Response Systems
   - Identifying Transit Stops that May Need Accessibility Improvements
   - Making Vehicle and/or Bus Stop Improvements for Bicycling
   - Maintaining and Expanding Intercity Bus Service

2.) Technology Improvements to Enhance Transportation Provider Services & Efficiency

Transportation providers throughout the region share a need for access to dispatching software, Global Positioning System (GPS), Automatic Vehicle Location (AVL) systems, etc. to be able to better coordinate rides between providers; plan trips or routes; streamline reporting; and to track costs and billing. While these technologies have numerous benefits, they are expensive for providers to procure and use.

Projects/Tasks:

- Transportation providers like North Country Transit, Carroll County Transit, and Grafton County Senior Citizens Council should seek funding for the procurement of new technologies.
- SCC/DOT should continue to explore software packages and pilot projects.

3) ***Support Mobility Management and Coordination Activities –*** Supporting new or existing mobility management and coordination programs for transportation and human services providers will allow for the improvement of transportation options.

Projects/Tasks:

- Administration and continuation of Regional Coordinating Councils (RCC) work plan implementation.
- RCCs should continue the promotion, enhancement, and facilitation of access to transportation services, especially for individuals with disabilities, older adults, and low income individuals.
- RCCs should continue to seek funding to support short term management activities to plan and implement coordination services.
- DHHS should continue funding the Medicaid Managed brokerage and identify ways to improve the operation of transportation brokerages to coordinate providers, funding agencies, and customers.
- The SCC, RCCs, DOT and transportation providers should work towards developing a centralized dispatch center to coordinate rides.

4) ***Education, Outreach, and Marketing Activities –*** In order for transportation systems to work, the potential users must know that they exist and how to use them. Additionally, private vehicle owners must be educated on the benefits of using a public transit system. Educating communities about existing and new transportation services can help build support for transportation providers and can be instrumental in helping providers receive commitments of local funds to maintain and enhance transportation services.

Projects/Tasks:

- Promoting and Distributing Directories
- Promoting and Hosting Public Meetings
- Supporting and Maintaining Rideshare Programs
- Supporting Travel Training Programs

5) ***Supporting Volunteer Programs –*** Supporting new and existing volunteer driver programs will allow human service agencies to continue to help meet the transportation needs of their clients. Many human service transportation providers utilize and depend on volunteer drivers to provide much needed rides to medical appointments, to pick up prescriptions, and for shopping. Many drivers are retirees on a fixed income, providing expensive long distance medical trips. Making improvements to accommodate prompt reimbursements to volunteer drivers will greatly help with driver retention.

Projects/Tasks:

- Providers should continue to seek funding that is available to reimburse volunteer drivers for mileage. This will improve the ability of agencies find, retain and train volunteer drivers.
- Providers should consider developing incentive programs to reward volunteers for their services (e.g. Prizes like gas cards, free car wash vouchers, coffee shop gift cards, etc.)
- The SCC should continue to review how volunteer driver insurance coverage could be improved.
- Human service agencies, NHDOT, NHDHHS, and other funders should explore ways to increase the speed at which reimbursements are made to volunteer drivers.
- Human service agencies should have policies regarding volunteer driver background checks.

6) Exploring Alternate Ways to Improve Access to Transportation – DOT, the SCC and RCCs should identify creative ways of improving access to transportation. Some of the following activities have been successful in other regions and could be something that could be taken on by private businesses and employers.

Projects/Tasks:

- Developing and Supporting Car Loan Programs
- Developing and Supporting Voucher Programs

STORMWATER

According to the *National Climate Assessment – Northeast Region Report* extreme precipitation events in the northeast have increased 75% since 1958 (U.S. Global Change Research Project, 2013). From 1953 to 1990, only 6 weather-related Disasters were declared in New Hampshire. From 1990 through 2013, the state had 19 weather-related Major Disaster Declarations not related to winter storms. Hurricanes and Tropical Storms accounted for 4 of these; 15 were other severe storms with flooding (FEMA.gov, Disaster Declarations for New Hampshire). Heavy rains in the summer of 2013 caused over $6 million worth of damage to the state's roads and bridges. For comparison, the State-Aid Bridge program was proposed to be $3.5 million for FY2016 (GACIT hearing presentation, Sept/Oct 2013). Climate scientists tell us to expect increases in precipitation, with more rain and less snow, and more frequent severe flooding (*National Climate Assessment – Northeast Region Report*, U.S. Global Change Research Project, 2013).

The extreme weather events of the past decade have reminded us of the cost of this issue to taxpayers. National Flood Insurance Program shortfalls have made the news headlines. However, the true cost to taxpayers is undocumented. Increases in stormwater also result in a growing amount of our limited municipal and state budgets going into rebuilding and repairing infrastructure, armoring riverbanks and roadside ditches, cleaning out stormdrains and ditches. The material and labor costs for these activities are not generally broken out in the municipal budget. Even emergency repairs for washouts and undercut banks will generally be included in the catchall "summer road maintenance" category. In addition, other planned highway maintenance often needs to be put off to free up crews and budgets for storm event repairs, sometimes leading to additional costs associated with deferred maintenance. Reducing the stormwater runoff from roads and other transportation infrastructure, and minimizing the interaction between the region's transportation infrastructure and rivers and streams, must be components of every project design. This includes such considerations as bridge placement and design, culvert size and design, and management of stormwater from impervious surfaces.

Maintenance of stormwater infrastructure by NHDOT and municipalities must also be a high priority. In October 2005 flooding from heavy rains in many parts of the state led to millions of dollars of damage. The most memorable event was the flash flood that wiped out NH 123 and the village of Alstead. A blocked culvert was the cause of this flash flood. The resulting emergency road work alone cost tax payers over $3 million.

Blocked culvert in North Country Region

Reducing the stormwater runoff from roads and other transportation infrastructure, and minimizing the interaction between the region's transportation infrastructure and rivers and streams, must be components of every project design. This includes such considerations as bridge placement and design; culvert size and design, including habitat connectivity; and management of stormwater from impervious surfaces. Maintenance of stormwater infrastructure by NHDOT and municipalities must also be a high priority to ensure public safety and protection of the investment made in the region's transportation infrastructure. Culvert inventories and assessments, geomorphic assessments of existing and proposed bridge placements, and training of state and local highway personnel in stormwater best practices are essential steps.

SECTION IV THE REGION'S SIX TRAVELSHEDS

A. COLEBROOK LABOR MARKET AREA TRAVELSHED

EXISTING CONDITIONS

The NH portion of the Colebrook Labor Market Area travelshed saw a slight population loss between 2000-2010. Some of this loss was associated with the closing of several Coos County mills in the previous decade, and job growth in service and retail industries that do not pay a livable wage. Additional population loss is associated with the aging population not being replaced by in-migration. OEP projections indicate continued population loss over the next few decades. NHES ELMI employment projections show a consistent trend, -0.2% for Coos County between 2010-2020.

Town Name	**Population 2000 Census**	**Population Change 00-10**	**Population 2010 Census**	***OEP Projection 2040***
Colebrook Labor Market				
Colebrook	2,321	-20	2,301	*1,951*
Stewartstown	1,012	-8	1,004	*852*
Pittsburg	867	2	869	*745*
Columbia	750	7	757	*653*
Clarksville	294	-29	265	*202*
Total	5,242	-48	5,196	*4,403*

(Source: NHES)

All of the growth in the number of dwelling units was accounted for by the 45% increase in seasonal homes.

CHANGE IN SEASONAL HOMES COMPARED TO TOTAL DWELLING UNITS
COLEBROOK LABOR MARKET AREA

	Population in Household	
2000	2010	% Change
5,381	5,340	-0.8%
	Total Dwelling Units	
2000	2010	% Change
4,529	5,561	+22.8%
	Seasonal Homes	
2000	2010	% Change
1,929	2,801	+45.2%
(42.6% of total dwelling units)	(50.4% of total dwelling units)	

(Source: US Census 2000, 2010)

HIGHWAY NETWORK

The following table shows the mileage by road class for the Colebrook Labor Market Area travelshed. Approximately 10% of the lane miles in the NCC region are located in the Colebrook LMA travelshed. Of the total 528 miles in this region, 46% are private roads, 12.5% are Class I, 8% are Class II, 1% are Class III, 28% are Class V, and 14% are Class VI. There are no Class IV or Federal Roads in this area. In fact, nearly 30% of the miles of private roads in the NCC region are located in the Colebrook LMA travelshed.

Colebrook Labor Market Area			
TOWN	**LEGISLATIVE CLASS**	**CENTERLINE MILES**	**LANE MILES**
CLARKSVILLE	Private Roads	24.958	24.958
COLEBROOK	Private Roads	31.685	45.415
COLUMBIA	Private Roads	26.68	26.927
DIXVILLE	Private Roads	0.041	0.082
PITTSBURG	Private Roads	126.57	222.417
STEWARTSTOWN	Private Roads	32.599	33.237
	Total Miles	**242.533**	**353.036**

Colebrook Labor Market Area			
TOWN	**LEGISLATIVE CLASS**	**CENTERLINE MILES**	**LANE MILES**
CLARKSVILLE	Class I: Primary Roads	2.047	4.053
COLEBROOK	Class I: Primary Roads	13.993	27.969
COLUMBIA	Class I: Primary Roads	9.523	19.046
DIXVILLE	Class I: Primary Roads	5.794	11.588
PITTSBURG	Class I: Primary Roads	27.461	54.922
STEWARTSTOWN	Class I: Primary Roads	7.072	14.144
	Total Miles	**65.89**	**131.722**
CLARKSVILLE	Class II: Secondary Roads	7.965	15.93
COLEBROOK	Class II: Secondary Roads	9.286	18.572
COLUMBIA	Class II: Secondary Roads	7.591	15.182
DIXVILLE	Class II: Secondary Roads	2.693	5.386
PITTSBURG	Class II: Secondary Roads	2.779	5.558
STEWARTSTOWN	Class II: Secondary Roads	8.59	17.18
WENTWORTHS LOCATION	Class II: Secondary Roads	3.683	7.366
	Total Miles	**42.587**	**85.174**
COLEBROOK	Class III: Recreation Roads	2.082	4.164
STEWARTSTOWN	Class III: Recreation Roads	2.849	5.698
	Total Miles	**4.931**	**9.862**
CLARKSVILLE	Class V: Local Roads	11.834	19.385
COLEBROOK	Class V: Local Roads	44.397	83.112
COLUMBIA	Class V: Local Roads	21.792	30.277
PITTSBURG	Class V: Local Roads	35.449	70.015
STEWARTSTOWN	Class V: Local Roads	34.839	55.504
	Total Miles	**148.311**	**258.293**
CLARKSVILLE	Class VI: Local Not Maintained	2.444	4.131
COLEBROOK	Class VI: Local Not Maintained	3.313	3.702
COLUMBIA	Class VI: Local Not Maintained	7.655	10.081
PITTSBURG	Class VI: Local Not Maintained	1.789	2.58
STEWARTSTOWN	Class VI: Local Not Maintained	8.028	8.028
	Total Miles	**23.229**	**28.522**
	Total Mileage	**527.481**	**866.609**

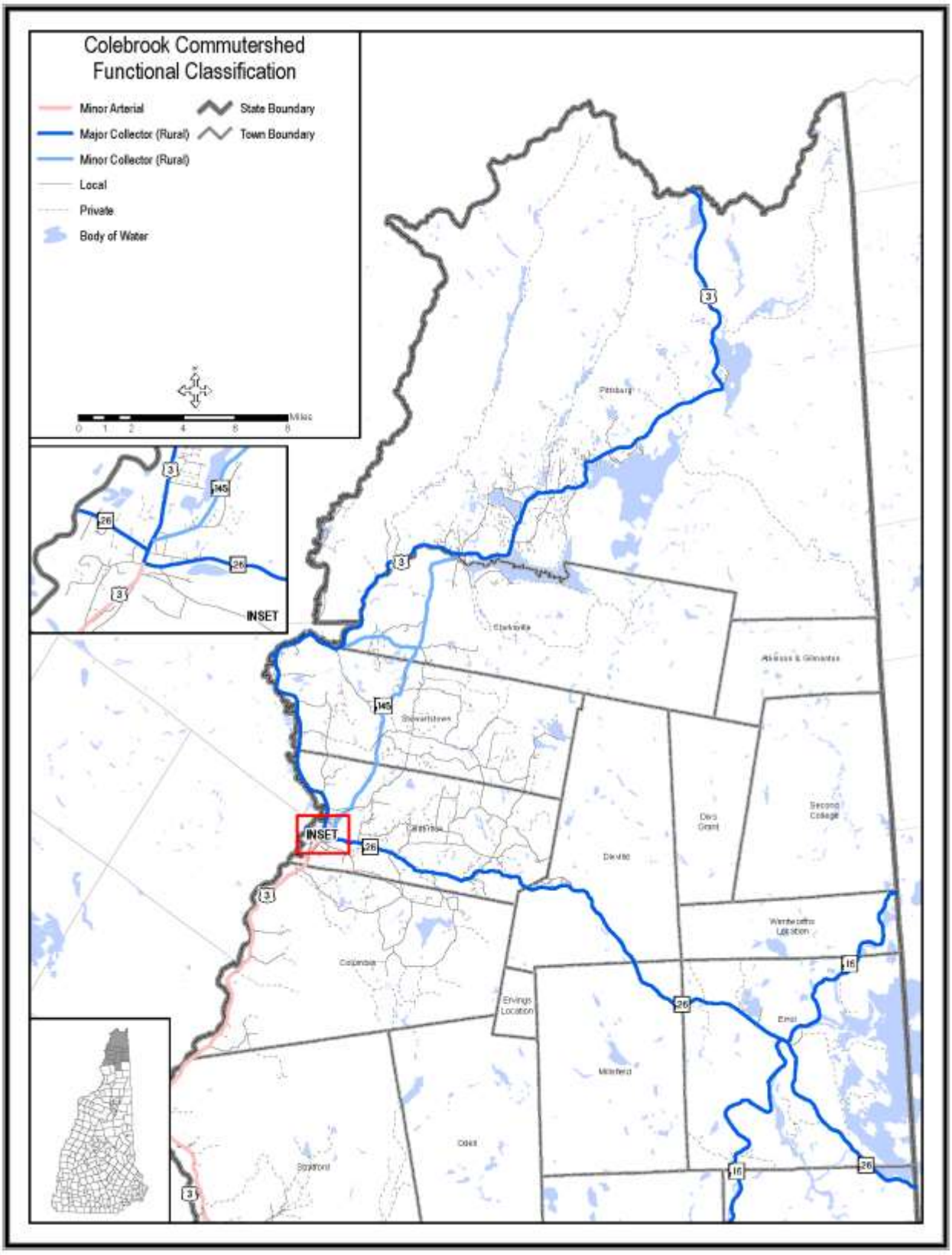
Source: NHDOT

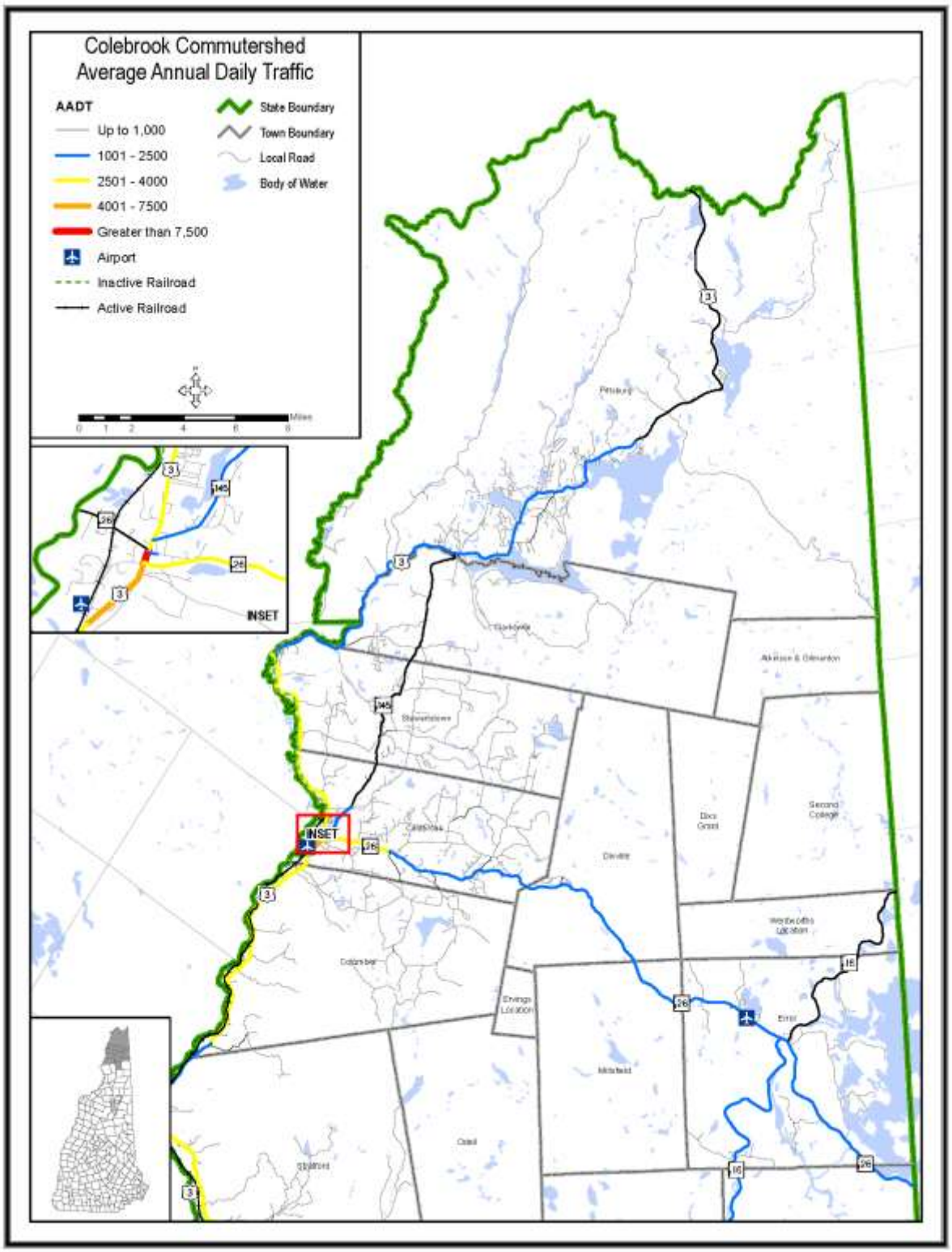
As shown on the following maps, US 3 runs north-south through the Colebrook LMA travelshed. US 3 is a Class I highway and functions as a Minor Arterial south of Colebrook and as a Major Collector north of Colebrook. US 3 connects this North Country job center with Canada to the north, and with US 2, US 302, and I-93, all parts of the National Highway System, to the south. It is therefore a regional priority corridor.

A second corridor in the Colebrook socioeconomic center that is a priority for the region is NH 26. NH 26 is a Class I highway and connects Colebrook with the Maine border just south of Errol, and with the City of Berlin via NH 16 south of Errol. In addition, the Balsam's resort on NH 26 in Dixville, although closed at this time, was formerly a major employer for the area and travel destination for visitors. Redevelopment plans are in the permitting process.

NH 145 is also an important alternate route from downtown Colebrook north to Pittsburg. This corridor is a priority for the Colebrook travelshed.

As shown, US 3 carries and AADT of 2501-4000 south of Colebrook to Stewartstown, 1001-2500 north through Pittsburg's resort area, and under 1,000 to the Canadian border. NH 26 carries an AADT of 2501-4000 through the Colebrook downtown area and 1001-2500 east to Errol. In downtown Colebrook, US 3 is Main Street for the busy commercial area. As shown in the insert on map of Average Annual Daily Traffic for the Colebrook Commutershed, this local traffic brings the AADT up to over 7500 in the center of the downtown, and to 4001-7500 south of the center.


Colebrook Commutershed
Functional Classification
Minor Arterial
Major Collector (Rural)
Minor Collector (Rural)
Local
Private
Body of Water
State Boundary
Town Boundary
Miles
0 1 2 4 6 8
INSET
INSET
3
145
26
16


Colebrook Commutershed
Average Annual Daily Traffic
AADT
Up to 1,000
1001 - 2500
2501 - 4000
4001 - 7500
Greater than 7,500
Airport
Inactive Railroad
Active Railroad
State Boundary
Town Boundary
Local Road
Body of Water
INSET
INSET

As shown in the tables below, traffic volumes are not increasing on US 3 or NH 26 in the Colebrook LMA travelshed.

Average Annual Daily Traffic (AADT)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Colebrook														
US 3 (TPR Leslie G Lord Mem Hwy) at Stewartstown TL		3900		2900			2500			3400			2900	
US 3 (Main St) North of Titus Hill Rd									5000			4900		
US 3/NH 26 (Main St) South of Bridge St			7900			10000			8900			8000		
US 3 (TRPR Scott E Phillips Highway) at Columbia TL		3500		3600			3400			4100			3300	
Columbia														
US 3 at Stratford TL	2800	2700		2800		2800			2500			2500		
US 3 of Cone Brook									2600			2600		
Pittsburg														
US 3 (Daniel Webster Hwy) South of Canadian Border		530		280		280			260			170		
US 3 (Daniel Webster Hwy) at Clarksville TL		1300		1200		1400			1300			1200		
US 3 (Daniel Webster Hwy) South of Hill Rd									1300			1400		
Stewartstown														
US 3 at Clarksville TL	1900			1800			1700			2000			1700	
US 3 North of Main St			2900			3300				2900		2400		

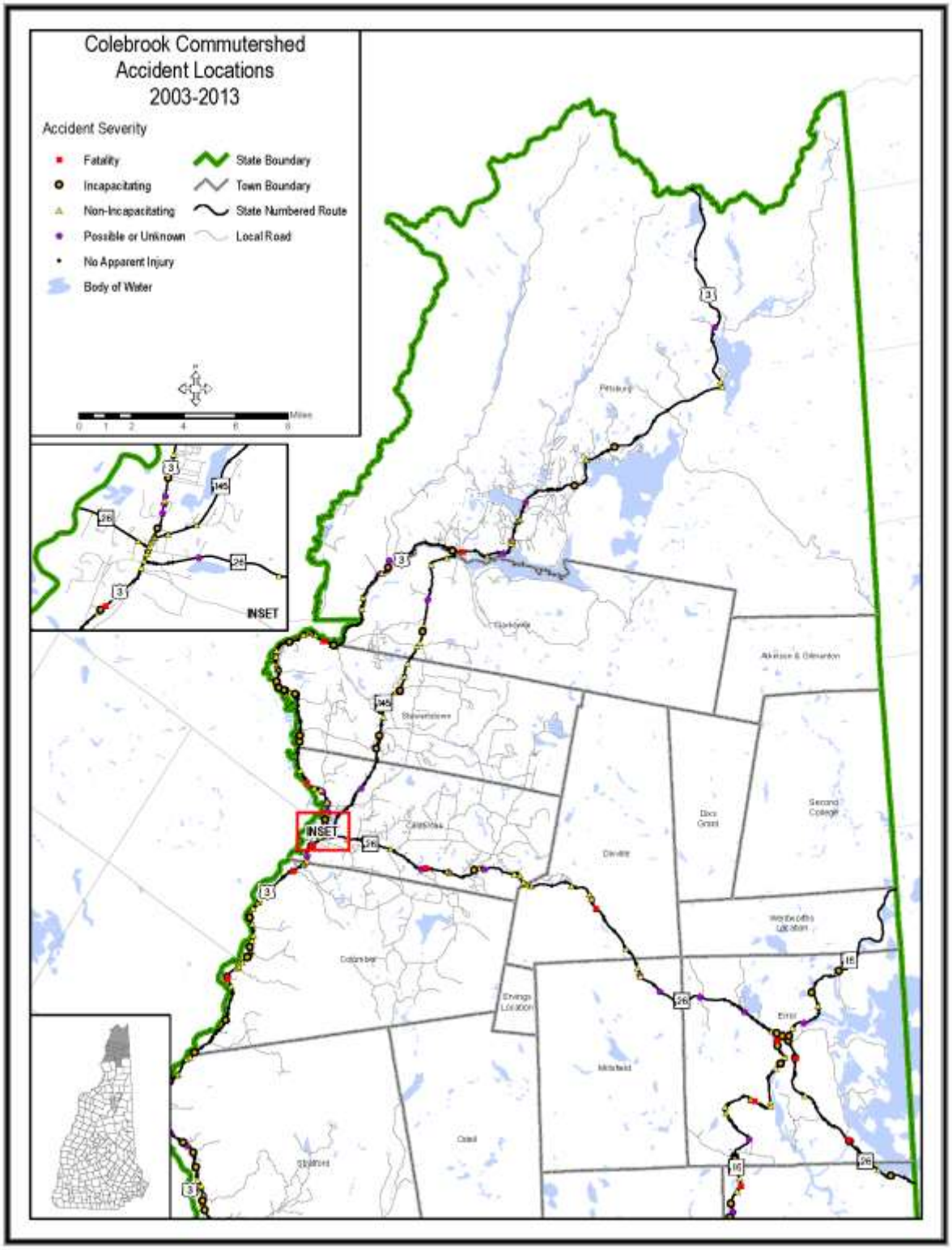
Source: NHDOT

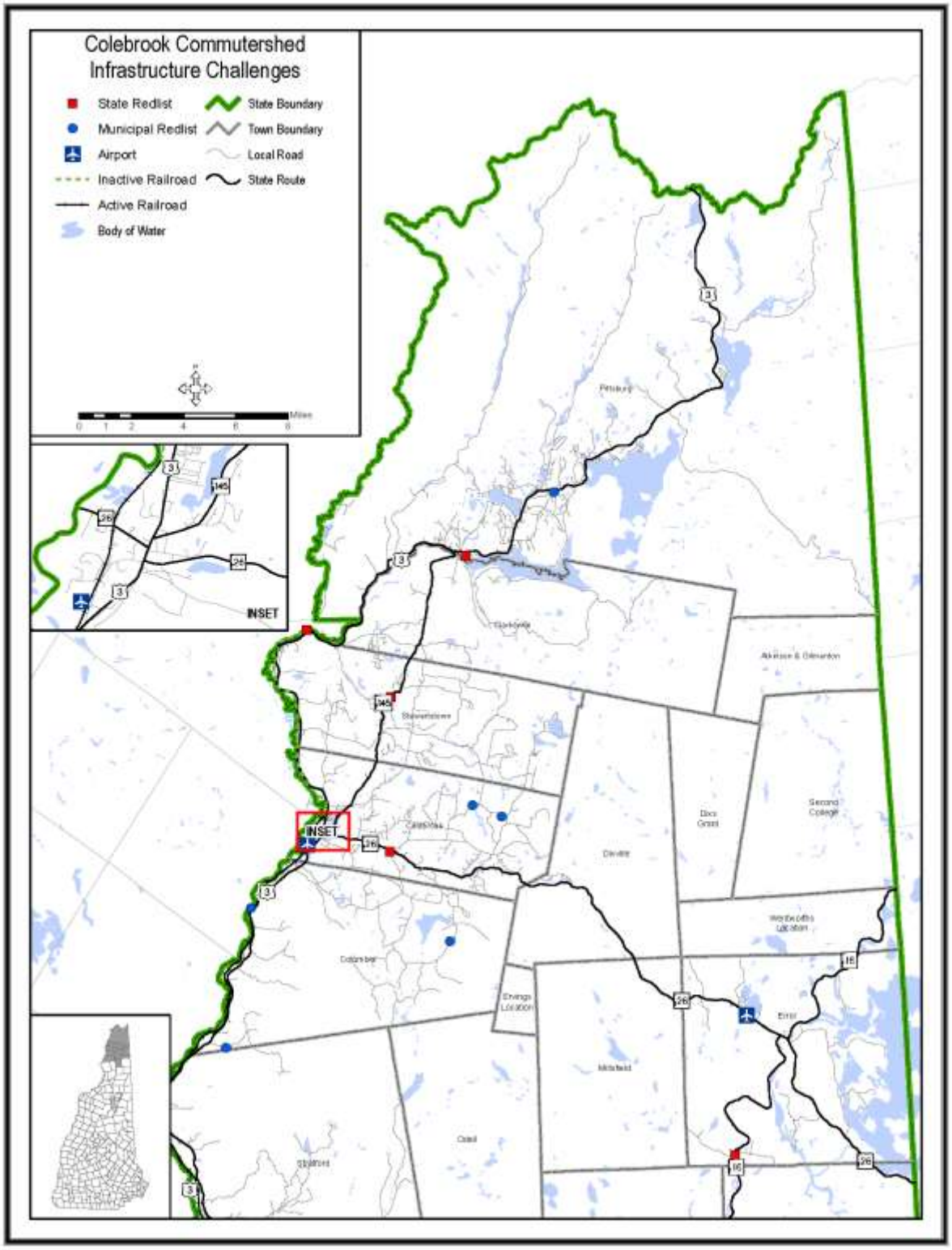
Average Annual Daily Traffic (AADT)

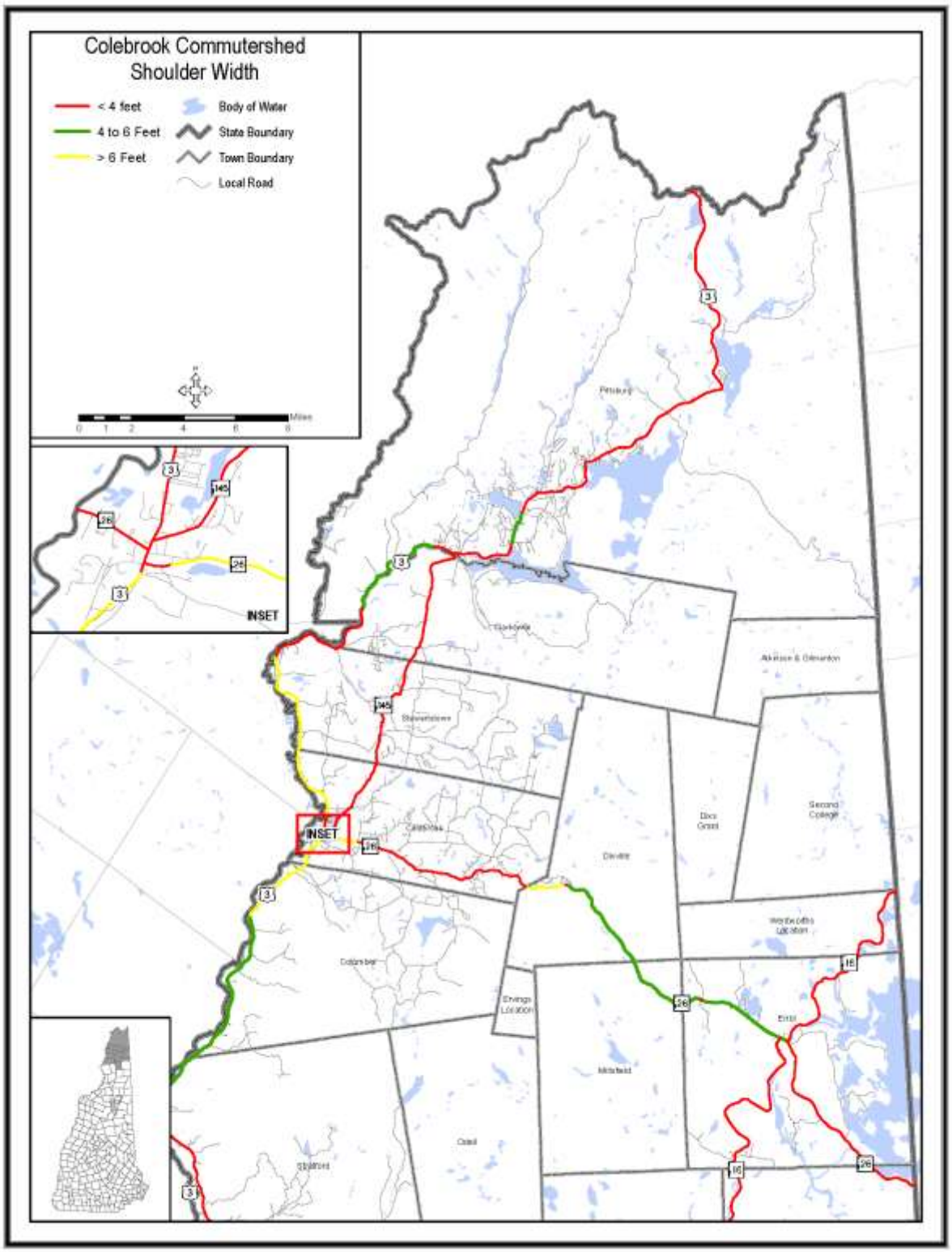
NH 26	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Colebrook														
NH 26 (Bridge St) at Vermont SL (EB-WB)	950		850		970		940			1000			820	
NH 26 (Mohawk RD) West of Fish Hatchery RD							3200			3300			3000	
NH 26 (Mohawk RD) at Dixville TL							1500			1500			1100	
NH 26 (Mohawk RD) West of Bungy Rd							3000			3400			1800	
Source: NHDOT														

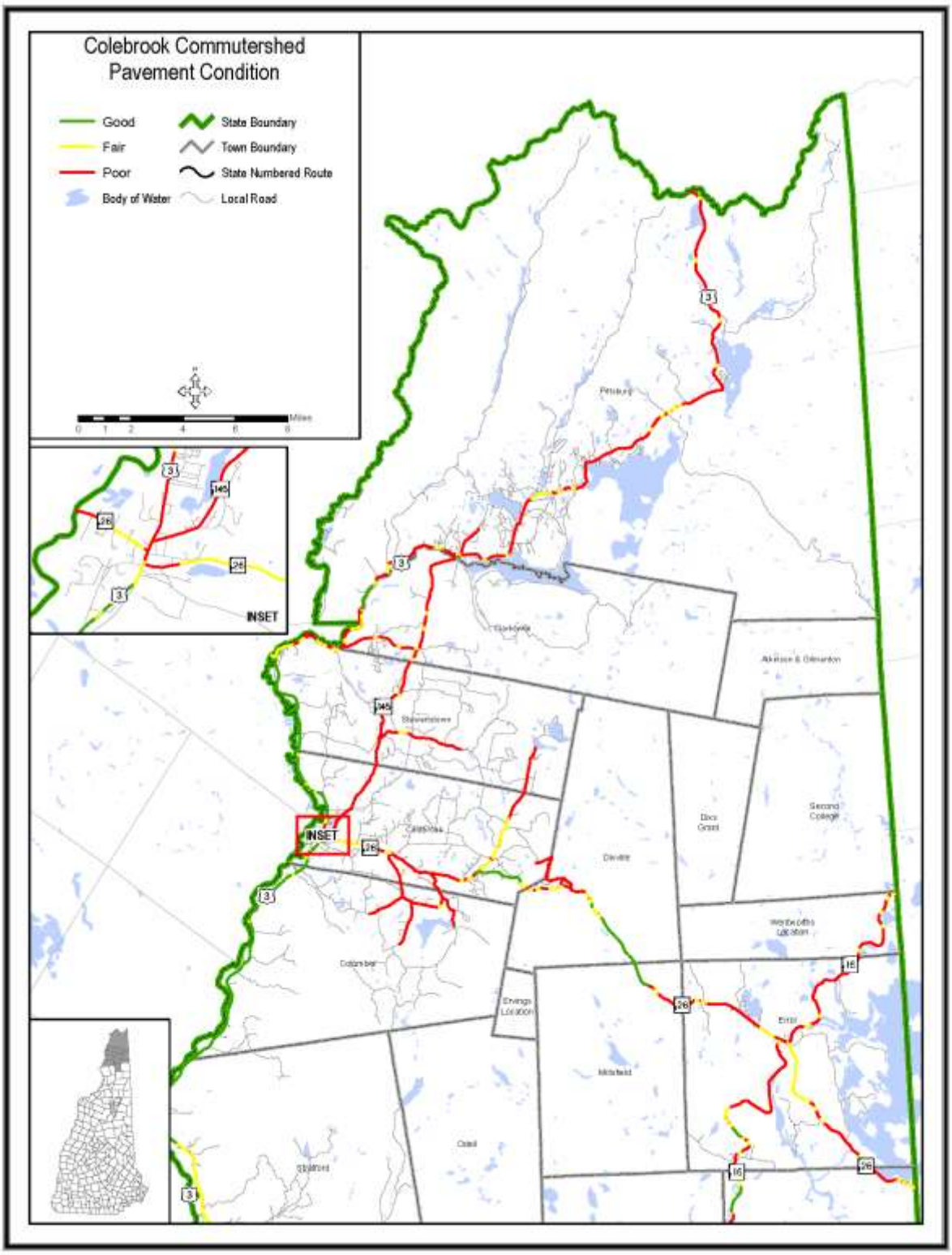
The following show accident locations, red listed bridges, shoulder width, and pavement condition in the Colebrook LMA travelshed. As shown, shoulder width on US 3 is less than 4 feet in downtown Colebrook, at the Stewartstown-Clarksville line, and through most of Pittsburg. Shoulders of less than 4 are also found on NH 26 in Colebrook, and on NH 145 which is used by many as alternate route between Colebrook and Pittsburg. This is a major concern for the safe travel of logging trucks, bicyclists, and visitors unused to watching for wildlife after dark. On US 3 from the Canadian border to the Stratford/Columbia town line (44 miles), there were 450 accidents reported to the state from 2003 to 2013. Almost one-third (32%) involved an animal, 27% involved another vehicle, and 24% involved a fixed object. On NH 26 from the Vermont state line to the Millsfield/Errol town line (18 miles), there were 112 accidents reported during the same period. Thirty-one percent involved another vehicle, 29% involved a fixed object, and 19% involved an animal. On the 13 miles of NH 145 from US in Pittsburg to US 3 in Colebrook, there were 83 accidents reported to the state from 2003 to 2013. Of these, 33% involved a fixed object, 22% involved another vehicle, and 20% involved an animal. (NHDOT)

As shown, pavement condition is also poor on most of US 3 through Pittsburg, much of NH 26, and all of NH 145. This is a concern of this heavily tourism-dependent area. In addition, a small section of NH 145 in Pittsburg has a pavement width of only 18 feet.


Colebrook Commutershed
Accident Locations
2003-2013
Accident Severity
Fatality
Incapacitating
Non-Incapacitating
Possible or Unknown
No Apparent Injury
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
INSET
INSET


Colebrook Commutershed
Infrastructure Challenges
State Redlist
Municipal Redlist
Airport
Inactive Railroad
Active Railroad
Body of Water
State Boundary
Town Boundary
Local Road
State Route
INSET
INSET


Colebrook Commutershed
Shoulder Width
< 4 feet
4 to 6 Feet
> 6 Feet
Body of Water
State Boundary
Town Boundary
Local Road
INSET
INSET


Colebrook Commutershed
Pavement Condition
Good
Fair
Poor
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
INSET
INSET

RAIL

The North Stratford-Beecher Falls Line is owned by the State of New Hampshire and operated by the New Hampshire Central Railroad (NHCR). Presently the southern two miles of the line are used on a weekly basis to provide access to a fuel transload facility and New Hampshire Central Railroad rolling stock repair facility in North Stratford (in the Littleton LMA travelshed). New Hampshire Central Railroad's primary business at this facility is the repair and maintenance of a portion of the St. Lawrence and Atlantic (SLR) fleet. The next 6 miles of track remain active although they are used much less frequently; this segment is frequently used for rail car storage. NHCR and SLR have an interchange at North Stratford. The line is not active north of Colebrook and has been turned over to the New Hampshire Department of Resources and Economic Development for recreational use and management. The 8 miles of actively used line includes 2 at-grade crossings and no bridges.

AIR

Gifford Field in Colebrook is the only airport in the Colebrook LMA travelshed and northernmost airport in the state; it is a privately owned, public-use facility. The 2,440' turf runway at Colebrook is open year-round with most flights utilizing the facility during spring through fall.

(Source: NH Civil Air Patrol)

Colebrook Airport	
FAA ID:	4c4
ARC:	A-1
Ownership	Private
Economic Region	North Country
County	Coos
Airport Role	General Aviation
Airspace	Class G
Zoning	No zoning
Fuel	None
Weather Info	None
Fixed Based Operator	No
Navigation Aids	None
Airport Latitude	44.53.001.70 N
Airport Longitude	71.29.583.03 W
Runway Orientation	4-22
Runway Length	2,440’
Runway Width	74’
Instrument Approaches	None
Lighting	None
Surface	Turf
Condition	Good
Operations for 12 Months Ending 12/31/2013	
Air Carrier	0
Air Taxi	0
General Aviation Local	350
General Aviation Itinerant	250
Military	0
Total Operations	600
Based Aircraft Colebrook	
Single Engine	7

(Source: NHDOT)

IMPROVEMENTS SINCE 2009 PLAN

PROJECTS

Colebrook**:** This project (Proj. # 13476/P2493D), located on NH 26, involved reconstruction on the road from 3 miles west of the Dixville town line easterly for 2.5 miles. Reconstruction also included bridges #202/059 over the Balsam Pond Outlet and 201/062 and 177/068 over the Mohawk River. Construction was completed in 2009.

TRANSPORTATION ALTERNATIVES

5310 Purchase of Service Funds: North Country Council has been working with the Grafton-Coos Regional Coordinating Council to develop proposals and administer funding for the 5310 Purchase of Service and Formula Funds programs. This funding is used to expand transportation services to the elderly and disabled provided by Tri-County CAP in this region using the demand response (dial-a-ride) service.

PLANNED IMPROVEMENTS - STIP AND TYP

Columbia**:** This project (state project #16302) involves the rehabilitation of the bridge over Cone Brook (#059/089) on US 3. Construction is schedule for 2019. (Bridge Program Funds.)

Stewartstown – Canaan, VT**:** This project (state project #15838) involves the rehabilitation of the Red List Bridge (# 054/163) over the Connecticut River on Bridge Street. Construction is schedule for 2015 and 2016. (Bridge Program Funds and contribution from the State of Vermont.)

DEFERRED LIST – UNFUNDED

Colebrook: This project (state project #13476) involves the rehabilitation of the bridge (#147/068) carrying NH 26 over the Mohawk River.

ISSUES, NEEDS AND PRIORITIES

PUBLIC COMMENTS

Public comments provided at the "Transportation Feedback Booth" at the Colebrook IGA in October 2014 focused on the following issues and needs:

- Roads are in poor condition, including US 3, NH 145, NH 26, tough on cars

- Need help with medical appointments for elderly and disabled
- Sidewalks not safe in winter
- Safety concerns about children walking to school
- Friday traffic, RVs

PRIORITIES

- Construct all STIP, TYP and Deferred List projects if still supported by municipalities.
- Address inadequate shoulder widths for driver, bicycle and pedestrian safety. Paved shoulder width should be increased to 4-5 feet on US 3, NH 26 and NH 145 whenever possible as part of future projects. Additional unpaved shoulder, level with the paved portion, should be added where feasible, except in stretches where the visual impacts and community preferences outweigh safety gains.
- Poor pavement condition. Need to repave, rehabilitate or reconstruct US 3, NH 26, and NH 145 as needed, and then perform preservation and maintenance at a level adequate to protect this investment of federal and state dollars.
- Pedestrian safety needs to be improved, especially in downtown Colebrook and West Stewartstown between residential areas and the school. (Proposed funding source: TAP)
- Increased outreach and coordination is needed for volunteer driver programs and other providers of transportation to medical appointments and other basic needs. Outreach efforts could be improved with assistance from the Grafton Coos Regional Coordinating Council and through the use of 5310 Purchase of Service and/or Formula Funds.
- Expand outreach on Rideshare and other alternatives to single occupant vehicles. (Proposed funding source: SPR via NCC UPWP, FTA.)
- Address Red List bridges. There are 4 State Red List Bridges in the Colebrook travelshed. Information about each of those is below. The project on a priority corridor is listed first, then other state bridges, and then municipal bridges. Priority for replacement or rehabilitation should be based on safety, traffic volumes and priority corridors. (Proposed funding source: Bridge Program, State Bridge Aid)

Stewartstown (121/144): This bridge replacement project on NH 145 over Bishop Brook was added to the State Red List in 2006. This bridge has a substructure that is listed in “serious condition”. The project cost is $2,207,000 and construction is scheduled for 2016. The NH 145 corridor is a high priority for this subregion.

Stewartstown (054/163): This bridge rehabilitation project on Bridge Street over the Connecticut River was added to the State Red List in 2006. This bridge, called “America’s Most Beautiful Steel Bridge” is listed in “serious condition”. The scour is critical and the weight is posted at 10 tons. The project cost is $6,229,000 and construction is scheduled for 2015.

Colebrook (102/083): This bridge rehabilitation project on Carleton Hill over Mowhawk River was added to the State Red List in 2012. This bridge is listed in "poor condition". NH DOT Bridge Maintenance plans to address the cost of this project in the future.

Pittsburg (099/034): This bridge on Murphy Dam Road over Dam Spillway was added to the State Red List in 2013. This bridge is considered "low capacity" and has a posted weight limit of 15 tons. NHDOT Bridge Maintenance plans to monitor this bridge and keep in service.

There are also 6 Municipal Red List Bridges located in the Colebrook LMA travelshed in the towns of Colebrook (2), Columbia (3), and Pittsburg (1).

THE FOLLOWING SPECIFIC PROJECTS HAVE BEEN IDENTIFIED BY COMMUNITIES AS NEEDS ASSOCIATED WITH ADDRESSING SOME OF THE PRIORITY ISSUES

COLEBROOK MAIN STREET

NEED

US 3 through Colebrook serves as both the only direct linkage between the state and Canada and Main Street for this socioeconomic center. Traffic is expected to increase when the Balsam's Resort reopens. Work will be taking place to replace leaking water and sewer lines that are over 100 years old. Rebuilding this section of US 3 at the same time will provide an opportunity to reduce conflicts between through traffic and local vehicular and pedestrian activity.

DESCRIPTION

Rebuild 5,000 feet of US 3/Colebrook's Main Street through the business district, from the traffic island at South Main Street to the bridge over the north branch of the Mohawk River commonly known as Beaver Brook (north of NH Route 145 intersection). Also include the intersection of US 3 and NH 26, the primary route to Dixville Notch and the Balsams Resort. Also include ADA compliant sidewalks and drainage replacement.

