

## Chapter 9 TRANSPORTATION

A safe and efficient transportation network is an essential component for the development of a well-functioning and accessible community, with land-use and transportation closely linked.

The existing transportation network has a profound influence on the location and development of land use throughout the town. Development trends in Boscawen have traditionally been influenced by US Routes 3 and 4. The Town's village core, and the low density residential and undeveloped areas which give the Town its distinct character, have been, and will continue to be, important elements in what it means to live and work in Boscawen.

Future improvements to King Street from where US 3 and US 4 merge north of Concord to where US 3 and US 4 diverges, is considered by the Town as the location for future mixed uses with an emphasis on pedestrian friendly development. King Street is proposed to be converted to a complete street serving the needs of vehicles, pedestrians, and bicyclists.

The Town of Boscawen has access to I-93 just to the east in Concord at Exit 17 and US 4. Nearby, the intersection of US 4/Whitney Road and Boyce Road in Concord and Canterbury has become problematic in recent years. A number of options should be studied, including the provision of a traffic signal or roundabout at the intersection of US 4/Whitney Road and Boyce Road in Canterbury.

Due to the financial commitment required for the improvement and maintenance of an adequate transportation system and the direct relationship between land use patterns and traffic circulation, the identification and analysis of current transportation needs is crucial to the orderly accommodation of growth and development. This section of the Master Plan is intended to provide such an analysis, while also enabling Boscawen to fully participate in all levels of transportation planning – local, regional, state and federal.

### CHAPTER VISION

Promote the improvement of roads in Boscawen; encourage a transportation system that will meet the mobility needs of all local residents by providing for the efficient movement of people, goods, and services within Boscawen and throughout the region; maintain a commitment to the rural and historical character of the community; and in coordination with the New Hampshire Department of Transportation provide a well-maintained and safe transportation system that meets the functional and aesthetic needs of the community in a cost-effective manner.

## TRANSPORTATION VISION

As Boscawen continues to grow and pressure on major roads intensifies, a balance needs to be found between providing local access, traffic and pedestrian safety, and maintaining the capability for US 3 and US 4 to function as important regional highways. A strong desire in the community is to maintain the historic character of the King Street Corridor while allowing for infill development and enhancing the use of the corridor by bicyclists and pedestrians. The community desires to allow for additional re-development while enhancing the historic character of Boscawen/Penacook Village Area along US 3, as well as the redevelopment of the Old Allied Tannery property in both Concord (Penacook Village) and Boscawen.

## CHAPTER PRINCIPLES

This Chapter identifies important transportation principles which incorporate community land use and resource base policies.

### Principle 1

An integrated approach to transportation throughout Boscawen is required with particular attention given to existing and proposed land use, transportation efficiency, safety, competitiveness, social inclusion and environmental sustainability.

### Principle 2

It is extremely important to develop and maintain strong relationships with the New Hampshire Department of Transportation (DOT) since the maintenance and any improvement to US 3 and US 4, as well as I-93 Exit 17, are the responsibility of the DOT.

### Principle 3

Boscawen's principal transportation assets include highways and bridges. Strategically important travel corridors should be protected and enhanced including US 3 and US 4, as well as I-93 Exit 17.

### Principle 4

Investment in Boscawen's transportation infrastructure should be made in a sustainable and efficient

## NOVEMBER 2016 OPEN HOUSE

On November 14, 2016, Boscawen held an open house at the Winthrop Carter House as part of a Municipal Technical Assistance Grant that focused on rezoning and revitalizing the King Street corridor in Boscawen. Many of the attendees at the open house voiced their opinions regarding transportation in Boscawen. Common themes included high volumes of traffic, high speeds along US 3 and US 4, safety issues such as left turning vehicles, pedestrian access and infrastructure, parking, and public transportation. Specific intersections such as the US 3/4 northerly split and the King Street intersections with Queen Street and Depot Street were discussed in detail. People also spoke about accidents at the Frnaklin Savings bank and Dunkin Donuts driveways on King Street. Many people in the community expressed interest in reconstructing a bridge at Depot Street. Several comments were made regarding the need for a bypass to King Street, noting that there are no other nearby alternative routes.

manner in order to promote the social and economic well-being of the Town and its populations.

#### Principle 5

Future provision for transportation infrastructure should be firmly integrated into the Town's overall land use strategies. The enhancement of the King Street Corridor and its development as a complete street is important to the viability and continued economic development of the community.

#### Principle 6

The Town should support regional or state wide transit and non-motorized programs and initiatives.

### TRANSPORTATION IMPROVEMENT PROJECTS

#### KING STREET (US 3 AND US 4) CORRIDOR IMPROVEMENTS

Two planning studies have been completed for King Street between the Northern intersection of US 3 and US 4 and the southern intersection of US 3 and US 4 — the "US Route 3 Corridor Study Boscawen, New Hampshire," June 2001, VHB and the "Boscawen to Franklin Phase 1," January 27, 2004, by the Lakes Region and Central New Hampshire Regional Planning Commissions.