Funding: The town of Colebrook was recently awarded nearly $640,000 in funding through the New Hampshire Department of Transportation's Transportation Alternatives Program (TAP.) The TAP project, with a total cost of nearly $800,000, is a component of a larger "Complete Streets" project including: roadways, bicycle lanes, sidewalks, streetscape, and utilities (water, Sewer, and drainage) and is anticipated to cost about $6.5 million. The TAP portion of funding will be used to construct ADA compliant sidewalks and crosswalks, and a paved bicycle lane on Main Street. The Town of Colebrook also has financial support from USDA and a bond of $6.5 million was supported at the 2015 town meeting: 249 in favor, 17 opposed. As of May, 2015, about half of that amount is funded by grants, and the town is pursuing additional funds through the NHDOT Transportation Improvement Program and through the USDOT TIGER program.

REPAIR WALLS IN STRATFORD

NEED

Two portions of US 3 in Stratford are associated with walls that have become in disrepair over the years and threaten the roadway if allowed to continue. One is at Baldwin Cemetery, south of 1564 US 3. Over the years, plowing, roadwork, and routine repairs have resulted in knocking down and/or burying the original stone wall around Baldwin Cemetery. Portions of the wall are now under road material and other portions have been knocked over and are lying on gravesites.

The second wall is at the north end of Stratford, at a very sharp bend in the road when entering the center of town at Fuller Town Hall. The wall is losing stones and has holes on top of the wall and a grassy area from erosion. Continued erosion is further deteriorating the wall. The wall is an essential piece of US 3 infrastructure and presents a safety hazard if deterioration is allowed to continue.

DESCRIPTION

Put the Baldwin Cemetery wall back into condition so that it is safe, no stones are on gravesites, and road material is not on top of the wall. The wall needs to be reinstalled, either by removing road material that has intruded into the cemetery or by bringing the wall up above the road material.

Re-point and repair the stone wall near Fuller Town Hall so that it is safe, no stones are falling out, and the grassy area is backfilled to end erosion. (Proposed funding source: Betterment Funds)

B. BERLIN-GORHAM LABOR MARKET AREA TRAVELSHED

EXISTING CONDITIONS

The Berlin-Gorham area lost population over the past decade. Some of this loss was associated with the closing of several mills in the previous decade, and job growth in service and retail industries that do not pay a livable wage. Additional population loss is associated with the aging population not being replaced by in-migration. OEP projections indicate continued population loss over the next few decades. NHES ELMI employment projections show a consistent trend, -0.2% for Coos County between 2010-2020.

Town Name	**Population 2000 Census**	**Population Change 00-10**	**Population 2010 Census**	***OEP Projection 2040***
Berlin/Gorham Labor Market Area Travelshed				
Berlin	10,331	-280	10,051	*8,356*
Gorham	2,895	-47	2,848	*2,395*
Milan	1,331	6	1,337	*1,149*
Shelburne	379	-7	372	*312*
Dummer	309	-5	304	*256*
Errol	298	-7	291	*243*
Randolph	339	-29	310	*240*
Total	15,882	-369	15,513	*12,951*

(Source: NHES)

Despite a loss in the overall number of dwelling units, the number of seasonal homes increased by 18%.

CHANGE IN SEASONAL HOMES COMPARED TO TOTAL DWELLING UNITS
BERLIN LABOR MARKET AREA

	Population in Households	
2000 15,892	2010 14,823	% Change -6.7%
	Total Dwelling Units	
2000 8,527	2010 8,474	% Change -0.6%
	Seasonal Homes	
2000 743 (8.8% of total dwelling units)	2010 877 (10.3% of total dwelling units)	% Change +18%

(Source: US Census 2000, 2010)

HIGHWAY NETWORK

As shown, US 2 runs east-west through the Berlin-Gorham LMA travelshed. US 2 is a Class I Highway, is on the National Highway System, and functions as a Principal Arterial through the region. This highway connects this socioeconomic center with Maine to the east and with Vermont via Lancaster NH to the west; in fact, US 2 is the major east-west corridor across northern New England. It is therefore a regional priority. US 2 is also Main Street through Gorham's busy downtown.

A second regional priority in the Berlin-Gorham socioeconomic center is NH 16. NH 16 is also a Class I Highway and is on the National Highway System south of downtown Berlin. NH 16 connects the two job centers, Berlin and Gorham, carries commuters south from Errol, and carries important tourist traffic north from Gorham. NH 16 functions as Main Street in Berlin's busy downtown. NH 16 south of Gorham provides a connection with the heavily tourist dependent Conway area through the Pinkham Notch recreation area. NH 16 also carries commuters to the Northern NH Correctional Facility and FCI Berlin, two major employers in Berlin. Both of these employers are north of the downtown, accessed by East Milan Road, making East Milan Road an important part of the highway network as well.

Two other important corridors are NH 26 and NH 110, both Class I Highways. These are both priority corridors for the Berlin-Gorham travelshed. NH 26 is another important highway; it carries tourist traffic from Maine's Grafton Notch State Park area into New Hampshire's North Country, provides access to

the Balsam's Resort (currently in the permitting process for redevelopment) and connects with US 3, the region's main north-south highway, in Colebrook.

NH 110 connects the City of Berlin with US 3 in Groveton, and provides access to the popular ATV trails at Jericho Mountain State Park.

As shown, the greatest traffic volumes (over 7,500 AADT) are in downtown Gorham on US2/NH 16, on the commercial strip in between Gorham and Berlin, and on NH 16 on either side of downtown Berlin. Volumes of 4001-7500 AADT are seen in Berlin within and north of the downtown, and on US 2 east of Gorham to the US 2/NH 16 intersection in Shelburne, and west through Randolph to the US 2/NH 115 intersection in Jefferson.

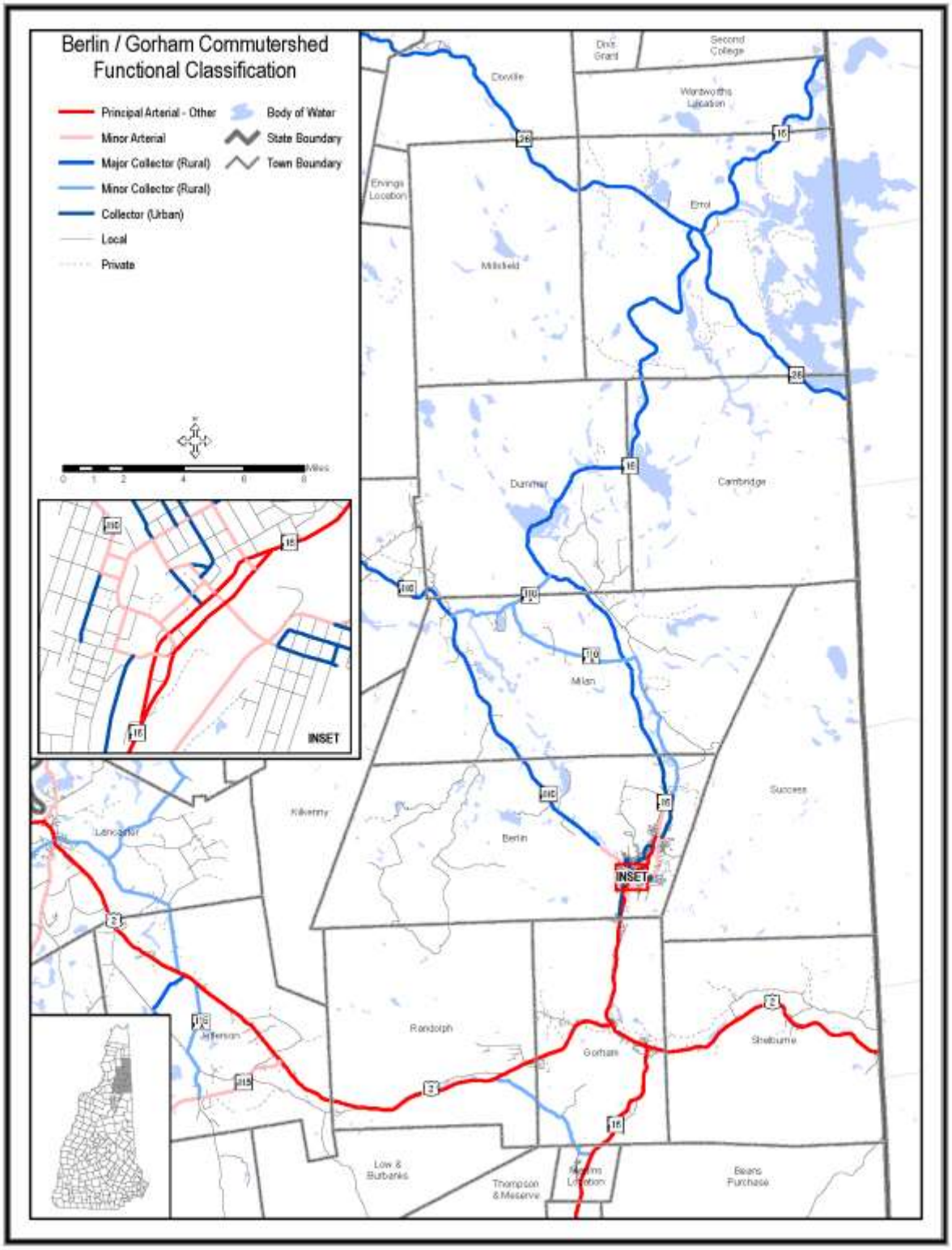
The following table shows the mileage by road class for the Berlin Labor Market Area travelshed, where approximately 10% of the lane miles in the NCC region are located. Of the total 373 miles in this region, about 25% are private roads, 21% are Class I, 10% are Class II, .5% are Class III, 2.4% are Class IV, 33% are Class V, 1% are Class VI, and about 7% are Federal. All 9 miles of Class IV roads in the NCC region are located in the Berlin LMA travelshed.

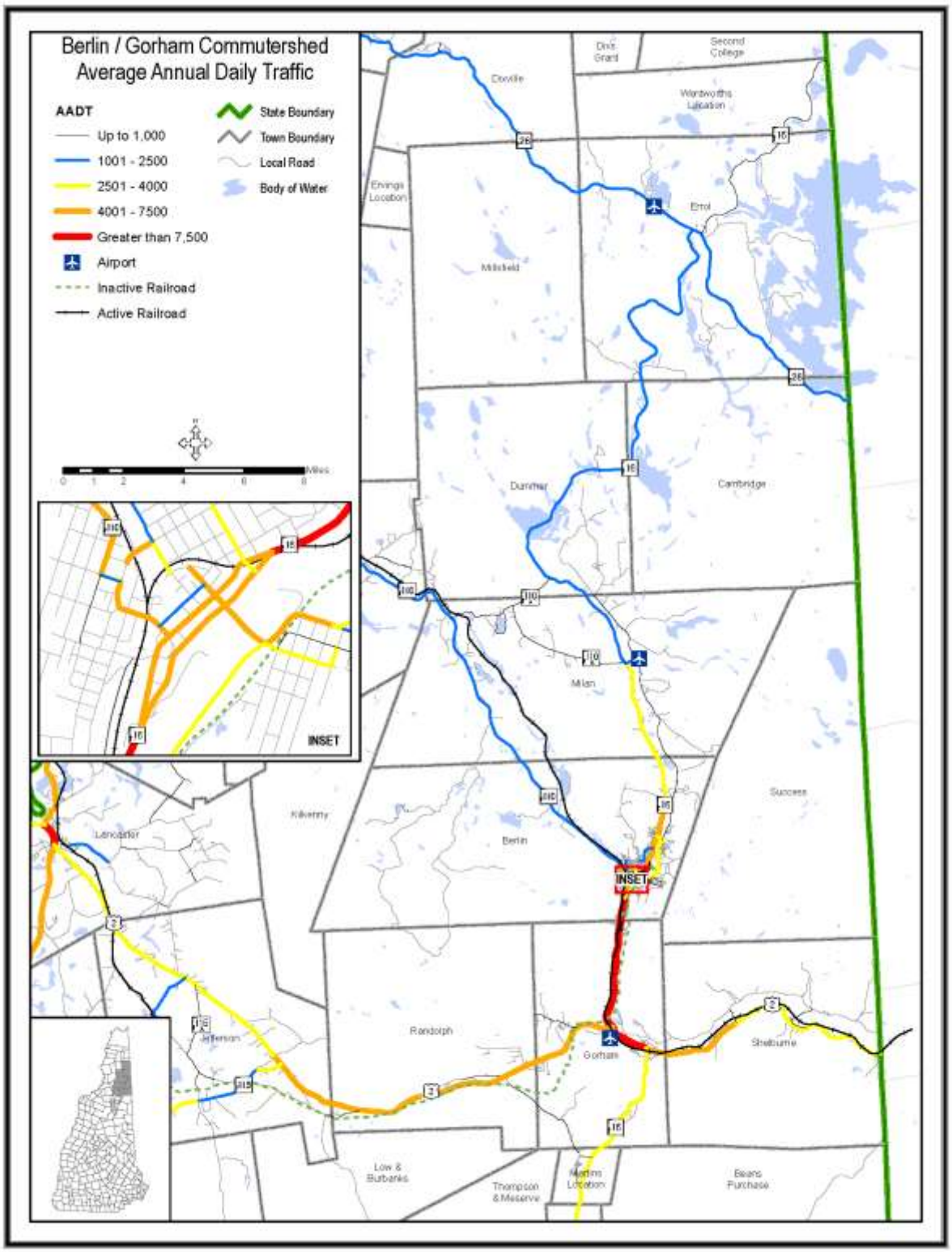
Berlin Labor Market Area

TOWN	LEGISLATIVE CLASS	CENTERLINE MILES	LANE MILES
BERLIN	Private Roads	10.171	11.664
DUMMER	Private Roads	4.946	4.97
ERROL	Private Roads	35.923	42.427
GORHAM	Private Roads	16.343	17.111
MILAN	Private Roads	14.083	14.861
RANDOLPH	Private Roads	1.335	1.965
SHELBURNE	Private Roads	11.303	19.869
	Total Miles	**94.104**	**112.867**
BERLIN	Class I: Primary Roads	6.248	12.496
CAMBRIDGE	Class I: Primary Roads	5.199	10.398
DUMMER	Class I: Primary Roads	8.102	16.204
ERROL	Class I: Primary Roads	18.919	37.838
GORHAM	Class I: Primary Roads	12.783	34.682
MILAN	Class I: Primary Roads	12.411	27.494
RANDOLPH	Class I: Primary Roads	7.201	17.67
SHELBURNE	Class I: Primary Roads	8.459	16.918
	Total Miles	**79.322**	**173.7**

Berlin Labor Market Area			
TOWN	**LEGISLATIVE CLASS**	**CENTERLINE MILES**	**LANE MILES**
BERLIN	Class II: Secondary Roads	1.446	2.892
DUMMER	Class II: Secondary Roads	5.064	10.128
ERROL	Class II: Secondary Roads	6.151	12.302
GORHAM	Class II: Secondary Roads	2.693	5.386
MILAN	Class II: Secondary Roads	14.237	28.445
RANDOLPH	Class II: Secondary Roads	2.595	5.19
SHELBURNE	Class II: Secondary Roads	4.642	9.284
	Total Miles	**36.828**	**73.627**
BERLIN	Class III: Recreation Roads	1.315	2.63
CAMBRIDGE	Class III: Recreation Roads	0.026	0.052
MILAN	Class III: Recreation Roads	0.258	0.516
	Total Miles	**1.599**	**3.198**
BERLIN	Class IV: Compact Roads	**8.667**	**17.56**
BERLIN	Class V: Local Roads	60.303	115.306
DUMMER	Class V: Local Roads	9.318	17.178
ERROL	Class V: Local Roads	0.713	1.426
GORHAM	Class V: Local Roads	17.565	34.366
MILAN	Class V: Local Roads	19.94	34.439
RANDOLPH	Class V: Local Roads	8.803	17.606
SHELBURNE	Class V: Local Roads	5.573	11.105
	Total Miles	**122.215**	**231.426**
DUMMER	Class VI: Local Not Maintained	0.214	0.214
GORHAM	Class VI: Local Not Maintained	0.571	0.571
MILAN	Class VI: Local Not Maintained	1.296	1.891
SHELBURNE	Class VI: Local Not Maintained	1.446	2.892
	Total Miles	**3.527**	**5.568**
BERLIN	Class VII: Federal Roads	20.112	37.589
GORHAM	Class VII: Federal Roads	1.581	1.581
RANDOLPH	Class VII: Federal Roads	2.86	5.72
SHELBURNE	Class VII: Federal Roads	1.261	2.522
	Total Miles	**25.814**	**47.412**
	Total Mileage	**277.972**	**552.491**

Source:
NHDOT


Berlin / Gorham Commutershed
Functional Classification
Principal Arterial - Other
Minor Arterial
Major Collector (Rural)
Minor Collector (Rural)
Collector (Urban)
Local
Private
Body of Water
State Boundary
Town Boundary
Miles
0 1 2 4 6 8
INSET
Dixville
Dix's Grant
Second College
Wentworths Location
Errol
Millsfield
Dummer
Cambridge
Milan
Berlin
Success
Kilkenny
Lancaster
Randolph
Gorham
Shelburne
Jefferson
Low & Burbanks
Thompson & Meserve
Bean's Purchase


Berlin / Gorham Commutershed
Average Annual Daily Traffic
AADT
Up to 1,000
1001 - 2500
2501 - 4000
4001 - 7500
Greater than 7,500
Airport
Inactive Railroad
Active Railroad
State Boundary
Town Boundary
Local Road
Body of Water
Miles
0 1 2 4 6 8
INSET
Dixville
Dix's Grant
Second College
Wentworths Location
Errol
Millsfield
Dummer
Cambridge
Milan
Berlin
Success
Kilkenny
Lancaster
Randolph
Gorham
Shelburne
Jefferson
Low & Burbanks
Thompson & Meserve
Martins Location
Bean's Purchase
Erving's Location

As shown in the tables below, traffic volumes are not in general increasing through this portion of the region.

Average Annual Daily Traffic (AADT)

US 2	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Randolph														
US 2 (Presidential HWY) at Jefferson TL			5300			5400			4900			5100		
Gorham														
US 2 (Presidential HWY) at Randolph TL (EB-WB)		5800			6400			6100			5900			5000
US 2/NH 16 (Main St) East of Dublin St (EB-WB)								14000			12000			12000
Shelburne														
US 2 at Gorham TL EB-WB			5300			6300		6700			6400			4100
US 2 East of North RD (EB-WB)	3495	3166	3684		3200			5200			3200			3500
US 2 at Maine SL EB-WB			5300			6300		6700			2800			3100

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 16	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Errol														
NH 16 North of NH 26 (SB-NB)		810			830		970			960			860	
NH 16 (Berlin RD) at Cambridge TL (SB-NB)		1100			1100		1200			1200			1200	
NH 16 at Wentworth Location TL (SB-NB)		720			600		820			650				
Berlin														
NH 16 (Main St) North of Pleasant St		9800				9100		7800			8800			9700
NH 16 (Main St) North of Maple St (SB-NB)			9100			8000				7200		7500		
NH 16 (Glen Ave) South of Pleasant St							9900			10000			9200	
NH 16 at Milan TL (SB-NB)		2200		2500			2700			2500			2600	
NH 16 (Main St) North of Woodward St		3700				3500		4100			4400			2900
NH 16 (Pleasant St) SB Over Dead River	6100			6400						6100			5500	
NH 16 (Main St) NB Over Dead River			5000			4800				5700		4800		
NH 16 (Main St) North of 10th St	7600			6900				7200		6900			6400	
NH 16 (Pleasant St) SB South of Diana St			6500			6100			6200			6000		
NH 16 (Glen Ave) NB South of Diana St			6100			6100			6000			5700		
NH 16 South of Brown St	13000			14000			9900							
Dummer														
NH 16 North of NH 110A (SB-NB)		1500		1400				1400		1200			1200	
NH 16 (Milan RD) at Milan TL (SB-NB)		1400		1400				1300			1300		1300	

Gorham														
NH 16 (Main St) North of US 2 (SB-NB)								13000		12000			13000	
NH 16 (Main St) South of Berlin TL								15000			11000			11000

(SB-NB)														
NH 16 (Glen RD) at Martins Locations TL (SB-NB)									3200		3300			2900
NH 16 (Glens RD) South of Libby St (SB-NB)							3100			3000			3800	
NH 16 South of Us 2 (SB-NB)		3500		3600			3100							

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 110	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Berlin														
NH 110 (Wight ST) East of Sixth Ave (EB-WB)								4100			4400		3800	
NH 110 (West Milan RD) at Milan TL (EB-WB)		1700		2100			1900		1600	1800			1600	
NH 110 (Berlin-Groveton HWY) at Compact Line (EB-WB)							2800			2500			2100	
NH 110 (Madigan ST) West of 2nd Ave (EB-WB)										2600			2200	
NH 110 West of Hillside Ave			2600			2700								
Milan														
NH 110 (West Milan RD) South of NH 110A							1900			1700			1500	
NH 110 at North Branch Brook		1800			2000		1900							

Source: NHDOT

Average Annual Daily Traffic (AADT)

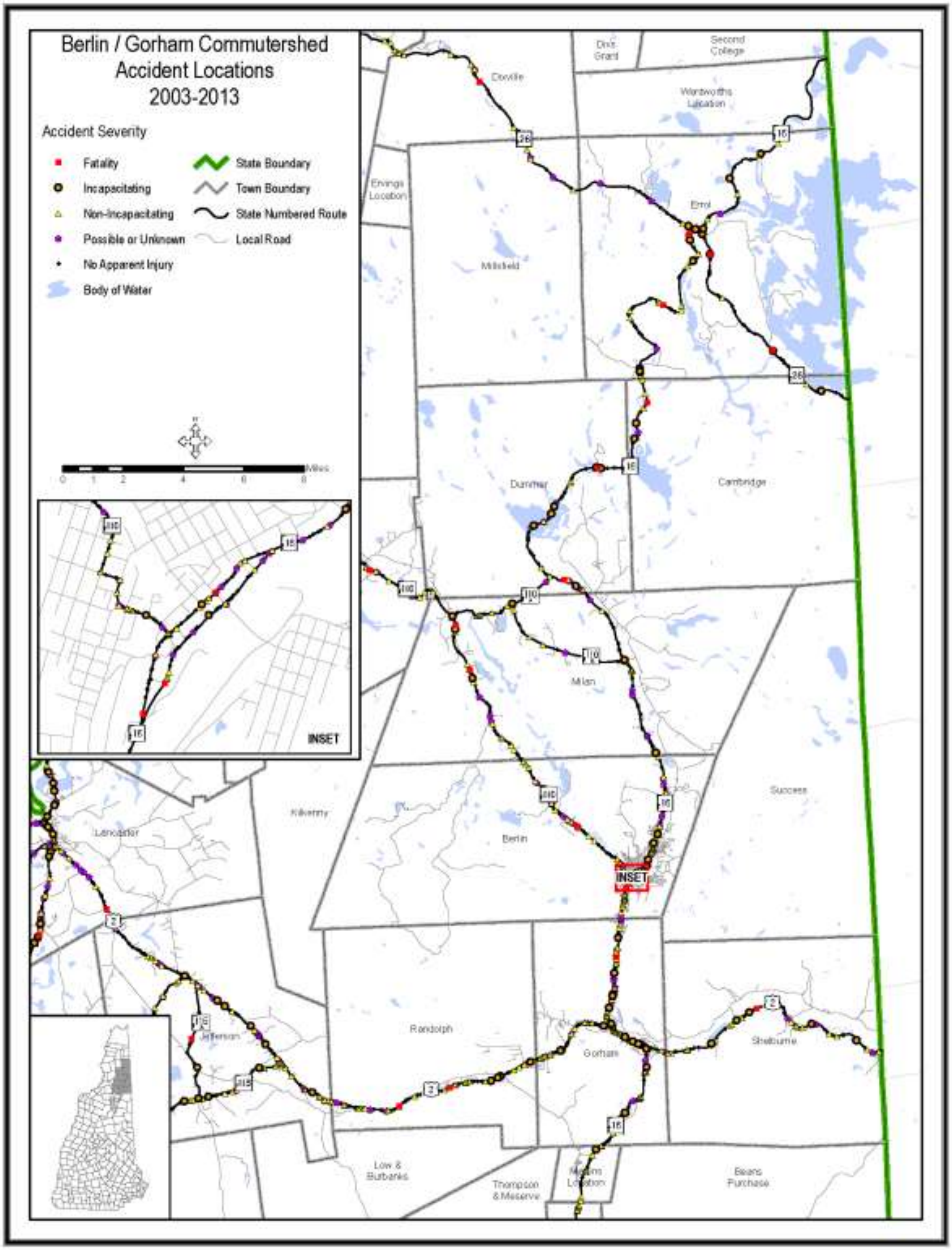
NH 26	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Errol														
NH 26 (Upton Hill RD) at Cambridge TL (EB-WB)		950					940	1100		1000			1100	
NH 26 (Upton RD) Over Androscoggin River (EB-WB)							1100			1300			1500	
NH 26 at Millsfield TL (EB-WB)							1100			1300			1400	

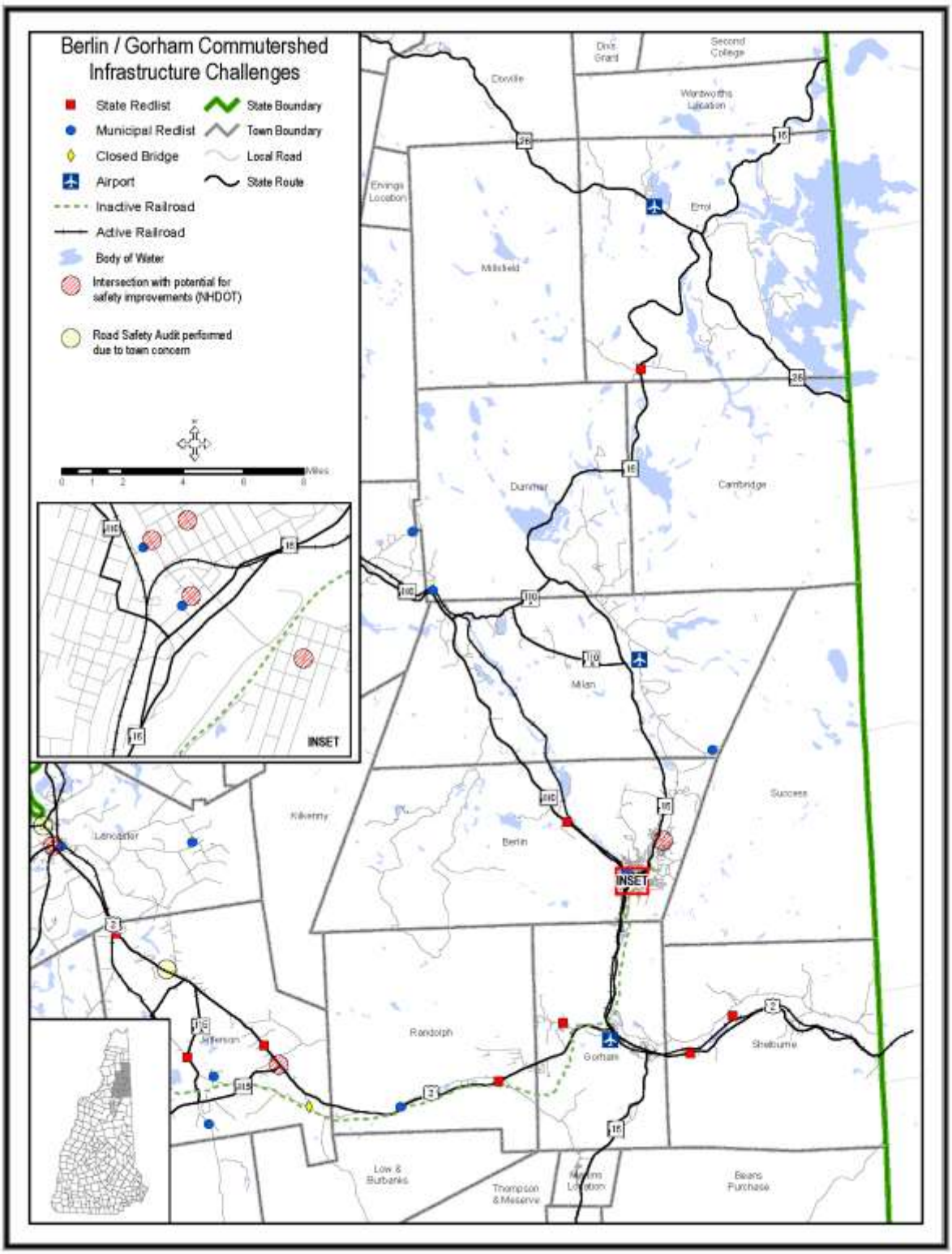
Source: NHDOT

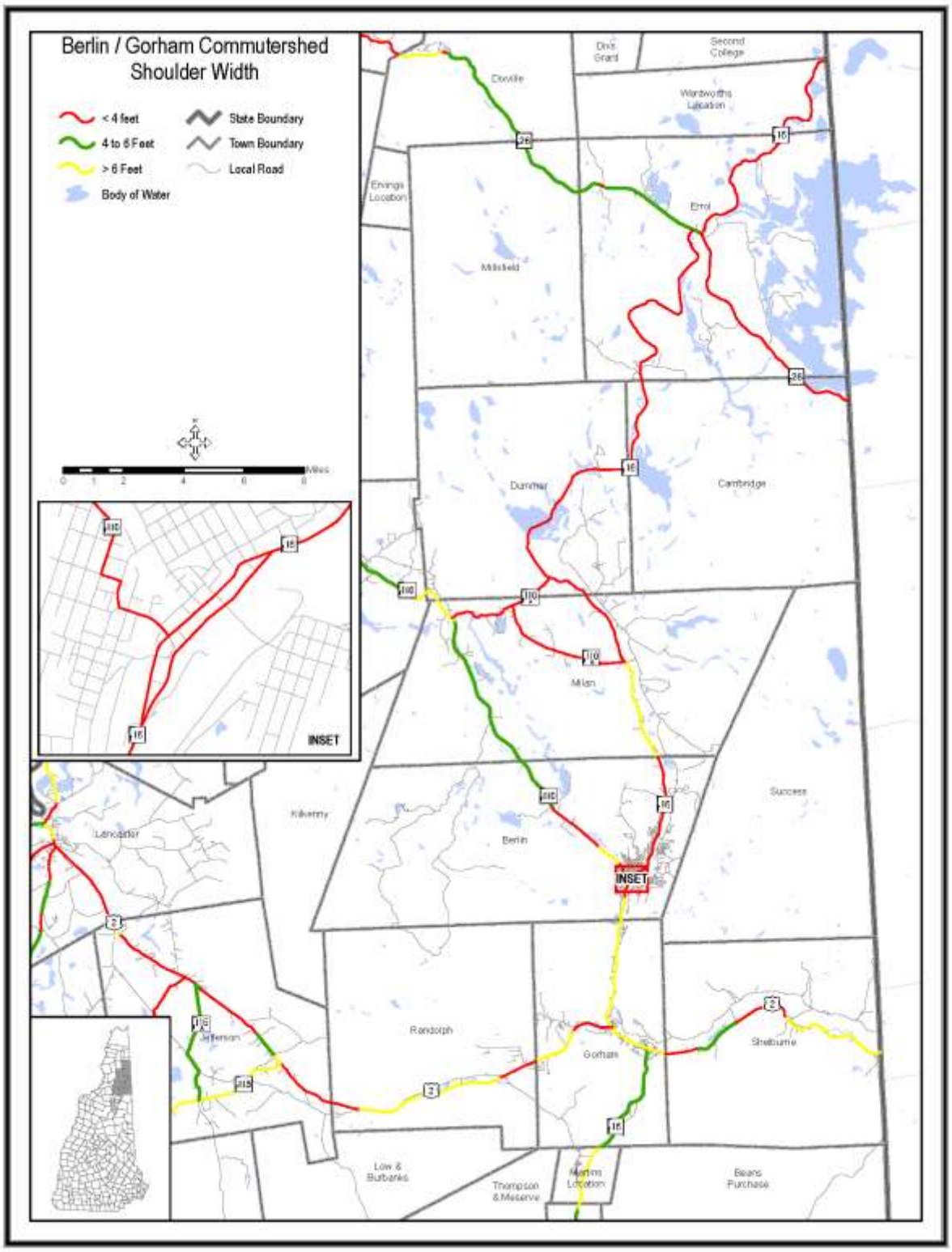
The maps below show accident locations, infrastructure issues, shoulder width, and pavement condition in the Berlin-Gorham LMA travelshed. As shown, five intersections in the City of Berlin have been identified by NHDOT as requiring evaluation for safety improvements, one at an important feeder to the East Milan Road commuter route to the two prisons. In addition, red-listed bridges occur on each priority highway in the subregion except NH 26.

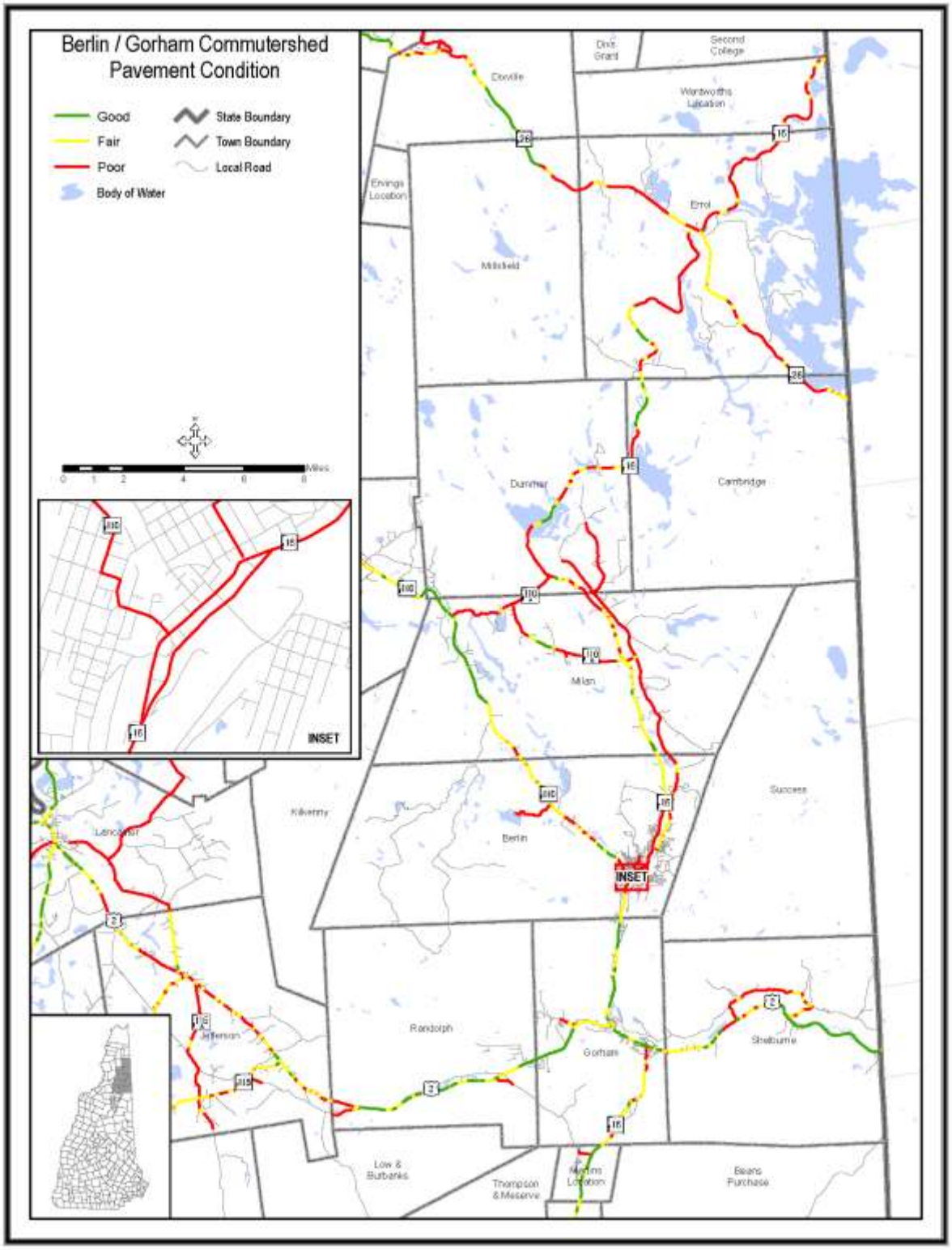
As shown, shoulder widths less than 4 feet are found on several sections of US 2, NH 16 from downtown Berlin to the Maine state line (except for the section from the Berlin-Milan town line to the NH 16/NH 110B intersection), on NH 26 in Errol, and on a segment of NH 110 in Berlin. This is a major concern for the safe travel of logging trucks, trucks carrying freight, bicyclists, and visitors unused to watching for wildlife after dark. On US 2 from the Randolph-Jefferson town line to the Maine state line (20 miles), there were 507 accidents reported to the state from 2003-2013. Of these, 47% involved another vehicle, 20% involved an animal, and 20% involved a fixed object. During the same period, there were 1,210 accidents reported on the 46 miles of NH 16 from the Errol-Wentworth's Location town line to the Gorham-Martin's Location town line. Over half (56%) of these involved another vehicle, 17% involved an animal, and 15% involved a fixed object. On NH 26 from the Errol-Millsfield town line to the Maine state line (13 miles), there were 87 crashes reported to the state from 2003 to 2013. Forty percent of these involved a fixed object, 20% involved an animal, and only 10% involved another vehicle. On NH 110 from the Dummer-Stark town line to NH 16 in Berlin, of 231 accidents reported, 415 involved another vehicle, 28% involved an animal, and 18% involved a fixed object.

As shown, pavement condition on US 2, NH 110, and NH 16 to the NH 16/NH 110B intersection in Milan, is mostly fair to good. North of the NH 16/NH 110B intersection, the pavement condition on NH 16 is predominantly in poor condition. Much of the pavement condition on NH 26 in Errol is also in poor condition. This is a concern of this heavily tourism-dependent area, as well as for Errol residents commuting to jobs at the prisons in Berlin.


Berlin / Gorham Commutershed
Accident Locations
2003-2013
Accident Severity
Fatality
Incapacitating
Non-Incapacitating
Possible or Unknown
No Apparent Injury
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 1 2 4 6 8
INSET
Errol
Dummer
Cambridge
Milan
Berlin
Success
Kilkenny
Lancaster
Jefferson
Randolph
Gorham
Shelburne
Low & Burbanks
Thompson & Meserve
Beans Purchase

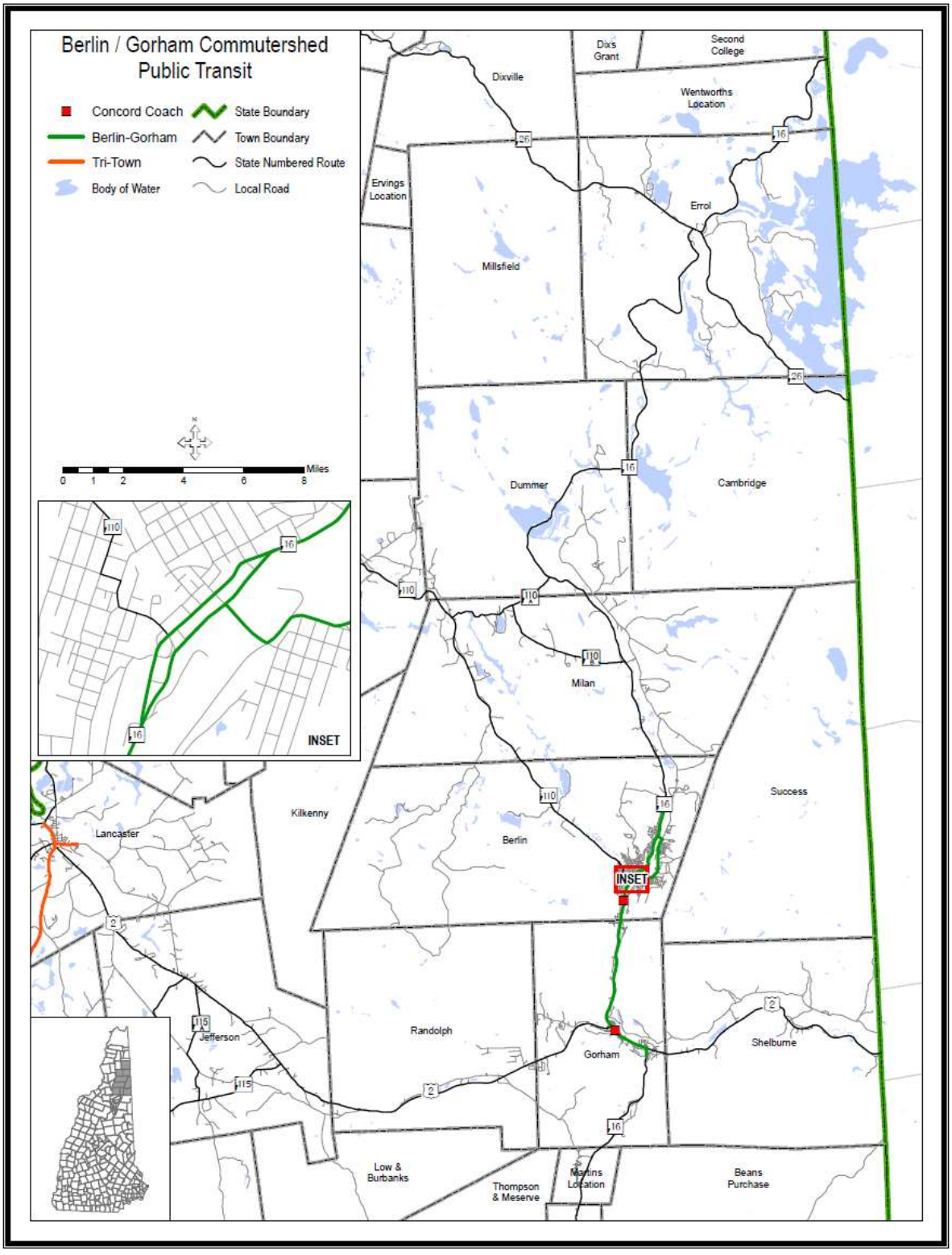

Berlin / Gorham Commutershed
Infrastructure Challenges
State Redlist
Municipal Redlist
Closed Bridge
Airport
Inactive Railroad
Active Railroad
Body of Water
Intersection with potential for safety improvements (NHDOT)
Road Safety Audit performed due to town concern
State Boundary
Town Boundary
Local Road
State Route
Miles
0 1 2 4 6 8
INSET
Coos
Clarksville
Dix's Grant
Second College
Odell
Wentworths Location
Errol
Millsfield
Dummer
Cambridge
Milan
Success
Berlin
Gorham
Shelburne
Randolph
Jefferson
Lancaster
Kilkenny
Low & Bufbanks
Thompson & Meserve
Bean's Purchase


Berlin / Gorham Commutershed
Shoulder Width
< 4 feet
4 to 6 Feet
> 6 Feet
Body of Water
State Boundary
Town Boundary
Local Road
Miles
0 1 2 4 6 8
INSET
Dixville
Dix's Grant
Second College
Wentworths Location
Errol
Millsfield
Dummer
Cambridge
Milan
Berlin
INSET
Success
Kilkenny
Lancaster
Jefferson
Randolph
Gorham
Shelburne
Low & Burbanks
Thompson & Meserve
Martins Location
Bean's Purchase


Berlin / Gorham Commutershed
Pavement Condition
Good
Fair
Poor
Body of Water
State Boundary
Town Boundary
Local Road
INSET
INSET
Dixville
Second College
Wentworths Location
Errol
Millsfield
Dummer
Cambridge
Milan
Berlin
Success
Kilkenny
Randolph
Gorham
Shelburne
Low & Burbanks
Thompson & Meserve
Bean's Purchase

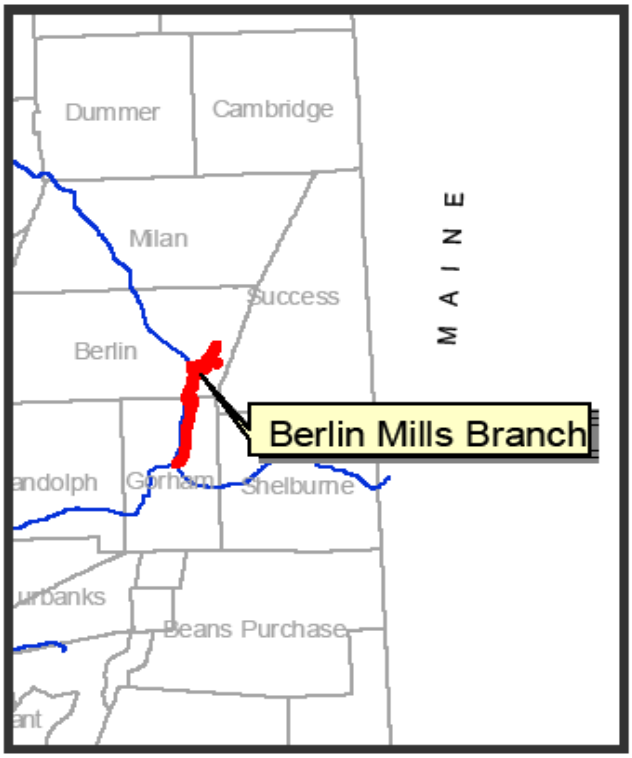
PUBLIC TRANSIT

As shown below, public transit is available in downtown Gorham and downtown Berlin and connecting the two downtowns. For inter-city bus service Concord Coach also has stops in both communities.



RAIL

The Berlin Mills Branch is leased by the St. Lawrence and Atlantic Railroad. The entire line is approximately 6 miles long, most of which has been inoperative since the shutdown of the mill in Berlin. A switch has been removed making a portion of the line inaccessible.



(Source: New Hampshire State Rail Plan, 2001)

AIR

Berlin Regional Airport is located in the town of Milan, just north of the City of Berlin. The Berlin Airport Authority owns the facility, with financial and administrative operations coordinated through the City of Berlin. The Airport Authority is comprised of a seven-member agency with representation from the City of Berlin, Town of Milan and Coos County. The airport manager coordinates day-to-day operation and management.

(Source: http://www.berlinnh.go)

The airport is primarily used by small general aviation aircraft and serves a

notable amount of training activity due to the available instrument approaches at the airport. The airport also serves an important role in emergency medical evacuation and support facility for search and rescue operations. The airport's location in the northern portion of the state and the availability of Jet-A fuel are key factors to the airport's importance to the region.

Berlin Airport	
FAA ID:	BML
ARC:	C-11
Ownership	Public
Economic Region	North Country
County	Coos
Airport Role	General Aviation
Airspace	Class G
Zoning	Residential/Agricultural
Fuel	100LL, Jet
Weather Info	ASOS/HIWAS
Fixed Based Operator	Yes (Part-Time)
Navigation Aids	VOR/NDB
Airport Latitude	44.34.313.42 N
Airport Longitude	71.10.333.54 W
Runway Orientation	18-36
Runway Length	5,200'
Runway Width	100'
Instrument Approaches	VOR/DME-18, NDB-18, GPS-18, VOR/GPS-B
Lighting	MIRL 18-36, REIL/PAPI 18; REIL 36
Surface	Asphalt
Condition	Good
Operations for 12 Months Ending 12/31/2013	
Air Carrier	0
Air Taxi	100
General Aviation Local	8,000
General Aviation Itinerant	4,000
Military	100
Total Operations	12,200
Based Aircraft Berlin	
Single Engine	22

(Source: NHDOT)

Errol Airport is located in the town of Errol. The airport is a privately owned airport open to the public. The airport has a 3,680' x 75' gravel runway and several based aircraft. The airport has a hangar and several turf tiedowns.

(Source: NH Civil Air Patrol)

Errol Airport	
FAA ID:	ERR
ARC:	A-1
Ownership	Private
Economic Region	North Country
County	Coos
Airport Role	General Aviation
Airspace	Class G
Zoning	Residential
Fuel	None
Weather Info	None
Fixed Based Operator	No
Navigation Aids	None
Airport Latitude	44.47.331.79 N
Airport Longitude	71.09.512.82 W
Runway Orientation	15-33
Runway Length	3,680'
Runway Width	75'
Instrument Approaches	None
Lighting	None
Surface	Gravel
Condition	Good
Operations for 12 Months Ending 12/31/2013	
Air Carrier	0
Air Taxi	25
General Aviation Local	300
General Aviation Itinerant	300
Military	10
Total Operations	635
Based Aircraft Errol	
Single Engine	2

(Source: NHDOT)

Gorham Airport is located in the town of Gorham. The airport is owned and operated by the town of Gorham. Day to day airport maintenance, operation and management are coordinated on a part-time basis through the town Water and Sewer Commission. The 2,800' turf runway facility is open seasonally from spring through fall.


Source: NH Civil Air Patrol)

Gorham Airport	
FAA ID:	2G8
ARC:	A-I
Ownership	Public
Economic Region	North Country
County	Coos
Airport Role	General Aviation
Airspace	Glass G
Zoning	Residential
Fuel	None
Weather Info	None
Fixed Based Operator	No
Navigation Aids	None
Airport Latitude	44.23.352.20 N
Airport Longitude	71.11.482.72 W
Runway Orientation	12-30
Runway Length	2,815'
Runway Width	80'
Instrument Approaches	None
Lighting	None
Surface	Turf
Condition	Good
Operations for 12 Months Ending 12/31/2013	
Air Carrier	0
Air Taxi	0
General Aviation Local	500
General Aviation Itinerant	200
Military	30
Total Operations	730
Based Aircraft Gorham	
Single Engine	3

(Source: NHDOT)

IMPROVEMENTS SINCE 2009 PLAN

HIGHWAY AND BRIDGE PROJECTS

Bartlett-Gorham (Proj.# 13857): This was a guardrail and terminal upgrade project along US 302 (Bartlett) to US 2 (Gorham). The project was completed in June of 2014.

Bartlett-Gorham (Proj. 16401): This project was to repair damages on NH 16 caused by Tropical Storm Irene in 2011 between Bartlett and Gorham. Construction was completed in October 2011.

Berlin (Proj. # 12958B): This project involves the reconstruction of NH 110 from Green Street/First Avenue to Wight Street. Construction began in November of 2013 and is expected to be complete by September 2015.

Dummer (Proj. #15804): In response to a storm event in 2009, a detour was constructed in order for permanent repairs on NH 16 to be made. This included realignment and reconstruction of NH 110A south .5 miles. Work also included stabilization of a failed slope. Construction on this project was completed in 2011.

Dummer (Proj. 15805): Realign and Reconstruct NH 16.

Randolph (Proj. 14368): This project involved the replacement of a bridge (#140/067) on Durand Road over Carlton Brook. Construction was completed in 2013.

Randolph (Proj. 13602A): This project, on US 2, involved full reconstruction of the roadway starting approximately 200 feet east of Valley Road, and proceeding east .84 miles. Construction was completed in August of 2010.

TRANSPORTATION ALTERNATIVES

Berlin (Proj. # 13886): This was a Transportation Enhancement Project to replace old sidewalks on Hillside Avenue. Construction was completed in 2009.

Gorham (Proj. 12279): This project, funded with Transportation Enhancement dollars, involved the construction of a multi-modal path connecting US 2 and NH 16 south of the St. Lawrence & Atlantic Railroads. Construction was completed in 2010.

5310 Purchase of Service and Formula Funds: North Country Council has been working with the Grafton-Coos Regional Coordinating Council to develop proposals and administer funding for the 5310 Purchase of Service and Formula Funds programs. This funding is used to expand transportation services to the elderly and disabled provided by Tri-County CAP using demand response services (dial-a-ride) and by providing trips through a volunteer network, which TCCAP was able to expand with this funding.

PLANNED IMPROVEMENTS - STIP AND TYP

Berlin: This project (state project # 12958H), located on NH 110 (from Green Street to Fourth Avenue) involves construction a scenic vistas, interpretive panels, and other approved mitigation measures. Construction is scheduled for 2015. (Surface Transportation Funds.)

Berlin: This project (state project #16019) involves the reconstruction of Hutchins Street from Napert Street to Bridge Street. Construction is scheduled for 2015. (Federal Highways Funds – Earmarked Project.)

Berlin: This project (state project # 15792), located on Hillside Avenue the replacement of the bridge over the Dead River (bridge # 232/066). Construction is scheduled for 2017. (State Aid Bridge Funds.)

Berlin: This project (state project #15793) involves the rehabilitation of the bridge (#256/087) over the Androscoggin River on 12th Street. Construction is scheduled for 2016. (State Aid Bridge Funds.)

Dummer: This project (state project #15815) involves the rehabilitation of the Old Route 110 Bridge over Upper Ammonoosuc River (#042/043), a 1944 IBeam bridge with a concrete deck. Construction is schedule for 2017. (State Aid Bridge Funds.)

Dummer: This project (state project #16304A), located on NH 16, involves the widening and rehabilitation from a point .3 miles north of NH 110A / Muzzey Hill Road, north 1.3 miles. Construction is scheduled for 2016. (Surface Transportation Funds.)

Dummer – Cambridge – Errol: This project (state project #16304) involves the widening and rehabilitation on NH 16 where needed from Errol extending south 10 miles. Construction is scheduled for 2017. (Surface Transportation Funds.)

ISSUES, NEEDS, AND PRIORITIES

- Construct all projects on STIP and TYP, with priority on safety and priority corridors.
- Address poor pavement condition. Need to repave, rehabilitate or reconstruct as needed, portions of NH 26 and NH 16, including downtown Berlin to White Mountains Community College, and north of NH 16/NH110B intersection, and then perform level of preservation and maintenance adequate to protect this investment of federal and state dollars. (Proposed funding sources to include Surface Transportation Program, Tiger Grant, City of Berlin).
- Monitor NH 16 bypass in Berlin (Hutchins Street) for additional needed improvements. (Proposed funding sources: Earmark, City of Berlin)
- Several intersections in need of further evaluation. Priority for Road Safety Audits should be based on safety, traffic volumes and functional class. NCC will work with interested communities on applying to DOT for Road Safety Audits.

- Continue support for the Berlin Airport and modernization as needed. (Proposed funding source: FAA)
- Address red-listed bridges. There are 6 State Red List Bridges in the Berlin travelshed. Information about each of those is below. Priority for replacement or rehabilitation should be based on safety, traffic volumes, and functional class. (Proposed funding source: Bridge Program, State Bridge Aid.) The projects below are listed first by priority regional corridors, next by priority local corridors, then other state bridges, followed by projects on local roads.
    - Bridges on High Priority Corridors for the Region
        - Shelburne (049/084): This bridge rehabilitation project on US 2 over Pea Brook was added to the State Red List in 2013. This bridge is listed in "poor condition", has an estimated project cost of $1,000,000, and needs to be added to the program.
        - Randolph (150/062): This bridge rehabilitation project US 2 over Moose River was added to the State Red List in 2013. This bridge is listed in "poor condition". Bridge Maintenance will address the cost of this project in the future.
        - Errol (071/030): This bridge replacement project on NH 16 over Outlet Moose Pond was added to the State Red List in 2013. This bridge is listed in "poor condition". Bridge Maintenance will address the cost of this project in the future.
    - Bridge on High Priority Corridor for the Subregion
        - Berlin (194/097): This bridge rehabilitation project on NH 110 over Small Brook was added to the State Red List in 2014. This bridge is listed in "poor condition". Bridge Maintenance will address the cost of this project in the future.
    - Other State Bridges
        - Shelburne (075/113): This bridge rehabilitation project on North Road over the Androscoggin River was added to the State Red List in 2013. This bridge is listed in "poor condition", has an estimated project cost of $2,000,000, and needs to be added to the program.
        - Gorham (043/114): This bridge project on Berry Farm Road over Perkins Brook was added to the State Red List in 2013. This bridge is listed in "fair condition" and a load is posted. NHDOT Bridge Maintenance plans to monitor this bridge and keep in service.
    - Municipal Bridges
        - There are also 8 Municipal Red List Bridges located in the Berlin LMA travelshed in Berlin (2), Dummer (1), Milan (2), Randolph (1), and Stark (2).
- Address inadequate shoulder widths. Paved shoulders for driver, bicycle and pedestrian safety should be increased to 4-5 feet on US 2, NH 16, NH 26 and NH 110 whenever possible as part of future projects. Additional unpaved shoulder, level with the paved portion, should be added where feasible, except in stretches where the visual impacts and community preferences outweigh safety gains.
- Increased outreach and coordination is needed for volunteer driver programs and other providers of transportation to medical appointments and other basic needs.(Proposed funding source: FTA)

- Expand outreach on Rideshare and other alternatives to single occupant vehicles. (Proposed funding source: FTA, SPR via NCC UPWP)
- Continue to support and develop the public transit system. (Proposed funding source: FTA) Some specific needs:
    - Evaluate and Enhance Existing Transportation Services
        - North Country Transit should evaluate the feasibility of and seek funding to expand services of the Berlin-Gorham Trolley to include operating in the evenings or on weekends and/or expanding service areas to include additional towns.
        - The development of park and ride where there can be connections with existing or potential new transit services (like North Country Transit and Concord Coach Lines) would improve access to public transit to get to work, medical appointments, shopping, etc. Park and ride facilities would also make RideShare and carpooling programs more accessible and attractive.
    - Technology Improvements to Enhance Transportation Provider Services & Efficiency
        - Transportation providers throughout the region share a need for access to dispatching software, Global Positioning System (GPS), Automatic Vehicle Location (AVL) systems, etc. to be able to better coordinate rides between providers; plan trips or routes; streamline reporting; and to track costs and billing. While these technologies have numerous benefits, they are expensive for providers to procure and use.
    - Transportation providers like North Country Transit should seek funding for the procurement of new technologies.

C. CONWAY LABOR MARKET AREA TRAVELSHED

EXISTING CONDITIONS

NCC's portion of the NH part of the Conway area saw substantial growth with an increase in year-round population, 14.7% from 2000-2010. Continued growth is expected in the coming decades, slightly over 20% over the 30-year period 2010-2040. Job growth in Carroll Country is also projected to increase - 5.1 between 2010 and 2010 (NHES ELMI).

Town Name	**Population 2000 Census**	**Population Change 00-10**	**Population 2010 Census**	***OEP Projections 2040***
Conway Labor Market Area Travelshed				
Conway	8,604	1,511	10,115	*12,475*
Madison	1,984	518	2,502	*3,268*
Bartlett	2,705	83	2,788	*3,018*
Albany	654	81	735	*870*
Jackson	835	-19	816	*829*
Chatham	260	77	337	*449*
Eaton	375	18	393	*433*
Total	15,417	2,269	17,686	*21,342*

(Source: NHES)

The growth rates in population, total dwelling units and seasonal homes were all about 15%.

CHANGE IN SEASONAL HOMES COMPARED TO TOTAL DWELLING UNITS
CONWAY LABOR MARKET AREA

	Population in Household	
2000 15,260	2010 17,561	% Change +15.1%
	Total Dwelling Units	
2000 13,052	2010 15,097	% Change +15.7%
	Seasonal Homes	
2000 5,645 (43.3% of total dwelling units)	2010 6,528 (43.2% of total dwelling units)	% Change +15.6%

(Source: US Census 2000, 2010)

HIGHWAY NETWORK

The following table shows the mileage by road class for the Conway Labor Market Area travelshed, where approximately 20% of the lane miles in the NCC region are located. Of the total 726 miles in this region, about 29% are private roads, 9% are Class I, 16% are Class II, .3% are Class III, 35% are Class V, 5% are Class VI, and about 7% are Federal. There are no Class IV roads in the Conway LMA travelshed.

Conway Labor Market Area			
TOWN	**LEGISLATIVE CLASS**	**CENTERLINE MILES**	**LANE MILES**
ALBANY	Private Roads	14.092	14.092
BARTLETT	Private Roads	40.596	41.18
CHATHAM	Private Roads	6.455	6.455
CONWAY	Private Roads	65.861	92.968
EATON	Private Roads	7.883	7.883
ELLSWORTH	Private Roads	2.524	2.784
HALES LOCATION	Private Roads	6.077	6.077
HARTS LOCATION	Private Roads	2.265	2.548
JACKSON	Private Roads	15.659	28.977
MADISON	Private Roads	46.297	47.346
MARTINS LOCATION	Private Roads	0.682	0.682
PINKHAMS GRANT	Private Roads	0.404	0.759
	Total Miles	**208.795**	**251.751**
ALBANY	Class I: Primary Roads	5.264	10.541
BARTLETT	Class I: Primary Roads	13.699	29.687
CONWAY	Class I: Primary Roads	16.064	32.496
HARTS LOCATION	Class I: Primary Roads	12.071	24.142
JACKSON	Class I: Primary Roads	8.225	19.088
MADISON	Class I: Primary Roads	1.444	4.019
MARTINS LOCATION	Class I: Primary Roads	2.108	4.216
PINKHAMS GRANT	Class I: Primary Roads	3.951	8.886
	Total Miles	**62.826**	**133.075**
ALBANY	Class II: Secondary Roads	16.511	33.022
BARTLETT	Class II: Secondary Roads	15.014	30.028
BEANS GRANT	Class II: Secondary Roads	0.713	1.426
CHANDLERS PURCHASE	Class II: Secondary Roads	1.044	2.088
CHATHAM	Class II: Secondary Roads	12.387	24.774
CONWAY	Class II: Secondary Roads	23.244	46.53
CRAWFORDS PURCHASE	Class II: Secondary Roads	7.778	15.556
EATON	Class II: Secondary Roads	9.511	19.022
HARTS LOCATION	Class II: Secondary Roads	0.306	0.612
JACKSON	Class II: Secondary Roads	8.833	17.631
LIVERMORE	Class II: Secondary Roads	6.167	12.334
MADISON	Class II: Secondary Roads	13.99	27.98
MARTINS LOCATION	Class II: Secondary Roads	0.729	1.458
	Total Miles	**116.227**	**232.461**

Conway Labor Market Area

TOWN	LEGISLATIVE CLASS	CENTERLINE MILES	LANE MILES
BARTLETT	Class III: Recreation Roads	1.052	2.104
CONWAY	Class III: Recreation Roads	0.648	1.296
HARTS LOCATION	Class III: Recreation Roads	0.18	0.36
	Total Miles	**1.88**	**3.76**
ALBANY	Class V: Local Roads	19.817	38.117
BARTLETT	Class V: Local Roads	46.331	87.919
CHATHAM	Class V: Local Roads	9.155	14.91
CONWAY	Class V: Local Roads	82.74	157.813
EATON	Class V: Local Roads	25.469	37.634
HARTS LOCATION	Class V: Local Roads	1.054	2.108
JACKSON	Class V: Local Roads	20.437	38.894
MADISON	Class V: Local Roads	46.432	81.123
	Total Miles	**251.435**	**458.518**
ALBANY	Class VI: Local Not Maintained	2.616	2.616
BARTLETT	Class VI: Local Not Maintained	0.844	1.066
CHATHAM	Class VI: Local Not Maintained	3.952	3.952
CONWAY	Class VI: Local Not Maintained	6.331	7.51
EATON	Class VI: Local Not Maintained	5.186	5.186
HARTS LOCATION	Class VI: Local Not Maintained	0.416	0.832
JACKSON	Class VI: Local Not Maintained	5.415	5.415
MADISON	Class VI: Local Not Maintained	12.275	12.795
	Total Miles	**37.035**	**39.372**
ALBANY	Class VII: Federal Roads	6.927	13.274
BARTLETT	Class VII: Federal Roads	10.513	19.616
BEANS PURCHASE	Class VII: Federal Roads	3.799	7.598
CHATHAM	Class VII: Federal Roads	7.14	12.325
CONWAY	Class VII: Federal Roads	0.143	0.286
HARTS LOCATION	Class VII: Federal Roads	1.2	2.4
JACKSON	Class VII: Federal Roads	6.922	13.115
LIVERMORE	Class VII: Federal Roads	7.51	15.02
MARTINS LOCATION	Class VII: Federal Roads	3.39	5.874
PINKHAMS GRANT	Class VII: Federal Roads	0.284	0.568
	Total Miles	**47.828**	**90.076**
	Total Mileage	**726.026**	**1209.013**

Source: NHDOT

US 302 enters the Conway LMA travelshed from Maine to the east and continues through downtown Conway to Bartlett and the White Mountain National Forest to the west. US 302 is a Class I highway, Principal Arterial, and part of the National Highway System, connecting the region with Portland, Maine to the east and with Vermont's Barre/Montpelier area to the east, at the same time connecting Maine's I-95 with I-93 in New Hampshire and I-91 and I-89 in Vermont. As such, it is an important corridor for both trade and tourism, and a regional priority. Within the Conway LMA travelshed, US 302 is the primary route for residents from Hart's Location, Bartlett and much of Conway, to access employment, goods and serves in the Conway's growing commercial area.

A second regional priority in the Conway travelshed is NH 16. NH 16 is also a Class I Highway, Principal Arterial, and on the National Highway System to downtown Berlin, the North Country's only city. This is the major north-south corridor on the eastern side of the state, connecting New Hampshire's seacoast region, through New Hampshire, to Maine's Rangeley Lake area. NH 16 is an important route for both trade and tourism. Within the Conway LMA travelshed, NH 16 connects residents of Albany, part of Madison, Jackson, part of Bartlett and part of Conway to Conway's growing commercial area.

NH 112 is the Kancamagus Highway, the first highway in New Hampshire to be designated as a National Scenic Byway. The Kancamagus is the heart of this region's summer and fall tourism industry and as such is a regional priority.

For residents of Chatham, except in summer when the Hurricane Mountain Road is open, the primary means for accessing employment, goods and services in Conway is via NH 113 and 113B, through Maine on 113, to East Conway Road in Conway. That makes these Minor Collectors a high priority for this subregion. The Hurricane Mountain Road is a high priority local road to this subregion for the same reason. During summer valuable time can be saved this way, not only because it is a more direct route, but because it avoids the busy Conway intersections.

Similarly, West Side Road and River Road provide the only access to the residents of Hale's location, and provide an essential way around the busy intersections of Conway for many residents and visitors. West Side Road and River Road are Minor Collectors and a priority for this subregion.

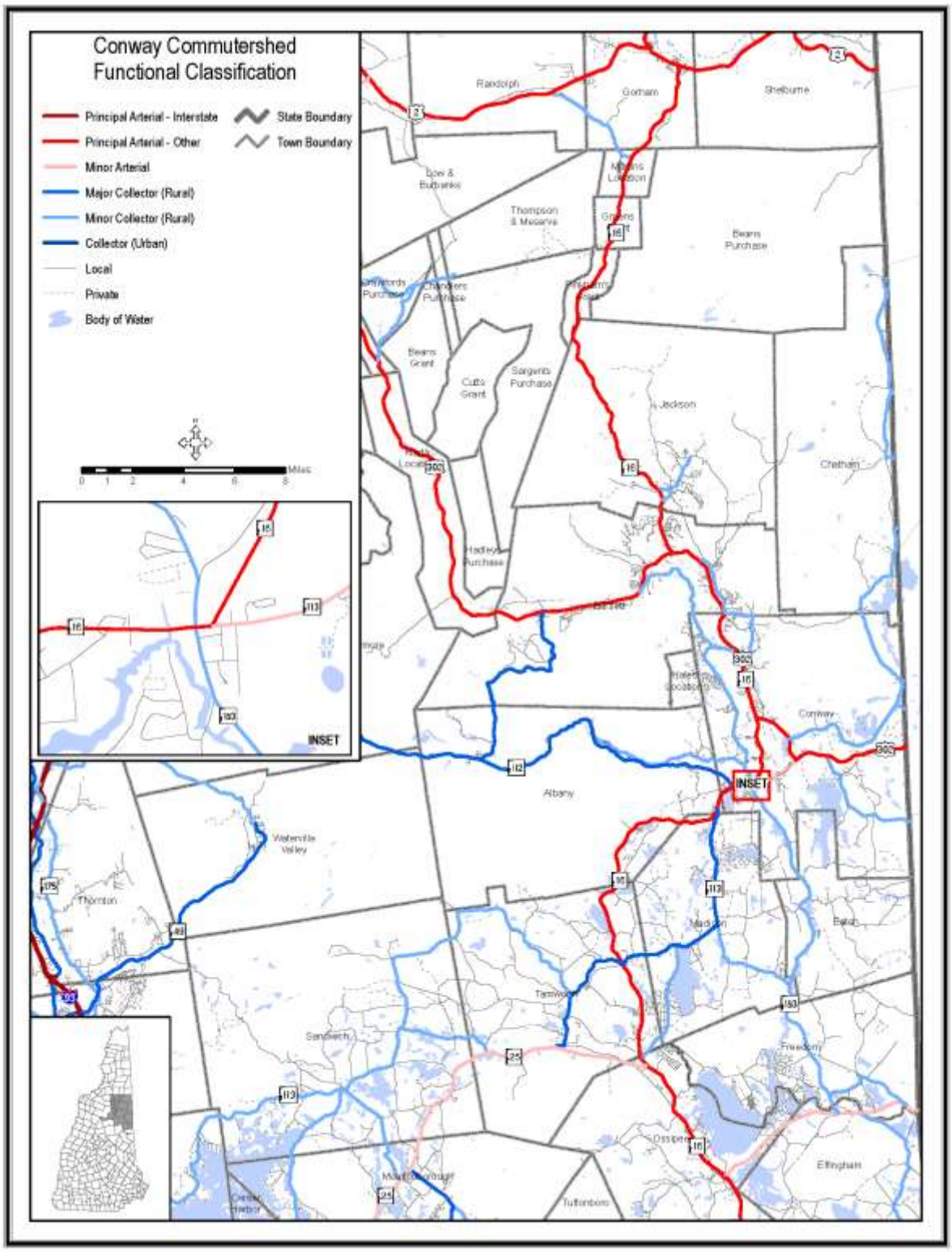
NH 113 from Madison to Conway, a Class II Major Collector, NH 153 from Eaton to Conway, and NH 16A connecting Jackson's village area with NH 16, are all the primary means of access to Conway for residents of those communities and so are priorities for this subregion.

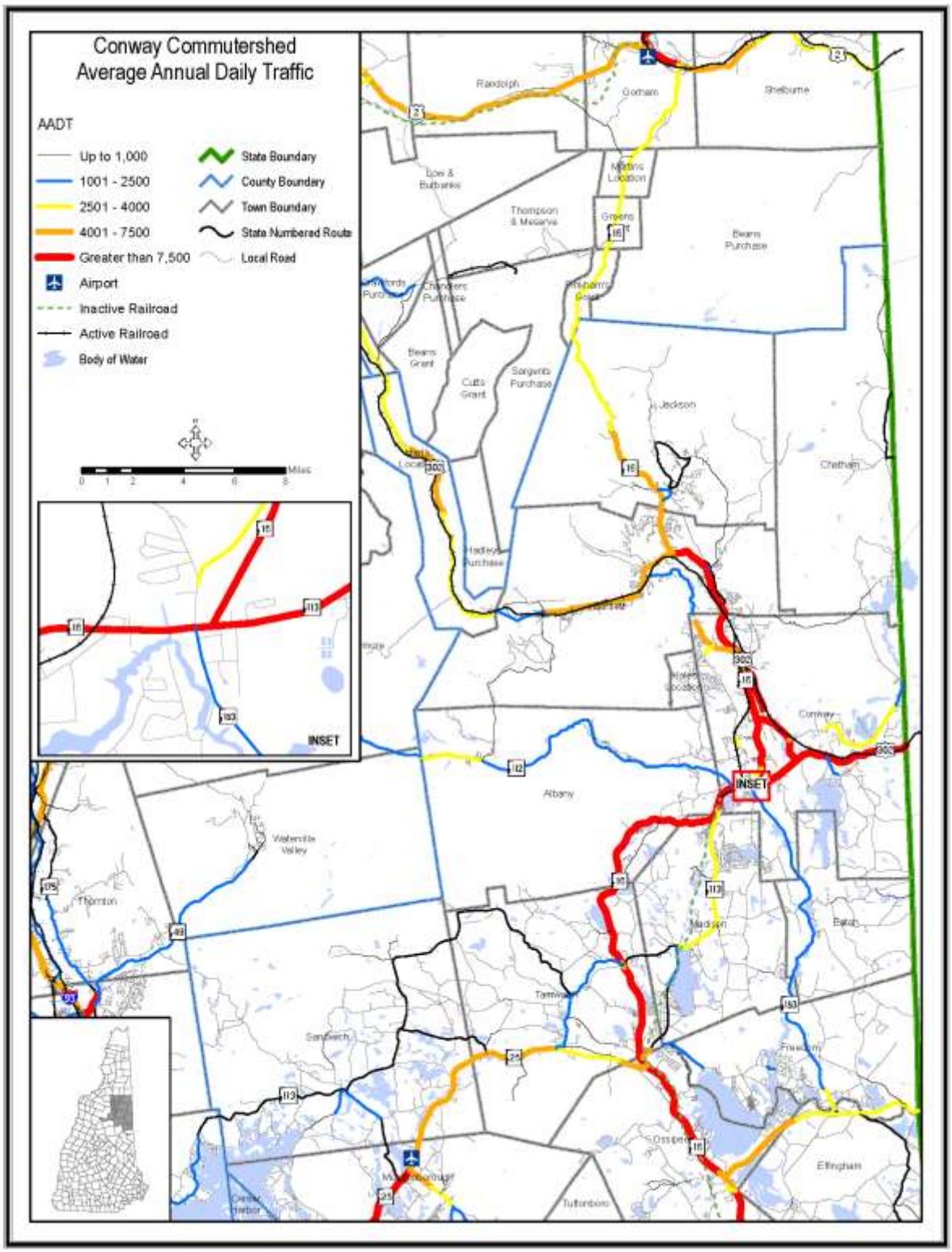
Additional priorities for this subregion are NH 153 connecting Eaton to Conway, and Brownfield Road providing access to the region from portions of Maine.

As shown, NH 16 and US 302 are high volume roads with AADT's of greater than 7500 through Albany and Conway and into Bartlett. Through Bartlett to Bear Notch Road and through a portion of Jackson, volumes are 4001-7500 AADT.

Of particular interest are the AADTs for East Conway Road and West Side Road-River Road. East Conway Road, a Class V local road and Minor Collector, has an AADT of 2501-4000, the same as portions of NH

16, US 302, NH 112 and NH 113. River Road and the first segment of West Side Road heading north, also Class V local roads and Minor Collectors, both have AADTs of 4001-7500, similar to NH 16 through parts of Jackson and US 302 through parts of Bartlett.


Conway Commutershed
Functional Classification
Principal Arterial - Interstate
Principal Arterial - Other
Minor Arterial
Major Collector (Rural)
Minor Collector (Rural)
Collector (Urban)
Local
Private
Body of Water
State Boundary
Town Boundary
Miles
0 1 2 4 6 8
INSET
Randolph
Gorham
Shelburne
Thompson & Meserve
Bean's Purchase
Jackson
Chatham
Conway
Albany
Madison
Eaton
Tamworth
Sandwich
Freedom
Ossipee
Effingham
Tuftonboro
Wolfeboro
Wolfeville Valley
Thornton


Conway Commutershed
Average Annual Daily Traffic
AADT
Up to 1,000
1001 - 2500
2501 - 4000
4001 - 7500
Greater than 7,500
Airport
Inactive Railroad
Active Railroad
Body of Water
State Boundary
County Boundary
Town Boundary
State Numbered Route
Local Road
Miles
INSET
Randolph
Gorham
Shelburne
Low & Burbanks
Martins Location
Thompson & Meserve
Greens
Bean's Purchase
Chandlers Purchase
Bean's Grant
Cutts Grant
Sargents Purchase
Jackson
Chatham
Hadleys Purchase
Conway
Albany
Waterville Valley
Thornton
Madison
Eaton
Tamworth
Sandwich
Freedom
Ossipee
Effingham
Tuftonboro
Center Harbor

As shown in the tables below, despite the growth in population and commercial activity in the Conway area, we do not see clear traffic growth trends on the major highways in the area. This is likely due to the increased use of alternate routes dispersing traffic.

Average Annual Daily Traffic (AADT)

US 302	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Harts Location														
US 302 (Crawford Notch Rd) at Carroll TL		2000				2100			2200			2700		
US 302 (Crawford Notch Rd) at Avalanche Brook (EB-WB)	3500			2300		2200			2200			4100		
US 302 (Crawford Notch Rd) at Nancy Brook (EB-WB)	3400			2400		2100				2200		2600		
Bartlett														
US 302 2 Miles East of Harts Location TL (EB-WB)								2400	2546	2691	3100	2438	2491	2643
US 302/NH 16 South of Hurricane MT RD at Conway TL							14600		12000	11000		13000		
US 302 (Crawford Notch Rd) West of NH 16 (EB-WB)		7700		7700			7500			6800				
US 302/NH 16 (White MTN HWY) East of JCT of NH 16 (EB-WB)							13300			9700			13000	
US 302 (Crawford Notch RD) at Stony Brook (EB-WB)								5300	4400			6900		

Source: NHDOT

Average Annual Daily Traffic (AADT)

US 302	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Conway														
US 302 (Main St) East of US 302/NH 113 (EB-WB)								**12000**			**11000**			**12000**
US 302 (Main St) at Maine SL (EB-WB)	**9000**			**9000**		**8300**		**11000**			**8600**			**9200**
US 302/NH 16 (White MT HWY) South of Grove St (SB-NB)									**14000**			**15000**		
US 302 (Theodore Roosevelt RD) East of NH 16 (EB-WB)	**10000**			**13000**			**13000**			**8300**			**9700**	
US 302/NH 16 (White MT HWY) North of River RD (EB-WB)										**12000**			**14000**	
US 302/NH 16 (White MT HWY) North of Echo Acres RD (SB-NB)									**15000**			**17000**		

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 16	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bartlett														
NH 16 North of US 302 (SB-NB)		8000		7900			7600			9400			7400	
Greens Grant														
NH 16 (White Mountain Hwy) at Pinkhams Grant TL		3200			3200			3600			3600			3000
Jackson														
NH 16 South of Ellis Brook	3415	3536	3622	3704	3491	3684	3500	3673						
NH 16 South of Blake House DR (SB-NB)							3500	3673	3494	3682	3700	3381	3216	3358
NH 16 (Pinkham Notch RD) at Bartlett TL (SB-NB)		5500				5400	6700					6800		
Albany														
NH 16 at Tamworth TL (SB-NB)		6400			8200			8200			8000			14000
NH 16 at Madison TL South (SB-NB)			7200		8700			10000			9300			7400
Conway														
NH 16 (White MT HWY) North of NH 113 at Saco River BR (SB-NB)	12000		13000	13000				13000		11000				12000
NH 16/NH 113 (White Mt HWY) at Albany TL (SB-NB)			11000			13000			11000			14000		
NH 16/NH 113 (Main St) West of NH 153 (SB-NB)			18000			17000			12000			16000		
NH 16 (White MT Hwy) North of Washington ST (SB-NB)									15000				16000	

Source: NHDOT

Average Annual Daily Traffic (AADT)

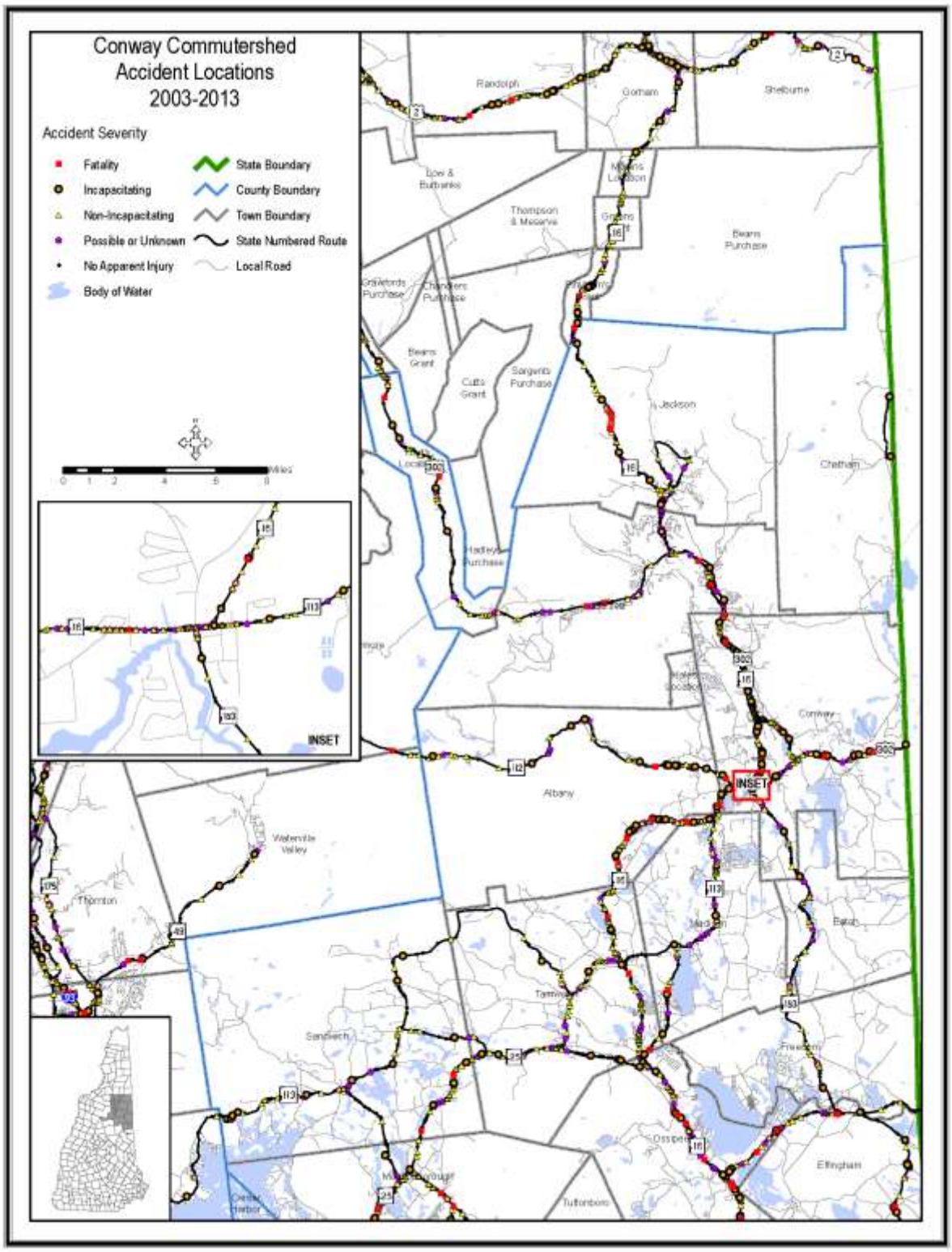
NH 112	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Albany														
NH 112 (Kancamagus HWY) West of Bear Notch Rd			**1000**			**2000**			**1700**			**3700**		
NH 112 (Kancamagus HWY) at Conway TL (EB-WB)	**1708**	**1787**	**1814**	**1813**	**1679**				**1200**			**1400**		
NH 112 (Kancamagus HWY) Over Twin Brook			**1900**			**1900**			**1400**			**1800**		

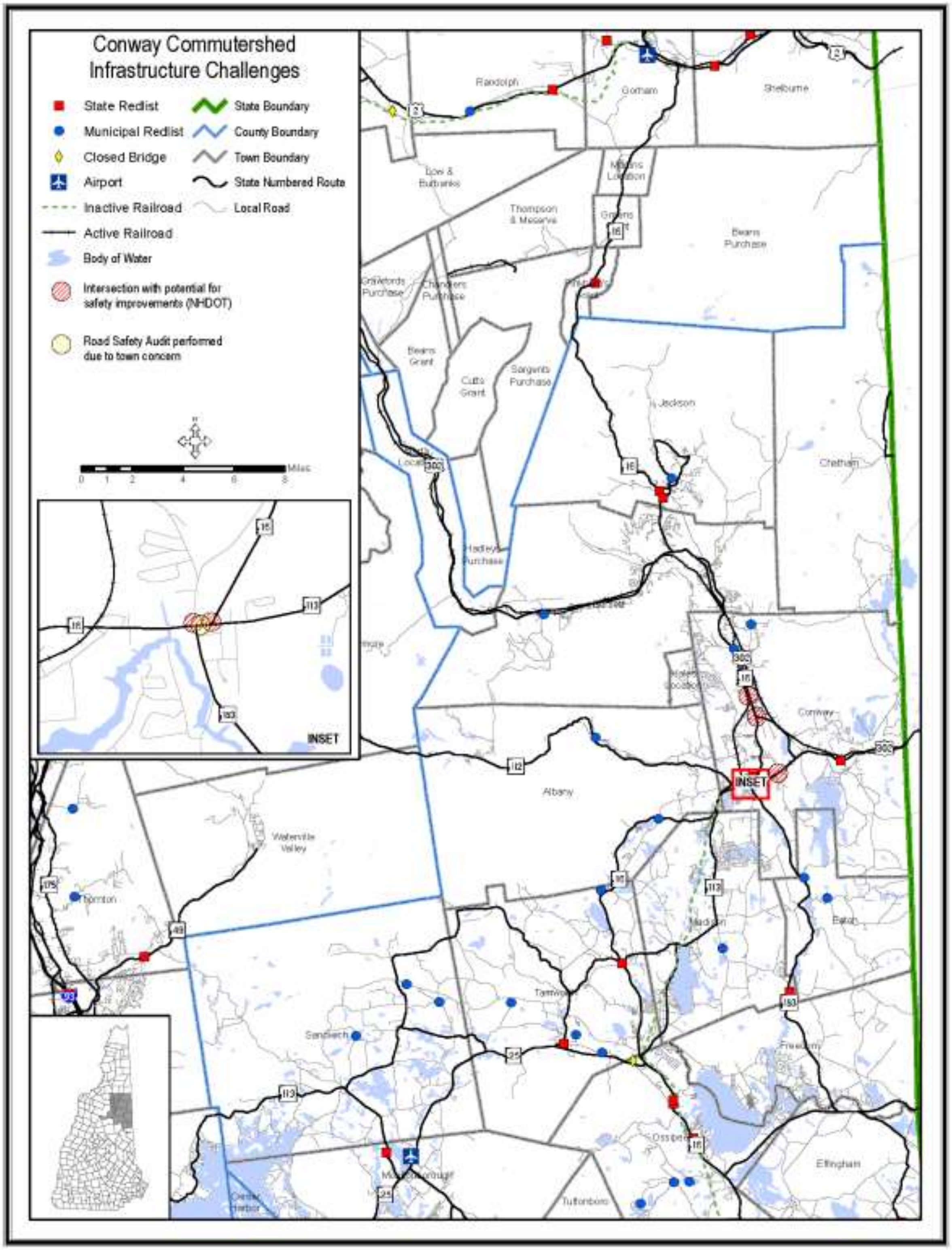
Source: NHDOT

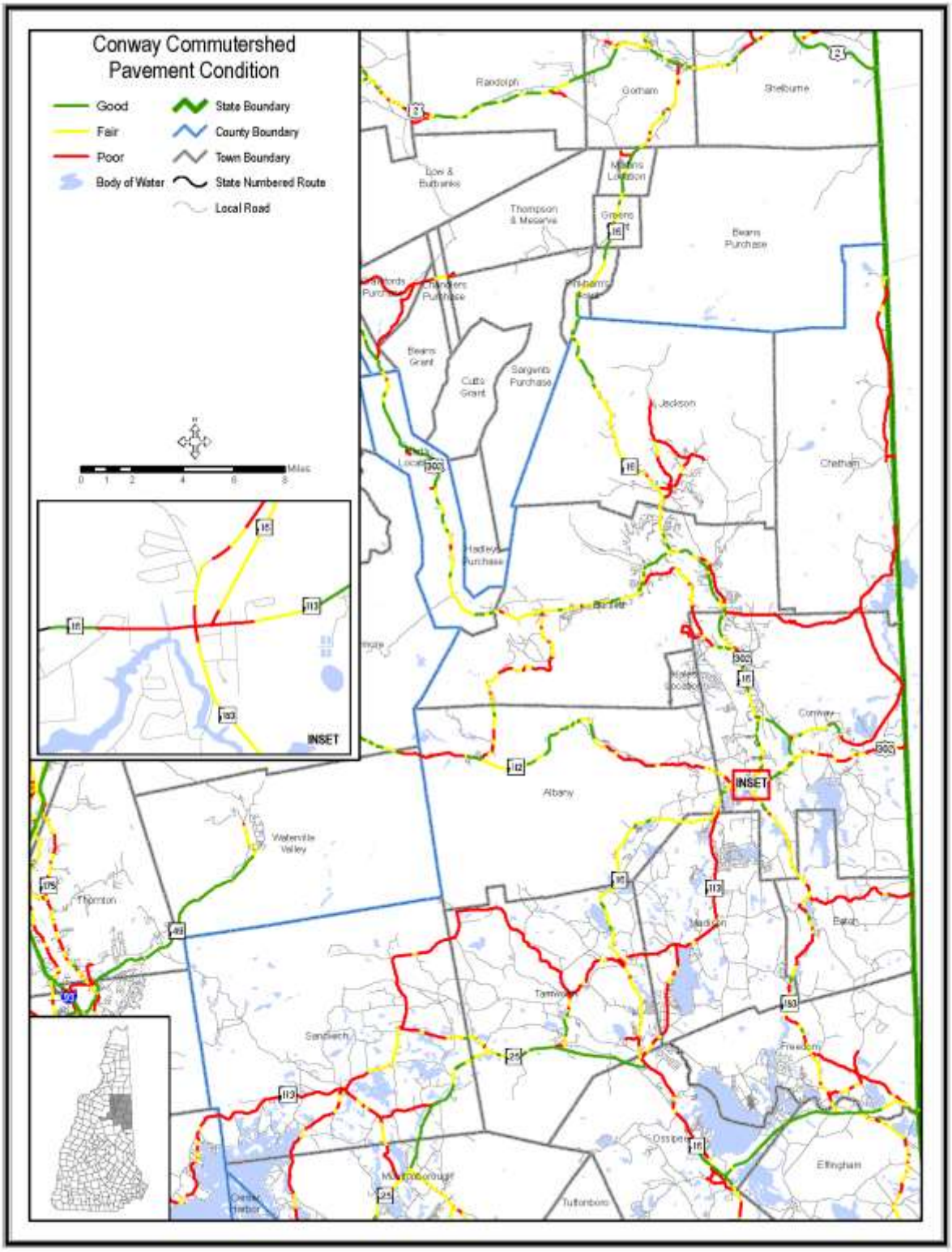
The maps on the following pages show accident locations, red listed bridges and intersections of concern, shoulder width and pavement condition for the Conway LMA travelshed. As shown, there are several intersections of concern in Conway. Red listed state bridges are found in Conway, Madison and Jackson.