Both planning studies addressed the King Street Corridor from where US 3/US 4 converges and where US 3/ US 4 diverges, although the US Route 3 Corridor Study (2004 study) extended from the I-93 Exit 17 interchange in Concord north to US 3/NH111 intersection in Franklin.

Each study projected future traffic growth and analyzed the impacts of this growth and development on the corridor and specific intersections.

Both studies recommended improvements to pedestrian facilities in the corridor, access management and control strategies, aesthetic improvements to King Street, Boscawen's Main Street, as well as what are now known as complete street provisions for bicycle movement.

The recommendations incorporated in both studies are still applicable and are even timelier given the growth in traffic volumes along the corridor since 2003.

- The northern intersection of US 3 (High Street) and US 4 (Daniel Webster Highway) intersect at an acute angle adjacent to the Boscawen Congregational Church. Given the volume of traffic on all three approaches, this intersection should conform to standard engineering geometry. A traffic signal or roundabout may be warranted at this intersection in the future.
- Existing shoulders are found all along US Route 3 and US Route 4; however, the width and condition of the shoulders varies, and at some locations wide,

uncontrolled access exists at businesses along the roadway. The shoulders need to be separated from the adjacent parking areas and conforming driveways created.

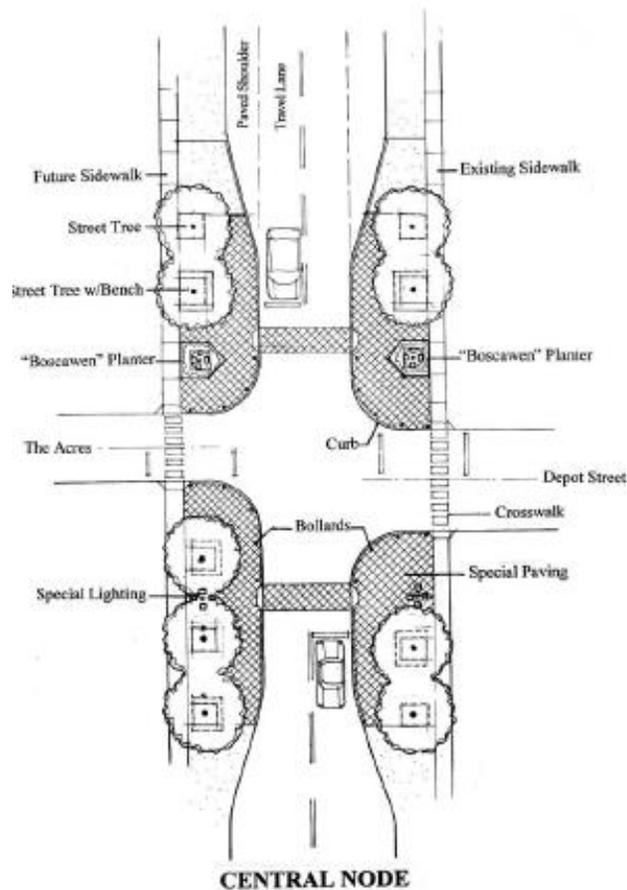
- Existing sidewalks are located on one or both sides of North Main Street (US 3) from Concord north to just south of the US 4 (King Street) intersection. The width and condition of the sidewalks vary and at some locations wide uncontrolled access exists at businesses along the roadway. The sidewalks need to be separated from the edge of the roadway and the adjacent parking areas and conforming driveways created.
- Crosswalks and entry features should be located at King Street and Depot Street, the central node of the corridor, and at the north US-3/US-4 intersection and other major intersections both to improve the safety of pedestrians as well as to create a sense of place.
- A consistent landscaping improvement program including decorative lighting and village type street furniture and signage, should be developed and implemented.

The King Street Corridor Improvement project is included in the 2019-2028 State of New Hampshire Ten Year Plan, and is a complete streets project for King Street (US 3 & US 4). The Boscawen #41578 project includes: "Improvements to King Street to include the addition of a center turn lane, improved bike/pedestrian facilities, and improvements to the US3/4 intersection (north). This project has been proposed in the Draft TYP to cost \$5,149,652. The intent of this project is to implement a "complete streets" plan for all roadway users, and support the development of this area into a mixed use, pedestrian friendly corridor, creating a town center for the community.

King Street Concurrent Activities:

- The Plains Village Zoning District, a hybrid form based zoning district, was adopted at 2018 Town Meeting for the King Street corridor with the intention of unifying the appearance of the corridor, broadening the range of uses, and establishing consistent standards of review.
- Design Review Guidelines are being developed for the Plains Village Overlay Zoning District for inclusion in the Site Plan Review Regulations.
- Access management provisions are being prepared to be incorporated into the Site Plan Review Regulations and Subdivision Regulations.