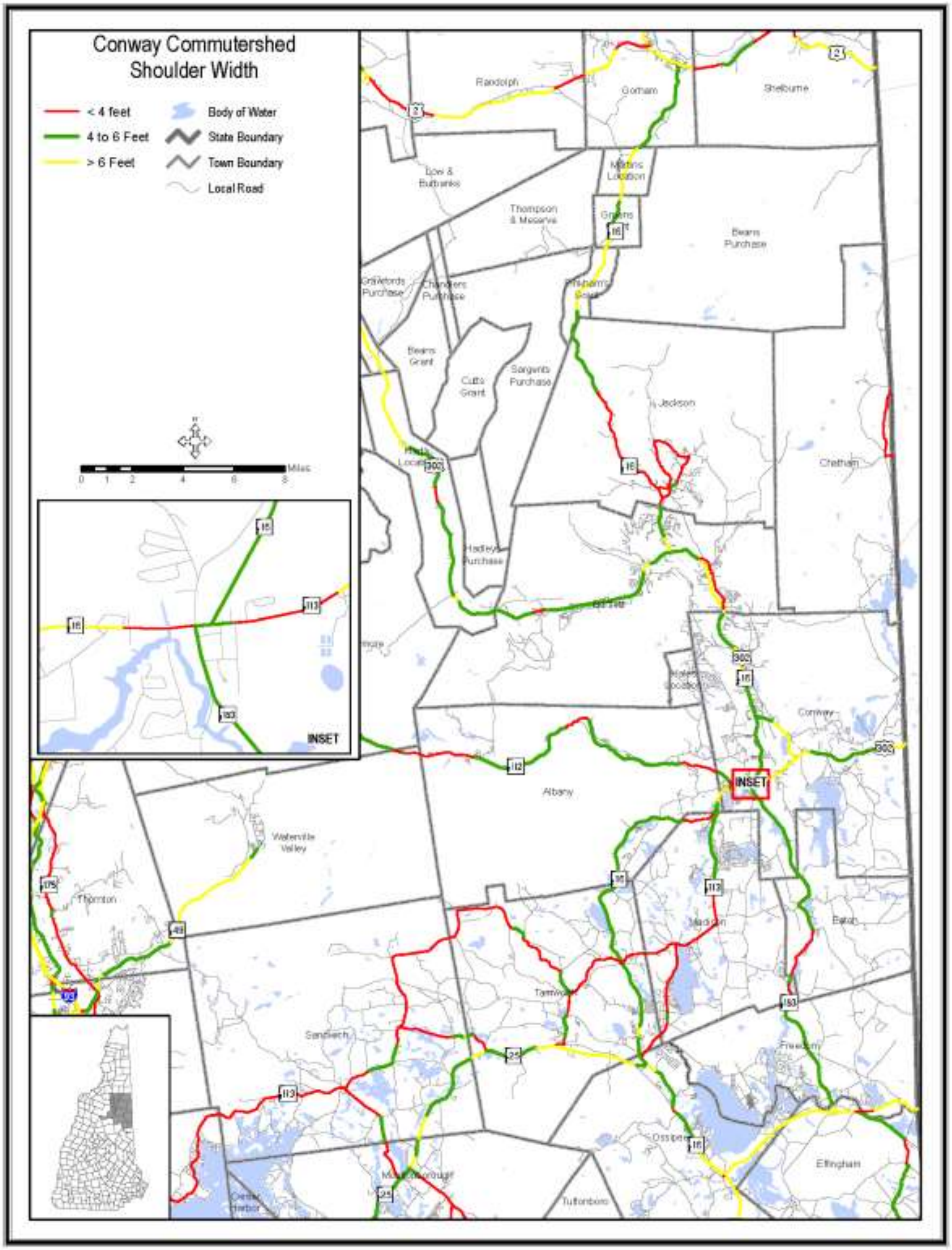
Shoulders of less than 4 feet are found on NH 16 in Jackson, on US 302/NH16 in Bartlett, on NH 113 in Chatham, on several small segments of NH 112 in Albany, on NH 113 in Madison, and NH 153 in Eaton. Those on NH 16, NH 112, and US 302 are of particular concern for the safe travel of logging trucks, freight, bicyclists, and visitors unused to watching out for wildlife after dark. Of 990 accidents on the 35 miles of US 302 from the Hart's Location-Carroll town line to the Maine state line that were reported to the state from 2003 to 2013, 68% involved another vehicle, 16% involved a fixed object, and 5% involved an animal. On NH 112 from the Livermore-Lincoln town line to NH 16 in Conway (22 miles), of the 167 accidents reported, 41% involved a fixed object, 21% involved another vehicle, and 145 involved an animal. On NH 16, from the Martin's Location-Gorham town line to the Albany-Tamworth town line (37 miles), of the 1724 accidents reported to the state between 2003 and 2013, 62% involved another vehicle, 18% involved a fixed object, and 9% involved an animal. On the 7 miles of NH 113 from NH 16 to the Maine state line, there were 260 accidents reported - 63% involved another vehicle, 18% involved a fixed object, and 7% involved an animal. Of the 12 miles of NH 113 from NH 16 to the Madison-Tamworth town line, 614 accidents were reported - 70% involved another vehicle, 17% involved a fixed object, and 4% involved an animal. At 4.66 crashes per mile, 3.71 crashes per mile, and 5.12 crashed per mile respectively, the reported accident rates on these highways were the highest of those examined on numbered state highways in the North Country region.

Pavement condition is good to fair on most of NH 16 through the Conway LMA travelshed. Pavement condition on US 302 is good to fair except for the segment east of downtown Conway to the Maine state line. Substantial portions of NH 112 are also in poor condition. This is an important issue in this heavily tourism dependent area. In addition, significant portions of each of the subregional priorities - NH 113, NH 153, East Conway Road, West Side Road, NH 16A - are in also poor condition, increasing travel time and vehicle repair costs for residents.


Conway Commutershed
Accident Locations
2003-2013
Accident Severity
Fatality
Incapacitating
Non-Incapacitating
Possible or Unknown
No Apparent Injury
Body of Water
State Boundary
County Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 1 2 4 6 8
INSET
Randolph
Gorham
Shelburne
Low & Burbanks
Thompson & Meserve
Green's
Bean's Purchase
Crawford's Purchase
Chandler's Purchase
Bean's Grant
Cutt's Grant
Sargent's Purchase
Jackson
Chatham
Hadley's Purchase
Conway
Albany
Waterville Valley
Thornton
Madison
Eaton
Tamworth
Sandwich
Freedom
Ossipee
Ellingham
Tuftonboro
Center Harbor

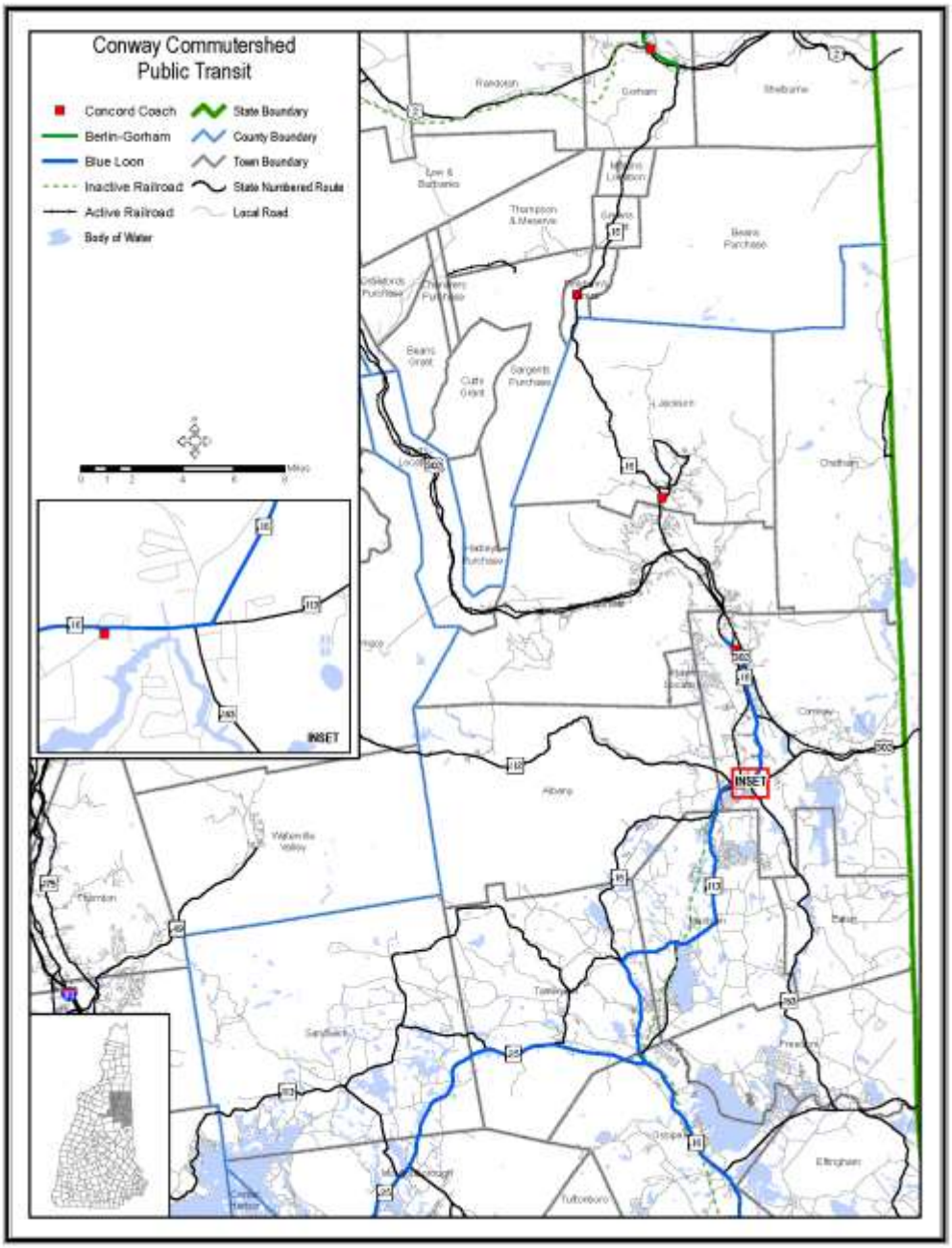

Conway Commutershed
Infrastructure Challenges
State Redlist
Municipal Redlist
Closed Bridge
Airport
Inactive Railroad
Active Railroad
Body of Water
Intersection with potential for safety improvements (NHDOT)
Road Safety Audit performed due to town concern
State Boundary
County Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 1 2 4 6 8
INSET
Randolph
Gorham
Shelburne
Jackson
Chatham
Conway
Albany
Waterville Valley
Thornton
Madison
Eaton
Tamworth
Sandwich
Freedom
Ossipee
Effingham
Tuftonboro
Center Harbor


Conway Commutershed
Pavement Condition
Good
Fair
Poor
Body of Water
State Boundary
County Boundary
Town Boundary
State Numbered Route
Local Road
Miles
INSET
INSET
Randolph
Gorham
Shelburne
Low & Eastbanks
Thompson & Meserve
Bean's Purchase
Chandlers Purchase
Bean's Grant
Cutts Grant
Sargents Purchase
Jackson
Chatham
Hadleys Purchase
Conway
Albany
Waterville Valley
Thornton
Madison
Eaton
Tamworth
Sandwich
Freedom
Ossipee
Ellingham
Tuftonboro


Conway Commutershed
Shoulder Width
< 4 feet
4 to 6 Feet
> 6 Feet
Body of Water
State Boundary
Town Boundary
Local Road
Miles
INSET
Randolph
Gorham
Shelburne
Jackson
Chatham
Conway
Albany
Madison
Tamworth
Sandwich
Thornton
Waterville Valley
Freedom
Effingham
Ossipee
Tuftonboro

PUBLIC TRANSIT

Carroll County Transit began operating the Blue Loon public route in January of 2012. As shown on the following map, service is provided from North Conway through Madison to West Ossipee. In West Ossipee, other Blue Loon routes connect with Laconia and Wolfeboro. This service has greatly expanded the opportunities for nondriving residents of Conway and Madison to access employment and services.



RAIL

No freight or passenger rail is available in the Conway LMA travelshed except Conway Scenic Railroad operating an excursion train on the Conway Branch. This section of rail provides a connection between the Conway Branch and the Mountain Division Line. However, the Golden Eagle Railway has proposed reviving the Mountain Division line between Portland and the White Mountains region for passenger and freight rail service with private and public funding. The company hopes to eventually extend the line to Vermont and Montreal. This would be a phased project that would begin with upgrading the lines to support a freight service that would connect businesses in Maine with the Portland waterfront and the national rail system through Pan Am Railway (FKA Guildford). The second phase would involve extending the upgrades to New Hampshire and to support passenger rail service to the White Mountains. The estimated cost of this project is $30 million. At its May 21, 2015 meeting, the NCC Transportation Advisory Committee voted to support the timely consideration by NHDOT of the proposal by Golden Eagle to improve the Mountain Division Line tracks with private funds provided lease language adequately protects safety and other public interests and the environment. Concern was expressed that time may be running out to save this important North Country infrastructure.

The NCC TAC has not taken a position on this project. David Schwanke, President of Golden Eagle will be speaking at the May 21, 2015 TAC meeting.

AIR

There are no airports in the Conway LMA travelshed; however the area is served by the Eastern Slopes Airport in Fryeburg, Maine.

IMPROVEMENTS SINCE 2009 PLAN

HIGHWAY AND BRIDGE PROJECTS

Bartlett-Gorham (Proj. # 13857): This project involved guardrail and terminal upgrades along US 302 (Bartlett) to US 2 (Gorham). The project was completed in June of 2014.

Bartlett-Gorham (Proj. # 16401): This project was to repair damages on NH 16 caused by Tropical Storm Irene in 2011 between Bartlett and Gorham. Construction was completed in October 2011.

Hart's Location (Proj. # 16396A)**:** This project involved the design and build of a replacement bridge on US 302 over Sawyer Brook as a response to the damage caused by Tropical Storm Irene in 2011. Construction was completed in September of 2013.

TRANSPORTATION ALTERNATIVES

Carroll County Transit: Carroll County Transit began operating the "Blue Loon", a deviated route system with scheduled stops in early 2012, after years of planning. (A deviated-fixed route service is when a provider operates a bus along a fixed route and keeps to a timetable with scheduled stops, but the bus can deviate from the route to go to a specific location to pick up or drop off a rider from their home or employment site.) This service operates throughout North Conway, West Ossipee, Wolfeboro, Laconia, Conway, Albany, Madison, Tamworth, Chocorua, Moultonborough, Sandwich (Monday-Friday). The most recent schedule can be found at TCCAP's website: http://tricountycaptransit.weebly.com/.

Carroll County Transit also began operating a dial-a-ride service for the elderly, the disabled, and the general public throughout most of Carroll County in 2011. This service requires a 24-hour advanced notice and operates Monday-Friday from 8 a.m.-4 p.m.

5310 Purchase of Service and Formula Funds: North Country Council has been working with the Carroll County Regional Coordinating Council to develop proposals and administer funding for the 5310 Purchase of Service and Formula Funds programs. (5310 Formula Funds are administered through the Mount Washington Valley Economic Council.) This funding is used to expand transportation services to the elderly and disabled provided by Carroll County Transit, the Gibson Center for Senior Services, and Carroll County RSVP in the Carroll County region. Carroll County Transit and the Gibson Center for Senior Services provide trips using demand response services (dial-a-ride). Carroll County RSVP and Carroll County Transit provide trips through volunteer networks, which they were able to expand with this funding.

PLANNED IMPROVEMENTS - IN STIP AND TYP

Albany: This project (state project #29597) involves shoulder widening and pavement resurfacing to support rumble strips on the center line through the length of the entire corridor on NH 16. Construction is schedule for 2023. (Surface Transportation Funds.)

Albany: This project (state project #24182) involves replacing the deck on the bridge over carrying Bear Notch Road over the Swift River (# 080/148). PE & ROW are scheduled Construction is schedule for 2016-2018. Construction is not yet scheduled. (Bridge Program and State Aid Bridge Funds.)

Conway: This project (state project # 11339Z) involves ongoing ROW and minor engineering issues relative to the bypass which had previously been planned to relieve congestion on US Route 302/NH Route 16. PE & ROW is scheduled for 2015 and 2016. (Surface Transportation Funds.)

Conway: This project (state project # 15864) involves the replacement of the red list bridge carrying US 302 over the Conway Lake Outlet (#158/137). Construction is scheduled for 2020. (Bridge Program Funds.)

Conway: This project (state project # 25103) involves scour protection efforts on the Saco Covered Bridge on East Side Road. Construction is scheduled for 2016. (State Aid Bridge Funds.)

Conway: This project (state project # 14958) involves the replacement of the bridge (#170/071) carrying NH 16 over the Saco River. Construction is scheduled for 2018. (Bridge Program Funds.)

Eaton: This project (state project # 15997) involves the replacement of the red list bridge (#078/114) carrying Roberts Road over Snow Brook. Construction is scheduled for 2019. (State Aid Bridge Funds.)

Jackson: This project (state project # 27709) involves the replacement of the bridge (#144/056) carrying NH 16 over the Ellis River. Construction is scheduled for 2023. (Surface Transportation Program Funds.)

DEFERRED LIST – UNFUNDED PROJECTS

Conway: This project (state project #11339B) involved the design and ROW acquisitions of the US 302/NH 16 Conway Bypass phases to provide congestion relief. (PE & ROW only.)

Conway: This project (state project #11339O) involved landscaping on the southern segment of the Conway Bypass.

Madison-Conway: This project (state project #11339J) was an earthwork project related to the Conway Bypass southern segment.

Madison-Conway: This project (state project #11339T) involved the construction of bridges carrying the Conway Bypass over Pequawket Brook, NH 113, and Woodland Road.

Madison-Conway: This project (state project #11339U) involved the final construction of the southern segment of the Conway Bypass.

Conway Bypass Project History: The overall project was approved in 1995 and included 9 phases. Phases 1, 2, 4 and 5 were completed. The phases completed included intersection improvements, upgrading of the North-South Road, improvements to US 302, and improvements to NH 16. Some of these improvements were in anticipation of the southern segment of the bypass. Several big projects were dropped from the 10 Year Plan in 2006-2007 when it was cut back to match anticipated available funds. The central and northern segments were among those cut from the 10 Year Plan. Since then the southern segment has been put on the deferred list. The improvements that have been made, while not yet enough to eliminate some delays and safety concerns, have made a significant improvement in traffic circulation and traffic and pedestrian safety, particularly in North Conway. In light of shrinking transportation budgets, continued monitoring and improvements to intersections and traffic calming and access management in village areas village areas is now the preferred approach.

ISSUES, NEEDS AND PRIORITIES

PUBLIC COMMENTS

Public comments provided at the "Transportation Feedback Booth" at the Center Conway Shaws on October 2014 focused on the following issues and needs:

- More public transit needed
- Needs of low income and elderly
- Need for the Bypass, esp. for trucks making deliveries
- East Conway Road needs paving, lots of potholes
- Cabs are expensive and busy, long waits
- Conflicts between residents trips to meet daily needs and tourists
- Not pedestrian friendly, have to drive from place to place
- Blue Loon needs more support and more drivers

PRIORITIES

- Construct all projects on STIP and TYP, with priority on safety and regional priority corridors.
- Traffic safety. Several intersections and highway segments in need of evaluation and/or improvement. NCC could assist communities in applying for Road Safety Audits.
- Continue to monitor traffic safety and congestion through the Conway area and identify opportunities for improvement through intersection improvements, traffic calming and access management.
- Address inadequate shoulder widths. Paved shoulders should be increased to 4-5 feet on NH 16, US 302 and NH 112. This should be included in repaving projects whenever possible. Additional unpaved shoulder, level with the paved portion, should be added where feasible, except in stretches where the visual impacts and community preferences outweigh safety gains. (Proposed funding source: Surface Transportation Program)Poor pavement condition. Need to repave, rehabilitate or reconstruct US 302 at Maine state line as appropriate and perform level of preservation and maintenance on all regional and subregional priority corridors adequate to protect this investment of federal and state dollars. (Proposed funding source: Surface Transportation Program)Address Red List bridges. There are 6 State Red List Bridges in the Conway Labor Market Area travelshed. Information about each of those is below. Priority for replacement or rehabilitation should be based on safety, traffic volumes and priority corridors. The projects listed below are prioritized first by priority regional corridors, next by priority local corridors, and then by projects on local roads. (Proposed funding source: Bridge Program, State Bridge Aid)
    - <u>Bridges on High Priority Regional Corridors</u>
        - Conway (158/137): This bridge replacement project on US 302/NH 113 over the Conway Lake Outlet was added to the State Red List in 2010. This bridge is listed in

"poor condition" and had a temporary railing installed in 2010. The project cost is $3,721,000 and construction is scheduled for 2022.
    - Jackson (144/056): This bridge rehabilitation project on NH 16 over Ellis River was added to the State Red List in 2011. This bridge is listed in "poor condition" and "scour critical". The project cost is $7,050,000 and construction is scheduled for 2023.
  - Bridges on High Priority Corridors for the Subregion
    - Jackson (148/050): This bridge rehabilitation project for "Honeymoon Covered Bridge" on NH 16A over Ellis River was added to the State Red List in 1990. This has a posted weight limit of 3 tons and had some rehabilitation done in 2006. NHDOT Bridge Maintenance plans to monitor and keep in service.
    - Madison (163/048): This bridge rehabilitation project on NH 153 over Purity Pond Brook was added to the State Red List in 2013. This bridge is listed in "poor condition". NHDOT Bridge Maintenance plans to address the cost and project timing.
  - Other Bridges
    - Conway (167/167): This bridge rehabilitation project on East Side Road over the Saco River was added to the State Red List in 1991. This covered bridge is listed as "scour critical" and has a posted weight limit of 3 tons. The project cost to stabilize the pier is $915,000 and construction is scheduled for 2016.
    - Pinkhams Grant (076/081): This bridge rehabilitation project on Old NH 16 over a brook was added to the State Red List in 2012. This bridge, located at Wildcat Ski Area is listed in "poor condition", is undermined and is considered for closure. The project cost is $250,000 and it needs to be added to the program.
  - Municipal Bridges
    - In addition, there are 9 Municipal Red List Bridges located in the Conway LMA travelshed in the towns of Albany (2), Bartlett (1), Conway (2), Eaton (2), Jackson (1), and Madison (1).
- Expand outreach on Rideshare and other alternatives to single occupant vehicles. (Proposed funding source: FTA, SPR via NCC UPWP)
- Continue to support and develop Carroll County Transit. (Proposed funding source: FTA.) Some specific needs include:
  - Evaluate and Enhance Existing Transportation Services:
    - Carroll County Transit should evaluate the feasibility of and seek funding to expand services of the Blue Loon to include operating in the evenings or on weekends and/or expanding service areas to include additional towns.
    - The development of park and ride where there can be connections with existing or potential new transit services (like the Blue Loon and Concord Coach Lines) would improve access to public transit to get to work, medical appointments, shopping, etc. Park and ride facilities would also make RideShare and carpooling programs more accessible and attractive. NCC could work with communities to use the Park and Ride Toolkit to assess locations.
  - Technology Improvements to Enhance Transportation Provider Services & Efficiency

- Transportation providers throughout the region share a need for access to dispatching software, Global Positioning System (GPS), Automatic Vehicle Location (AVL) systems, etc. to be able to better coordinate rides between providers; plan trips or routes; streamline reporting; and to track costs and billing. While these technologies have numerous benefits, they are expensive for providers to procure and use. (Proposed funding source: Federal Transit Administration funds through NHDOT.)
- Transportation providers like Carroll County Transit should seek funding for the procurement of new technologies. (Proposed funding source: Federal Transit Administration funds through NHDOT.)

THE FOLLOWING SPECIFIC PROJECTS HAVE BEEN IDENTIFIED BY COMMUNITIES AS NEEDS ASSOCIATED WITH ADDRESSING SOME OF THE PRIORITY ISSUES

CONWAY VILLAGE ROUNDABOUT

NEED

The intersections of NH16/153 and NH 16/US 113 in Conway Village are both rated "F," created a bottleneck at this important tourism gateway.

DESCRIPTION

Replace both signalized intersections with oval roundabout as shown in this concept drawing developed by NHDOT.

(Proposed funding source: Surface Transportation Program)

The Town of Conway submitted a proposal through the NHDOT Transportation Improvement Program for inclusion in the Ten Year Plan. This project was the top priority for new projects submitted in the NCC region and it should be added to the Ten Year Plan.

(Source: Town of Conway)

NH 16 ALBANY SAFETY IMPROVEMENTS

NEED

Local officials in Albany and other NH 16 corridor communities have been raising concerns about accident rates on the NH 16 for many years. Rumble strips have been discussed as one means for reducing the number of accidents caused by drivers crossing the centerline. Test rumble strips are scheduled for spring 2015 on a one-mile test section. DOT prepared a list of intersections of concern utilizing Safety Analyst, and the Safety Team refined the list of safety concerns based on recurring accidents and fatalities. A Road Safety Audit was put on hold in anticipation of new FHWA guidelines.

DESCRIPTION

Conduct the Road Safety Audit of areas identified by the Safety Team; review alternative approaches with local officials and regional transportation planners; and schedule implementation steps.

(Proposed funding source: Highway Safety Improvement Program)

EAST CONWAY ROAD

NEED

Located in eastern portion of Town of Conway, this project (located on a state road) will begin approximately 1.5 miles east of the intersection of Rt. 302 and East Conway Rd. and continue east to the Chatham/Conway Town line, a distance of approximately 8.5 miles. East Conway Road is not constructed to current road standards. Specifically, the road base and drainage are in poor condition such that frost heaving and potholing present and ongoing driving and maintenance problem.

DESCRIPTION

Reconstruct approximately 8.5 miles of road base and drainage. Pave entire length.

Proposed funding source: Surface Transportation Program - The Town of Conway submitted a proposal through the NHDOT Transportation Improvement Program for inclusion in the Ten Year Plan. This project was ranked as the 4th priority for new projects submitted in the NCC region and it should be added to the Ten Year Plan if funds are available.

CONWAY VILLAGE PROJECT

NEED

Repaving, pedestrian and utility improvements in Conway Village area.

DESCRIPTION

The Village Streetscape project was initially planned to be funded by Transportation Enhancement dollars (Proj. 14821). The project included redesign work including sidewalk upgrades, crosswalks, utility relocation, landscaping, lighting and gateway markers. This project was cancelled and not constructed.

The project has evolved over time. There are plans to complete portions of it in 2016. NHDOT will repave NH 16 through the village, sidewalk upgrades will be funded by the town, and the Conway Village fire District will fund the installation of utilities.

(Proposed funding source: Surface Transportation Program)

D. LITTLETON LABOR MARKET AREA TRAVELSHED

EXISTING CONDITIONS

The population of the NH side of the Littleton Labor Market Area grew by 4.6% from 2000-2010. However, growth was not even throughout this NCC subregion. Several communities grew by over 10% - Bethlehem, Carroll, Franconia, Jefferson and Whitefield - while two of the most northern communities - Stratford and Northumberland - lost substantial population. These shifts were associated with mill closings in the northern communities in the previous decades, and growth of retail and service jobs in the southern communities. OEP projections show some continued population losses and some leveling off in Littleton LMA communities over the coming decades. Only a few communities are projected to continue to grow. Although NHES ELMI projections show job growth at 11.9% in Grafton County for the 2000-2010 period, Grafton County figures are heavily influenced by the Hanover-Lebanon area. NHES ELMI projects job growth for the NCC region as a whole at 4.8% for the period 2012-2022.

Town Name	**Population 2000 Census**	**Population Change 00-10**	**Population 2010 Census**	***OEP Projection 2040***
Littleton Labor Market Area Travelshed				
Littleton	5,845	83	5,928	*5,862*
Lancaster	3,280	227	3,507	*3,194*
Bethlehem	2,199	327	2,526	*2,838*
Whitefield	2,038	268	2,306	*2,202*
Northumberland	2,438	-150	2,288	*1,828*
Lisbon	1,587	8	1,595	*1,561*
Franconia	924	180	1,104	*1,284*
Jefferson	1,006	101	1,107	*1,033*
Dalton	927	52	979	*882*
Carroll	663	100	763	*738*
Monroe	759	29	788	*800*
Stark	516	40	556	*510*
Lyman	487	46	533	*572*
Sugar Hill	563	0	563	*548*
Stratford	942	-196	746	*470*
Landaff	378	37	415	*447*
Easton	256	-2	254	*245*
Total	24,808	1,150	25,958	*25,014*

(Source: NHES)

The growth rate in seasonal homes far exceeded that growth rate in year-round population and accounted for about a third of new dwelling units.

CHANGE IN SEASONAL HOMES COMPARED TO TOTAL DWELLING UNITS
LITTLETON LABOR MARKET AREA

	Population in Household	
2000 23,999	2010 24,919	% Change +3.8%
	Total Dwelling Units	
2000 13,079	2010 14,728	% Change +12.6%
	Seasonal Homes	
2000 2,118 (16.2% of total dwelling units)	2010 2,754 (18.7% of total dwelling units)	% Change +30%

(Source: US Census 2000, 2010)

HIGHWAY NETWORK

The table below shows the mileage by road class for the Littleton Labor Market Area travelshed, where approximately 30% of the lane miles in the NCC region are located. Of the total 1,018 miles in this region, about 13% are private roads, 18% are Class I, 16% are Class II, .2% are Class III, 44% are Class V, 6% are Class VI, and about 4% are Federal. There are no Class IV roads in the Littleton LMA travelshed.

Littleton Labor Market Area

TOWN	LEGISLATIVE CLASS	CENTERLINE MILES	LANE MILES
BETHLEHEM	Private Roads	6.258	6.723
CARROLL	Private Roads	14.219	27.086
DALTON	Private Roads	6.403	6.403
EASTON	Private Roads	8.9	8.641
FRANCONIA	Private Roads	13.717	21.749
JEFFERSON	Private Roads	16.716	20.853
LANCASTER	Private Roads	13.728	17.349
LISBON	Private Roads	1.583	1.622
LITTLETON	Private Roads	10.498	11.587
LYMAN	Private Roads	12.599	12.599
NORTHUMBERLAND	Private Roads	2.861	3.573
STARK	Private Roads	12.244	13.71
SUGAR HILL	Private Roads	0.829	1.403
WHITEFIELD	Private Roads	12.339	17.535
	Total Miles	**132.894**	**170.833**
BETHLEHEM	Class I: Primary Roads	26.194	50.286
CARROLL	Class I: Primary Roads	19.354	38.472
FRANCONIA	Class I: Primary Roads	32.877	56.115
JEFFERSON	Class I: Primary Roads	9.754	20.033
LANCASTER	Class I: Primary Roads	12.725	27.027
LANDAFF	Class I: Primary Roads	1.036	2.072
LISBON	Class I: Primary Roads	7.554	15.108
LITTLETON	Class I: Primary Roads	38.179	70.255
NORTHUMBERLAND	Class I: Primary Roads	12.73	25.46
STARK	Class I: Primary Roads	9.791	19.582
SUGAR HILL	Class I: Primary Roads	4.636	9.272
WHITEFIELD	Class I: Primary Roads	6.127	12.254
	Total Miles	**180.957**	**345.936**
BETHLEHEM	Class II: Secondary Roads	12.633	24.509
CARROLL	Class II: Secondary Roads	9.297	16.855
DALTON	Class II: Secondary Roads	11.656	23.312
EASTON	Class II: Secondary Roads	14.148	28.296
FRANCONIA	Class II: Secondary Roads	8.935	17.87
JEFFERSON	Class II: Secondary Roads	20.39	42.311
LANCASTER	Class II: Secondary Roads	15.683	31.366
LANDAFF	Class II: Secondary Roads	12.796	25.375
LISBON	Class II: Secondary Roads	7.367	14.734
LITTLETON	Class II: Secondary Roads	13.38	26.76
LYMAN	Class II: Secondary Roads	6.896	12.309
NORTHUMBERLAND	Class II: Secondary Roads	10.914	21.828
STARK	Class II: Secondary Roads	0.894	1.396
SUGAR HILL	Class II: Secondary Roads	4.729	9.458
WHITEFIELD	Class II: Secondary Roads	10.803	21.718
	Total Miles	**160.521**	**318.097**

Littleton Labor Market Area

TOWN	LEGISLATIVE CLASS	CENTERLINE MILES	LANE MILES
DALTON	Class III: Recreation Roads	0.723	1.446
WHITEFIELD	Class III: Recreation Roads	1.404	2.808
	Total Miles	**2.127**	**4.254**
BETHLEHEM	Class V: Local Roads	51.234	95.03
CARROLL	Class V: Local Roads	11.121	22.078
DALTON	Class V: Local Roads	33.576	59.826
EASTON	Class V: Local Roads	3.011	6.022
FRANCONIA	Class V: Local Roads	26.859	46.831
JEFFERSON	Class V: Local Roads	21.943	41.656
LANCASTER	Class V: Local Roads	41.391	75.297
LANDAFF	Class V: Local Roads	16.429	27.667
LISBON	Class V: Local Roads	39.529	66.29
LITTLETON	Class V: Local Roads	67.85	123.278
LYMAN	Class V: Local Roads	28.781	49.35
NORTHUMBERLAND	Class V: Local Roads	14.404	28.333
STARK	Class V: Local Roads	24.486	46.363
SUGAR HILL	Class V: Local Roads	29.763	53.39
WHITEFIELD	Class V: Local Roads	33.043	65.975
	Total Miles	**443.42**	**807.386**
BETHLEHEM	Class VI: Local Not Maintained	1.636	2.136
CARROLL	Class VI: Local Not Maintained	0.772	1.186
DALTON	Class VI: Local Not Maintained	5.316	6.635
EASTON	Class VI: Local Not Maintained	0.519	1.038
FRANCONIA	Class VI: Local Not Maintained	0.863	1.259
JEFFERSON	Class VI: Local Not Maintained	2.322	2.322
LANCASTER	Class VI: Local Not Maintained	11.052	11.219
LANDAFF	Class VI: Local Not Maintained	11.568	11.568
LISBON	Class VI: Local Not Maintained	7.662	7.662
LITTLETON	Class VI: Local Not Maintained	7.506	7.795
LYMAN	Class VI: Local Not Maintained	2.802	3.482
NORTHUMBERLAND	Class VI: Local Not Maintained	4.215	5.03
STARK	Class VI: Local Not Maintained	3.183	3.183
WHITEFIELD	Class VI: Local Not Maintained	0.342	0.494
	Total Miles	**59.758**	**65.009**
BETHLEHEM	Class VII: Federal Roads	19.366	31.59
CARROLL	Class VII: Federal Roads	7.139	8.469
EASTON	Class VII: Federal Roads	4.006	4.235
LANDAFF	Class VII: Federal Roads	0.391	0.391
STARK	Class VII: Federal Roads	6.708	8.752
	Total Miles	**37.61**	**53.437**
	Total Mileage	**514.109**	**892.557**

Source: NHDOT

The job growth in the Littleton area and job loss in some other areas of the region has meant the expansion of the Littleton LMA travelshed. Six corridors in this subregion are regional priorities. As shown on the following map, the Littleton LMA travelshed is crossed by both of the region's east-west highways on the National Highway System - US 2 and US 302 east of I-93. US 2 is a Class I Primary Arterial. US 302 is a Class I Primary Arterial east of I-93 and Minor Arterial west of I-93, and provides access to I-91. I-93, also a Class I Primary Arterial on the National Highway System, connects the region to Concord and Boston to the south, and to Canada, Vermont and cities to the south via I-91. These three highway corridors are regional priorities. In addition, the highway corridor made up of NH 116, a Class II Major Collector, from Littleton to Whitefield, and US 3, a Class I Minor Arterial, from Whitefield north, is the major north-south route through this portion of the North Country and a regional priority. This corridor provides connectivity among several socioeconomic centers - Littleton, Whitefield, Lancaster, Northumberland's Groveton village, and eventually Colebrook and New Hampshire's only border crossing with Canada. NH 115 connecting US 3 in Carroll to US 2 in Jefferson is also a regional priority. NH 110, a Class I Major Collector, is another regional priority. This highway connects US 3, the major north-south corridor on the eastern side of the region and state, with NH 16, the major north-south corridor on the western side of the region and state, and to Berlin, the region's only city. The final regional priority in this travelshed is NH 112 crossing the southern parts of Landaff and Easton. NH 112 provides a major connector for visitors from I-91 and US 302 to the Lincoln-Woodstock area and Kancamagus Highway.

The following highways each provide the primary access between communities or between a community and the nearest job center or Arterial. They are therefore priority highways for this subregion.

NH 116 from Whitefield north to US 2 in Jefferson

US 3 from Franconia north to Carroll's Twin Mountain village and US 302

US 3 from Carroll's Twin Mountain village north to Whitefield

NH 135 connecting Dalton with Littleton to the south and with Lancaster to the north

NH 142 connecting Dalton to Whitefield

NH 142 connecting Bethlehem with NH 116 to Whitefield

NH 135 connecting Monroe with Woodsville to the south and to I-93 to the north

NH 117 connecting Sugar Hill with Lisbon to the west and with Franconia to the east

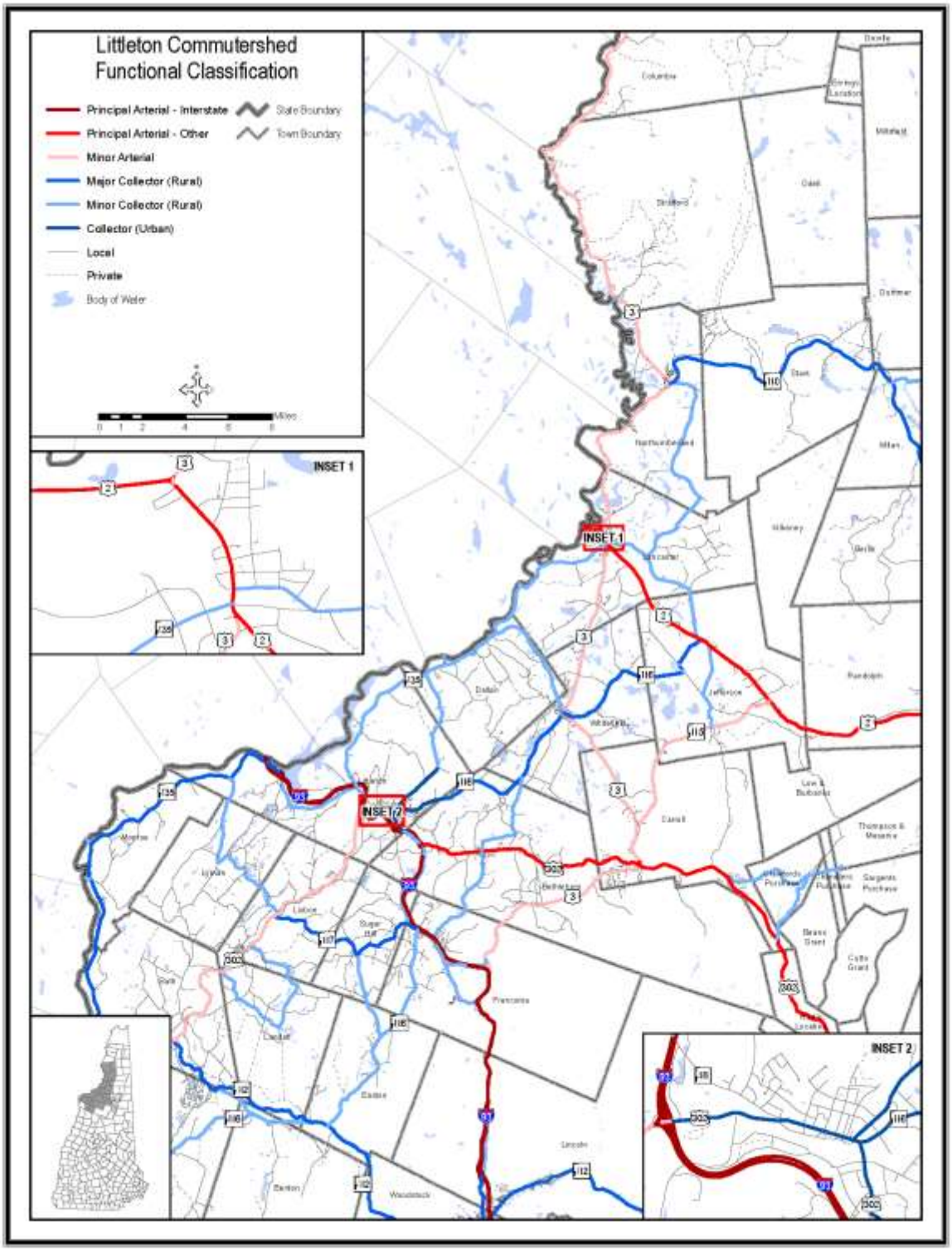
NH 116 connecting NH 112 and Easton to Franconia to the north, and to Haverhill to the southwest

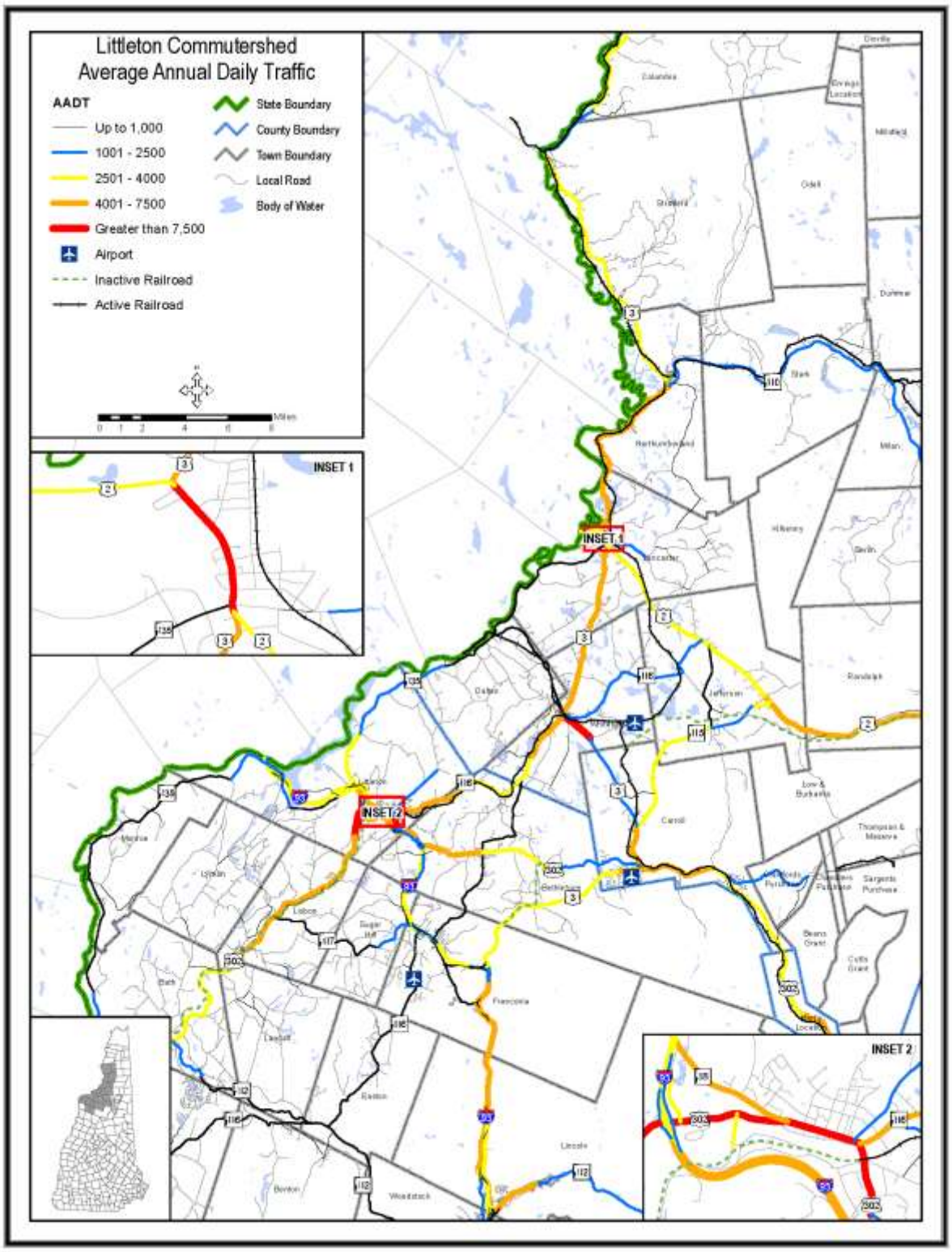
Tinkerville Road-Lyman Road connects Lyman with US 302 in Lisbon

Pearl Lake Road and Millbrook Road connecting Landaff to US 302

As shown, the only highway segments in the Littleton LMA travelshed with AADTs over 7500 are US 302 from Littleton's commercial strip through the downtown and south toward I-93, in downtown Lancaster where US 2 and US 3 are one, and ON US 3 heading south out of Whitefield. In Littleton and Lancaster this is due to the local traffic of a busy downtown area being combined with through-traffic. In

Whitefield the same may be true. The extension of this segment southward may be a function of the traffic counter location.




Littleton Commutershed
Average Annual Daily Traffic
AADT
Up to 1,000
1001 - 2500
2501 - 4000
4001 - 7500
Greater than 7,500
Airport
Inactive Railroad
Active Railroad
State Boundary
County Boundary
Town Boundary
Local Road
Body of Water
INSET 1
INSET 2

With the possible exception of I-93 at milepost 131.6 toward the Vermont state line, traffic count data for the Littleton LMA travelshed do not show clear growth trends at any of the locations counted. In several locations, traffic volumes seem to have dropped during the recession and high gas prices of mid-late 2000s and have since rebounded.

Average Annual Daily Traffic (AADT)

I-93	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Littleton														
I-93 NB-SB at Bethlehem TL Exit 40-41	5121	9100	9700											
I-93 NB-SB Between Exits 40-41									9000			9300		
I-93 NB-SB Between Exits 41-42									8300			8600		
I-93 NB-SB Between Exits 42-43									6900			7500		
I-93 NB-SB at Crossover at Milepost 131.6 Between Exit 44-VT SL	**5062**	**5121**	**5588**	**5720**		**5900**	**5948**	**5943**	**5603**	**5900**	**6000**	**5800**	**5961**	**6370**
I-93 Between Exits 43-44 (SB-NB)									6800			7100		
Franconia														
I-93 SB-NB Between Exits 35-36	5700	4800	6100						5000			5100		
I-93 SB-NB Between Exits 38-39	6100	5500	6400						5700			5600		
US 3 (Daniel Webster HWY) South of NH 141 SB-NB												3900		
I-93 SB-NB Between Exits 36-37	6000	5100	6300						5300			5800		
I-93 SB-NB Between Exits 37-38	5500	4600	5800						4800			5100		
I-93 SB-NB (Parkway) Between Exits 34C-35	8700	9000	8700		8800				8400			9400		
I-93 SB-NB (Parkway) Between Exits 34B-34C	9100	9200	9500		9100				8700			9400		
US 3 (Daniel Webster HWY) NB South of NH 141									2000			2100		
US 3 (Daniel Webster HWY) SB South of NH 141												1800		

Source: NHDOT

Average Annual Daily Traffic (AADT)

US 3	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Lancaster														
US 3 (Prospect St) at Whitefield TL								5000			4800			4700
US 3 (Main St) at Northumberland TL								6000			5800			5100
US 3 (NO. Main St) North of Bridge St							8200			6600			7000	
US 3 (Daniel Webster Hwy) North of US 2 (West)		5500			6100			6000						
US 3 (Lancaster Rd) at Northumberland TL	7500			8800			8200							
Whitefield														
US 3 (Daniel Webster Hwy) at Carroll TL		2600		2600			2800			2500			2300	
US 3/NH 116/NH 142 (Union St) at Johns River			8800				9600			10000			7600	
Bethlehem														
US 3 (Daniel Webster Hwy) at Franconia TL			3700			3900			3600			3300		
Carroll														
US 3 (Daniel Webster HWY) at Bethlehem TL		4700			4400	4800		4100			3200			4100
US 3 (Daniel Webster HWY) North of Fieldstone Lane								5600			5300			6400
US 3 (Daniel Webster HWY) South of Ledoux DR							5200			4700			5300	
US 3 (Daniel Webster HWY) South of US 302/NH 10							4600			4300			5100	

Source: NHDOT

The maps on the following pages show accident locations, red listed bridges and intersections of concern, shoulder width and pavement condition for the Littleton LMA travelshed. As shown, for such a large area with numerous highways and intersections, there are relatively few intersections of concern. Two of the exceptions are on segments with over 7500 AADT combined local and through-traffic through busy downtowns: both US2/US3 intersections in downtown Lancaster, and NH 116/US 302 at the east end of downtown Littleton. A third intersection of concern is US2/NH 115 in Jefferson.

Eight red listed state bridges are found in the Littleton LMA travelshed.

Shoulders of less than 4 feet are found on many high priority highways in the Littleton LMA travelshed. Those on Arterials and NH 116 are of particular concern for the safe travel of logging trucks, freight, bicyclists, and visitors unused to watching out for wildlife after dark. On NH 116 from US 3 in Whitefield to US 2 in Jefferson (7 miles), 82 accidents were reported to the state from 2003-2013 - 38% involved a fixed object, 26%involved another vehicle, and 22% involved an animal. On US 3 from I-93 in Franconia to US 302 in Carroll (11 miles), of 200 accidents reported, 35% involved an animal, 31% involved a fixed object, and 21% involved another vehicle. On US 3 from US 302 in Carroll to Whitefield village (8 miles), of 153 accidents reported, 32% involved another vehicle, 29% involved an animal, and 21% involved a fixed object.

Pavement condition is fair to good on most of the regional priority corridors in this travelshed. Exceptions are US 2 and NH 112. In addition, the majority of corridors that are subregional priorities are in poor condition. This is an important issue in this low wage, heavily tourism-dependent region.

Average Annual Daily Traffic (AADT)

US 302	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Lisbon														
US 302/NH 10 at Littleton TL		3700			5300			5000			4700			5400
US 302/NH 10 Over Ammonoosuc River									5100			6300		
US 302/NH 10 Over Pearl Lake Brook									5400			4900		
Landaff														
US 302/NH 10 (Dartmouth College RD) East of Millbrook RD		3900			3600			3600			3500			3500
Bethlehem														
US 302/NH 10/NH 18/NH 116 West of I-93 Exit 40 SB on Ramp	1500			1200			1300			1100			1400	
US 302/NH 10 (Dartmouth College Hwy) West of Prospect ST (EB-WB)	5300			6000			5600			5800			6000	
US 302/US 10 (Dartmouth College Hwy) West of Prospect St (EB-WB)							2800			2600			3300	
US 302/NH 10 (Dartmouth College Hwy) East of Glessner RD							5900			4500			5800	
US 302/NH 10/NH 18/NH 116 East of I-93 &West of I-93 NB off Ramp									2100			3100		
Carroll														
US 302 (Crawford Notch RD) at Ammonoosuc River Bridge								3200			2700			3900
US 302/NH 10 (Dartmouth College HWY) at Bethlehem TL		2000			3000		2500	2800			2400			2900
US 302 (Crawford Notch RD) East of US 3								3500			4200			4200

Source: NHDOT

US 2	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Lancaster														
US 2 (Bridge St) at Vermont SL (EB-WB)		3600	3737				4000			3700			3800	
US 2/US 3 (Main St) at Israel River Bridge (EB-WB)									9900		12000			10000
Jefferson														
US 2 (Presidential HWY) at Lancaster TL		3500			3400		3200			3600			2900	
US 2 (Presidential HWY) 0.7 Miles West of Randolph TL (EB-WB)	4446	4393	5674	4800	4626	4614	4637	4600	4361	4467	4326	4300	4322	4272
US 2 (Presidential HWY) at Priscilla Brook									3200			2900		
US 2 (Presidential HWY) West of Kilkenny View RD (EB-WB)							3200			3500				6600

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 135	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Dalton														
NH 135 (Dalton RD) East of Ridge Hill RD			1100				1200			1100			920	
Lancaster														
NH 135 (SO. Court St) West of NH 10								620			530			520
NH (NO. Court St) at Bath TL							920			690			640	
NH 135 at Dalton TL			570				920							
Littleton														
NH 135 (Connecticut River RD) at Dalton TL		1500	1500					1600			1500			1300
NH 135 (Connecticut River RD) North of NH 135/NH 18 Jet		3500	3300					3100			3400			3500
NH 135 (Monroe RD) at Monroe TL								870			910			910
NH 135 (Monroe RD) West of I-93 & Jet with NH 18		1300			1200			1200			1200			1200
Monroe														
NH 135 (Littleton RD) South of Barnet RD		630			710		830			790			690	
NH 135 (Littleton RD) East of Grange Hall RD				940			1400							
NH 135 over Roaring Brook							1400			1000			1000	

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 110	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Northumberland														
NH 110 (Berlin-Groveton HWY) South of Wemyss DR							2400			1500			1900	
NH 110 Compact Line		2500			2700		2400							
Stark														
NH 110 (Stark HWY) East of Meacham RD							1700			1500			1400	
NH 110 (Stark HWY) at Northumberland TL	2200				2000		1900			1700			2000	
NH 110 (Stark HWY) at Dummer TL (EB-WB)		1900		1900			1800			1500			1400	
NH 110 1.1 Miles West of Bell Hill Rd			1700				1700							

Source: NHDOT

Average Annual Daily Traffic (AADT)

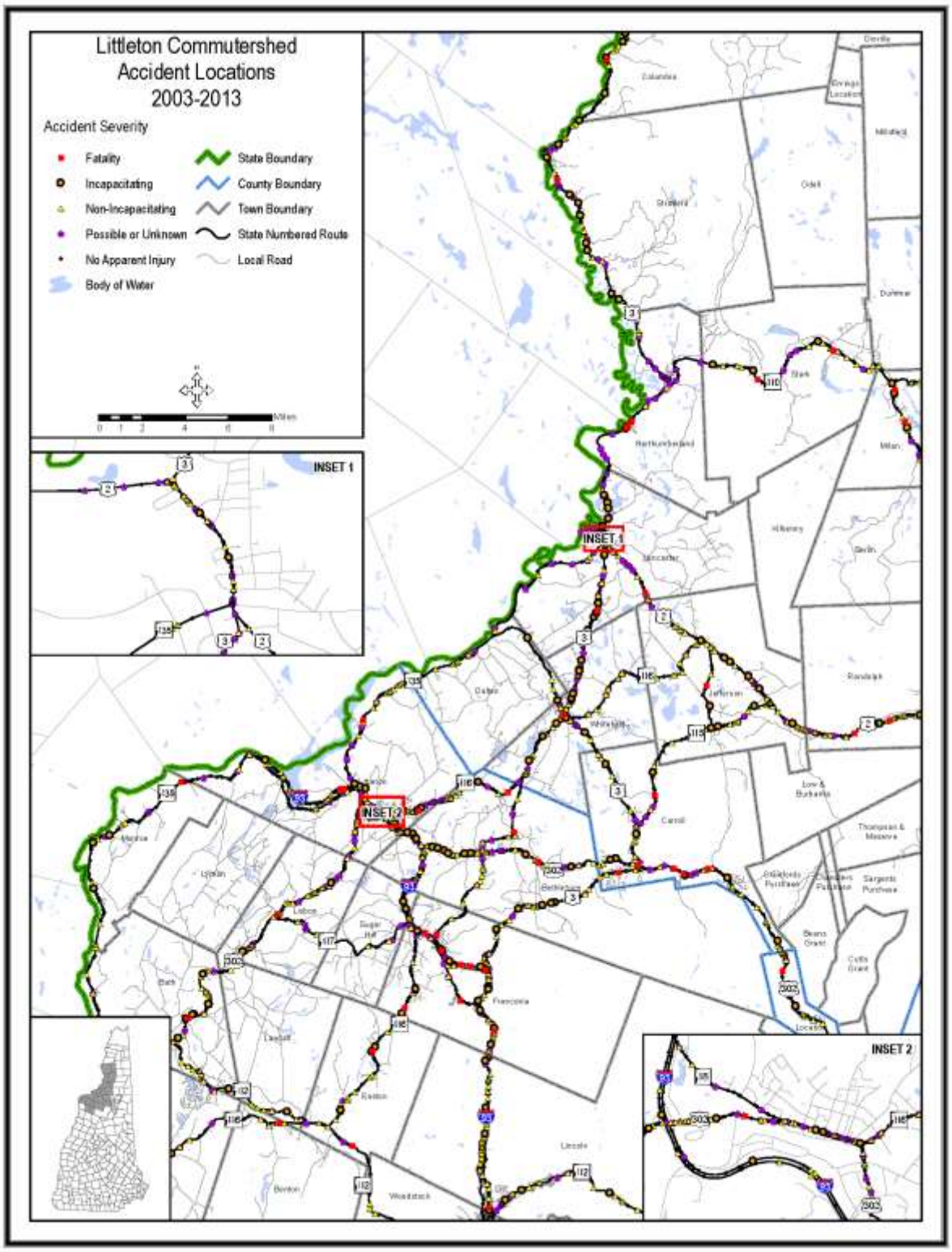
NH 116	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Jefferson														
NH 116 (Bailey RD) South of US 2		1200				1400				1300		1100		
Whitefield														
NH 116 (Alder Brook RD) at Bethlehem TL		4700		3800			5400			5500			4000	
NH 116 (Jefferson RD) at Jefferson TL		1100	1200		1300	1300			1100			1200		
NH 116/NH 142 (Alder Brook RD) North of Forest Lake RD	1700				5600		5300			5500			6000	
Littleton														
NH 116 East of Myron St		7100			6000			6300						
NH 116 (Union ST) West of Samson RD								6300			6700			6600
Easton														
NH 116 (Easton Valley RD) North of NH 112	300			450		280			310			290		
Franconia														
NH 116 (Easton RD) at Easton TL							820			790			710	
NH 116 at Benton TL		860			990		820							
NH 116 (Easton RD) Over Gale River			2800		2800				2700			2100		

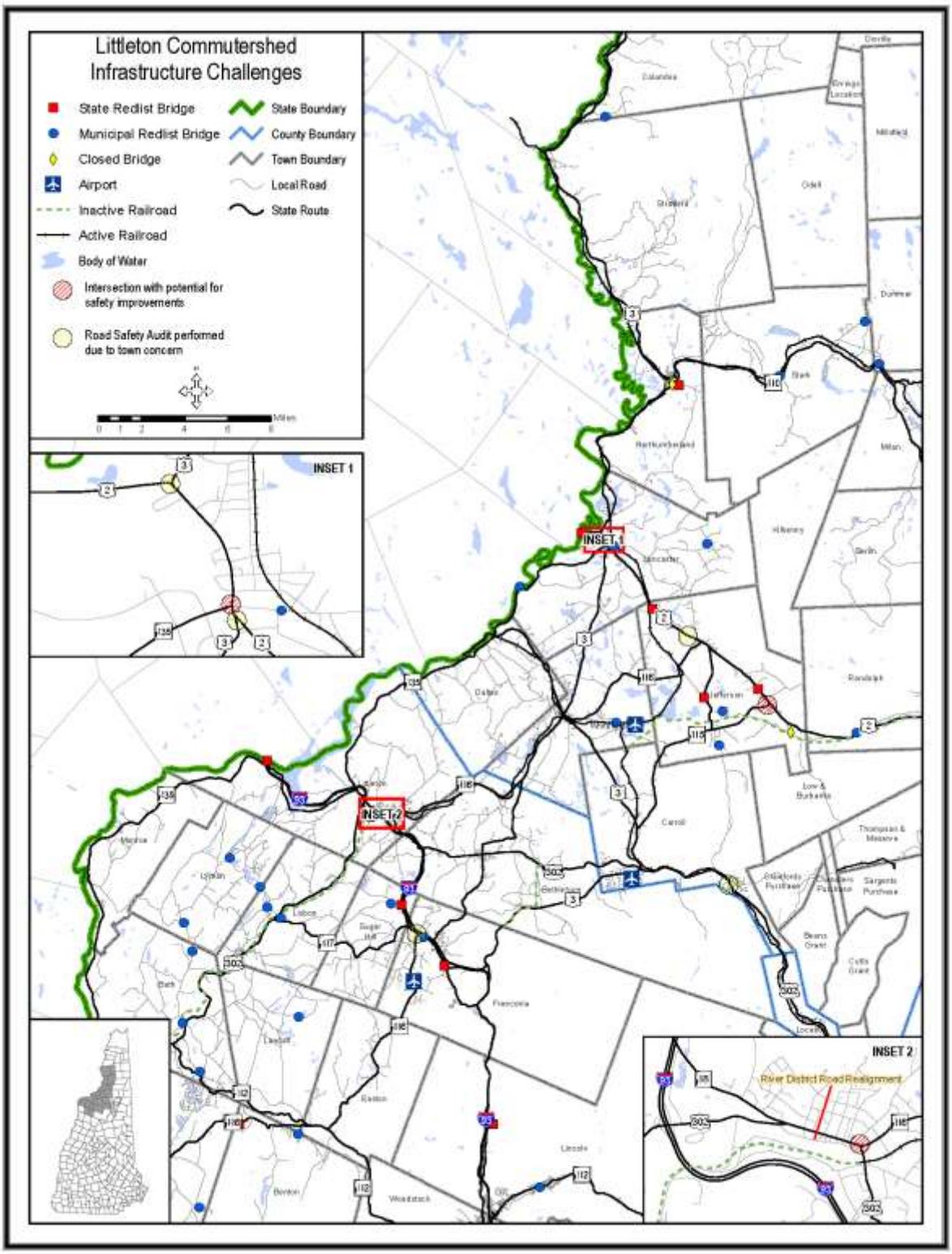
Source: NHDOT

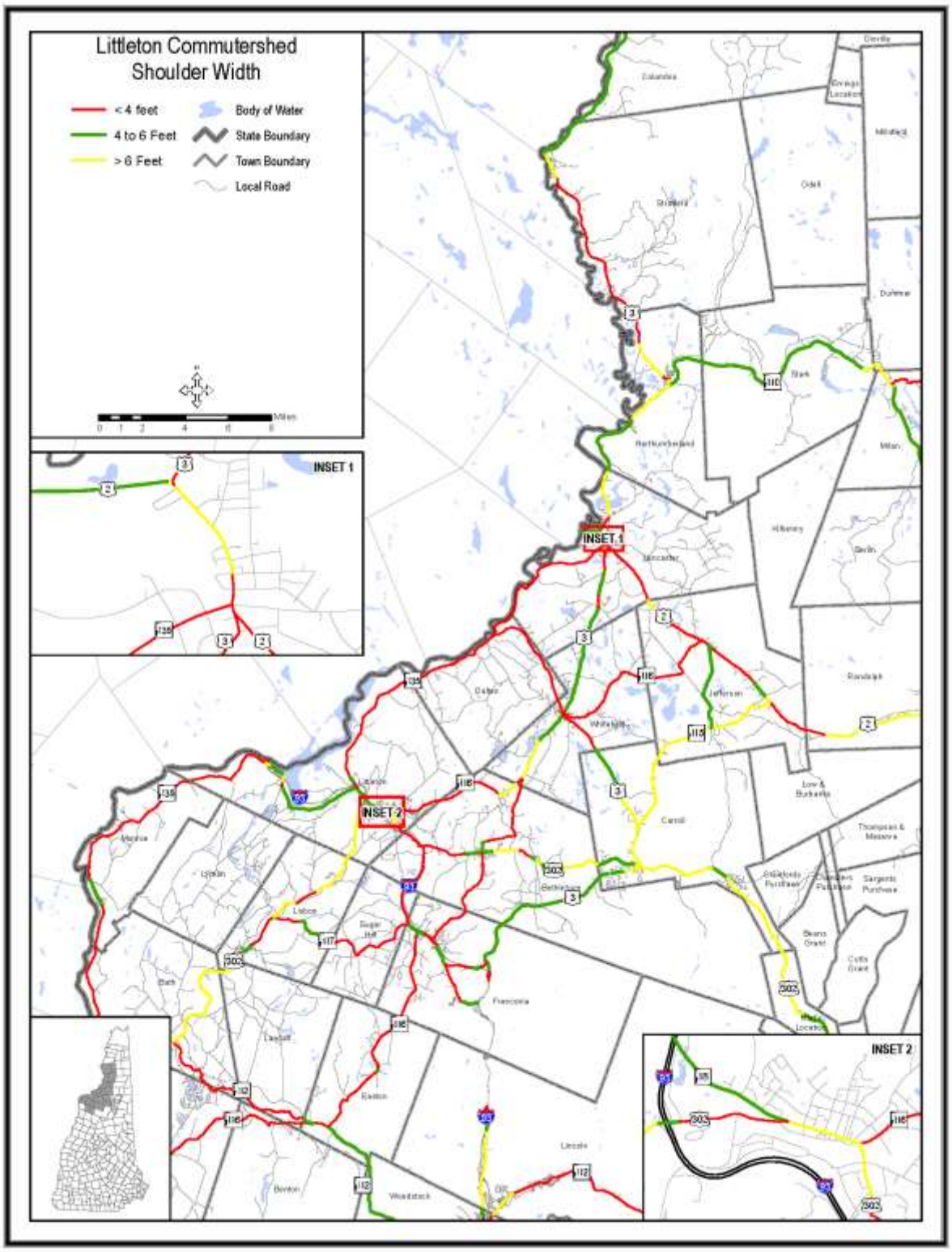
Average Annual Daily Traffic (AADT)

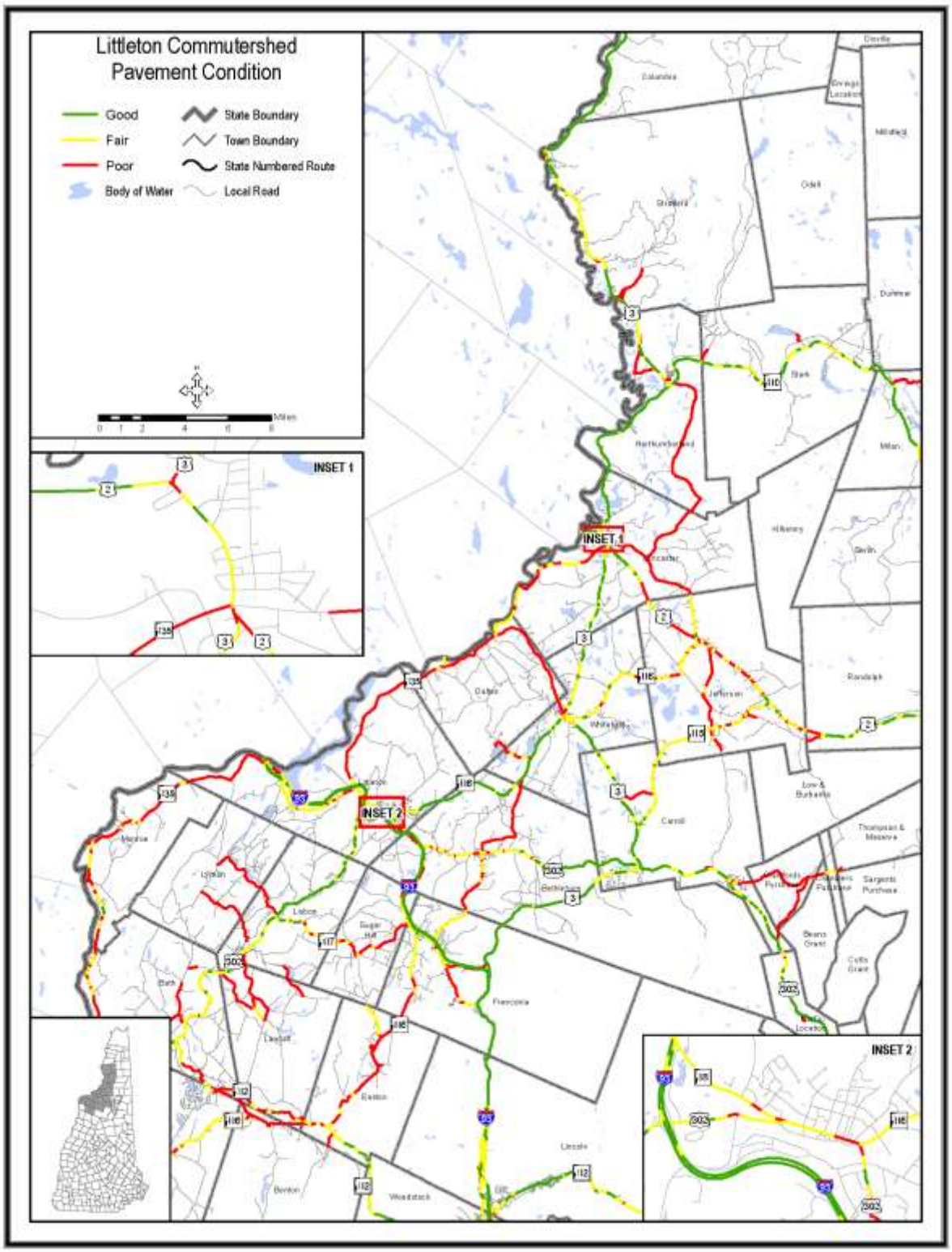
NH 112	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Easton														
NH 112/NH 116 (Lost River RD) East of Bowen Brook RD									830			820		
NH 112 West of NH 116	1000			1200		1400								

Source: NHDOT


Littleton Commutershed
Accident Locations
2003-2013
Accident Severity
Fatality
Incapacitating
Non-Incapacitating
Possible or Unknown
No Apparent Injury
Body of Water
State Boundary
County Boundary
Town Boundary
State Numbered Route
Local Road
INSET 1
INSET 2

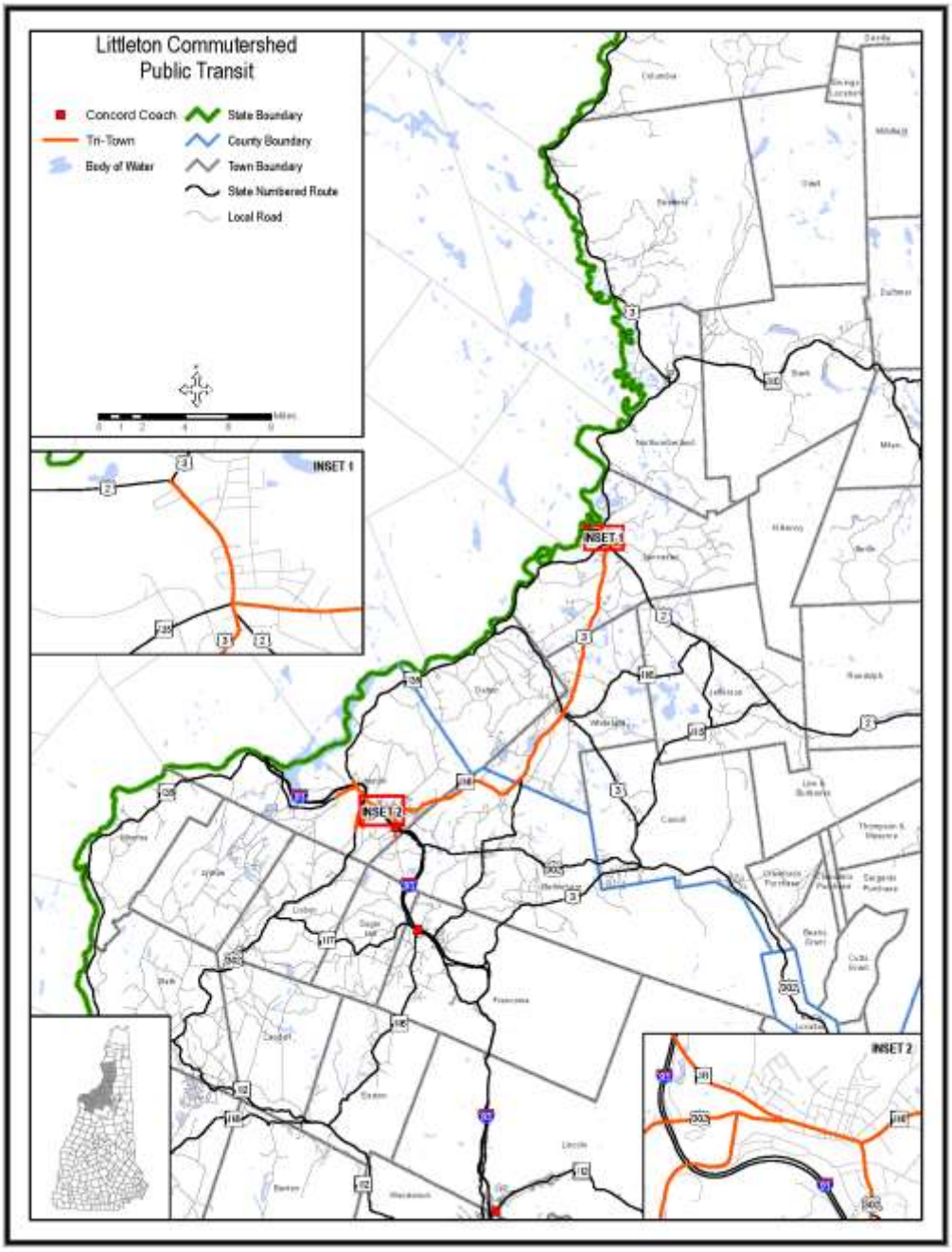

Littleton Commutershed
Infrastructure Challenges
State Redlist Bridge
Municipal Redlist Bridge
Closed Bridge
Airport
Inactive Railroad
Active Railroad
Body of Water
Intersection with potential for safety improvements
Road Safety Audit performed due to town concern
State Boundary
County Boundary
Town Boundary
Local Road
State Route
INSET 1
INSET 2
River District Road Realignment


Littleton Commutershed
Shoulder Width
< 4 feet
4 to 6 Feet
> 6 Feet
Body of Water
State Boundary
Town Boundary
Local Road
INSET 1
INSET 2
INSET 1
INSET 2


Littleton Commutershed
Pavement Condition
Good
Fair
Poor
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
INSET 1
INSET 2

PUBLIC TRANSIT

As shown on the following map, the Littleton area is fortunate to have a public transit system connecting downtown Lancaster with downtown Whitefield, downtown Littleton, and the Littleton commercial strip. The Tri-Town Trolley is run by Tri-County CAP's North Country Transit. For intercity bus service, there are Concord Coach stops in Littleton and Franconia.



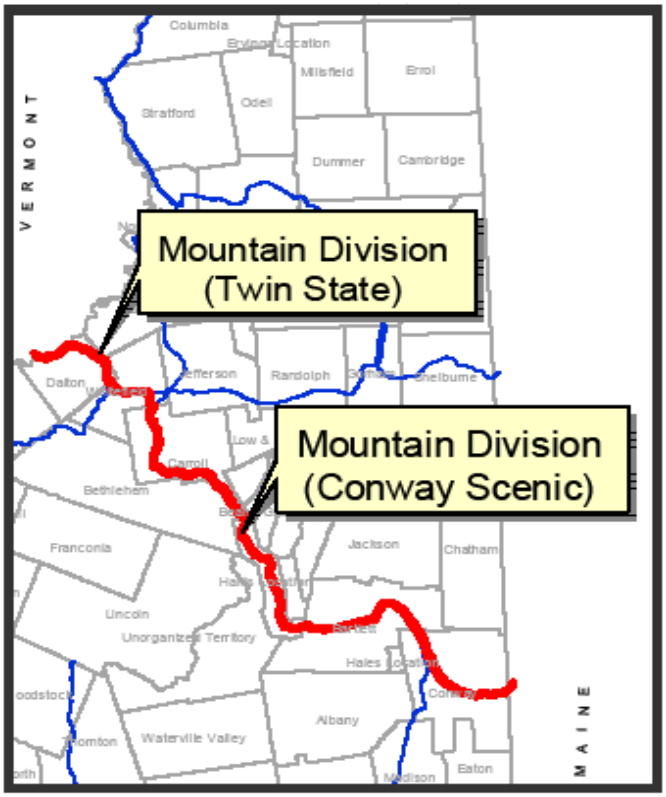
RAIL

The North Stratford-Beecher Falls Line is owned by the State of New Hampshire and operated by the New Hampshire Central Railroad (NHCR). Presently the southern two miles of the line are used on a weekly basis to provide access to a fuel transload facility and New Hampshire Central Railroad railroad rolling stock repair facility in North Stratford. New Hampshire Central Railroad's primary business at this facility is the repair and maintenance of a portion of the St. Lawrence and Atlantic (SLR) fleet. The next 6 miles of track remain active although they are used much less frequently; this segment is frequently used for rail car storage. NHCR and SLR have an interchange at North Stratford. The line is not active north of Colebrook (in the Colebrook LMA travelshed) and has been turned over to the New Hampshire Department of Resources and Economic Development for recreational use and management.

The Berlin Branch is owned by the State of New Hampshire and operated by the New Hampshire Central Railroad. The active portion of the line is approximately 11 miles from Waumbek Junction, in Jefferson, passing through Whitefield to Wing Road in Bethlehem. The line is not in service at this time. The remainder of the Branch, east of Waumbek Junction has been abandoned.

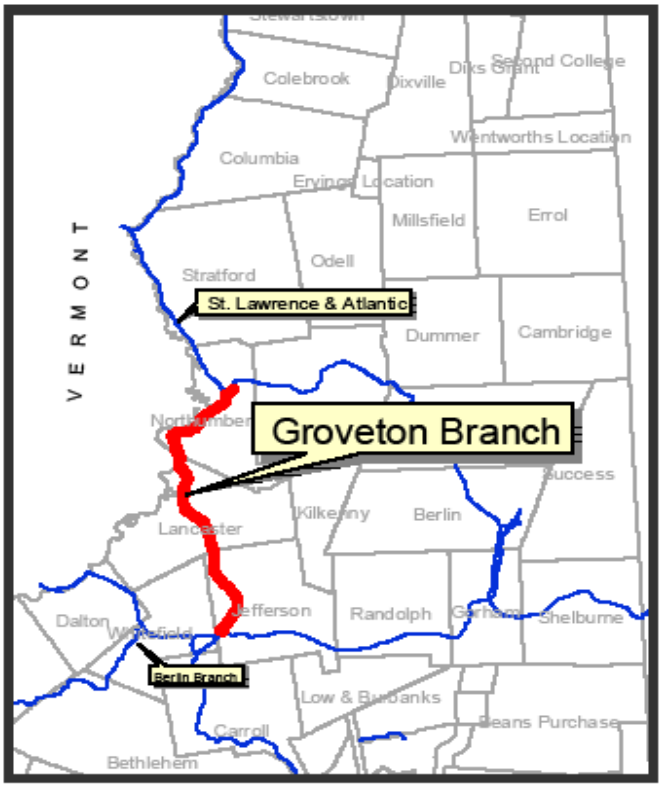
Source: New Hampshire State Rail Plan, 2001

Mountain Division (Twin State) is an eight-mile segment of rail line that lies between Whitefield and Gilman, Vermont was purchased by the State of New Hampshire. Six miles of the rail line are located in New Hampshire. The state has entered into an agreement with the New Hampshire Central to operate the line. An operating lease with Twin State Railroad was assigned to the State of New Hampshire upon sale of the line by the Maine Central Railroad. There is not any rail traffic along the corridor currently.



Source: New Hampshire State Rail Plan, 2001

The Groveton Branch is owned by the State of New Hampshire and operated by the New Hampshire Central Railroad except for one mile of the line in Groveton owned and operated by St. Lawrence and Atlantic (SLR). New Hampshire Central and SLR interchange at Groveton. The FRA Class 1 line stretches 19 miles between Jefferson and Groveton. Along the 18 mile NHCR portion, there are 36 at-grade crossings. There is presently one customer along the line that receives plastic pellets and a new track that serves as a transload facility located in Hazens (Whitefield).



Source: New Hampshire State Rail Plan, 2001

According to the 2005 NH State Trails Plan, the 1.9 mile Upper Coos Railroad line, a state-owned abandoned rail corridor from Whitefield to Jefferson, has potential for operation as a freight rail again as well.

AIR

Two airports, Mount Washington Regional Airport in Whitefield and Twin Mountain Airport in Carroll, serve the visitors, residents and businesses of the Littleton LMA travelshed. A third, Franconia Airport is used primarily by the Franconia Soaring Association.

The Mount Washington Regional Airport is owned by the Town of Whitefield and is operated and managed by the Mount Washington Regional Airport Commission. The Commission is comprised of ten (10) surrounding towns in a cooperative financial agreement to support the airport. Each member town in the Commission supports the airport by voluntarily providing revenue (as a line item in their annual budget) with a suggested amount per town resident. As each member town's contribution to the Commission is voluntary, most member communities contribute annually. However, some communities may not contribute every year (depending on each respective town's ability to provide funds). At the present time, Littleton, Sugar Hill, Franconia, Dalton, Lancaster and Whitefield are paying members.

The airport's location allows easy access to two major hotel resorts, the Mountain View Grand in Whitefield and the Mount Washington Resort in Carroll. Portions of the itinerant operations that occur during the summer months are corporate turboprop/jet aircraft and charter aircraft that transport passengers to these two resorts. The airport also sees a few aircraft during the winter that are travelling to the various ski resorts in the region.

The airport is working to develop a Localizer Performance with Vertical Guidance (LPV) approach as well as extending the runway an additional 1,000' to allow the airport to accommodate more efficient corporate jet aircraft. Currently, the lack of Jet-A fuel is an issue for attracting more traffic to the airport. As such, the airport is considering Jet-A tanks to support the projected corporate traffic once the runway extension has been built.

(Source: NH Civil Air Patrol)

Mount Washington Regional Airport - Whitefield	
FAA ID:	HIE
ARC:	B-II
Ownership	Public
Economic Region	North Country
County	Coos
Airport Role	General Aviation
Airspace	Class G
Zoning	No zoning
Fuel	100LL; Jet
Weather Info	ASOS
Fixed Based Operator	Yes
Navigation Aids	VOR/DME/NDB/LOC/GPS
Airport Latitude	44.22.034.19 N
Airport Longitude	71.32.400.96 W
Runway Orientation	10-28
Runway Length	3,495’
Runway Width	75’
Instrument Approaches	LOC-10; NDB-10; GPS-10
Lighting	MIRL 10-28; VASI 10; REIL 28
Surface	Asphalt
Condition	Good
Operations for 12 Months Ending 12/31/2013	
Air Carrier	0
Air Taxi	20
General Aviation Local	3,000
General Aviation Itinerant	4,000
Military	50
Total Operations	7,070
Based Aircraft Whitefield	
Single Engine	28
Multi Engine	5
Helicopters	1
Gliders	4
Ultra-Light	2

(Source: NHDOT)

Twin Mountain Airport is located in the town of Carroll. The airport is a privately owned/public-use airport with a paved 2,640’ x 60’ runway. There is a small building that serves as a terminal building and a tiedown apron for aircraft.

(Source: NH Civil Air Patrol)

Twin Mountain Airport	
FAA ID:	8B2
ARC:	B-I
Ownership	Private
Economic Region	North Country
County	Coos
Airport Role	General Aviation
Airspace	Class G
Zoning	Residential/Business
Fuel	100LL
Weather Info	None
Fixed Based Operator	No
Navigation Aids	VOR/DME
Airport Latitude	44.15.502.29 N
Airport Longitude	71.32.512.92 W
Runway Orientation	09-27
Runway Length	2,640’
Runway Width	60’
Instrument Approaches	None
Lighting	LIRL
Surface	Asphalt
Condition	Good
Operations for 12 Months Ending 12/31/2013	
Air Carrier	0
Air Taxi	0
General Aviation Local	100
General Aviation Itinerant	500
Military	0
Total Operations	600
Based Aircraft Twin Mountain	
Single Engine	1

(Source: NHDOT)

IMPROVEMENTS SINCE 2009 PLAN

HIGHWAY AND BRIDGE PROJECTS

Lisbon (Proj. 14464): This project involved the rehabilitation of a bridge (# 094/114) on US 302 over the Ammonoosuc River. Construction was completed in 2009.

Lisbon (Proj. 16184): This project involved the reconstruction of a failing slope on US 302 near the Catterall Road intersection. Construction was completed in 2012.

Littleton (Proj. 14307): The Reddington Street Bridge (# 232/050) over the Ammonoosuc River was replaced in 2011 using Municipal Bridge Aid funds.

Littleton – (Proj. 15931): This project involves pavement rehabilitation, including 9 miles and 16 bridges) from north of exit 42 on I-93 to the bridge over the Connecticut River at mile marker 131.6. Construction began in 2013 and is scheduled to be complete in 2015.

Whitefield (Proj. P2953): This project on US 3 involved road reconstruction from the Carroll town line north for 2.1 miles. Construction was completed in 2010.

US ROUTE 3 CORRIDOR MANAGEMENT PLAN

In 2009 NCC staff completed a study of the US 3 corridor in four communities - Whitefield, Lancaster, Northumberland and Stratford. The report contained recommendations relative to traffic and pedestrian safety, access management and traffic calming.

TRANSPORTATION ALTERNATIVES

PROJECTS

Lancaster (Proj. 14836): This project, funded by Transportation Enhancement dollars, involved reconstructing 300 linear feet of sidewalk on US 2/US 3 and 900 linear feet on Mechanic Street (including installing 11 driveway tip downs.) It also includes the widening to 5’ and overlay of 460 linear feet of asphalt sidewalk near Soldier’s Park. Construction was completed in 2011.

Littleton (Proj. 13861/13897): This project on Main Street involved pedestrian improvements and the implementation of projects and recommendations that were developed through the Littleton Phase 1 Transportation Community & System Preservation & State Aid Highway Program. It included the pedestrian covered bridge and also involved roadway reconstruction. Phase 1 was completed in 2009. Phase 2 included the construction of approximately 1,000 feet of Riverwalk along the Ammonoosuc

River from the South end of the pedestrian covered bridge to Cottage Street/US 302. This project was funded with Transportation Enhancement dollars and was completed in 2010.

5310 Purchase of Service and Formula Funds: North Country Council has been working with the Grafton-Coos Regional Coordinating Council to develop proposals and administer funding for the 5310 Purchase of Service and Formula Funds programs. This funding is used to expand transportation services to the elderly and disabled provided by Grafton County Senior Citizens Council and Tri-County CAP using senior buses and by Tri-County CAP through a volunteer network, which was expanded with this funding fund. Formula Funds have also been used by Tri-County CAP to provide trips to the elderly and disabled with their demand response services (dial-a-ride.)

ROAD SAFETY AUDITS

CARROLL

In September 2013, a Road Safety Audit was done in Carroll from the Mount Washington Resort Wastewater Plant to Stickney Chapel. The purpose of this RSA was to identify safety issues that may be contributing to the reported crashes, identify potential safety issues that have not yet resulted in crashes, and identify potential measures to mitigate these issues. The safety issues identified during the RSA, including:

- Change in land use without change in cross-section.
- Base Road is a three-legged stop-controlled intersection that is difficult for drivers to see.
- Driver distractions and visual clutter along the corridor detract from the driving task.
- There were relatively few reported crashes at or near the Bretton Woods entrance, but members of the RSA team identified additional unreported crashes that typically occur during the winter months.
- There are potential pedestrian safety issues related to the new scenic turnout across from the Mount Washington Resort entrance.
- The highway-rail grade crossing is unsafe for bicyclists.
- High occurrence of animal crashes.

RECOMMENDATIONS:

Short Term

- Install proper signage and consider rumble strips to alert drivers to the change in land use.
- Install proper signage for drivers to locate turns and attractions.
- Relocate and update paint and signage.
- Coordinate with code enforcement to identify potential issues related to over signing and encourage businesses to limit the number of signs.
- Consider the potential to contact GPS providers to incorporate warnings for congested areas.
- Monitor pedestrian crossings and parking at scenic turnout.
- Consider the use of a rubberized fill at rail crossing to reduce the gap in the track (at least on the shoulders).
- Identify prevalent deer crossing areas and consider installing deer crossing signs to warn drivers.

Medium Term

- Convert the cross-section from a two-way undivided road to a three-lane section with a continuous two-way left-turn lane. This would provide drivers with a visual cue that there is a change in activity.
- Realign Base Road intersection to improve alignment and conspicuity.
- Install a left-turn pocket on US 302 at Base Road in coordination with the two-way left-turn lane.
- The change in cross-section from a two-way undivided road to a three-lane section with a continuous two-way left-turn lane (TWLTL) may help to alert drivers to a change in activity.
- Consider a high-friction surface treatment for the entrance to help address skidding issues.
- Consider the potential for an eastbound right-turn lane.
- Install a short section of bike path to reroute cyclists off of shoulder to cross the rail tracks at more of a 90 degree angle.

FRANCONIA

In July 2014, a Road Safety Audit was done at the Intersection of NH Route 18 (Main Street) with Easton Road (NH Route 116) and Wallace Hill Road in the Town of Franconia. The purpose of the RSA was to identify safety issues that may be contributing to the reported crashes, to identify safety issues that could result in future crashes, and to identify potential measures to mitigate these issues. There were six primary safety issues identified during the RSA, including:

- Limited Visibility and Conspicuity of the Intersection
- Limited Corner Sight Distance
- Driver Behavior Issues
- Pedestrian Safety Issues
- Access Management Issues
- Drainage Issues

RECOMMENDATIONS:

Short Term

- Install rumble strips.
- Installation and improvements/relocation of signage, beacons, pavement markers and vegetation.
- Consider installing a marked crosswalk on Easton Road near the Academy and church.
- Assess the pavement friction at the intersection and apply spot friction treatments as appropriate.

Medium Term:

- Realign the flashing beacon with the travel lane.
- Install a raised splitter island between lanes.
- Conduct turning movement counts and evaluate the warrants for an all-way stop and traffic signal once the gas station is opened on the northwest corner.

- Eliminate the right-turn slip lane and consider the need for a separate right-turn lane.
- Improve the connectivity for pedestrians by filling-in gaps where sidewalk is currently missing.
- Consider installing bump-outs at the designated crossing location near the Academy on Easton Road to reduce the crossing distance for pedestrians. (Bump-outs may also act as a traffic calming measure and reduce speeds.)
- Address the drainage issue near the post office during the next resurfacing project.

Long Term:
- Consider raising the profile of Easton Road to the west of the bridge to provide eastbound drivers with better visibility of the intersection.
- Consider installing a roundabout.
- Continue to monitor speeds and identify speed mitigation measures as appropriate.

JEFFERSON

In September 2010, a Road Safety Audit was done on US2 at Santa's Village in Jefferson to identify safety issues for pedestrian crossings and to develop recommendations to resolve them. This area has several recreational and lodging establishments and no established walkway for pedestrians to move between them. Of specific concern are issues relating to clientele moving across US2 from the Santa's Village overflow parking to the amusement park.

RECOMMENDATIONS:

Short Term
- Install Portable Changeable Message Signs in advance of Santa's Village entrance with appropriate message.
- Upgrade existing pedestrian warning signs.
- Delineate the approach and location of pedestrian crossing using signage.
- Delineate access for drivers using entrance/exit signs and crossing guards during holidays.
- Implement the use of cones on centerline in advance of crossing.
- Implement sporadic use of a speed trailer on US2.

Medium Term:
- Install an energized advance warning sign.
- Install pedestrian warning sign with Rectangular Rapid Flashing Beacon.
- Redefine entrance to Santa's Village.
- Improve pedestrian routing by lining up the pedestrian crossing US3 with Santa's Village entrance.
- Repurpose the retired vehicle entrance lane for pedestrian routing and separation from traffic into and through the parking area.
- Improve lighting.

- Close one entrance to overflow parking.
- Close west end pedestrian crossing.
- Install fencing channelizing pedestrians to designated crossing area.

Long Term: 3 to 5 Years (Consider using Transportation Enhancement/Transportation Alternative Funds)
- Underground pedestrian walkway.
- Sidewalks.

LANCASTER

In October 2010, Road Safety Audits were done at two locations in the Town of Lancaster (the northern and southern intersections of US 2 and US 3.) The Town of Lancaster and the North Country Council's Transportation Advisory Committee identified these intersections as priorities for a safety evaluation based upon the crash history and safety concerns of local residents.

North Intersection:
(US-2 & US-3)

The two highways merge into a single roadway at the north end of Lancaster, continue thru the downtown area and diverge on the southern end of the town. This Road Safety Audit (RSA) considers the northern intersection of these two highways. The intersection forms a "Y" intersection with the approaches separated by roughly 120 degrees.

The Town of Lancaster and the North Country Council's Transportation Advisory Committee have identified this intersection as a priority for a safety evaluation based upon the crash history of the intersection and safety concerns of local residents. The intersection is on the 5% list of high hazard locations defined by the NHDOT. Maintenance of the two routes and the intersection is the responsibility of the NHDOT. The issues identified during this RSA included:
- The "Y" intersection creates confusion for the unfamiliar driver regarding who has the right-of-way. In addition adequate intersection sight distance is lacking. This type of intersection does not function to a satisfactory level of service for the volume of traffic using the intersection during peak hour or special event usage.
- All approaches require traffic to split to right or left.
- Signs do not meet standards and are not in proper locations.
- There are no pavement markings to let the driver know where they are to yield to oncoming traffic.
- The paint for the southbound US-3 stop line is worn and not visible.
- Private driveways at the intersection create a conflict with highway users and ingress/egress traffic to the private property.
- Pedestrian crosswalks prior to the intersections are not adequately marked with appropriate pedestrian warning signs.
- Eastbound left turn vehicle movements create conflicts for northbound left movement.
- Southbound traffic queue is caused by vehicle waiting to make left turn and drivers are confused whether northbound traffic is going to turn right or turn left.