Figure 9-1: Potential Central Node with Depot Street and King Street



Source: *US Routes 3 and 4 Corridor Study, VHB, June 2001*

## EXISTING TRANSPORTATION NETWORK

A key component in planning for future transportation improvements in a community is to complete an inventory of the existing transportation infrastructure serving the Town. Boscawen's transportation network is dominated by US 3 and US 4. Other important state and local roads are Harris Hill Road/Tremont Street, Queen Street, Water Street/Long Street, and Corn Hill Road. With the exception of Harris Hill Road/Tremont Street, all the rest of the roads are low volume roads providing access to low density rural development. Harris Hill Road/Tremont Street with Canal Street in Concord, provides a direct link from US 3 in the Penacook area to US 4 and then to I-93 Exit 17.

## STATE HIGHWAY CLASSIFICATION AND FUNDING

The State Aid classification system, which is identified by NH RSA 229:5 and 229:231, establishes responsibility for construction, reconstruction, and maintenance as well as eligibility for use of State Aid funds.

Of the seven possible state classifications, Boscawen's roads fall into five of these: Class I; Class II; Class V; Class VI; and private roads. Boscawen's road system is typical of most New Hampshire towns, in that the most mileage is counted as Class V roads, but does have a

larger percentage of Class VI and private roads than do most of the towns in the region. The table below displays roadway mileage by classification. These roads can also be seen on the **Roads by Legislative Class Map**.

**Table 9-1: State Legislative Classification**

Class	Mileage	Percent of total
Class I: State Aid Highways	14.6	24.0%
Class II: State Aid Highways	4.6	7.6%
Class V: Rural Highways	23.1	37.9%
Class VI: Unmaintained Highways	8.0	13.2%
Private Roads	10.5	17.3%
Total	60.8	

Source: NHDOT

**Class I Trunk Lane Highways**

Class I highways consists of all existing or proposed highways on the primary state highway system, except portions of the highways within the compact sections of cities and towns. The state assumes full control and pays costs of construction, reconstruction and maintenance of its sections with the assistance of federal aid. In Boscawen, US 3 and US 4 are Class I highways.

**Class II State Aid Highways**

Class II highways include all highways on the secondary state highway system. In Boscawen, Harris Hill Road/Tremont Street and Water Street/Long Street are Class II highways.

**Class V Rural Highways and Block Grant Aid**

This classification consists of all traveled highways that a town has the duty to maintain regularly. The state provides funding to towns for road maintenance on Class IV and V roads in the form of Highway Block Grant Aid. Table 9-2 shows the Block Grant Aid Boscawen has received over the last five State Fiscal Years (SFY). The funds can only be used to fund or match funding for constructing, reconstructing or maintaining Class IV and V (town maintained) highways as well as equipment for maintaining local roads. To ensure Boscawen receives the proper allotment it is crucial to provide accurate information regarding Class V road mileage to



US Route 3 (Class I) looking north towards US 4 intersection

NH Department of Transportation (NHDOT). Highway Block Grant Aid distribution formulas do not take into consideration the condition of roads or the traffic on municipal roads.

**Table 9-2: Highway Block Grant Aid Payments for Boscawen**

SFY 2013	SFY 2014	SFY 2015	SFY 2016	SFY 2017
\$73,283.93	\$73,364.39	\$73,679.73	\$72,525.72	\$74,334.52

*Source: New Hampshire Department of Transportation*

**Class VI Unmaintained Highways**

Please see the ‘Other Transportation Networks’ section on page 21 for discussion on Class VI unmaintained highways.

**FEDERAL FUNCTIONAL CLASSIFICATION SYSTEM**

The functional classification system identifies roads by the type of service provided and by the role of each highway within the state system based on standards developed by the US Department of Transportation. While the state aid classification system outlined above is the primary basis for determining jurisdiction, the following system is important for determining eligibility for federal funds. These roads can be seen on the **Roads by Functional Class Map**.

**Table 9-3: Federal Functional Classification**

Federal Functional Classification	Mileage	Percent of total
Principal Arterials	0	0%
Minor Arterials	4.6	7.3%
Major Collector	10.6	2.9%
Minor Collectors	3.9	9.0%
Local Roads	23.3	37.0%
Class VI or Private Roads	20.7	32.8%
Total	63.1	100.0%

*Source: NHDOT*

Recognition of the principal function that a highway, road, or street is intended to serve can reduce potential conflicts between land use activities and traffic movements. Generally, future development in Boscawen should be encouraged to take place at locations where the primary road function is appropriate for the type of development proposed. As part of its Site Plan Review Regulations, the Planning Board should consider the functional classification of any road on which development is proposed to ensure that the proposed development is appropriate for the existing roadway function.