RECOMMENDATIONS:

Short Term

- Provide advance route turn guidance signage to inform the driver of the route direction before the driver reaches the intersection.
- Destination signs displaying the name and distance to the next town should be installed at least 200 feet prior to and 300 feet after the intersection in order for the driver to make the appropriate turning movement decision.
- Provide yield line pavement markers (solid white isosceles triangles) at all locations where it is intended for vehicles to yield to oncoming traffic. Consideration should be given to provide a supplemental plaque on top of the Yield sign for eastbound Bridge Street stating “Left Turn” and another supplemental plaque to the bottom of the sign stating “To Oncoming Traffic”.
- Apply thermos-plastic pavement marking for the stop line to maintain stop line durability.
- All signs should be replaced with high intensity prismatic sheeting (ASTM III) and placed in accordance with the 2009 MUTCD. (Or placed in the cases where no proper signage exists.)
- Driveways at the intersection should be closed and alternate entrances/exits should be used.
- Provide left turn lane for eastbound left on US-2 and provide signage that clearly indicates that the left turn movement must yield to northbound left.
- Provide northbound left turn lane on Main St (US-2/3)

Long Term: 3 to 5 Years (Consider using Transportation Enhancement/Transportation Alternative Funds)

- Consideration should be given to reconstruct this intersection as a roundabout. The geometrics of the intersection including the approach angles; the relatively high volume of traffic; the percentage of truck traffic; vehicle turning movements; pedestrian traffic; and available right-of-way are all factors that make a conventional intersection at this location problematic. Reconstruction and installation of a signalized intersection will create additional traffic delay, may require additional right-of-way and will not adequately address the restricted intersection sight distance.

South Intersections
(US-2 & US-3)

This Road Safety Audit (RSA) considers the southern intersection of these two highways and the three adjacent intersections at Portland St (US-2) / Prospect St (US-3) / Main St (US-2/3), Portland St (US-2) / Soldier St / Pleasant St

Prospect St (US-3) / Soldier St, and Main St (US-2/3) / Elm St (NH-135) / Mechanic St. The issues identified during this RSA included:

- The "Y" intersection creates a safety issue for northbound vehicles on Prospect Street (US-3) and northbound vehicles on Portland Street (US-2) yielding as they converge onto Main Street.
- Stopping Sight Distance for Northbound Prospect Street is Limited.
- Alignment needed for yield control for northbound Portland Street to merge with northbound Prospect Street.
- Northbound traffic on Prospect Street does not have adequate advance notice that vehicles may be merging and/or turning in front of them from Portland Street.
- Northbound traffic on Portland Street does not yield to northbound traffic on Prospect Street.
- Overhead street lighting is minimal at this intersection.

- Limited sight distance.

RECOMMENDATIONS:

Short Term
- Replace existing tee intersection sign with a "Y" intersection sign and install a “No Merge Area” supplemental plaque below for northbound Prospect Street.
- Install signs and plaques that meet MUTCD standards in the proper locations and explain the rules and flow of the intersection.
- Install overhead street lighting on the existing power poles for the intersection.
- Restrict egress traffic to only turn in certain directions when exiting lots and limit on-street parking in certain areas.

Medium Term
- Lower the crest of the hill on Prospect Street between Portland Street and Soldier Street.
- Realign Portland Street to allow the yield control to be at a more perpendicular angle to Prospect Street.

Long Term: 3 to 5 Years (Consider using Transportation Enhancement/Transportation Alternative Funds)
- Consideration should be given to reconstruct this intersection as a "Tee" intersection, with Prospect Street (US-3) as the major highway and Portland Street (US-2) as the minor highway.
- The adjacent intersections to the south at Soldier Street and Pleasant Street; and the intersection to the north at Elm Street and Mechanic Street are influenced by the traffic at this intersection. Improving the operation of this intersection will provide a positive impact to the function and safe operation of these intersections as well.

LITTLETON SARANAC STREET

The purpose of Saranac Street project was to define a work plan to assist the Town of Littleton with initial zoning, development and redevelopment issues all related to the Saranac Street Corridor from Meadow Street on the West to Ammonoosuc / Green Street on the East.

Using UPWP funding, NCC provided the Town with a traffic count analysis of the Corridor, participated in the committee meetings in a transportation advisory role, conducted a parking analysis, developed a build-out, and preformed a realignment analysis. Results of this technical assistance acted as a catalyst for additional work requests and higher level participation from NCC in Littleton’s Corridor revitalization.

The Saranac Street Corridor Project has and continues to be a successful partnership between the Town of Littleton and North Country Council. Using transportation as the starting point for assistance, the former UPWP-only project has evolved into an economic development project, and has helped build new relationships between NCC and other regional economic and social development organizations throughout the North Country.

CARROLL CULVERT INVENTORY

Under the Statewide Asset Data Exchange System (SADES), NCC staff completed an assessment of approximately 50% of the culverts on Class V roads in the town of Carroll in 2014 as part of a pilot project under its UPWP contract. SADES is a unique approach to statewide asset management that efficiently utilizes modern technology and joins efforts for the common good of accurate and sustainable data collection. Storing all the asset data on the cloud platform allows for one, single, and central repository for all of the State's asset inventories. Data collected under this program include attributes that cover geomorphic and fish passage as well as structural condition that will assist in prioritizing redesign and replacement projects. Data will be prepared for redistribution for any interested parties via a web based application, web mapping services (WMS) and direct data download.

PLANNED IMPROVEMENTS - STIP AND TYP

Franconia: This project (state project # 24497) involves superstructure replacement for the red list bridge carrying NH 18 over Lafayette Brook (# 089/099). Construction is scheduled for 2023. (Bridge Program Funds.)

Franconia – Littleton: This project (state project #16305) involves pavement rehabilitation of I-93 from Franconia Notch to north of exit 41 (9 miles.) Construction is schedule for 2023 and 2024. (Interstate Maintenance Funds.)

Jefferson: This project (state project #16153) involves the rehabilitation of the red list bridge (#046/175) carrying US 2 over the Israel River. Construction is schedule for 2021. (Bridge Program Funds.)

Jefferson-Randolph: This project (state project #13602B) involves reconstruction, safety improvements, and shoulder widening on US 2 from the NH 115 intersection east approximately 2.3 miles to the Jefferson/Randolph town line. Construction is schedule for 2023 and 2024. (National Highway Performance Program Funds.)

Lancaster, NH – Guildhall, VT: This project (state project # 16155) involves the replacement of Roger's Ranger's Bridge (#111/129) carrying US 2 over the Connecticut River. Construction is scheduled for 2019 and 2020. (Bridge Program Funds and contribution from the State of Vermont.)

Northumberland: This project (state project # 14234) involves the replacement of the bridge carrying Brooklyn Street over Roaring Brook (#108/114). Construction is scheduled for 2024. (State Bridge Aid Funds.)

Sugar Hill: This project (state project # 24218) involves the rehabilitation of the bridge carrying Crane Hill Road over the Gale River (#202/128). Construction is scheduled for 2022. (State Aid Bridge Funds.)

Whitefield: This project (state project # 15732) involves the repair/replacement of the red list bridge on Water Street (#106/106). Preliminary engineering is scheduled for 2016. Construction is not yet scheduled. (State Aid Bridge Funds.)

Whitefield: This project (state project # 16025) involves the replacement of the red list bridge carrying Hazen Road over the Johns River (#159/198). Construction is scheduled for 2019. (State Aid Bridge Funds.)

ISSUES, NEEDS AND PRIORITIES

PUBLIC COMMENTS

Public comments provided at the "Transportation Feedback Booth" at the Littleton Walmart in October 2014 raised the following issues and needs:

- Need bike paths
- Bridges are falling apart
- Back roads are bad
- Behind on ditching - more washouts because of it
- Need funding for transportation

PRIORITIES

- Construct all projects on the STIP and TYP.
- Traffic safety. Several intersections and highway segments in need of evaluation and/or improvement. Review Road Safety Audit recommendations with local officials and regional transportation planners and schedule implementation of desired approach. Arrange additional Road Safety Audits as needed. NCC can assist communities in applying to NHDOT for Road Safety Audits. (Proposed funding source: HSIP)
- Review the US Route 3 Corridor Study recommendations with local officials and regional transportation planners and schedule desired improvements for implementation. (Proposed funding sources: HSIP, Surface Transportation Program, TAP and Betterments)
- Address inadequate shoulder widths. Paved shoulders should be increased to 4-5 feet on all Arterials and NH 116 from Littleton to Whitefield whenever possible as part of repaving projects. Additional unpaved shoulder, level with the paved portion, should be added where feasible, except in stretches where the visual impacts and community preferences outweigh safety gains. (Proposed funding source: Surface Transportation Program)
- Address poor pavement condition. Repave, rehabilitate, or reconstruct as appropriate and perform level of preservation and maintenance on all regional and subregional priority corridors

adequate to protect this investment of federal and state dollars. (Proposed Funding Source: Betterment Funds, Surface Transportation Program)

- Address Red List bridges. There are 7 State Red List Bridges in the Littleton Labor Market Area travelshed. Information about each of those is below. Priority for replacement or rehabilitation should be based on safety, traffic volumes, and priority corridors. The projects listed below are prioritized first by priority regional corridors, then other state and municipal bridges. (Proposed funding source: Bridge Program, State Bridge Aid.)
  - Bridges on Highest Priority Regional Corridors
    - Jefferson (046/178): This bridge rehabilitation project on US 2 over the Israel was added to the State Red List in 2008. This bridge is listed in "poor condition". The project cost is $1,800,000 and construction is scheduled for 2021.
    - Jefferson (140/097): This bridge replacement project on US 2 over Priscilla Brook was added to the State Red List in 2014. This bridge is listed in "poor condition". NHDOT Bridge Maintenance plans to address the cost and project timing.
    - Lancaster: This bridge replacement project on US 2 over the Connecticut River was added to the State Red List in 2013. This bridge is listed in "poor condition". The project cost is $10,405,250 and construction is scheduled for 2020.
  - Other State Bridges
    - Sugar Hill (212/126): This bridge rehabilitation project on NH 18/NH 116 over Indian Creek was added to the State Red List in 2012. This bridge is listed in "critical condition". NHDOT Bridge Maintenance plans to address the cost and project timing.
    - Franconia (089/099): This bridge rehabilitation project on NH 18 over Lafayette Brook was added to the State Red List in 2010. This bridge is listed as "superstructure poor". The project cost is $2,950,000 and construction is scheduled for 2023.
    - Jefferson (089/090): This bridge rehabilitation project on NH 115A over Cherry Mill Brook was added to the State Red List in 2012. This bridge is listed with a "poor substructure". NHDOT Bridge Maintenance plans to address the cost and project timing.
    - Northumberland (076/081): This bridge rehabilitation project on Winter Street over Roaring Brook was added to the State Red List in 2014. This bridge is listed in "poor condition". NHDOT Bridge Maintenance plans to address the cost and project timing.
    - In addition, there are 14 Municipal Red List Bridges located in the Littleton LMA travelshed in the towns of Franconia (1), Jefferson (2), Lancaster (3), Landaff (1), Lisbon (2), Lyman (3), Sugar Hill (1), and Whitefield (1).
- Continue to support and modernize Mount Washington Regional Airport. (Proposed funding source: FAA)
- Expand outreach on Rideshare and other alternatives to single occupant vehicles. (Proposed funding source: FTA, SPR via NCC UPWP.)
- Continue to support the Tri-Town Trolley. Monitor the feasibility of expansions of the system, e.g. through Lisbon to Woodsville. (Proposed funding source: FTA)

Some specific needs:

- Evaluate and Enhance Existing Transportation Services:
  - North Country Transit should evaluate the feasibility of and seek funding to expand services of the Tri-Town Bus to include operating in the evenings or on weekends and/or expanding service areas to include additional towns.
  - The development of park and ride where there can be connections with existing or potential new transit services (like the Tri-Town Bus and Concord Coach Lines) would improve access to public transit to get to work, medical appointments, shopping, etc. Park and ride facilities would also make RideShare and carpooling programs more accessible and attractive.
- Technology Improvements to Enhance Transportation Provider Services & Efficiency
  - Transportation providers throughout the region share a need for access to dispatching software, Global Positioning System (GPS), Automatic Vehicle Location (AVL) systems, etc. to be able to better coordinate rides between providers; plan trips or routes; streamline reporting; and to track costs and billing. While these technologies have numerous benefits, they are expensive for providers to procure and use.
  - Transportation providers like North Country Transit should seek funding for the procurement of new technologies.

THE FOLLOWING SPECIFIC PROJECTS HAVE BEEN IDENTIFIED BY COMMUNITIES AS NEEDS ASSOCIATED WITH ADDRESSING SOME OF THE PRIORITY ISSUES

NORTHUMBERLAND - US 3, MAIN STREET, AND CHURCH STREET

NEED

The traffic flow in the area of US 3/Main Street and Church Street is an issue in Northumberland. There is traffic coming from many directions and improvements to signage or re-structuring of traffic approaches could improve the flow of traffic.

DESCRIPTION

The project would involve a traffic movement study of alternative traffic approaches in the area, and engineering and construction to implement a plan. This project would benefit from being timed with any major redevelopment of the mill site, but should not be on hold indefinitely if plans are not imminent.

(Proposed funding source: Surface Transportation Program Funds for rural areas)

NORTHUMBERLAND - US 3 (NEAR DEAN BROOK ROAD AND SHOPPING PLAZA

NEED

At this 1.5 mile section of US 3 in Northumberland (VT Route 102 junction to north entrance of Village Road) there are many issues including: very narrow, many ingress/egress areas located close to one another, poor signage, and a history of accidents over the years.

<u>Accident Data at this location:</u>

Total accidents 27 (2003-2013)
Accident ratio: 3.6 accidents per roadway mile.
Cause of accident

- Other vehicle 15 (56%)
- Fixed Object 4 (15%)
- Animal 3 (11%)
- Overturn 3 (11%)
- Other Object 1 (4%)
- Unknown 1 (4%)

There were 9 accidents (33%) that resulted in injuries to 21 individuals, 4 fatalities (15%), 2 incapacitating accidents (7%), and 3 non-incapacitating accidents (11%). Twenty-one of the accidents have occurred in the vicinity of a small trailer park, motel, and gift store where the NB and SB passing lanes meet.

The Average Annual Daily Traffic for this segment of road is 4,900.

DESCRIPTION

The project would involve a study of the area including traffic counts, turning movement counts, and research on accident history, followed by engineering and construction. The width of the road needs to be addressed as well as the size and locations of entrances/exits to the shopping plaza. Signage is poor and needs to be addressed.

Proposed funding source: Surface Transportation Program Funds (rural areas)

WHITEFIELD – BIKE AND PEDESTRIAN IMPROVEMENTS TO KING'S SQUARE

NEED

Bike and pedestrian improvements to King's Square area of town on US 3.

DESCRIPTION

This project (Whitefield Proj. 16028) was previously planned for construction with Transportation Enhancement dollars and involved bike and pedestrian improvements to King's Square area of town on US 3. The project was cancelled and not constructed. However, this project continues to be a priority for the Town of Whitefield. It will be completed over time as funding becomes available. The project will include construction of about 450 feet of sidewalk, and replacement of one catch basin.

(Proposed funding source: TAP, municipal, other grants)

WHITEFIELD – SIDEWALK AND DRAINAGE IMPROVEMENTS DOWNTOWN

NEED

Sidewalk and drainage improvements in the downtown area.

DESCRIPTION

This project (Whitefield Proj. 14425) was previously planned for funding with Transportation Enhancement dollars and involved upgrading drainage and upgrading 1,200' of sidewalks, curbing and swale; and upgrading 1,600' of drainage pipe and installing 17 new catch basins. The project was cancelled and not constructed. This project continues to be a priority for the Town of Whitefield. Since it was cancelled nearly 12 years ago, the town suggests that the project scope and cost be updated by the New Hampshire Department of Transportation.

(Proposed funding source: TAP, municipal, other grants)

E. HAVERHILL LABOR MARKET AREA TRAVELSHED

EXISTING CONDITIONS

The Haverhill Labor Market Area travelshed population grew by 8.4% from 2000 to 2010, however a leveling off in the growth is expected with about the same population increase in terms of absolute numbers in the next three decades as occurred in the last one, or a rate of 6.3% for the 30-year period. NHES ELMI projects 11.9% job growth for Grafton County as a whole for the 2000-2010 period; this figure is heavily influenced by the Hanover-Lebanon area. NHES ELMI projects job growth for the NCC region as a whole at 4.8% for the period 2012-2022.

Town Name	**Population 2000 Census**	**Population Change 00-10**	**Population 2010 Census**	***OEP Projections 2040***
Haverhill Labor Market Area Travelshed				
Haverhill	4,416	281	4,697	*4,896*
Bath	893	184	1,077	*1,262*
Warren	873	31	904	*915*
Benton	314	50	364	*412*
Total	6,496	546	7,042	*7,485*

(Source: NHES)

The growth rate in seasonal homes far exceeded the growth rate in year-round population and accounted for about 30% of the increase in dwelling units.

CHANGE IN SEASONAL HOMES COMPARED TO TOTAL DWELLING UNITS
HAVERHILL LABOR MARKET AREA

	Population in Household	
2000 6,165	2010 6,655	% Change +7.9%
	Total Dwelling Units	
2000 3,234	2010 3,734	% Change +15.5%
	Seasonal Homes	
2000 511 (15.8% of total dwelling units)	2010 660 (17.7% of total dwelling units)	% Change +29.2%

(Source: US Census 2000, 2010)

HIGHWAY NETWORK

The table below shows the mileage by road class for the Haverhill Labor Market Area travelshed, where approximately 6.5% of the lane miles in the NCC region are located. Of the total 236 miles in this region, about 11% are private roads, 11% are Class I, 14% are Class II, 58% are Class V, and 6% are Class VI. There are no Class III or IV or Federal roads in the Haverhill LMA travelshed.

Haverhill Labor Market Area

TOWN	LEGISLATIVE CLASS	CENTERLINE MILES	LANE MILES
BATH	Private Roads	8.858	10.123
HAVERHILL	Private Roads	14.457	17.953
MONROE	Private Roads	2.879	2.879
	Total Miles	**26.194**	**30.955**
BATH	Class I: Primary Roads	7.191	14.382
HAVERHILL	Class I: Primary Roads	17.329	34.596
	Total Miles	**24.52**	**48.978**
BATH	Class II: Secondary Roads	11.915	23.83
HAVERHILL	Class II: Secondary Roads	10.48	20.918
MONROE	Class II: Secondary Roads	11.283	22.566
	Total Miles	**33.678**	**67.314**
BATH	Class V: Local Roads	40.683	64.597
HAVERHILL	Class V: Local Roads	79.614	151.005
MONROE	Class V: Local Roads	15.908	26.427
	Total Miles	**136.205**	**242.029**
BATH	Class VI: Local Not Maintained	5.403	5.403
HAVERHILL	Class VI: Local Not Maintained	9.408	10.892
MONROE	Class VI: Local Not Maintained	0.498	0.498
	Total Miles	**15.309**	**16.793**
	Total Mileage	**235.906**	**406.069**

Source: NHDOT

The largest village in the Haverhill LMA travelshed is Woodsville at the far northwest corner of Haverhill. Here, US 302 enters New Hampshire from Wells River, Vermont and the nearby I-91 interchange. A large amount of truck traffic enters New Hampshire at this point and heads east on US 302. It is also a popular entry point to the North Country Region for tourists arriving from southern New England via I-91. As shown on the following map, NH 10 heads south from Woodsville, not only providing access to several of Haverhill's other villages, but also becoming the primary north-south route on the western side of the

central New Hampshire, and an alternate to I-91 to the Upper Valley region. US 302 and NH 10 south from Woodsville are both Class I Minor Arterials. These two highway corridors are both regional priorities.

NH 25 heads west from NH 10 in the southern part of Haverhill. This Class I Major Collector connects the Haverhill LMA travelshed with Plymouth and to the I-93 corridor. NH 25 is a regional priority.

The fourth highway corridor in the Haverhill LMA travelshed that is a regional priority is NH 112. This Class II Major Collector is a very important part of the region's tourism industry infrastructure. NH 112, via a short stretch of US 302, provides the linkage between I-91 and the heavily tourism-dependent Lincoln-Woodstock area. NH 112 becomes the Kancamagus Highway in Lincoln.

Priority subregional highways are those that provide the primary linkage between communities, or between communities and Interstate Highway access:

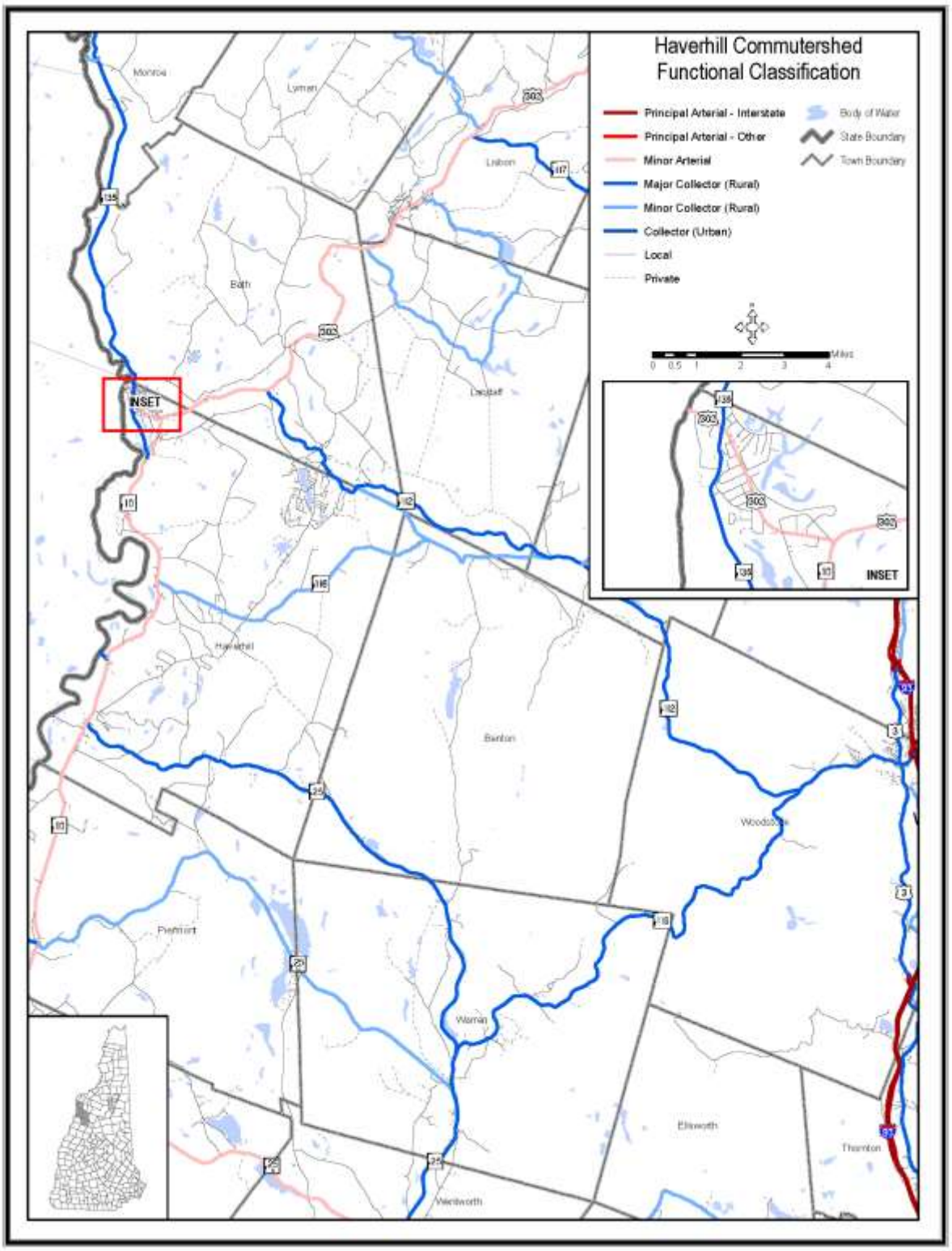
NH 116 from Haverhill through Benton to NH 112

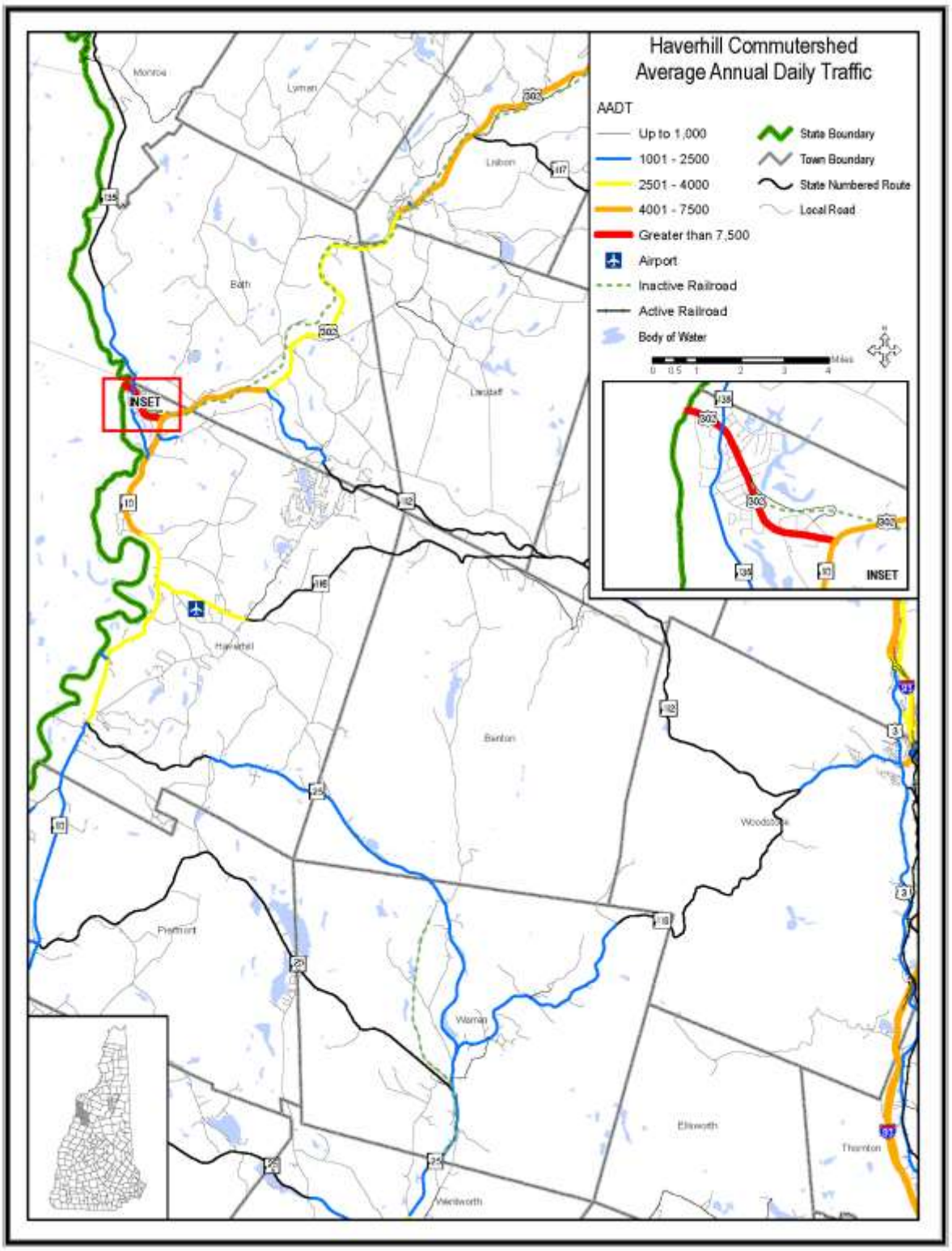
NH 135 north from Haverhill through Bath

NH 25C west from NH 25 in Warren - provides connection to I-91 for access to jobs and services in the Upper Valley.

NH 118 east from Warren - provides connection to Lincoln-Woodstock area and to Mount Moosilauke.

As shown, the segment of US 302 from the Vermont state line to the intersection with NH 10 south has an AADT of over 7500. The adjacent segments of NH 10 south and US 302 east have AADTs of 4001-7500.


Haverhill Commutershed
Functional Classification
Principal Arterial - Interstate
Principal Arterial - Other
Minor Arterial
Major Collector (Rural)
Minor Collector (Rural)
Collector (Urban)
Local
Private
Body of Water
State Boundary
Town Boundary
Miles
0 0.5 1 2 3 4
INSET
INSET
Monroe
Lyman
Lisbon
Bath
Landaff
Haverhill
Benton
Piermont
Warren
Woodsville
Ellsworth
Thornton
Wentworth


Haverhill Commutershed
Average Annual Daily Traffic
AADT
Up to 1,000
1001 - 2500
2501 - 4000
4001 - 7500
Greater than 7,500
Airport
Inactive Railroad
Active Railroad
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 0.5 1 2 3 4
INSET
INSET
Monroe
Lyman
Lisbon
Bath
Landaff
Haverhill
Benton
Piermont
Warren
Ellsworth
Thornton
Woodsville
Wentworth

The high traffic volumes for US 302 shown below reflect the multiple purposes this highway segment serves - in addition to local traffic and through-traffic, including tourists and trucks, this small segment of highway is the commercial center for several surrounding towns.

In general traffic volumes in this subregion appear to be fairly stable. Traffic on NH 112 in Bath appears to be decreasing. Traffic on NH 135 in Haverhill appears to be increasing.

Average Annual Daily Traffic (AADT)

US 302	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Haverhill														
US 302 (Central St) South of Beech St									10000			9000		
US 302 (Central St) at Vermont SL		7700				8100			8200			7800		
US 302/NH 10/NH 11 (Dartmouth College HWY) at Bath TL		4600			4400			4700			4500			4400

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 25	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Haverhill														
NH 25 (Mount Moosilauke HWY) East of NH 10		1200				1700			1100			960		
NH 25 (Mount Moosilauke HWY) at Benton TL		1100			1300			1200			1100			1100

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 112	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bath														
NH 112 (Wild Ammonoosuc RD) East of US 302/NH 10	1708	1787	1814	1813	1679		1000			1100			1200	
Haverhill														
NH 112 (Wild Ammonoosuc RD) at Bath TL		870			680			840			970			730

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 116	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Haverhill														
NH 116 (Benton RD) at Benton TL	370				430			360			460			490
NH 116 over Clark Brook	3200				3500			3800			3400			4900

Source: NHDOT

Average Annual Daily Traffic (AADT)

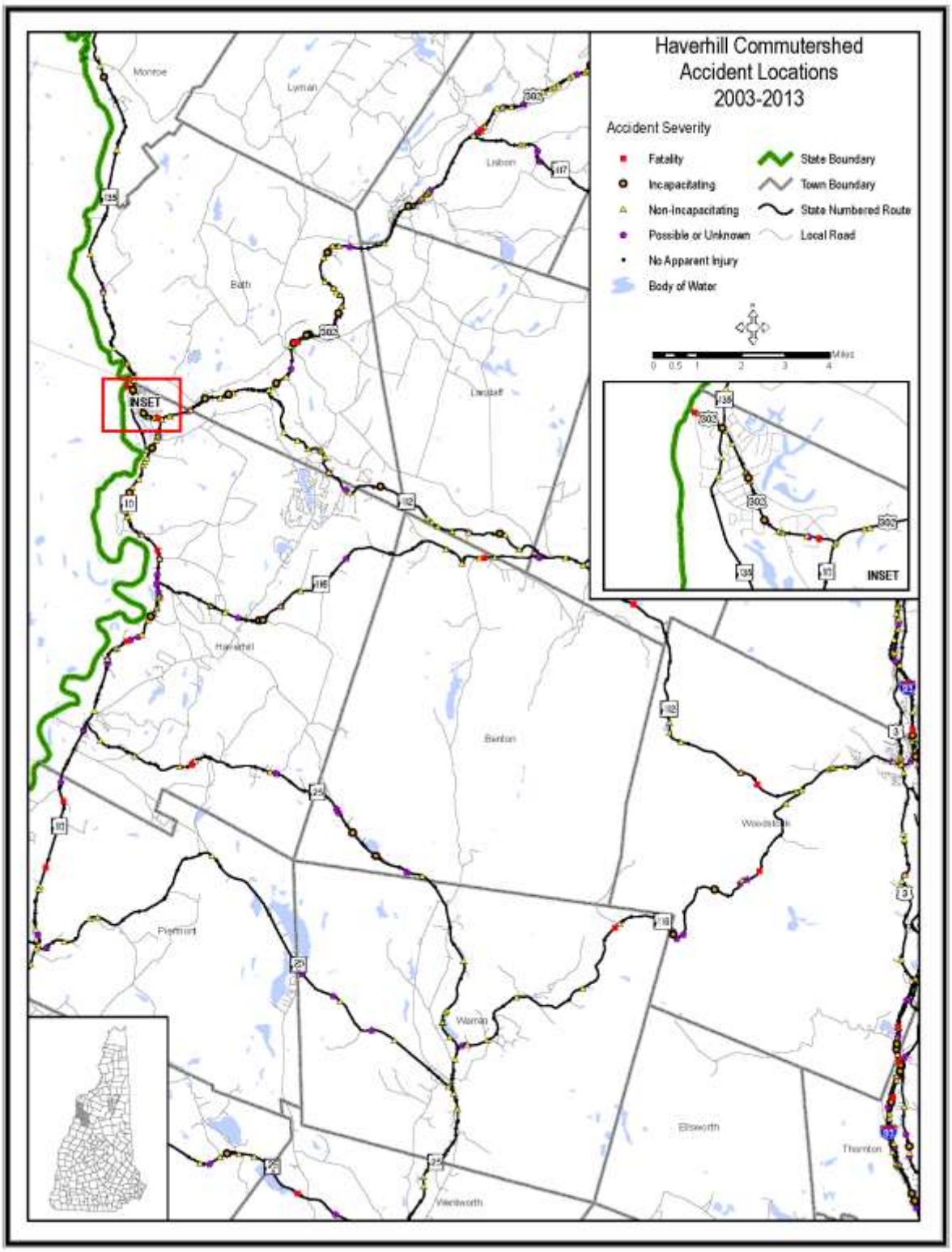
NH 135	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bath														
NH 135 (Monroe RD) at Monroe TL	540			620			550			520			640	
Haverhill														
NH 135 (SO. Court St) West of NH 10									1600			1300		
NH 135 at Bath TL		1200				1300				1400		1400		
NH 135 East on Mt Orne Rd		1100				1300								

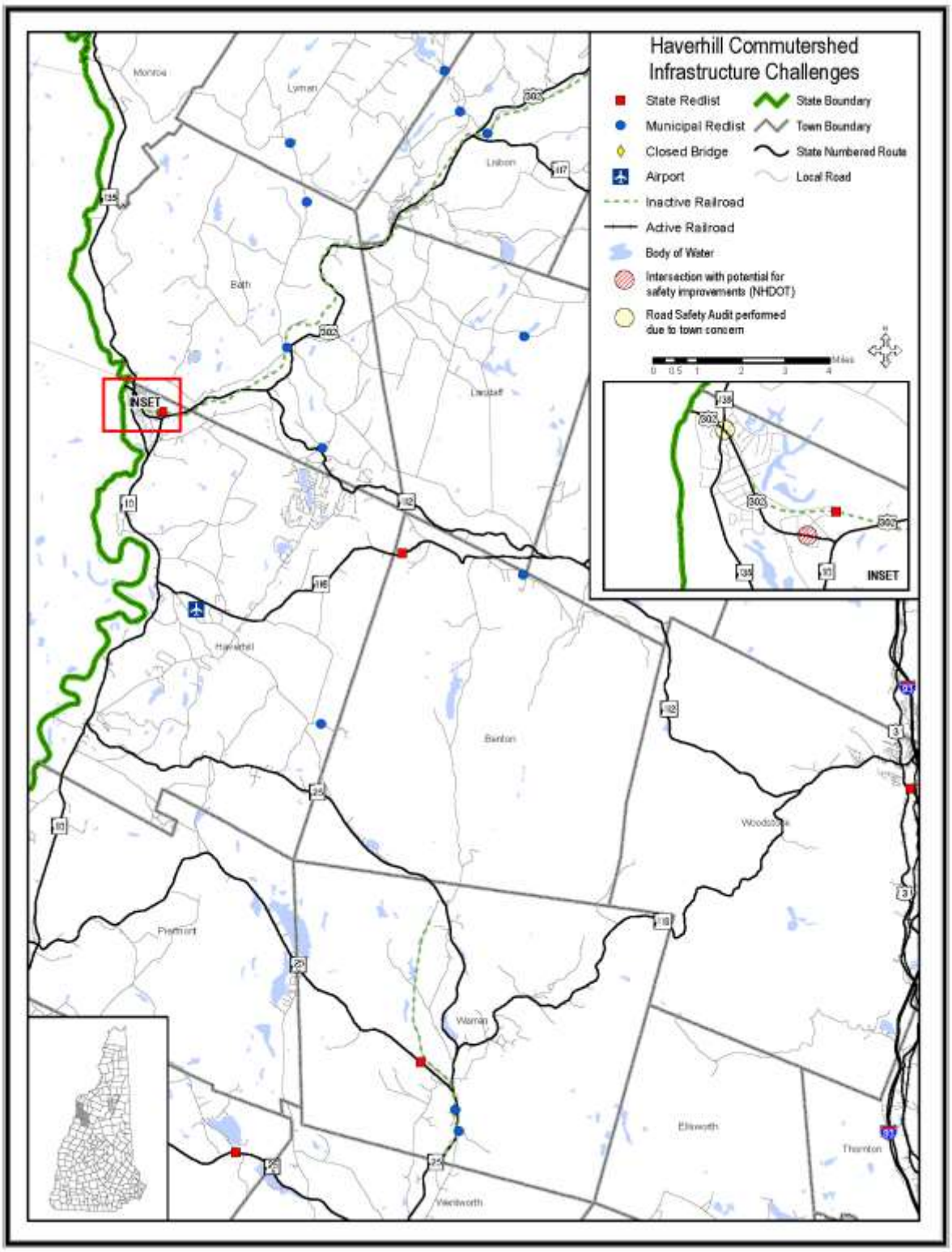
Source: NHDOT

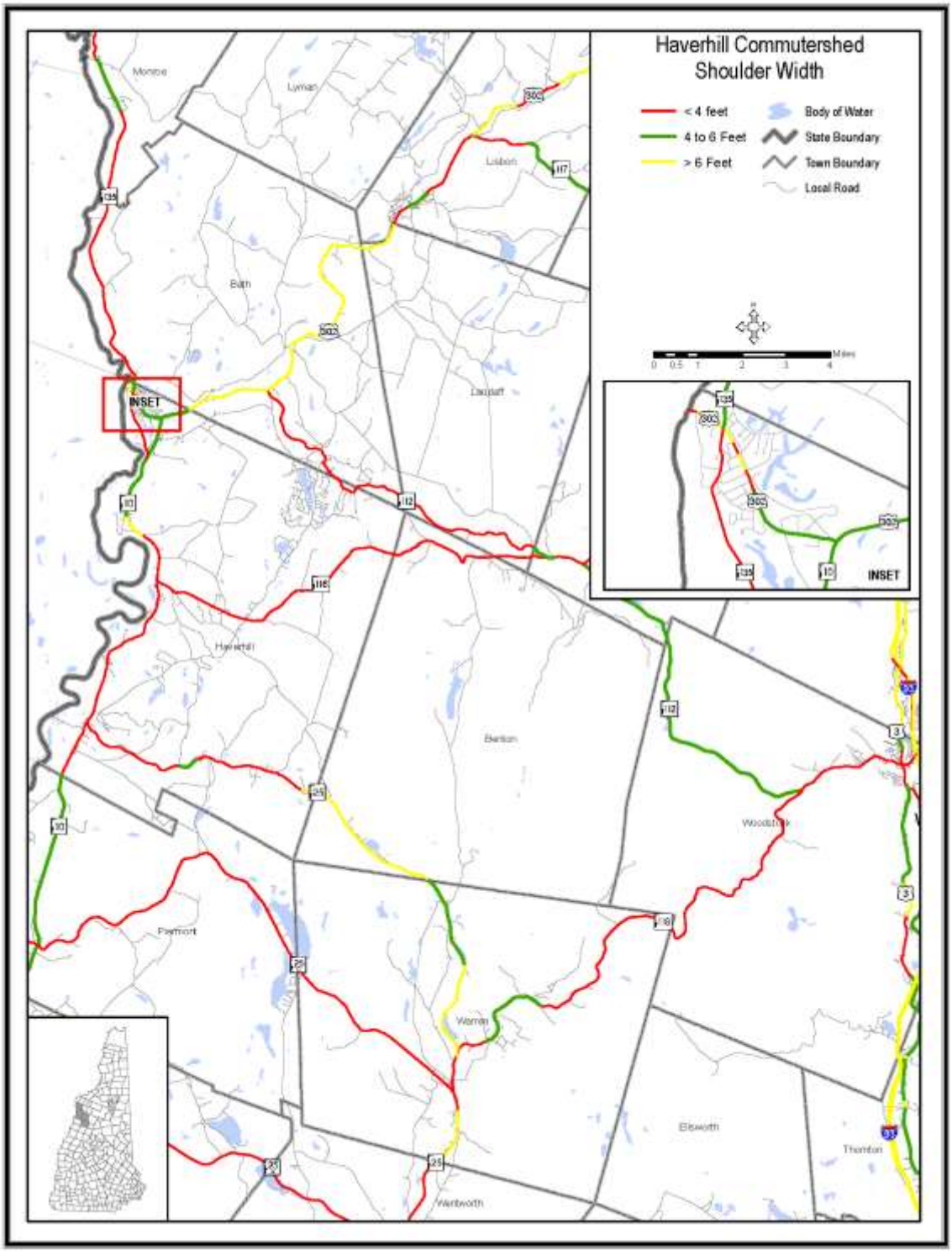
The following maps show accidents, red listed bridges and intersections of concern, shoulder widths and pavement conditions in the Haverhill LMA travelshed. There is one intersection of concern in downtown Woodsville, and 3 red-listed state bridges - on NH 25C, NH 116 and the rail trail.

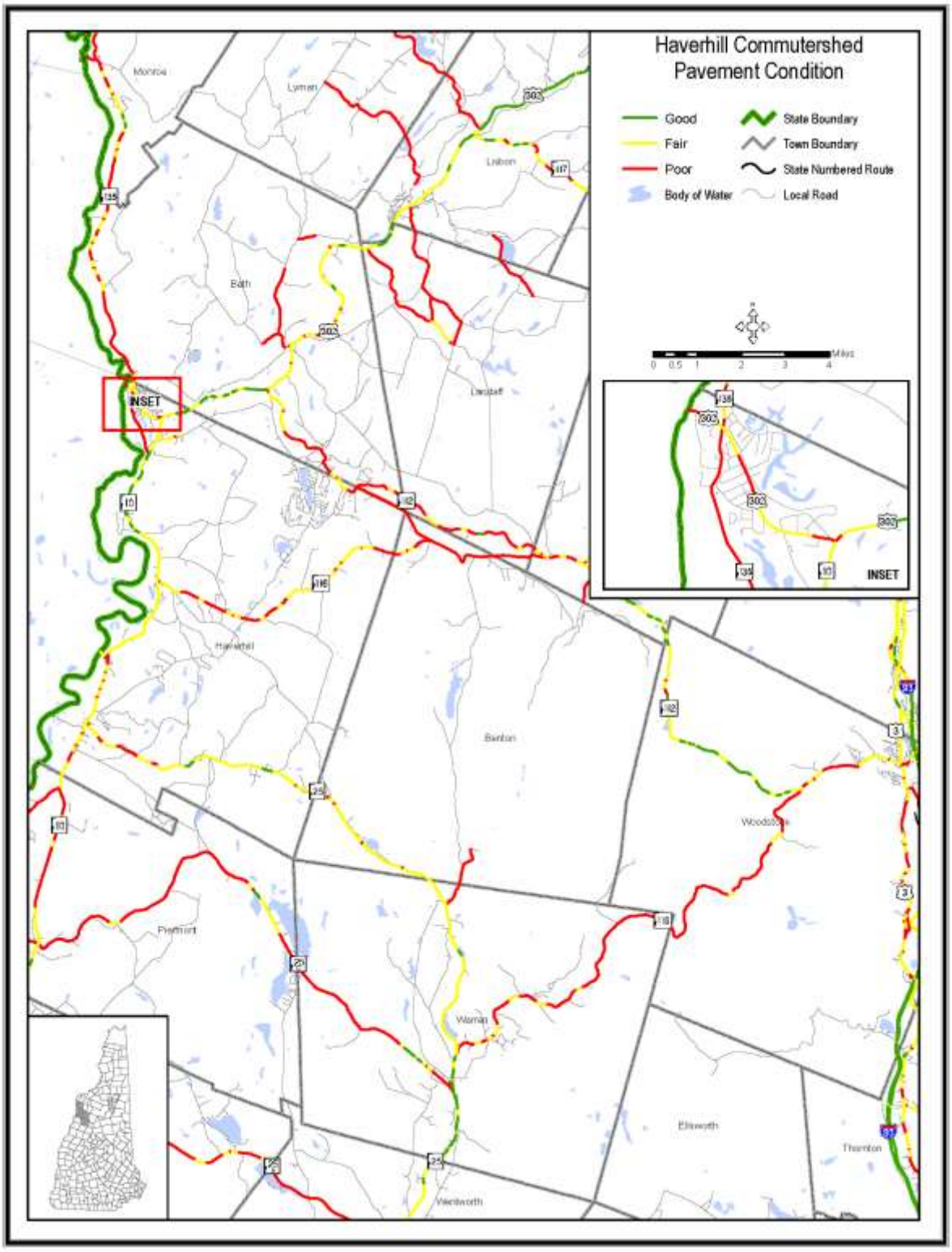
Shoulders of less than 4 feet are found on many highway segments in the Haverhill LMA travelshed. Of particular concern are those on the region's high priority corridors - NH 10, NH 25 and NH 112. These Arterials and Major Collectors are of particular concern for the safe travel of logging trucks, freight, bicyclists, and visitors unused to watching out for wildlife after dark. Of 104 accidents that were reported to the state on NH 25 from NH 10 in Haverhill to the Warren-Wentworth town line between 2003 and 2013, 48% involved a fixed object, 32% involved another vehicle, and 14% involved an animal. On the 9 miles of NH 10 from US 302 in Woodsville to the Haverhill-Piermont town line, of 150 accidents reported, 49% involved another vehicle, 26% involved an animal, and 19% involved a fixed object. Of the 32 accidents reported on NH 112 from US 302 to the Bath-Benton town line (5 miles), 47% involved a fixed object, 19% involved another vehicle and 13% involved an animal.

Pavement condition is poor in the Woodsville area and on much of NH 116, NH 135 and NH 112. NH 112 is of particular concern as this is a popular tourist route.


Haverhill Commutershed
Accident Locations
2003-2013
Accident Severity
Fatality
Incapacitating
Non-Incapacitating
Possible or Unknown
No Apparent Injury
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 0.5 1 2 3 4
INSET
Monroe
Lyman
Lisbon
Bath
Landaff
Haverhill
Benton
Piermont
Warren
Woodstock
Ellsworth
Thornton
Wentworth


Haverhill Commutershed
Infrastructure Challenges
State Redlist
Municipal Redlist
Closed Bridge
Airport
Inactive Railroad
Active Railroad
Body of Water
Intersection with potential for safety improvements (NHDOT)
Road Safety Audit performed due to town concern
State Boundary
Town Boundary
State Numbered Route
Local Road
Miles
INSET
Monroe
Lyman
Lisbon
Bath
Landaff
Haverhill
Benton
Piermont
Warren
Ellsworth
Woodsville
Thornton
Wentworth


Haverhill Commutershed
Shoulder Width
< 4 feet
4 to 6 Feet
> 6 Feet
Body of Water
State Boundary
Town Boundary
Local Road
INSET
INSET
Monroe
Lyman
Lisbon
Bath
Landaff
Haverhill
Benton
Piermont
Warren
Wentworth
Woodsville
Ellsworth
Thornton


Haverhill Commutershed
Pavement Condition
Good
Fair
Poor
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 0.5 1 2 3 4
INSET
INSET
Monroe
Lyman
Lisbon
Bath
Landaff
Haverhill
Benton
Piermont
Warren
Woodsville
Ellsworth
Thornton
Wentworth

PUBLIC TRANSIT

There is no public transit in the Haverhill LMA travelshed.

AIR

Dean Memorial Airport is located in the town of Haverhill. The airport is a public airport owned by the Town of Haverhill and operated by an airport commission comprised of municipal and airport officials. The airport was identified for inclusion into the National Plan of Integrated Airport Systems (NPIAS) and accepted into the program in 2010 making it eligible to receive federal grants under the Airport Improvement Program.

There are no fixed-base operator services provided at the airport, but the airport does have 100LL fuel. The based aircraft primarily generates activity, but the airport does see a few itinerant flights during the summer. The airport has a very successful "Airport Day" held in the summer that attracts the local community to the airport, helping to increase the airport's visibility within the community.

(Source: NH Civil Air)

Dean Memorial - Haverhill	
FAA ID:	5B9
ARC:	B-I
Ownership	Public
Economic Region	North Country
County	Grafton
Airport Role	General Aviation
Airspace	Class G
Zoning	No Zoning
Fuel	100LL
Weather Info	None
Fixed Based Operator	No
Navigation Aids	None
Airport Latitude	44.04.502.33 N
Airport Longitude	72.00.283.19 W
Runway Orientation	1-19
Runway Length	2,500’
Runway Width	60’
Instrument Approaches	None
Lighting	None
Surface	Asphalt
Condition	Good
Operations for 12 Months Ending 12/31/2013	
Air Carrier	0
Air Taxi	0
General Aviation Local	4,000
General Aviation Itinerant	750
Military	0
Total Operations	4,750
Based Aircraft	
Single Engine	11

(Source: NHDOT)

IMPROVEMENTS SINCE 2009 PLAN

HIGHWAY AND BRIDGE PROJECTS

Bath (Proj. # 14439): This project involved the rehabilitation of the Village Covered Bridge over the Ammonsoosuc River on West Bath Road (Red List Bridge # 137/095). This project was recently completed and is awaiting audit.

Bath (Proj. # 15376): This project involved work to repair slope failure and drainage issues along US 302 to prevent further damages. Work was completed in 2009.

Bath – Haverhill – Landaff –Easton (Proj. # 164121): This project was needed because of damages caused by Hurricane Irene in 2011. This project was located on US 302 in Bath and extended to NH 116 and included repairing damage to slopes, roadways and drainage. Construction was completed in 2012.

Bath-Littleton – (Proj. # 13427): Upgraded guardrails on NH 10 beginning on US 302/NH 10 Continuing north and ending at Mill Brook Road.

Haverhill (Proj. # 14154): This project involved the reconstruction of unstable embankment on NH 110 approximately 1 mile south of NH 116. Construction was completed in September 2014.

ROAD SAFETY AUDITS

In February 2012 a Road Safety Audit was done at the intersections of NH 135/US 302, US 302/Forest Street, and NH 10/Forest Street in Woodsville. Concerns over safety at these three intersections were initially voiced by elected officials from Haverhill, Woodsville, and the Transportation Advisory Committee (TAC) of the North Country Council to the

Governor's Advisory Commission on Intermodal Transportation (GACIT) in the fall of 2011.

US 302/NH 135 INTERSECTION

The US 302 and NH 135 intersection is located at the historic center of Woodsville. It is a small, densely developed area where the old railroad depot, banks, and a senior living facility are located. The RSA Team identified numerous safety issues as contributing factors that make this intersection dangerous, including:

- Visibility of stop signs on NH 135 and of sight line issues along US 302.
- Location of stop bars and stop signs
- Sight-line obstructions
- Access management issues

RECOMMENDATIONS:

Short Term

- Improve pavement markings, signage, and consider flashing beacons.
- Remove parking spots near intersection corners.
- Evaluate alternative loading zone for senior bus at southwest corner of intersection.
- Enforce sign restrictions on the NHDOT right-of-way.
- Evaluate driveway cuts and develop access management solutions for the US 302 corridor.

Medium Term

- Evaluate feasibility for building bump-outs on all four approaches to make crosswalks shorter and also allow stop signs to be placed closer to the roadway, making the stop more noticeable. Bump outs could also be combined to add parking spots on the northern approach of NH 135.

- Evaluate if intersection meets warrants for a 4-way stop control.

US 302/FOREST ST. INTERSECTION

The US 302/Forest Street intersection is located between the historic section of Woodsville and the new commercial development on NH 10. Forest Street is short, running approximately ½ mile between US 302 and NH 10. It is mostly residential with a small equipment store located half way down. The RSA Team identified numerous safety issues as contributing factors that make this intersection dangerous, including:

- Alignment issues
- Multiple turning lanes
- Visibility of pedestrian signs and flashing beacons

RECOMMENDATIONS:

Short Term

- Realign the north approach of Forest St. by removing the splitter island and repainting the lanes so they match up with the southern approach.
- Relocate and replace signage and beacons with new ones that meet MUTCD standards.

Medium Term

- Evaluate feasibility of narrowing the Forest Street approach in addition to removing the median island.
- Evaluate feasibility of removing right turning lane on US 302 and converting it to a wide shoulder.

Long Term

- Evaluate traffic signal warrants for intersection.

NH 10/FOREST ST. INTERSECTION

The intersection of Forest Street and NH 10 is a four-way intersection with Swiftwater Road directly across from Forest Street. The intersection is stop controlled for the minor (Swiftwater Road and Forest Street) legs. The RSA Team identified numerous safety issues as contributing factors that make this intersection dangerous, including:

- Lack of stop bars or crosswalks at the intersection.
- Clutter of signs and overgrown trees distract drivers and impede visibility.

RECOMMENDATIONS:

Short Term

- Paint stop bars at Forest St. and on Swiftwater Road.
- Clean up unneeded signs and install signs that meet MUTCD standards in the proper locations.

Consider removing over-grown trees.

TRANSPORTATION ALTERNATIVES

5310 Purchase of Service Funds: North Country Council has been working with the Grafton-Coos Regional Coordinating Council to develop proposals and administer funding for the 5310 Purchase of Service and Formula Funds programs. This funding is used to expand transportation services to the elderly and disabled provided by Grafton County Senior Citizens Council in this region using the senior center vans.

HAVERHILL RSMS

Utilizing UPWP funds, NCC staff performed a Road Surface Management System (RSMS) inventory and analysis of paved roads within the community. RSMS is used to detect early signs of roadway failure and provides a framework for both short and long range planning. The result was a systematically developed repair plan by year that was presented to the Board of Selectmen as part of the budget process. RSMS has been upgraded so future inventories collected will be included in the Statewide Asset Data Exchange System (SADES).

PLANNED IMPROVEMENTS - STIP AND TYP

Haverhill: This project (state project # 16238) involves the replacement of the red list bridge (#215/158) carrying Mill Street over the abandoned railroad. Construction is scheduled for 2018. (Bridge Program Funds.)

DEFERRED LIST - UNDFUNDED

Haverhill-Bath: This project (state project #10436) involved the reconstruction on US 302 from the junction at NH 10 northerly approximately 1.8 miles.

ISSUES, NEEDS AND PRIORITIES

- Construct all projects on STIP/TYP and Deferred List.
- Traffic safety. Address unsafe intersections in Woodsville. Review Road Safety Audit recommendations with local officials and regional transportation planners and schedule implementation of desired approach. Schedule additional Road Safety Audits as needed. NCC can assist communities with RSA applications to NHDOT. (Proposed funding source: HSIP)

- Address inadequate shoulder widths. Paved shoulders should be increased to 4-5 feet on NH 10, NH 112 and NH 25 whenever possible as part of repaving projects. Additional unpaved shoulder, level with the paved portion, should be added where feasible, except in stretches where the visual impacts and community preferences outweigh safety gains. (Proposed funding source: Surface Transportation Program)
- Address poor pavement condition. Repave, rehabilitate or reconstruct as needed with priority on downtown Woodsville and NH 112, and perform level of preservation and maintenance on all regional and subregional priority corridors adequate to protect this investment of federal and state dollars. (Proposed funding source: Betterment funds and Surface Transportation Program)
- Address Red List bridges. (Proposed funding source: Bridge Program, State Bridge Aid)

    - There is 1 State Red List Bridge in the Haverhill Labor Market Area travelshed, Haverhill (215/158). This bridge replacement project on Mill Street over NHRR (ABD) was added to the State Red List in 1997. This bridge is listed in "poor condition" with low capacity and has a posted weight limit of 6 tons. The project cost is $1,254,000 and construction is scheduled for 2016. (Funding: TYP)
    - There are 4 Municipal Red List Bridges located in the Haverhill LMA travelshed in the towns of Bath (3) and Haverhill (1).

    Priority for replacement or rehabilitation should be based on safety and traffic volumes.
- Work toward developing public transit to connect Haverhill residents with Vermont's Stagecoach River Route. (Proposed funding source: FTA)
- Monitor the feasibility of connecting Woodsville to Littleton's Tri-Town Trolley route. (Proposed funding source: FTA)
- Expand outreach on Rideshare and other alternatives to single occupant vehicles. (Proposed funding source: FTA, SPR via NCC UPWP.)

THE FOLLOWING SPECIFIC PROJECTS HAVE BEEN IDENTIFIED BY COMMUNITIES AS NEEDS ASSOCIATED WITH ADDRESSING SOME OF THE PRIORITY ISSUES

WOODSVILLE US 302/NH 135

NEED

In Haverhill (Woodsville) at the US 302/NH 135 intersection, there have been continued complaints and concerns about the safety of the intersection safety. A Road Safety Audit (summarized on page ***) had been done at this intersection in 2012, and the DOT District 2 Engineer proposed that a plan to resolve the issues be developed.

DESCRIPTION

This project would involve implementation of the Road Safety Audit recommendations, including the development of an engineering plan for ultimate intersection configuration and program construction costs.

(Proposed funding source: Highway Safety Improvement Program Funds)

F. PLYMOUTH LABOR MARKET AREA TRAVELSHED

EXISTING CONDITIONS

The population of the NCC portion of the Plymouth Labor Market Area travelshed grew by slightly more than 20% from 2000-2010. All but three communities - Rumney, Waterville Valley and Ellsworth - grew by more than 10%. Again except for those three communities, all are expected to increase by more than 10% between 2010 and 2040. In terms of absolute numbers, the population is expected to grow by about the same number in the next 30 years as it did in the last 10 years. NHES ELMI projects 11.9% job growth for Grafton County as a whole for the 2000-2010 period; this figure is heavily influenced by the Hanover-Lebanon area. NHES ELMI projects job growth for the NCC region as a whole at 4.8% for the period 2012-2022.

Town Name	**Population 2000 Census**	**Population Change 00-10**	**Population 2010 Census**	***OEP Projection 2040***
Plymouth Labor Market Area Travelshed				
Plymouth	5,892	1,098	6,990	*8,078*
Campton	2,719	614	3,333	*3,957*
Thornton	1,843	647	2,490	*3,176*
Lincoln	1,271	391	1,662	*2,072*
Rumney	1,480	0	1,480	*1,439*
Woodstock	1,139	235	1,374	*1,610*
Wentworth	798	113	911	*1,018*
Groton	456	137	593	*736*
Waterville Valley	257	-10	247	*229*
Ellsworth	87	-4	83	*76*
Total	15,942	3,221	19,163	*22,391*

(Source: NHES)

The growth in year-round population and total dwelling units far exceeded the growth in seasonal homes.

CHANGE IN SEASONAL HOMES COMPARED TO TOTAL DWELLING UNITS
PLYMOUTH LABOR MARKET AREA

	Population in Households	
2000 14,240	2010 16,863	% Change +18.4%
	Total Dwelling Units	
2000 11,590	2010 13,897	% Change +19.9%
	Seasonal Homes	
2000 5,332 (43.3% of total dwelling units)	2010 5,970 (43.2% of total dwelling units)	% Change +12%

(Source: US Census 2000, 2010)

HIGHWAY NETWORK

The following table shows the mileage by road class for the Plymouth Labor Market Area travelshed, where approximately 20% of the lane miles in the NCC region are located. Of the total 728 miles in this region, about 23% are private roads, 19% are Class I, 16% are Class II, 35% are Class V, 4% are Class VI, and about 4% are Federal. There are no Class III or IV highways in the Plymouth LMA travelshed.

Plymouth Labor Market Area			
TOWN	**LEGISLATIVE CLASS**	**CENTERLINE MILES**	**LANE MILES**
CAMPTON	Private Roads	37.624	63.128
GROTON	Private Roads	14.956	14.968
LINCOLN	Private Roads	28.368	56.736
PLYMOUTH	Private Roads	14.426	25.118
RUMNEY	Private Roads	10.654	10.778
THORNTON	Private Roads	23.853	38.576
WARREN	Private Roads	12.243	12.243
WATERVILLE VALLEY	Private Roads	4.186	6.383
WENTWORTH	Private Roads	5.518	5.742
WOODSTOCK	Private Roads	14.274	17.162
	Total Miles	**166.102**	**250.834**
CAMPTON	Class I: Primary Roads	22.024	41.382
LINCOLN	Class I: Primary Roads	23.398	40.454
PLYMOUTH	Class I: Primary Roads	19.25	37.175
RUMNEY	Class I: Primary Roads	7.533	15.066
THORNTON	Class I: Primary Roads	18.96	35.922
WARREN	Class I: Primary Roads	7.071	14.142
WENTWORTH	Class I: Primary Roads	9.938	19.876
WOODSTOCK	Class I: Primary Roads	26.488	49.049
	Total Miles	**134.662**	**253.066**
CAMPTON	Class II: Secondary Roads	16.68	33.315
ELLSWORTH	Class II: Secondary Roads	4.791	9.582
GROTON	Class II: Secondary Roads	8.289	16.578
LINCOLN	Class II: Secondary Roads	14.254	28.508
PLYMOUTH	Class II: Secondary Roads	7.001	13.979
RUMNEY	Class II: Secondary Roads	11.615	23.23
THORNTON	Class II: Secondary Roads	12.542	25.084
WARREN	Class II: Secondary Roads	12.703	25.406
WATERVILLE VALLEY	Class II: Secondary Roads	6.942	13.884
WENTWORTH	Class II: Secondary Roads	1.608	3.216
WOODSTOCK	Class II: Secondary Roads	20.247	40.494
	Total Miles	**116.672**	**233.276**

Plymouth Labor Market Area			
TOWN	**LEGISLATIVE CLASS**	**CENTERLINE MILES**	**LANE MILES**
CAMPTON	Class V: Local Roads	58.643	110.637
ELLSWORTH	Class V: Local Roads	3.199	5.687
GROTON	Class V: Local Roads	12.585	22.968
LINCOLN	Class V: Local Roads	7.6	15.217
PLYMOUTH	Class V: Local Roads	40.201	70.492
RUMNEY	Class V: Local Roads	22.592	44.037
THORNTON	Class V: Local Roads	48.539	95.447
WARREN	Class V: Local Roads	17.338	27.728
WATERVILLE VALLEY	Class V: Local Roads	6.802	13.471
WENTWORTH	Class V: Local Roads	30.657	51.838
WOODSTOCK	Class V: Local Roads	8.038	13.458
	Total Miles	**256.194**	**470.98**
CAMPTON	Class VI: Local Not Maintained	4.198	6.627
ELLSWORTH	Class VI: Local Not Maintained	0.602	0.919
GROTON	Class VI: Local Not Maintained	6.528	6.554
PLYMOUTH	Class VI: Local Not Maintained	4.955	5.086
RUMNEY	Class VI: Local Not Maintained	0.827	0.862
THORNTON	Class VI: Local Not Maintained	0.733	0.996
WARREN	Class VI: Local Not Maintained	4.413	4.496
WENTWORTH	Class VI: Local Not Maintained	2.404	2.749
WOODSTOCK	Class VI: Local Not Maintained	2.534	4.041
	Total Miles	**27.194**	**32.33**
ELLSWORTH	Class VII: Federal Roads	2.877	5.754
LINCOLN	Class VII: Federal Roads	1.068	2.136
RUMNEY	Class VII: Federal Roads	0.351	0.351
THORNTON	Class VII: Federal Roads	5.801	11.011
WARREN	Class VII: Federal Roads	0.722	1.444
WATERVILLE VALLEY	Class VII: Federal Roads	7.506	12.957
WOODSTOCK	Class VII: Federal Roads	8.566	15.709
	Total Miles	**26.891**	**49.362**
	Total Mileage	**727.715**	**1289.848**

Source: NHDOT

As shown on the following maps, the I-93 and US 3 corridor forms the backbone of the Plymouth LMA travelshed highway network. These two highways connect the region to Canada, Concord, Boston and other major cities. They are high priorities for the region. In addition, I-93 is on the National Highway System. Three other regional priorities in the Plymouth LMA travelshed are NH 25, NH 112 and NH 49. NH 25 links two of the region's important job center communities - Plymouth and Woodsville (in Haverhill), and provides some travelers and commerce with a connection between I-91 and I-93. NH 112 is the heart of summer and fall tourism in the region; it becomes the Kancamagus in Lincoln east of I-93.

NH is also important to the region's economy as it is the only winter access to the Waterville Valley ski resort.

The following highways either provide the primary access between communities and/or between a community and a major job center or Arterial, or serve high density population areas. They are therefore priority highways for this subregion.

NH 118 south of NH 112 - connects Warren with Lincoln-Woodstock commercial center

NH 175 through Thornton and Campton - population growth over 20% from 2000-2010 (US Census)

Highland Street in Plymouth - high traffic volumes, Major Collector

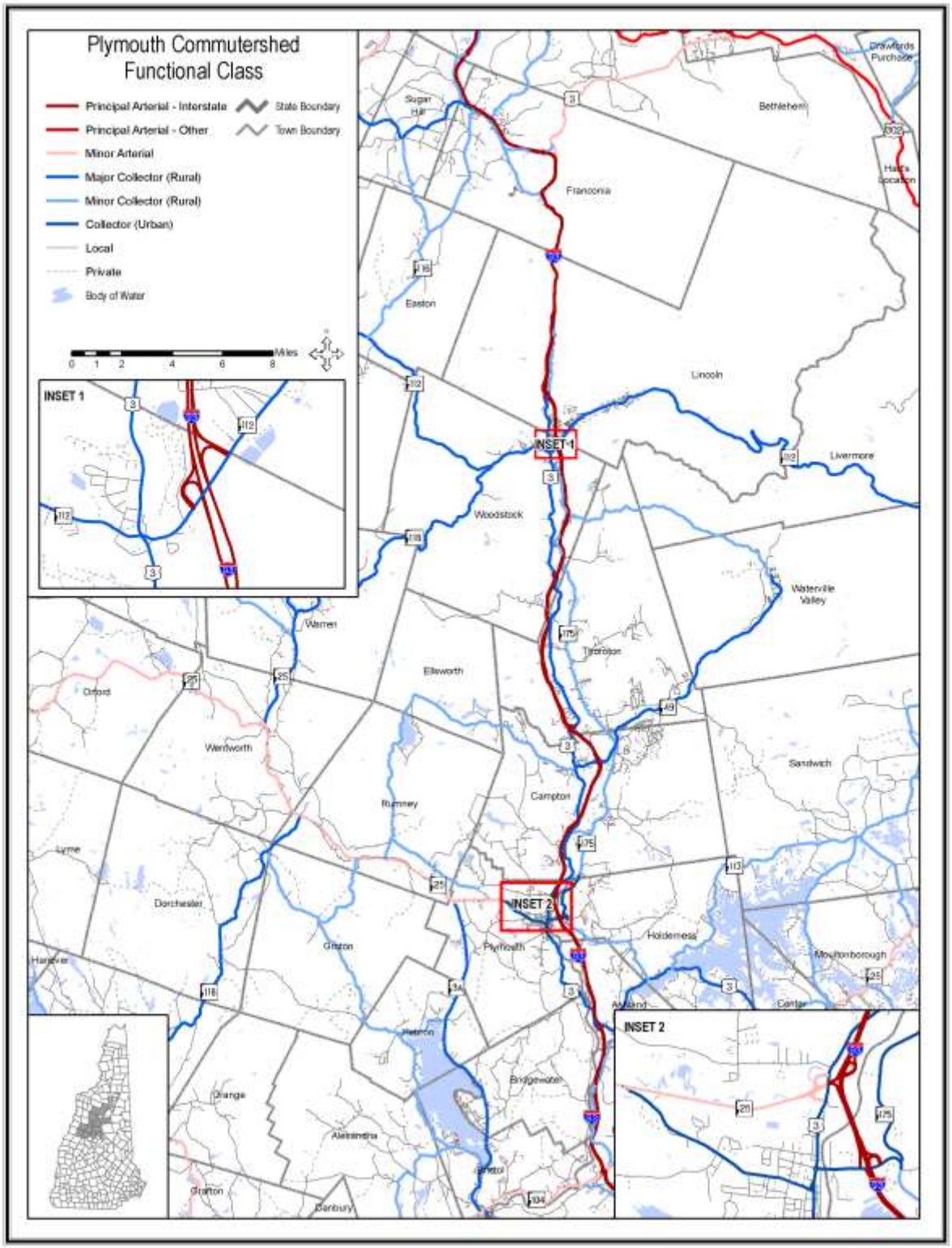
Halls Brook Road and North Groton Road to Halls Brook Road - Groton - connects Groton with NH 25 and NH 118

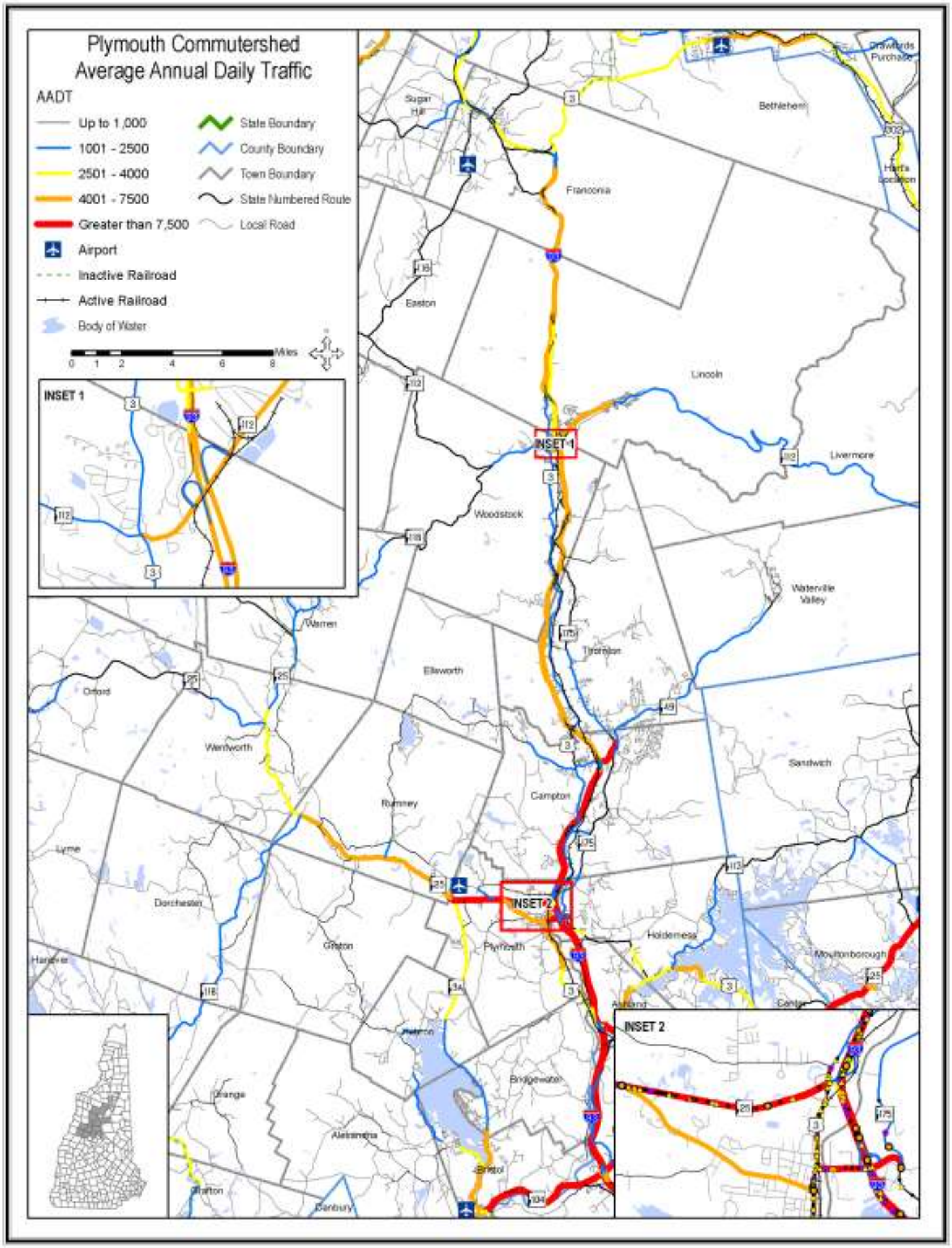
Ellsworth Hill Road - Ellsworth and Campton - only year-round access to Ellsworth

NH 118 south of NH 25 - connects Plymouth area towns to Upper Valley job center

NH 25A west of NH 25 - connects Plymouth area towns to I-91

As shown, the highest traffic volumes in the Plymouth LMA travelshed are associated with NH 25 through Plymouth, on I-93 to the Waterville valley exit, and NH 49 between I-93 and NH 175. At this junction, the high residential growth of Thornton and Campton combines with the ski resort traffic. I-93 traffic drops off to below 7500 AADT north of this point.


Plymouth Commutershed
Functional Class
Principal Arterial - Interstate
Principal Arterial - Other
Minor Arterial
Major Collector (Rural)
Minor Collector (Rural)
Collector (Urban)
Local
Private
Body of Water
State Boundary
Town Boundary
Miles
0 1 2 4 6 8
INSET 1
INSET 2
Sugar Hill
Bethlehem
Crawfords Purchase
Franconia
Easton
Lincoln
Livermore
Woodstock
Waterville Valley
Warren
Tiverton
Ellsworth
Wentworth
Rumney
Campton
Sandwich
Lyme
Dorchester
Grafton
Plymouth
Holderness
Meredith
Bridgewater
Orange
Alexandria
Danbury


Plymouth Commutershed
Average Annual Daily Traffic
AADT
Up to 1,000
1001 - 2500
2501 - 4000
4001 - 7500
Greater than 7,500
Airport
Inactive Railroad
Active Railroad
Body of Water
State Boundary
County Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 1 2 4 6 8
INSET 1
INSET 2
Sugar Hill
Bethlehem
Franconia
Easton
Lincoln
Livermore
Woodstock
Waterville Valley
Warren
Thornton
Ellsworth
Orford
Wentworth
Sandwich
Campton
Rumney
Lyme
Dorchester
Holderness
Plymouth
Groton
Moultonborough
Hanover
Ashland
Center
Bridgewater
Orange
Alexandria
Bristol
Grafton
Danbury
Hebron

Despite the growth of the area, traffic count data do not in general show growth trends in traffic volumes in the Plymouth LMA travelshed.

Average Annual Daily Traffic (AADT)

I-93	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Lincoln														
I-93 SB-NB Between Exits 32-33	9000	8300	8900		8200				8000			8500		
I-93/US 3 SB-NB Between Exits 34A-34-B									9100			9900		
I-93 SB-NB at Crossover at Milepost 103.1 Between Exit 33 & 34A	8171	8404	8707	8172	8300	7500	7909	7900	8007	8296	8498	8322	8298	8522
Campton														
I-93 at Crossover at Milepost 81.4 Between Exits 26-27 (SB-NB)	16321	16535	16405	17000	17607	18000	17846	18003	16988	17221	17591	16920	16810	16960
I-93 SB-NB Between Exits 28-29	15000	16000	16000		16000				11000			10000		
I-93 SB-NB Between Exits 27-28	12000	13000		12000					15000			16000		
Woodstock														
I-93 SB-NB Between Exits 29-30	11000	11000	11000		12000				11000			9500		
I-93 SB-NB Between Exits 30-31	11000	10000	11000		12000				10700			10000		
I-93 SB-NB Between Exits 31-32	11000	11000	11000		11000				11000			11000		

Source: NHDOT

Average Annual Daily Traffic (AADT)

US 3	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Campton														
US 3 North of Livermore Rd at Bog Brook				2000		1500								
US 3 (Daniel Webster HWY) South of Colonel Spencer RD at Bog Brook									1200			1300		
US 3 (Daniel Webster HWY) at Thornton TL		1100				1200			920			930		
Lincoln														
US 3 (Daniel Webster Hwy) South of Indian Head Resort		2400			2800			3400			3800			930
US 3 (Daniel Webster Hwy) Below I-93 Overpass at Exit 33			3500				3700			3100			2900	
Woodstock														
US 3 at Bridge over Lost River			2600			2400								
US 3 at Glover Brook			1500			1400								
US 3 (Daniel Webster HWY) North of Grandview Lower RD									2200			2300		
US 3 (Daniel Webster HWY) South of NH 175		1700			1800			1800			2000			1700
US 3 (Main St) at Lincoln TL			3000			2500			2600			2000		
US 3 (Daniel Webster HWY) at Thornton TL		1100			1100			1100			1100			960
US 3 (Daniel Webster HWY) South of MT Cilley RD										1300		1400		

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 25	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Plymouth														
NH 25 & 3A of West of Highland Street		10000			14000									
Rumney														
NH 25 (Mt Moosilauke HWY) West of Polar Caves (SB-NB)	5978	5981	6226	6579	6749	6694	6624	6291	6000	6100	6268	5908	6134	5640
NH 25 North of Rest Area		4300			5100			5200			4700			4300
Warren														
NH 25/NH 118 (Water St) at Wentworth TL		2300			2500			2500			2200			2000
NH 25 (MT Moosilauke HWY) West of NH 118	1000	1000		1100			1100			1200			1100	
NH 25/NH 118 (Water St) South of NH 25C	2800				3300		3200			3000			2000	
Wentworth														
NH 25/NH 118 North of NH 25A		2400			2900			2700			2600			2300
NH 25/NH 118 at Rumney TL		3500			1800			4000			3700			3600
NH 25/NH 118 South of NH 25A		2800			3700			3600			3200			3200

Average Annual Daily Traffic (AADT)

NH 118	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Rumney														
NH 118 (Dorchester RD) at Groton TL		**1200**					**1300**	**1600**			**1600**			**1400**
Warren														
NH 118 (Sawyer HWY) East of NH 25								**920**			**1200**			**680**
NH 118 Over Berry Brook		**790**			**830**			**920**						
Woodstock														
NH 118 (Sawyer HWY) at Warren TL		**340**				**410**				**410**		**200**		

Source: NHDOT

Average Annual Daily Traffic (AADT)

NH 112	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Woodstock														
NH 112 (Lost River RD) at Easton TL		790			840			890			780			670
NH 112 (Lost River RD) West of Lost Valley RD									1500			1200		
NH 112 (Kancamagus HWY) Over Pemigewasset River (EB-WB)										5900		4800		
NH 112 East of Mt Side RD			2000			1600								
NH 112 East of US 3		4800		4700			6100							
Lincoln														
NH 112 (Kancamagus HWY) East of Loon Village RD		2400			3300			2300			2100			1300
NH 112 (Kancamagus HWY) East of Seasons RD at Pollard Brook (EB-WB)		4900			4500			4900			4300			3900

Average Annual Daily Traffic (AADT)

NH 175	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Campton														
NH 175 at Holderness TL									1000			1100		
NH 175 over Beebe River									970			930		
NH 175 south of Nh 49 over Mad River									2000			2200		
NH 175 at Thornton TL									2200			2200		
Thornton														
NH 175 North of Benton Rd										1400			1700	
Woodstock														
NH 175 at Thornton TL								350			310			340
NH 175 over Pemigewasset River E of US 3								400			350			600
NH 175 over Pemigewasset River S of Tripoli Rd.								650			490			450

Source: NHDOT

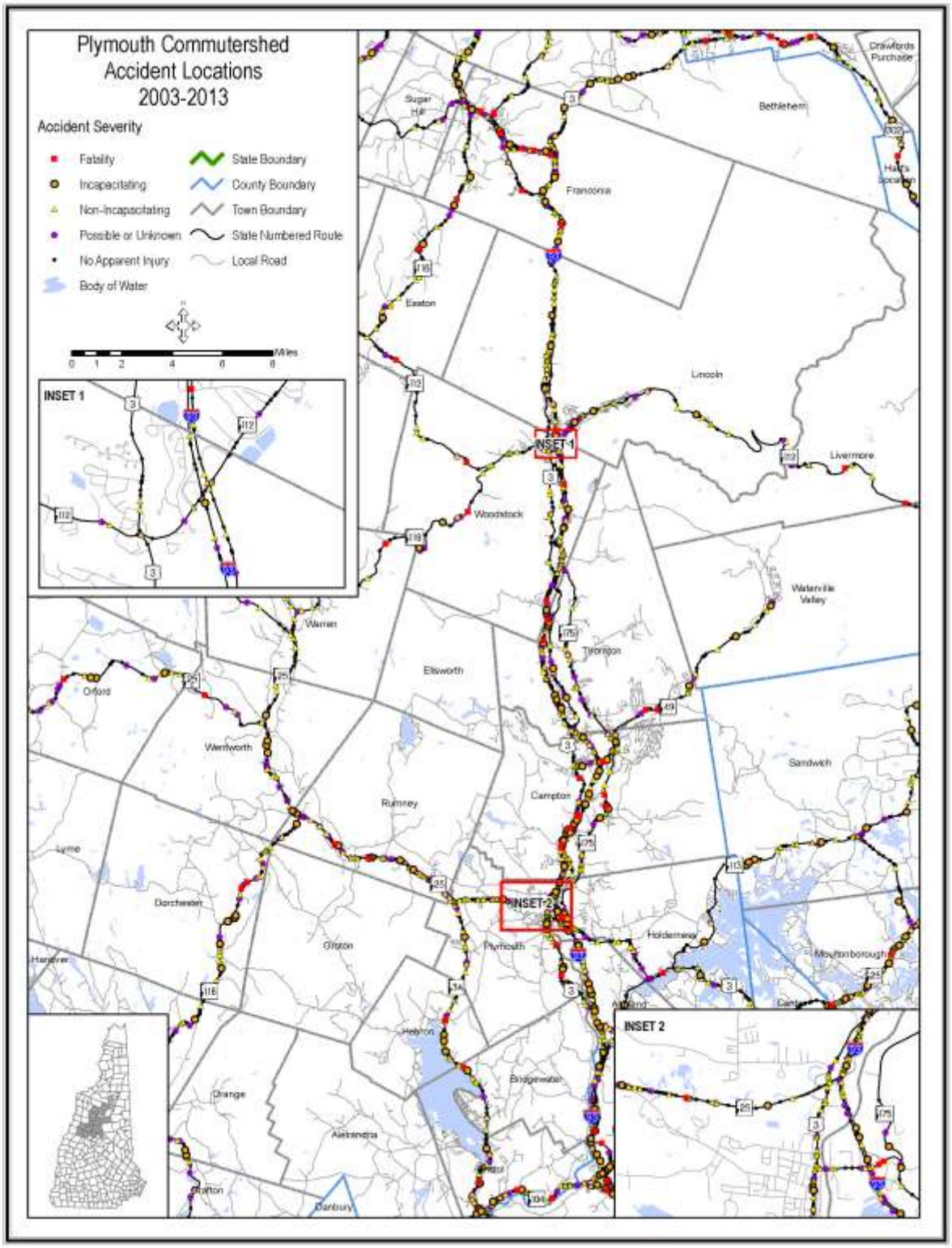
The following maps show accident locations, red listed bridges and intersections of concern, shoulder widths and pavement condition in the Plymouth LMA travelshed. As shown, there are several red listed state bridges. The only intersection of concern is in downtown Plymouth on Highland Street near Speare Memorial Hospital.

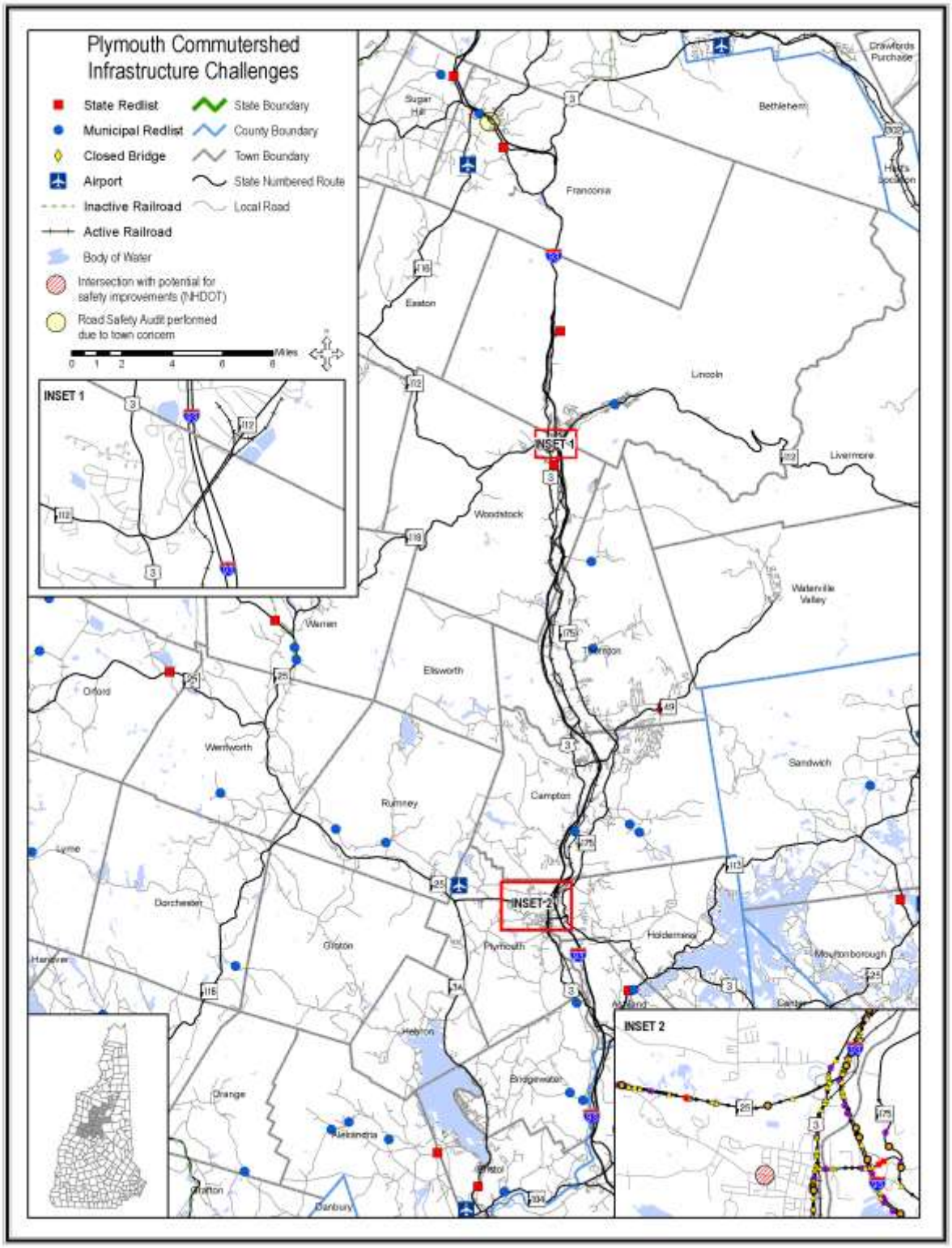
On US 3 from the Lincoln-Franconia town line to the Plymouth-Bridgewater town line (35 miles), 567 accidents were reported to the state between 2003 and 2013 - 47% involved another vehicle, 28% involved a fixed object, and 6% involved an animal. Nine percent involved a parked vehicle (mostly on Main Street in Plymouth). On NH 25 from the Wentworth-Warren town line to the Plymouth-Bridgewater town line (22 miles), of the 744 accidents reported, 53% involved another vehicle, 21% involved a fixed object, and 10% involved an animal. On NH 112 from US 302 to the Bath-Benton town line to the Waterville Valley town line (30 Miles), 201 accidents were reported - 46% involving another vehicle, 28% involving a fixed object, and 11% involving an animal. On NH 49 from US 3 to Waterville Valley (11 miles), of 151 reported accidents, 47% involved another vehicle, 28% involved a fixed object, and 14% involved an animal. On NH 175 from US 3 in Woodstock to the Plymouth-Holderness town line

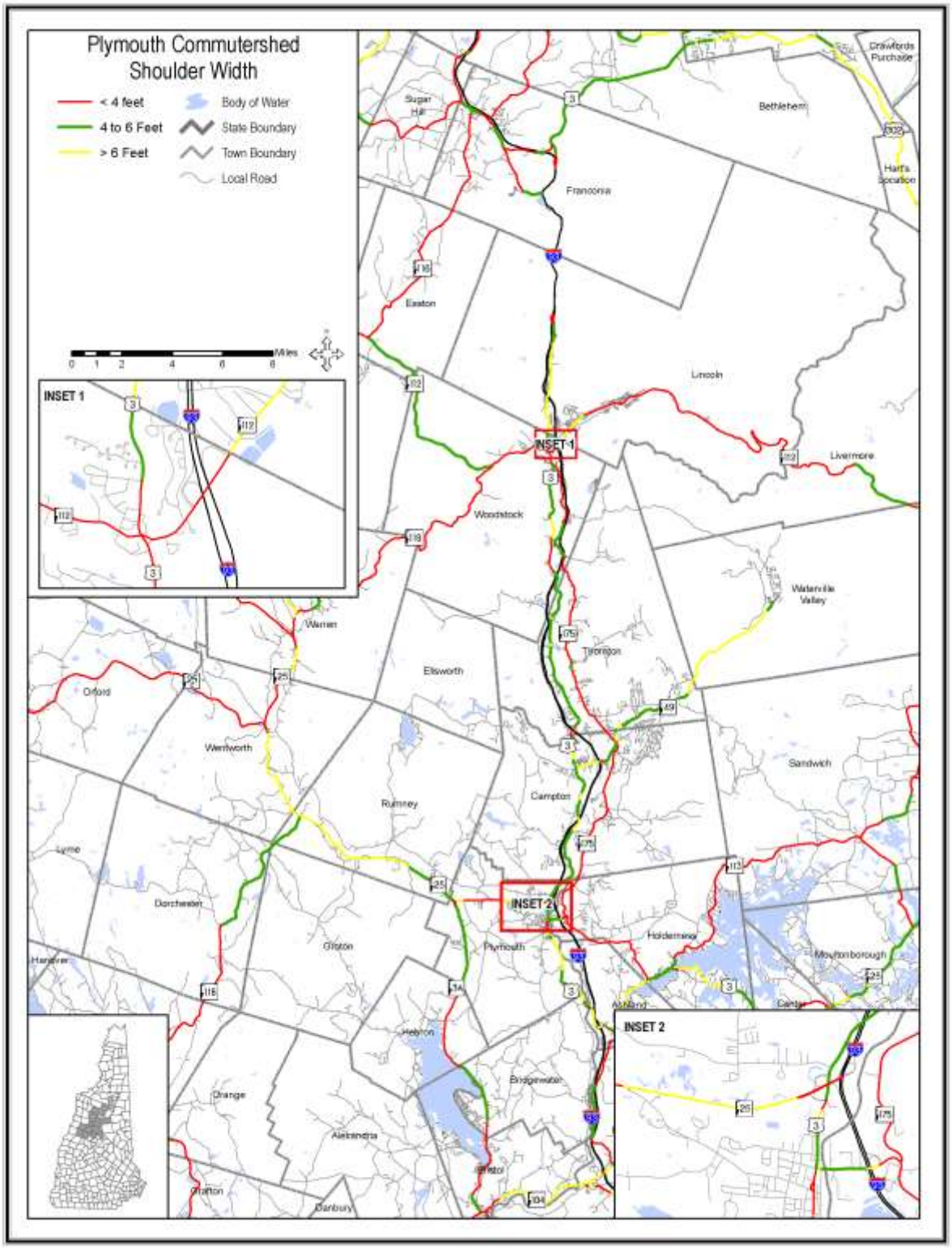
(14 miles), of 157 accidents reported, 43% involved a fixed object, 31% involved another vehicle, and 4% involved an animal. On NH 118 from NH 25 in Warren to NH 112 in Woodstock (13 miles), only 38 accidents were report.