**Principal Arterials and Interstates**

These roads primarily function as the main routes for interstate commerce and traffic. In addition, they also link major geographic and urban areas to economic districts of the state. Controlled Access is a designation adopted by NHDOT, the effect of which is to minimize the frequency of curb cuts, thereby controlling the amount of traffic crossing lanes and stopping on the road. None of the roads in Boscawen are federally classified as either Interstates or Principal Arterials.

### Minor Arterials

These roadways serve as long distance traffic movements and are secondary to primary arterial roadways, in that Minor Arterials primarily serve as links between major population areas, or between distinct geographic and economic regions. US 3 and US 4 south of Queen Street are classified as Minor Arterials, along with Harris Hill Road/Tremont Street.

### Collectors

These roadways differ from arterial roadways due to size and general service area. Collectors serve traffic in a specific area, whereas arterials generally serve traffic moving through an area. Thus, average trip lengths on collectors are shorter than trips on arterials. The rest of US 3 and US 4 north of Queen Street are classified as Major Collectors. The only Minor Collector in Boscawen is the Water Street/Long Street connector linking US 4 to the Town of Webster. Given the amount of regional traffic on US 3 and US 4 they could easily be reclassified as Minor Arterials.

### Local Roads, Private Roads, and Class VI Roads

Local and Private Roads are used primarily to provide access to adjacent properties. This includes the vast majority of streets and roads open for public travel in Boscawen. Class VI roads are discussed in the section on Other Transportation Networks.

### BRIDGE NETWORK

Bridges are a key component of the highway system. Bridges are the most expensive sections of roads, and a lack of adequate bridges can create transportation bottlenecks, which are often difficult to remedy.

The New Hampshire Department of Transportation (NHDOT) maintains an inventory of all bridges in New Hampshire using Federal Sufficiency Ratings (FSR), a nationally accepted method for evaluating bridges. An FSR represents the relative overall effectiveness of a bridge as a modern-day transportation facility. With an FSR greater than 80 a bridge is generally accepted to be in good condition overall. A bridge having an FSR between 50 and 80 is eligible for Federal bridge rehabilitation funding. A bridge with an FSR less than 50 is eligible for either Federal bridge replacement or rehabilitation funding. These ratings are based on modern, federally accepted standards, and often historic bridges do not meet these standards.

NHDOT manages three bridge aid programs including State Aid Bridge and SB 367 programs which are state funded and the Municipal Off-System Bridge Rehabilitation and Replacement program which is federally funded.

Table 9-4 shows the bridges in Boscawen as listed on the 2017 NHDOT Bridge Summary. “Structurally Deficient” does not mean that the bridge is necessarily unsafe for use; rather, it refers to a bridge with one or more deteriorated components whose condition is critical enough to reduce the safe load carrying capacity of the bridge. Culverts, bridges 10 years or

newer, and bridges 20 feet or less in length do not typically receive deficiency ratings and therefore are defined in the table below as “Not Applicable”.

Except for two bridges on US 4 at the Merrimack River and Commercial Street/River Road, all of the remaining bridges not provided with a structural or functional rating are noted as “Not Applicable.” The Tremont Street/Canal Street Bridge is a significant bridge structure and is older than 10 years; however, its FSR of 83 indicates it is still in good condition.

The only municipal bridge which is rated as deficient is the Corn Hill Road Bridge over Pond Brook with a FSR of 48.1. This short bridge and adjacent road appears to be highly susceptible to flooding and appears in very poor condition. The Town should incorporate this bridge into the Town’s Capital Improvement Budget and consider annually setting aside funding for its ultimate replacement. Pond Brook forms the boundary between Webster and Boscawen at this location and any improvement to this bridge will be a joint responsibility of both Towns.

A number of NHDOT bridges on US 3 and US 4 have FSR’s below 70 and are approaching the time when rehabilitation or replacement may be warranted.

Table 9-4: Bridges in Boscawen

Location	FSR	Structural Deficiency	Owner	AADT	Inspection Date	Yr Built/Rebuilt
Corn Hill Road over Pond Brook	48.1	Not Applicable	Municipality	640	Oct 2017	1936
Long Street over Beaver Dam Brook	61.8	Not Applicable	NHDOT	130	Nov 2017	1931
Raymond Street over Tannery Brook	86.0	Not Applicable	Municipality	60	Oct 2017	1945
Tremont Street over Contoocook River	83.0	Not Deficient	NHDOT	6,200	May 2017	1955/1992
US Route 3 over Tannery Brook	66.9	Not Applicable	NHDOT	5,200	Jun 2017	1940
US Route 3 over Stirrup Iron Brook	73.0	Not Applicable	NHDOT	5,200	Jun 2017	1933
US Route 4 over Tannery Brook	70.7	Not Applicable	NHDOT	3,600	Jun 2017	1928
US Route 4 over Tannery Brook	65.5	Not Applicable	NHDOT	3,600	Jun 2017	1936
US Route 4 over Tannery Brook	94.5	Not Applicable	NHDOT	6,100	Jun 2017	1941/1975
US Route 4 over Commercial Street	93.4	Not Deficient	NHDOT	8,800	May 2017	1958/1992
US Route 4 over Merrimack River	93.4	Not Deficient	NHDOT	8,800	May 2017	2005

Source: 2017 NHDOT Bridge Summary  
AADT= Average Annual Daily Traffic

Bridges by ownership can be seen on the **Bridges Map**.

### TRAFFIC COUNT HISTORY

The Central New Hampshire Regional Planning Commission (CNHRPC) maintains an ongoing traffic count program for monitoring the region's transportation network. Each year, CNHRPC offers to collect traffic data at up to ten (10) locations for each municipality. In addition, CNHRPC collects traffic count data for the New Hampshire Department of Transportation (NHDOT) in accordance with federal guidelines under the Federal Highway Performance Monitoring System (HPMS).

The Average Annual Daily Traffic (AADT) volumes, which are published on the NHDOT website at <http://www.nh.gov/dot/org/operations-/traffic/documents.htm>, are a basic measure of traffic demand for a roadway and represent the volume of traffic travelling in both directions. CNHRPC provides traffic count data to the NHDOT, who then calculates the AADT by applying correction factors to raw data to account for weekday and seasonal variations in traffic volumes. AADT at select locations can be seen on the **Average Annual Daily Traffic Map**.

### ROADWAY CONDITIONS

Pavement condition data from 2015 and 2016 was obtained from the NHDOT's Pavement Management Section for state-maintained (Class I and II) roads and is displayed on the **Pavement Condition Map**. The pavement condition is rated based on its International Roughness Index (IRI), which is calculated directly from the average pavement roughness measured in the left and right wheel paths of roadways.

Because the NHDOT data is from 2015 and 2016, some of the roads in fair or poor condition may have been addressed by NHDOT improvement projects or maintenance programs since the data was collected. Since 2015, Depot Street, Harris Hill Road/Tremont Street, and Water Street/Long Street have been resurfaced and are generally in good condition. US 4 northerly of its junction with US 3 is proposed to be resurfaced in Calendar Year 2019 by NHDOT in Boscawen, Salisbury and Andover. US

### MERRIMACK RIVER BRIDGE

In the past, many in the community have supported the replacement of the Depot Street Bridge over the Merrimack River. The replacement of the Depot Street Bridge would link Route 3/4 on the west side of the Merrimack River by way of Depot Street and West Road in Canterbury to I-93 at Exit 18 east of the river. The bridge was removed in 2014 and estimates for a replacement bridge run between 10-20 million dollars. The replacement of the Depot Street Bridge over the Merrimack River is not incorporated in any NH DOT improvement programs.

Unless entirely funded locally, this project would need to compete for state funding through the TYP process. However, this would be an excellent location for a new pedestrian/bicycle/snowmobile bridge given the existing bridge piers and the ability to link the two towns at a location away from other crossings with high volumes of traffic. This project might be feasible provided grant funding and local matching funds could be secured.

3 northerly of its junction with US 4 has deteriorated since 2015 and should be resurfaced in the next five (5) to ten (10) years. King Street (US 3 & US 4) has deteriorated and should be resurfaced prior to 2026, when the road improvements on this corridor are planned. With these exceptions, the road surface for the vast majority of all State maintained highways in Boscawen are in fair or good condition.

On local, Town maintained roads, surface conditions vary by location. Naturally, there are issues to be addressed in the Town's road network, particularly due to the increasing costs of maintenance.

#### ROAD SURFACE MANAGEMENT SYSTEM

The road surface conditions on Town maintained roads vary by location. The Town's Highway Department and Board of Selectmen are to be commended for taking a proactive approach to local road maintenance. The Town's Capital Improvement Program regularly schedules improvements to the local road network and the Highway Department has a repaving and maintenance schedule that the Town's residents have supported. In 2012 CNHRPC helped the Boscawen Highway Department implement a Road Surface Management System (RSMS) that would help prioritize road improvements and develop a transparent system for short, medium and long-term improvements. RSMS is basically a methodology intended to furnish an updatable inventory of the existing local roads, and provide an estimate of the Town's roadway system needs, as well as improvement and maintenance costs.