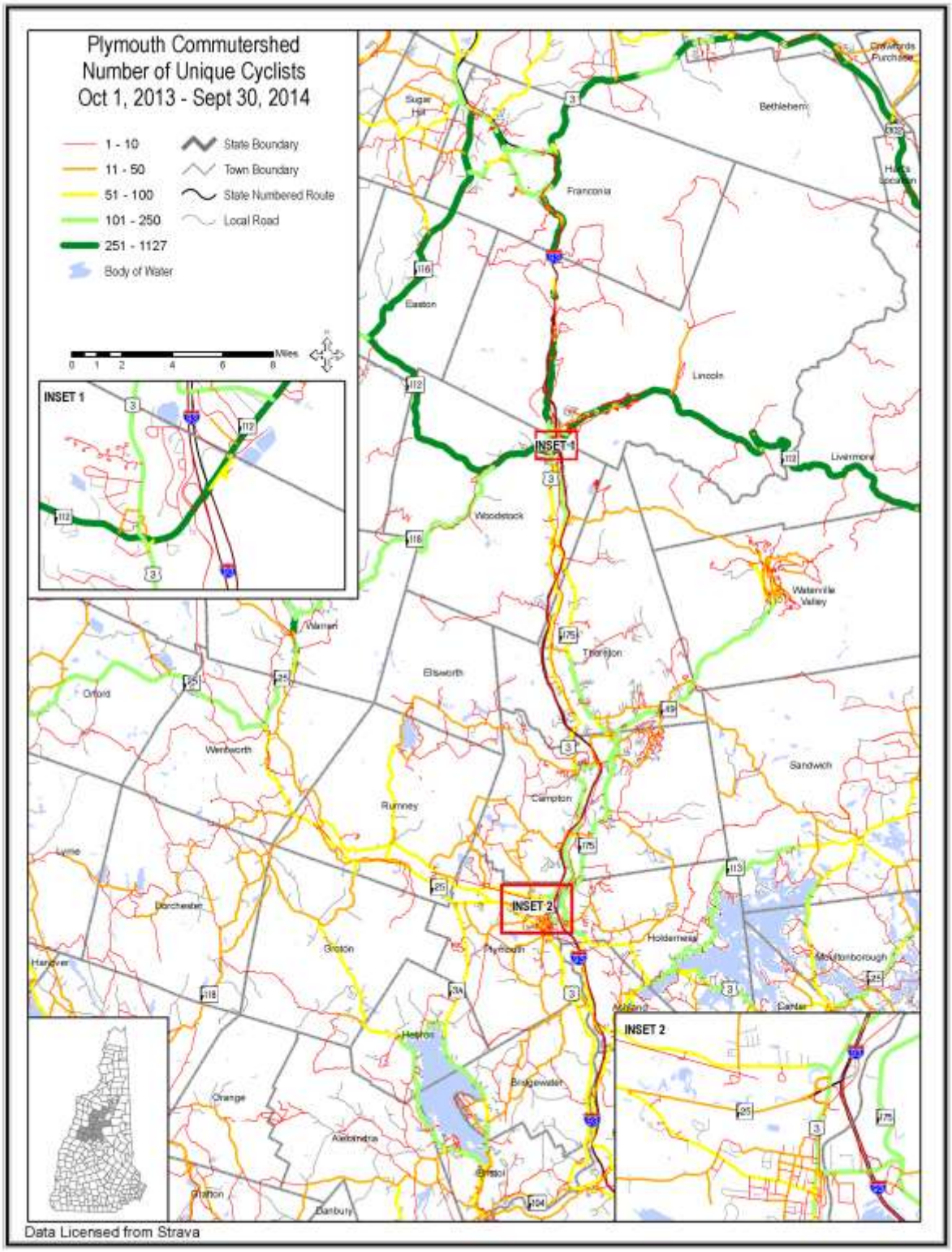
Shoulder widths are less than 4 feet wide on NH 118, NH 112 east of NH 118, all of NH 175, and portions of NH 25. This is a concern given the high level of bicycling seen in this area. The map "Plymouth Commutershed Number of Unique Cyclists" shows only those cyclists who use Strava, a social web app for tracking athletic activity. As shown, over 100 Strava users alone cycled from Campton and Thornton to Plymouth and to Waterville Valley. NH 112 is a very popular recreational route for groups, clubs, individuals and a growing number of race/organized ride events. The lack of adequate paved shoulders on these routes (between 4-5 feet) poses a danger to the safety of drivers as well as the bicyclists; drivers are forced to cross the center line to pas bicycles when shoulders are not wide enough for the cyclist to safely leave the traveled way.

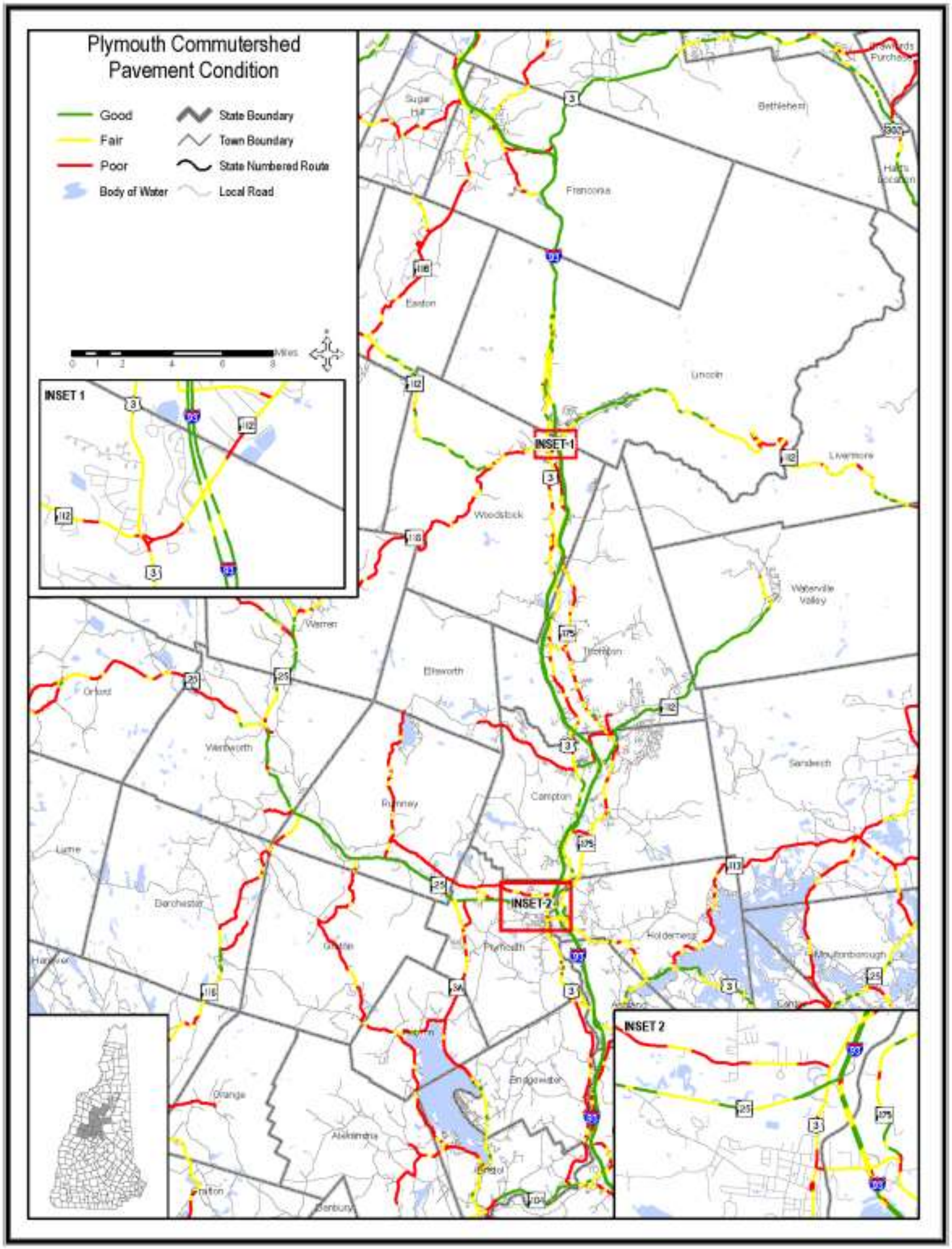
Except for portions of US 3, pavement conditions are fair to good on most of the regional priority highway corridors in the Plymouth LMA travelshed.


Plymouth Commutershed
Accident Locations
2003-2013
Accident Severity
Fatality
Incapacitating
Non-Incapacitating
Possible or Unknown
No Apparent Injury
Body of Water
State Boundary
County Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 1 2 4 6 8
INSET 1
INSET 2
Sugar Hill
Bethlehem
Crawfords Purchase
Franconia
Easton
Lincoln
Woodstock
Livermore
Waterville Valley
Warren
Thornton
Ellsworth
Orford
Wentworth
Rumney
Campton
Sandwich
Lyme
Dorchester
Plymouth
Holderness
Moultonborough
Grafton
Hebron
Bridgewater
Orange
Alexandria
Groton
Danbury


Plymouth Commutershed
Infrastructure Challenges
State Redlist
Municipal Redlist
Closed Bridge
Airport
Inactive Railroad
Active Railroad
Body of Water
Intersection with potential for safety improvements (NHDOT)
Road Safety Audit performed due to town concern
State Boundary
County Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 1 2 4 6 8
INSET 1
INSET 2
Sugar Hill
Bethlehem
Crawfords Purchase
Franconia
Easton
Lincoln
Woodstock
Livermore
Waterville Valley
Warren
Ellsworth
Thornton
Orford
Wentworth
Rumney
Campton
Sandwich
Lyme
Dorchester
Plymouth
Holderness
Moultonborough
Groton
Hebron
Bridgewater
Orange
Alexandria
Bristol
Grafton
Danbury


Plymouth Commutershed
Shoulder Width
< 4 feet
4 to 6 Feet
> 6 Feet
Body of Water
State Boundary
Town Boundary
Local Road
Miles
INSET 1
INSET 2
Bethlehem
Franconia
Easton
Lincoln
Woodstock
Livermore
Waterville Valley
Warren
Ellsworth
Thornton
Orford
Wentworth
Rumney
Campton
Sandwich
Lyme
Dorchester
Groton
Plymouth
Holderness
Moultonborough
Hebron
Bridgewater
Orange
Alexandria
Bristol
Danbury


Plymouth Commutershed
Number of Unique Cyclists
Oct 1, 2013 - Sept 30, 2014
1 - 10
11 - 50
51 - 100
101 - 250
251 - 1127
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
Miles
0 1 2 4 6 8
INSET 1
INSET 2
INSET 1
INSET 2
Data Licensed from Strava

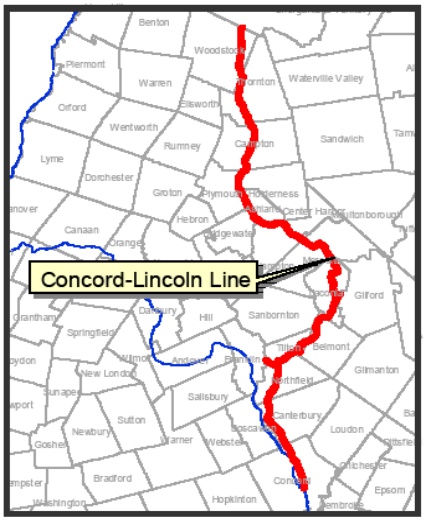

Plymouth Commutershed
Pavement Condition
Good
Fair
Poor
Body of Water
State Boundary
Town Boundary
State Numbered Route
Local Road
INSET 1
INSET 2
INSET-1
INSET-2
Franconia
Bethlehem
Lincoln
Easton
Woodstock
Livermore
Waterville Valley
Warren
Ellsworth
Thornton
Orford
Wentworth
Rumney
Campton
Sandwich
Lyme
Dorchester
Plymouth
Holderness
Moultonborough
Groton
Bridgewater
Orange
Alexandria
Bristol
Danbury

PUBLIC TRANSIT

In the Plymouth LMA travelshed, Concord Coach provides intercity bus service with stops in Plymouth and Lincoln. In Plymouth, the only access to transportation is through Grafton County Senior Citizen's Council, the Plymouth State University Shuttle (when classes are running), the Transport Central volunteer driver program, and private taxi companies.

RAIL

The **Concord-Lincoln** Line, which runs the 73 miles between Concord and Lincoln, is owned by the State of New Hampshire. Two tourist services and one freight railroad operate over this line. The tourist services, both operated by Plymouth & Lincoln Railroad, are the Hobo Railroad operating out of Lincoln and the Winnipesaukee Scenic Railroad operating out of Meredith. Freight service is operated along the line to Tilton by the New England Southern Railroad. The line is maintained to FRA Class 1 standards.



(Source: New Hampshire State Rail Plan, 2001)

AIR

Plymouth Airport is located in the town of Plymouth. The Town of Plymouth owns and operates the airport with a part-time airport manager. The airport has a 2,380' x 90' turf runway, a small terminal building and a small hangar. The airport is open three seasons; the Town does not plow the runway during the winter.

Plymouth Municipal Airport	
FAA ID:	1P1
ARC:	A-I
Ownership	Public
Economic Region	North Country
County	Grafton
Airport Role	General Aviation
Airspace	Class G
Zoning	Residential – Airport Airspace Overlay
Fuel	100LL
Weather Info	None
Fixed Based Operator	No
Navigation Aids	None
Airport Latitude	43.46.452.57 N
Airport Longitude	71.45.132.86 W
Runway Orientation	12-30
Runway Length	2,380’
Runway Width	90’
Instrument Approaches	None
Lighting	None
Surface	Turf
Condition	Good
Operations for 12 Months Ending 12/31/2013	
Air Carrier	0
Air Taxi	0
General Aviation Local	2,000
General Aviation Itinerant	1,000
Military	30
Total Operations	3,030
Based Aircraft Plymouth	
Single Engine	3
Gliders	1
Ultra-Light	3

(Source: NHDOT)

IMPROVEMENTS SINCE 2009 PLAN

HIGHWAY AND BRIDGE PROJECTS

Campton (Proj. 12407): This project involved the rehabilitation of the Blair Bridge (#117/076) over the Pemigewasset River on Blair Road. This is a red list bridge in the National Historic Covered Bridge Preservation Program. Work on this bridge began in 2013 and has been completed.

Lincoln (Proj. 15754): This project involved cold plane and overlay on I-93 with fabric and 2" of pavement from the US bridge to the Whitehouse bridge (4.2 MILES). Completed in 2014.

Lincoln (Proj. 16397): This project was a response to massive damages on NH 112 (Kancamagus Highway) caused by Tropical Storm Irene. Work involved roadway repairs using Betterment Funding and was completed in 2012.

Lincoln – Franconia (Proj. 15603): This was a pavement, guardrail and drainage rehabilitation project on I-93 between Lincoln and Franconia. Construction was complete in 2012.

Plymouth (Proj. 158820: This project involved the rehabilitation of the red listed Baker Bridge (#175/143) over the Baker River on NH 25/NH 3A. Construction was completed in 2011.

Thornton (Proj. 16398): This project was a response to massive damages and flooding caused on the roadway on NH 49 caused by Tropical Storm Irene. Construction was complete in 2012.

Wentworth (Proj. 15908): This project involved the rehabilitation, deck replacement, stripping and repainting of the red list bridge (#146/090) over the Baker River on NH 25 & NH 118. The project was completed in 2013.

Woodstock-Lincoln (Proj. 15755): This project involves pavement and bridge rehabilitation (#202/100) on I-93 from exit 32 north 6 miles. Construction began in 2014 and will be completed in 2015.

TRANSPORTATION ALTERNATIVES

Transport Central provides no-cost transportation to seniors, individuals with a disability, Medicaid clients, Vocational Rehabilitation clients, and veterans through a network of volunteer drivers. The service area includes the 19-town region of Central NH centered around Plymouth, including: Woodstock, Warren, Wentworth, Lincoln, Thornton, Campton, Ellsworth, Waterville Valley, Rumney, Plymouth, Holderness, Ashland, Dorchester, Groton, Hebron, Alexandria, Bristol, New Hampton and Bridgewater.

In October, 2010, North Country Council and Transport Central hired consultant Nelson/Nygaard to do a study on the feasibility of a transit system around the Plymouth area. While this study is very comprehensive, the options that were ultimately decided by the steering committee include the list below. Transport Central intends to continue working to implement some of these plans and strategies when possible.

• Full Build Out – includes mobility management services, plus two commuter routes, Dial-A- Ride service (north and south zone) and expanded seasonal service.

• Commuters and Coordination – includes mobility management services, plus two commuter routes, mid-day Flex service (north and south zone) and expanded seasonal service.

• Transit Dependent – includes mobility management and volunteer services.

5310 Purchase of Service and Formula Funds: North Country Council has been working with the Grafton-Coos Regional Coordinating Council to develop proposals and administer funding for the 5310 Purchase of Service and Formula Funds programs. This funding is used to expand transportation services to the elderly and disabled provided by Grafton County Senior Citizens Council using senior buses. Formula Funds have also been used by Transport Central to provide trips through a volunteer network, which was expanded with this funding fund. These funds have also been used to staff the position n of a Mobility Manager that coordinates trips and does other administrative work for Transport Central.

TENNEY MOUNTAIN HIGHWAY

In 2014 NCC staff completed an update to the Tenney Mountain Highway Corridor 2003 Access Management Plan. Recommendations were as follows:

- Future traffic studies: Route 25 east of Wal-Mart; Route 25 west of Smith Bridge Road; Highland Street south of Hannafords.
- Hydrology study for the sections of the Corridor from the Traffic Circle to Highland Street.
- Adopt and amend current regulatory documents to include the Access Management Standards from, Innovative Land Use Planning Techniques: A Handbook for Sustainable Development.
- Feasibility study conducted to determine whether or not a roundabout or lit traffic signal would improve the safety of the intersection at Smith Bridge Road and the TMH.
- Study the feasibility of a frontage road along the southern side of the TMH. A survey of property owners along the TMH and general public is recommended as an initial step.
- Encourage shared access roads for parcels on both sides of the TMH.
- Engineering study to address the feasibility of a system of pedestrian and bicycle pathways. Town should coordinate with Plymouth State and general public in the development of pedestrian and bicycle pathways.
- Improve the Plymouth State Shuttle system that provides public transportation services to students, residents and locals and/or seek expansion of transportation provider services from other providers. In a coordinated effort, shuttle stop locations along the TMH should include north/south crosswalks for pedestrians to safely cross and access businesses and services on the other side of the TMH.
- State and Town enter into a Memorandum of Understanding (MOU).

PLANNED IMPROVEMENTS - STIP AND TYP

Lincoln: This project (state project #15755) involves pavement rehabilitation on I-93 from exit 32 north 6 miles. It also involves the rehabilitation or the red list bridge (#202/100) located on that stretch of the interstate. Construction is scheduled for 2015. (National Highway Performance Program Funds.)

Rumney: This project (state project #27162) involves the replacement of the bridge (#093/082) carrying Buffalo Road over the brook. Construction is schedule for 2022. (State Aid Bridge Funds.)

Thornton: This project (state project #15938) involves the rehabilitation of the red list bridge (#183/107) carrying Covered Bridge Road over Mill Brook. Construction is schedule for 2018. (State Aid Bridge Funds.)

ISSUES, NEEDS AND PRIORITIES

- Construct all projects on STIP/TYP.
- Complete and implement the Airport Master Plan. (Proposed funding source: FAA)
- Address red-listed bridges. There are 4 State Red List Bridges in the Plymouth Labor Market Area travelshed. Information about each of those is below. Priority for replacement or rehabilitation should be based on safety, traffic volumes, and priority corridors. The projects are listed below in order of priority regional corridors first, next subregional priority corridors, and then projects on local roads. (Funding: Bridge Program, State Bridge Aid)
  - Bridges on High Priority Corridors for the Subregion
    - Thornton (239/152): This bridge rehabilitation project NH 49 over the Mad River was added to the State Red List in 2014. This bridge is listed as "deck poor" and "scour critical". The project cost is $4,200,000 and it needs to be added to the program. This corridor is a high priority for the region.
    - Woodstock (177/148): This bridge rehabilitation project on NH 175 over the Pemigewasset River was added to the State Red List in 2013. This bridge is listed in "poor condition". NHDOT Bridge Maintenance plans to address the cost and project timing. This corridor is a high priority for the subregion.
    - Lincoln (149/110): The Flume Covered Bridge on the Flume Bus Route over the Pemigewasset was added to the State Red List in 1995. This bridge is listed at "low capacity". NHDOT Bridge Maintenance plans to monitor and keep in service.
    - Warren (102/092): This bridge replacement project on NH 25C over the Black Brook was added to the State Red List in 2010. This bridge is listed in "serious condition". NHDOT Bridge Maintenance plans to address the cost and project timing.
  - Municipal Red List Bridges
    - There are 11 Municipal Red List Bridges located in the Plymouth LMA travelshed in the towns of Campton (3), Lincoln (1), Rumney (2), Thornton (2), Warren (2), and Wentworth (1).
- Address intersections of concern. Towns can work with NCC and NHDOT to apply for Road Safety Audits. (Proposed funding source: HSIP)
  - Add 4-5 foot paved shoulders to NH 175, NH 25, and NH 112 whenever feasible as part of repaving projects. Additional unpaved shoulder, level with the paved portion, should be added

where feasible, except in stretches where the visual impacts and community preferences outweigh safety gains. (Proposed funding source: Surface Transportation Program)

- Repave, rehabilitate or reconstruct segments of priority highways with poor condition and maintain a level of maintenance and preservation adequate to protect this investment of state and local funds. (Proposed funding source: Betterment Funds and Surface Transportation Program)
- Assist the town of Plymouth with implementation of the Tenney Mountain Highway Corridor Access Management Plan. (Proposed funding source: Municipal, Grants, Businesses, PSU))
- Expand outreach on Rideshare and other alternatives to single occupant vehicles. (Proposed funding source: FTA, SPR via NCC UPWP.)
    - Developing New Deviated Route Transit Systems and Demand Response Systems. In Plymouth, the only access to transportation is through Grafton County Senior Citizen's Council, the Plymouth State University Shuttle, the Transport Central volunteer driver program, and private taxi companies. Many residents of the area find it difficult to access medical appointments, employment, shopping, and other essential services. A feasibility study was done by Nelson/Nygaard in October 2010, focusing on developing a transportation system around the 19-town Plymouth area. The goal of Transport Central is not to duplicate services, but rather to develop a "hospital-based system" that would provide people with rides to medical appointments, employment, and other places of need. This system would supplement services that are already provided by the Plymouth Senior Center and Grafton County Senior Citizens Council. The Feasibility Study recommends various forms of future service development in the area. Phase I, which is having a Mobility Manager coordinate rides through volunteer drivers has been funded by 5310 POS funds and has been underway for the past 2 years. Transport Central should seek FTA funding to implement additional recommendations of this study.
    - Technology Improvements to Enhance Transportation Provider Services & Efficiency. Transportation providers throughout the region share a need for access to dispatching software, Global Positioning System (GPS), Automatic Vehicle Location (AVL) systems, etc. to be able to better coordinate rides between providers; plan trips or routes; streamline reporting; and to track costs and billing. While these technologies have numerous benefits, they are expensive for providers to procure and use. Transportation providers like Grafton County Senior Citizens Council should seek FTA funding for the procurement of new technologies.

GROTON BRIDGE REPLACEMENT

NEED

This project is located on Sculptured Rocks Road in Groton involves the removal of the current bridge which is located on a Class V Town Highway, and is currently the only route between Groton and Dorchester. The bridge, according to Town record, was built in the 1920's and is ostensibly an open-bottom box culvert. The concrete is failing and beyond repair, although recent repairs include refastening of wooden guard rails to steel supports moly bolted into the remaining concrete. The

current bridge is dimensionally inadequate, as it is only 1.5 lanes wide (+-12'). In 2009 the bridge was inspected by NHDOT and rated at E2, forcing logging trucks that use this road to haul underweight loads. The width of the bridge causes safety hazards, and the span of the bridge does not appear to adequately accommodate large storm events, and creates a dam at times when the stream over which it is built needs to flow freely.

DESCRIPTION

The scope of work includes the removal of the existing bridge, the erection of a temporary bridge, and the construction of a new, two-lane bridge designed to accommodate all legal loads.

(Proposed funding source: State Aid Bridge Program)

SECTION V LAND USE AND TRANSPORTATION

New Hampshire's North Country is primarily a rural landscape dotted with low density residential use, typical New England villages, and several larger socioeconomic centers with more of a downtown look and feel, some with associated commercial strips. These socioeconomic centers range from those with an industrial history, such as Berlin; to North Conway and Lincoln/Woodstock with roots in tourism; and to Plymouth, whose activity is now centered around the growing Plymouth State University. The smaller job centers of the North Country – Colebrook, Lancaster and Littleton - reflect a mix of factors. At the local level, most communities in the North Country have only a small percentage of their residential units in the village areas. Most are scattered across former agricultural lands and along forested road corridors. Today's land use pattern evolved over time from villages surrounded by farmsteads and forest as farms grew up into houselots and forest. Scattered hunting camps and shoreline cottages are being transformed over time into retirement and second home communities with tourism replacing logging as an important foundation of the economy.

This pattern of development has created a region heavily dependent on the private automobile, not only for commutes to regional job centers, but also to the village store or post office. This land use pattern, like most of the United States, makes for an inefficient transportation infrastructure, is expensive to serve by public transportation, and has documented negative health impacts. Our history of transportation funding and government-subsidized post World War II sprawl has not only created an expensive and inefficient transportation system unhealthy for the individual, it has created an inequity, favoring the driver over the nondriver. The elderly and disabled in the North Country live with the challenge of a piecemeal and often lacking system of public transit to access medical care, shopping, and social interaction. (See **"***Coordinated Public Transit-Human Services Transportation Plan for New Hampshire's North Country***"** for more information on this issue.)

Public sector transportation costs are increasing with sprawl. Some of the impacts of sprawl on transportation budgets are:

- Increased miles driven means increased local and state highway maintenance.
- Turning lanes and other traffic control devices needed to manage conflicts between through-traffic and surrounding development represent not only the initial cost of the infrastructure but also increased long-term maintenance costs.
- Reconstructing and paving additional miles, and upgrading drainageways, as development spreads out from the town centers, is an expensive proposition for local governments.
- Town acceptance of new, formerly private subdivision roads, or upgrading Class VI roads to Class V, causes incremental growth in local maintenance costs.
- Police and fire transportation costs increase as more development takes place further away from the station.

- School transportation costs are a significant budget item as most New Hampshire school children lack safe sidewalks or paths, or live too great a distance from school to walk.
- Public transit routes are sparsely populated, leading to a low amount of fares per mile served.
- Health and social service organizations must reimburse workers in the field a high amount to cover a widely dispersed client population.

The financial burden of meeting transportation needs in a landscape of rural sprawl is substantial on the individual household as well. A Pennsylvania study by Lehigh University found that in that state the average rural family spends $4,600 more per year on transportation costs than an urban family. In New Hampshire, where residents of the rural North Country also have average incomes and average wages lower than the rest of the state, and often work two jobs, this is a double whammy. This means that not only are the costs of transportation higher, but that transportation represents a much higher percentage of the household budget, taking money away from other necessities such as food, health insurance, and day care. In addition, this figure does not take into account the portion of the household's property tax going to maintain local roads, or provide match for federal transportation projects, or the portion of their federal income tax supporting an increasingly inefficient transportation system.

In rural northern New Hampshire, a household's lack of ability to afford an automobile typically means no job at all. This is a vicious cycle for families, who then also suffer from lack of access to some additional educational opportunities and health care for preventative measures. This in turn increases the number of advanced health problems and so means additional costs to the taxpayer. The associated impacts of private automobile energy use on air quality and climate change are also well documented, as well as the increased stormwater runoff and water quality degradation from roads, drives and parking lots.

Typical New Hampshire development pattern.
(Source: NH GRANIT, NAIP 2003)

While the terms "smart growth," sprawl and strip development have become well-known, and many state, regional and municipal plans now incorporate smart growth principles, substantial change in development patterns has not been achieved. Positive examples are few and far between. Commute times are one measure of the location of residential uses proximate to employment centers. In the North Country, as the economic base is shifting further away from forest product-related industry, commute times increased in all three counties in the 1990's. In Grafton County, the number of residents who traveled more than 20 minutes to work increased by about 37% from 1990 to 2000. The number of Carroll County residents traveling at least 45 minutes to work nearly doubled over the same period, while slightly more (80% vs. 77%) drove themselves to work in 2000. In Coos County, where the average commute increased by five minutes, 14% more people drove themselves to work. (Data from NHES analysis of 1990 and 2000 US Census.)

Most land use decisions in New Hampshire are in the hands of the local planning board and town meeting. These land use decisions impact the quality and cost of the transportation system, and have environmental and health effects. This section will look at planning concepts to combat sprawl, and the land use powers of communities and how they can be used to improve the effectiveness of the transportation infrastructure while lowering costs to the public.

SMARTER GROWTH FOR A BETTER TRANSPORTATION SYSTEM

The transportation-related impacts associated with sprawl often include an increase in vehicle miles traveled (VMT), longer travel times, a higher number of trips per day, higher household spending on transportation, less cost effective and efficient public transit, and higher social costs of travel (lack of time to participate in activities in the community or with family). For communities, as the amount of use of rural roads increases, so do the maintenance costs. In addition, growing numbers of users often also mean increasing demand for road improvements.

To the extent that public and private agencies and organizations can work together with local planning boards to redirect development patterns back toward the village model surrounded by the working landscape, we can conserve the opportunities provided by these working landscapes for future generations, and create communities better served by public transit, walking, biking, and carpools. The "Smart Growth" movement has been an attempt by planners to educate the public and private sector on the benefits of working to slow down the pace of sprawl. The Smart Growth New Hampshire Steering Committee developed the following principles for Smart Growth in New Hampshire:

- Maintain traditional compact settlement patterns to efficiently use land, resources, and investments in infrastructure.
- Foster the traditional character of New Hampshire downtowns, villages, and neighborhoods by encouraging a human scale of development that is comfortable for pedestrians and conducive to community life.
- Incorporate a mix of uses to provide a variety of housing, employment, shopping, services, and social opportunities for all members of the community.
- Provide choices and safety in transportation to create livable, walkable communities that increase accessibility for people of all ages, whether on foot, bicycle, or in motor vehicles.
- Preserve New Hampshire's working landscape by sustaining farm and forest land and other rural resource lands to maintain contiguous tracts of open land and to minimize land use conflicts.
- Protect environmental quality by minimizing impacts from human activities and planning for and maintaining natural areas that contribute to the health and quality of life of communities and people in New Hampshire.
- Involve the community in planning and implementation to ensure that development retains and enhances the sense of place, traditions, goals, and values of the local community.
- Manage growth locally in the New Hampshire tradition, but work with neighboring towns to achieve common goals and address common problems more effectively.

(Source: Achieving Smart Growth in New Hampshire, NH Office of State Planning)

Smart growth can be both very attractive and beneficial to the community. In many European countries planners ensure that the traditional development pattern is maintained with development concentrated in villages surrounded by forest and farmland.

(Photo Credit: B. Knauff)

These European village areas are usually linked by an efficient system of public transit, and often multiple-use paths used by bicycles and agriculture.

(Photo Credit: B. Knauff)

Children in Europe often travel to and from school on public transit, or by walking, biking, or other self-propelled means.

(Photo Credit: B. Knauff)

In northern New Hampshire, where many individuals value land ownership and privacy over the common goals of smart growth, more public dialog is needed to identify the tools appropriate for achieving common goals.

TOOLS FOR PLANNING BOARDS

In New Hampshire, local planning boards and voters have the authority to adopt the tools necessary to combat sprawl and steer development in a direction that will enable a more efficient and cost effective transportation system for the residents of the rural North Country. These are summarized below.

MASTER PLAN

Planning Boards are responsible to develop and update the city or town's master plan. A vision statement (goals) and land use element are required elements for zoning. The planning board should ensure that the local master plan is up-to-date and incorporates information on the link between land use development patterns and transportation costs; and policies and recommendations for combating sprawl, such as steering development toward village areas and conserving the surrounding working landscape.

ZONING

Planning boards can develop zoning ordinances for town meeting approval that concentrate development in and near existing villages and allow mixed use to enable walking between residential and other uses. One method authorized by RSA 674:21 Innovative Land Use Controls and contained in *Innovative Land Use Planning Techniques*, developed by New Hampshire's regional planning commissions and published by NHDES, provides for flexible density with more intense development allowed in or near an existing village area. Zoning is also an important tool for preventing strip development where commercial drive after commercial drive is allowed along a major roadway, slowing through-traffic and making walking/biking unsafe.

SUBDIVISION AND SITE PLAN REVIEW

Road standards: Subdivision regulations should include road standards. Road standards should ensure that roads are properly constructed, but not require excess width which can lead to unnecessary stormwater runoff.

Parking standards: Zoning and/or site plan review regulations should contain parking regulations to ensure that development does not create unsafe conditions or place an unreasonable burden on public parking. However, excess or inflexible parking requirements sometimes lead to unnecessary impervious surface and increase stormwater runoff and decreased water quality.

Walkability: Both subdivision and site plan review regulations can be written to ensure that the new development is walkable, accommodating to bicyclists, and linked to adjacent pedestrian and bicycle ways.

Assistance with review of proposed developments: State law (RSA 676:4 Sec.I.g.) enables planning boards to hire help with review of subdivision and site plan applications. This assistance can include hiring someone like the regional planning commission to act like a town planner throughout the process, or it can be limited to engineering review of one particular issue. Either way the applicant pays the cost – the funds are not subject to planning board budget limits nor reported as planning board expenditures.

Charge developers for fair share of needed road improvements: RSA 674:21 Sec. V.j. enables planning boards to require developers to pay for their fair share of road upgrades that will be needed as a consequence of their project even without an impact fee ordinance. (Drainage, water and sewer are also covered by this provision.)

Covenant review: When private roads are constructed as part of a subdivision, an entity must be identified or legally established to bear the responsibility for properly maintaining the road. This is typically done with the establishment of a homeowner's association through covenants filed with the deed. The proposed covenants should be reviewed by the town counsel to ensure that they will achieve the desired purpose even if/when all of the property has changed hands and the town will not bear any costs associated with the road.

Performance guarantees: Planning boards should require a performance bond or letter of credit from the developer to ensure that transportation and other infrastructure is properly completed.

Inspection fees: Towns need not bear the cost of inspection of roads and other features to see that they are being constructed according to the approved plans. Developers should provide the town an amount adequate to cover these inspections. These funds are then placed in an escrow account drawn down for that specific purpose only.

ACCESS MANAGEMENT

Managing access to state highways from land uses along them is critical to maintaining the flow of through-traffic and the safety of both local and through-traffic. While NHDOT provides one set of review criteria, local planning is also needed to ensure that the number of drives (curb cuts) is kept to a minimum, adjacent land uses or signs are not allowed to cause the driver confusion, and that adjacent

developments are planned with shared accesses whenever possible. This can be accomplished through a combination of zoning, site plan and subdivision regulations. Some communities also have cooperative agreements with NHDOT ensuring that all parties work together toward the best possible outcome.

DRIVEWAY REGULATIONS

Driveway regulations can be adopted by the planning board pursuant to RSA 236:13 and are typically implemented by the road agent or selectboard. Their chief purpose is to ensure that driveways constructed on town roads do not cause a safety problem or a drainage problem on the town road. They can specify necessary site distances and grades.

RSA 36:54 - 58 DEVELOPMENTS WITH POTENTIAL REGIONAL IMPACT (DRI)

RSA 36:54–58 requires local land use boards (including planning boards, zoning boards of adjustment, historic district commissions, and building inspectors) to notify neighboring communities and the regional planning commission when developments are proposed which "could reasonably be expected to impact on a neighboring municipality..." Factors to consider include the size of the proposed development, proximity to the town line, transportation, emissions such as light or noise, proximity to aquifers or surface waters that cross town lines, or use of regional facilities such as schools or transfer stations. Assistance with consideration of these potential impacts and recommendations for sources of assistance with review of the application is provided by North Country Council when a DRI notice is received.

CLASS VI ROAD POLICIES

Instead of making decisions regarding whether or not to allow building on class VI roads on a case by case basis, and facing pressure to upgrade and maintain the road at the town's expense later on when several residences have been erected, some communities develop class VI road policies. These policies outline the decision-making process and conditions that will lead to a positive or negative finding. This might include the distance from a maintained road, upgrading and maintenance required, and payment by the landowner for this work. It might also list which class VI roads may or may not be built upon. Because state law provides for selectboards to make determinations regarding construction on class VI roads after review by the planning board, class VI road policies are typically developed jointly by both boards.

STORMWATER MANAGEMENT

Stormwater runoff from impervious surfaces associated with transportation such as roads, drives and parking areas has been recognized as one of the primary sources of water quality degradation. Standards for preventing erosion and sedimentation during construction, and minimizing the amount of stormwater runoff and negative impacts of the runoff from the completed development, should be incorporated in zoning, subdivision and site plan regulations. Stormwater management is especially important on steep slopes where shallow soils are easily eroded.

CAPITAL IMPROVEMENT PROGRAMS

Town Meeting can authorize the preparation of a capital improvement program (CIP) for the community. This can be either developed by the planning board with other key local officials, or developed by a CIP committee appointed by the selectboard or city council. Either way the road agent is one of the most important members of the committee. The CIP is a medium-range planning tool used to budget for large expenditures such as highway equipment or road resurfacing or reconstruction. A CIP enables the coming year and at least five additional years to be planned for at once so that expenditures can be spread evenly over the coming years to reduce fluctuations in the tax rate and so that capital reserve funds can be set up to save for some items and grants sought for others.

LAND USE AND TRANSPORTATION POLICIES

The following Transportation Policy Statements were readopted by the North Country Council on November 19, 2014 as part of the regional plan pursuant to RSA Chapter 36, and reviewed/updated by the TAC as part of this Regional Transportation Plan update.

1) North Country Council will continue outreach and education and technical assistance to communities with land use planning and regulation to ensure that the public investment in the transportation system is protected and that development is planned in a way that maximizes transportation access and choices. This will include actively pursuing funds to continue the outreach and education program and to provide local technical assistance to communities and to groups of communities interested in working on issues related to the transportation–land use relationship.

2) North Country Council will continue to work with partners to try to shape the North Country's land use development pattern in a direction that will better serve the needs of the non-driver and those desiring alternatives to the single occupancy vehicle for financial, environmental or other reasons. This will include development of a rideshare program, exploration of meeting/parking opportunities (e.g. park and rides) in and near village areas, and continued assistance to the region's transit providers.

3) North Country Council will continue to work with NHDOT to take a corridor approach to planning land use and access management along the region's major highways.

4) Planning Boards should review their local plans and land use ordinances and regulations and facilitate dialog with residents to identify tools appropriate for moving lands use patterns in a direction more efficiently served by the transportation infrastructure, and for ensuring that private land use decisions do not unduly burden public transportation budgets.

APPENDIX A

NHDOT Pavement Strategy - Summary

The New Hampshire Department of Transportation (NHDOT) is focused on managing the state's road network as efficiently and effectively as possible. With that goal in mind the Pavement Strategy is based on the following concepts:

1. Highway Priorities (Tiers)
2. Making Sustainable Investments
3. Maintenance Paving

Highway Priorities (Tiers) - Not all roads are equal

While every road is critical to the people and businesses that rely upon it each road also serves a different number of users and provides different levels of connectivity. The Department has categorized the state managed road system into the following priorities (tiers):

- Tier 1 – Interstates, Turnpikes & the divided section of Route 101
- Tier 2 – Major corridors (like US 3, US 4, US 202, and Route 16)
- Tier 3 – Collectors (like Route 112, Route 31, and Route 155)
- Tier 4 – Secondary highways and unnumbered routes

Making Sustainable Investments

The road network in New Hampshire required a massive investment of public funds over many decades. In order to maximize that prior investment along with current and future investments, strategies are developed for different types of roads to get the most useful life.

Preservation – Keeping good roads good

Pavement, like just about everything else that endures wear and tear, needs some attention every now and then to stay in good working condition. A variety of **low-cost** pavement treatments are used to maintain roads in good working condition for as long as possible. The low-impact nature of these treatments means that the disruption from construction may only last a few weeks, however, these treatments can only be used on roads that are already in good shape.

March 9, 2015

Rehabilitation – Restoring poor pavements

The result of this activity is a new pavement that can be preserved for many years. Rehabilitation is not suitable for every road that needs attention although particular site conditions can significantly affect the cost and how long the rehabilitated road will last. These activities are generally **moderate-cost** and may take a couple months to complete. Rehabilitation will be evaluated for cost effectiveness on a case by case basis.

Reconstruction – Making a good road

Because the road network in New Hampshire has developed organically over many decades, many roads were not built on a good foundation. These roads present a challenge for sustainability because no investment in them, short of reconstruction, will last for very long. Reconstruction has a **high-cost** and may take more than a year to complete. This activity is not a priority of the Pavement Strategy because we are seeking to maximize the effectiveness of limited paving budgets and reconstruction can be **cost prohibitive**.

Maintenance Paving - Keeping roads in working order

Many roads in NH have never been formally constructed to support today's heavy truck loads and traffic volumes. As a result, these roads are susceptible to frost action, pavement rutting, cracking and potholes. These roads are not suitable for preservation treatments and rehabilitation is not always practical or affordable.

For these types of roads maintenance paving will be performed based on a condition assessment and traffic volume. The condition assessment essentially measures how bumpy the road is and how severe those bumps are. This type of paving is **low-cost**, will only take a few days to complete, and will become routine to keep the road in working order.

Table 1 – Pavement Strategy Priority

Pavement Strategies	Tier 1	Tier 2	Tier 3	Tier 4
Preservation	High	High	Moderate	Moderate
Rehabilitation	High	Low	Low	Low
Reconstruction	-	-	-	-
Maintenance Paving	-	Moderate	Moderate	Moderate

March 9, 2015

APPENDIX B

NHDOT Bridge Strategy - Summary

The New Hampshire Department of Transportation (NHDOT) is focused on managing the state's transportation network as efficiently and effectively as possible. With that goal in mind, the Bridge Strategy is based on the following concepts:

1. Bridge Priorities (Tiers)
2. Making Sustainable Investments
3. Redundant Bridges

Bridge Priorities (Tiers) - Not all bridges are equal

While every bridge is critical to the people and businesses that rely upon it, each bridge also serves a different number of users and provides different levels of connectivity between homes, businesses, and other destinations. The Department has categorized the state managed road system and the bridges along each road into the following priorities (tiers):

- High Investment Bridges (HIB) – Largest & most costly bridges (Memorial, I-95, Amoskeag, etc.)
- Tier 1 – Interstates, Turnpikes & the divided section of Route 101
- Tier 2 – Major corridors (like US 3, US 4, US 202, and Route 16)
- Tier 3 – Collectors (like Route 112, Route 31, and Route 155)
- Tier 4 – Secondary highways and unnumbered routes

In addition to tiers NHDOT focuses on bridge condition to prioritize work. All bridges are regularly inspected (once every two years) and those found to have structural deficiencies or that are weight restricted are added to the NHDOT Red List. Bridges on the Red List are inspected twice each year and evaluated for rehabilitation or reconstruction. NHDOT uses tiers and bridge condition to develop an annual Priority List for bridges. Other factors like traffic volume and detour length are also considered in the development of the Priority List.

Making Sustainable Investments

New Hampshire's inventory of more than 3,800 bridges required a massive initial investment of public funds over many decades. To maximize the return on that investment, bridges require a thorough preservation and maintenance strategy. For recently constructed bridges, our goal is to extend the expected service life up to and beyond 120 years. This strategy relies on recurring investments in preservation and maintenance which reduces the frequency of higher-cost reconstruction and replacement projects.

March 23, 2015

Maintenance & Preservation – Keeping good bridges good

Bridges are made up of many different parts working together and each of those parts requires upkeep to stay in good working order. Upkeep includes everything from washing to repairing damage to replacing certain parts that wear out over time. This type of upkeep is generally **low-cost**, but can vary based on how large and busy a bridge is. The impact to travelers would normally be between a few hours and several months. Routine maintenance and preservation performed on-schedule will keep bridges operating for as long as possible before more substantial work is required.

Rehabilitation – Restoring poor bridges

Because certain parts of a bridge cannot be maintained or repaired forever, every bridge will require rehabilitation at some point in its lifecycle. The result of rehabilitation is a bridge that can be maintained and preserved for many years to come. These activities are generally **moderate-cost** and usually take several months or up to a year to complete.

Reconstruction – Making a good bridge

Most bridges will need to be reconstructed at some point because certain parts that are difficult to rehabilitate deteriorate over time. The result of reconstruction is a brand new bridge that is very similar in function to the prior bridge. Reconstruction is **high-cost** and requires 1 to 3 years to complete. Because of the high cost, each bridge must be carefully evaluated to determine when or if it should be reconstructed, down-posted, or closed.

Table 1 – Bridge Strategy Investment Priority

Bridge Strategies	HIB	Tier 1	Tier 2	Tier 3	Tier 4
Maintenance	High	High	High	High	High
Preservation	High	High	High	High	High
Rehabilitation	High	High	High	Moderate	Low
Reconstruction	High	High	Moderate	Low	Low

Redundant Bridges – Should all bridges be kept open

Each bridge required a substantial initial investment made by the people of New Hampshire and our goal is to protect that investment for as long as possible. In addition, each bridge also requires a recurring investment for routine maintenance, preservation, rehabilitation, and, ultimately, reconstruction. Over the years, new roads and bridges have been built that may make certain bridges somewhat redundant. With limited resources we must evaluate whether or not continued long-term investment is justified on redundant bridges.

March 23, 2015