The RSMS program in Boscawen involved an inventory of local road surfaces. The data from the road surface surveys was input into the RSMS software, which then provided maintenance categories for each section of road. Eight and a half miles of local roads were determined to be in good condition requiring no immediate maintenance, 7.3 miles of roadway required only routine maintenance, 2.2 miles required preventative maintenance while 2.6 miles needed rehabilitation and 2.7 miles, including sections of Commercial Street and Woodbury Lane, required reconstruction. The 2012 RSMS program results can be used by the Highway Department to examine progress over the last five years. Boscawen should also work with CNHRPC to begin implementing a new RSMS utilizing NHDOT's Statewide Asset Data Exchange System (SADES) program.

In addition to a 2012 road surface survey, CNHRPC also inventoried 95 locally owned culverts in Boscawen. Each culvert was given an overall condition rating based on the following rating system:

- Excellent (7.4%) – recently constructed, no visible deficiencies.
- Good (54.7%) – at least 75% open, few if any minor deficiencies.
- Fair (29.5%) – at least 50% open, some existing or developing deficiencies.
- Poor (6.3%) – at least 25% open and/or has serious deficiencies.
- Critical (2.1%) – less than 25% open and/or has critical deficiencies.

Boscawen's Highway Department can use the 2012 culvert inventory to review the progress of culvert maintenance and replacement on local roads and work with CNHRPC to complete a culvert stream crossing analysis throughout the Town.

#### MOTOR VEHICLE CRASHES

Motor vehicle crash data from 2011 - 2015 was obtained from NHDOT, who receives the data from the Department of Safety for crashes with over \$1,000 in damage. The data represents roughly 80% of all crashes with over \$1,000 in damage that took place during this time period; the remaining 20% of crashes are not locatable based on the information contained in the accident reports. Locatable crashes that occurred in Boscawen were reviewed and are summarized graphically on the **2011-2015 Crashes by Severity Map** and in summary tabular form for the most frequent locations in Table 9-5. It is reasonable to assume that a number of smaller accidents may also have occurred during this time period which did not require the intervention of the police department.

Where any discrete segment of highway or intersections have three or more accidents per year, or a fatality has occurred, these locations should be studied to determine if any safety improvements can be made to reduce the number and/or severity of accidents. Most accidents occur on state maintained highways, US 3 or US 4, or at intersections with State maintained highways. The proposed King Street Corridor project will be designed to address the safety issues associated with many of the highest accident locations on these highways.

However, the northern sections of US 3 and US 4, as well as the southern section of US 4 have a significant number of accidents and the NH DOT should consider undertaking a Road Safety Audit (RSA) for these regionally significant highways. North Water Street and Corn Hill Road had the highest number of accidents from 2011-2015 for any locally maintained roads in the community. North Water Street has had a consistent traffic count of 130 AADT and Corn Hill Road traffic volumes have grown slightly from an average 580 AADT to 640 AADT. Five (5) accidents on North Water Street in five years is significant given the low intensity development along this roadway and the very low traffic volume on this road. The traffic accidents should be analyzed along both roads to determine if speed is an issue and enhanced enforcement warranted.

Given the local controversy in regard to the roundabout installed at the intersection of US 4 and Harris Hill Road in 2013, the accident history at this intersection should be studied to compare before and after the construction of the roundabout. Other roadways or intersections within the community, based solely on accident history, do not warrant consideration for upgrades or study at this time.

#### HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

The purpose of NHDOT's Highway Safety Improvement Program (HSIP) program is to achieve a significant reduction in fatalities and serious injuries on all public roads through the implementation of highway safety improvement projects. The process for which a project receives funding from HSIP for a roadway segment or intersection is highly dependent on data. The intersection of US 4 and Harris Hill Road was determined to have

enough serious crashes to qualify and the roundabout project was ultimately funded using HSIP funds.

If data (history of crashes resulting in injuries or fatalities) warrants further examination a Road Safety Audit (RSA) is typically the next step. The RSA is a collaborative approach to review safety issues and make recommendations for improvements. A cost/benefit analysis is used to determine the best solution for improving safety at the road segment or intersection. CNHRPC assists towns in applying for HSIP funds and completing small scale RSAs that offer safety solutions.

**Table 9-5: Crash Hot Spots 2011-2015**

State Maintained Highways	Number of Crashes 2011-2015	5 Year Average
US Rt. 4 Southern Section	58	11.6
US Rt. 3/4 (King St)	40	8
US Rt. 4 Northern Section	39	7.8
US Rt. 3 Southern Section	38	7.6
US Rt. 3 Northern Section	26	5.2
Town Maintained Roads	Number of Crashes 2011-2015	5 Year Average
North Water Street	5	1
Corn Hill Road	4	0.8
Queen Street	3	0.6
Raymond Rd	1	0.2
Intersection Locations	Number of Crashes 2011-2015	5 Year Average
US 4/Harris Hill Rd	5	1
US 3/US 4 Southern merge	5	1
US 3/US 4 Northern merge	2	0.4
Tremont, Eel, Commercial Street	2	0.4

*Source: NHDOT/NH Department of Safety*

The severity of serious traffic crashes could be reduced through roadway improvements, where appropriate, such as adding turn or through lanes, adding or improving medians, implementation of access control measures to reduce the number and increase the spacing between curb cuts, installing traffic signals at significant traffic generators or intersecting streets.

**PUBLIC TRANSPORTATION**

The Town of Boscawen is not directly served by a fixed route public transportation service. The Concord Area Transit System’s Penacook route extends to within a quarter mile of the Boscawen’s town line. The Belknap-Merrimack Community Action Program (BMCAP) also operates a senior transit program providing service to the Merrimack County Nursing Home.

The feasibility to provide transit service from Concord to Franklin through Boscawen was studied in 2016-2017 and was not found to be feasible at this time given the cost of providing the service and the amount of potential demand.

The Mid-State Regional Coordinating Council for Community Transportation runs a volunteer driver program that serves the region’s elderly and disabled populations. The primary purpose of these trips are for essential social services and medical appointments (including long distance medical). Currently, there is no charge for both of these systems although donations are accepted.

A Taxi Voucher Trial program has been established to provide rides from the Merrimack County Correctional Facility along US Route 3. The Mid-State Regional Coordinating Council hopes that the program can be expanded to help meet the needs of the disabled and seniors when other services are not available.

PARK AND RIDE

Boscawen is fortunate to have a NH Park and Ride along US Route 4 near exit 17 on I-93. The park and ride contains 42 parking spaces and is often used for parking to access the Hannah Dustin Memorial and Northern Rail Trail in addition to providing carpoolers with a safe place to leave their cars. CNHRPC has conducted monthly occupancy counts at the Park and Ride over the last several years. In line with national standards, the counts are conducted between 9:00am and 3:00pm on Tuesday, Wednesday or Thursday. Data from 2010 to 2017 are displayed in the table below.

The NH Department of Transportation should consider providing additional Park and Ride capacity in this area, preferably through the development of a second lot nearby, since the environmental impact and cost to expand the existing facility may be excessive.

Table 9-6: Park and Ride Occupancy Data

Year	Mean (occupancy)		Minimum (occupancy)		Maximum (occupancy)	
2017	50%	21.0	24%	10	64%	27
2016	57%	23.7	29%	12	76%	32
2015	72%	30.4	48%	20	90.48	38
2014	51%	21.38	33%	14	81%	34
2013	60%	25.36	33%	14	91%	38
2012	55%	23	29%	12	76%	32
2011	69%	29	48%	20	100%	42
2010	55%	23	21%	9	74%	31

Source: CNHRPC

NON-MOTORIZED TRANSPORTATION

Residents of Boscawen value the rural and historic character of the Town. Along King Street, US 3 and US 4, and Harris Hill Road/Tremont Street the volume of traffic and associated speeds can be detrimental to the sense of place. Pedestrian facilities, such as

paved sidewalks and gravel walking paths are essential features for roadways with high volumes of traffic or high speeds. The primary purpose of sidewalks is to improve safety for pedestrians by separating them from travel lanes of roadways. In addition to this, sidewalks can also serve as a source of recreation for residents or even stimulate economic activity in rural and village settings.

Similar to the provision of pedestrian infrastructure, planning for a bicycle network requires a different approach from that of motorized transportation planning. Bicyclists have different needs from those of motorists, including wider shoulders, better traffic control at intersections, and stricter access management. By creating adequate local bicycle & pedestrian infrastructure, members of the community will have the ability to travel within Town for employment, shopping, and recreational purposes without driving.

Boscawen has been successful in obtaining Safe Routes to School (SRTS) and Transportation Enhancement (TE) grants to improve walking and bicycling infrastructure. Improvements have been focused near US Route 4, US Route 3 and the Boscawen Elementary School. The SRTS efforts also identified the need to replace the sidewalk south of B.E.S.T Avenue on US Route 3. Future improvements may be eligible for the Transportation Alternatives Program (TAP), a federally funded program administered through NHDOT for pedestrian and bicycle infrastructure.

### [The Northern Rail Trail](#)

The Northern Rail Trail is a 56 mile long multi use path utilizing an abandoned railroad corridor that once connected Concord, NH to White River Junction, VT. The rail trail begins in Lebanon, NH and terminates in Boscawen, NH on River Rd just north of the Hannah Dustin Memorial. The four season path accommodates non-motorized transportation in the warmer months as well as cross country skiing, snowmobiling and snowshoeing during winter months. Access between the trail and local amenities can be developed and maintained to connect trail users to businesses and services in Boscawen. The Town has seen greater than expected use of the trail and the opportunity to attract users to local businesses and spur economic development (See Economic Development Chapter). Trail counts can be completed in the summer months to gauge the number of users on the trail. This trail may also be extended southerly as part of the proposed Merrimack River Greenway Trail to connect to Concord.

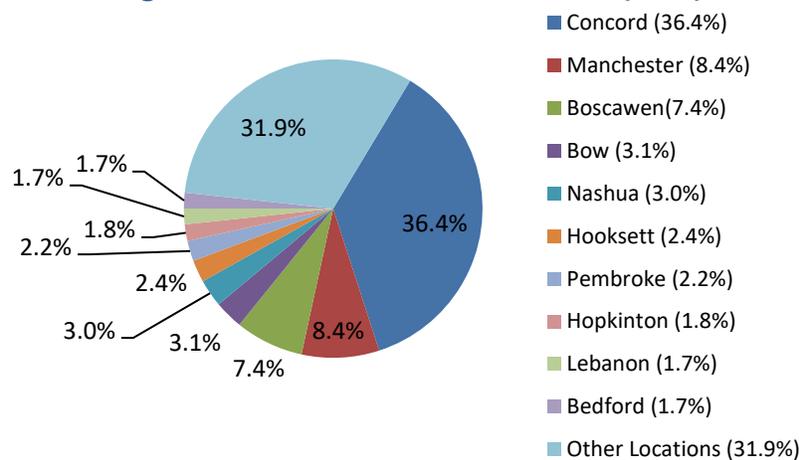
### [COMMUTING PATTERNS](#)

The US Census Bureau's American Community Survey (ACS) provides data every year in the form of 1-, 3- and 5-year period estimates representing the population and housing characteristics over a specific data collection period. The ACS differs from the decennial Census in that the Census shows the *number* of people who live in an area by surveying the total population every 10 years. The ACS shows *how* people live by surveying a sample of the population every year. ACS collects and releases data by the calendar year for geographic areas that meet specific population thresholds; for areas with populations under 20,000, such as Boscawen, 5-year estimates are generated. The most recent release represents data collected between January 1, 2012 and December 31, 2016.

Journey to Work Commuting data from the 2012-2016, 5-year estimates and data from the US Census Bureau’s OnTheMap application for Boscawen were reviewed and are displayed graphically in the charts below. In general, the majority of the working population residing in Boscawen works outside of the community but within New Hampshire, drives to work alone, and commutes an average of about 26.5 minutes to work. It should be noted that the category “public transportation,” is an option under “Means of Transportation to Work,” however, there were zero respondents who chose that option.

The closest employment center (Concord) attracts about thirty six percent of the commuters. Nearly thirty-two of the work force in Boscawen commutes to locations categorized as “All Other Locations.” In reviewing the raw data, the “All Other Locations” are widely distributed to many communities in New Hampshire, Massachusetts, Maine, and even further afield. None of these destinations attract more than 1.7% of the total resident workers.

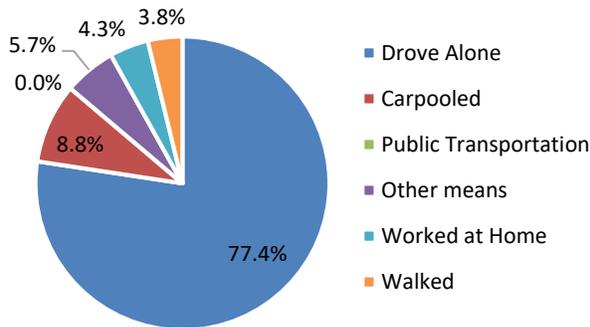
Figure 9-2: Where Do Residents Work? (2015)



Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap Application

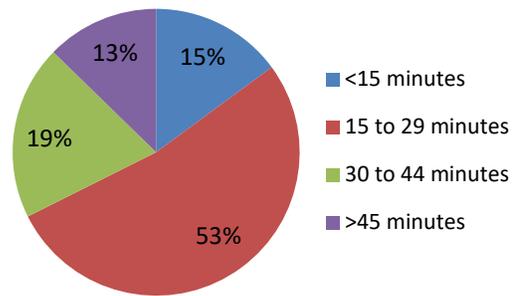
In general, the majority of the working population residing in Boscawen drive alone to work based on information provided in Figure 9-3, as is typical in most New Hampshire towns. The most popular transportation option for Boscawen residents is the private automobile at 77.4%, while 8.8% of those employed carpooled. It is interesting to note that 4.3% percent of those employed worked at home, 3.8% walked, and 5.7% used other means. The number of residents who work at home reinforces the importance of broadband internet for telecommuters. More information on carpools and alternative modes of commuting can be found at [www.commutessmartnh.com](http://www.commutessmartnh.com).

Figure 9-3: Means of Transportation to Work



Source: 2012-2016 American Community Survey

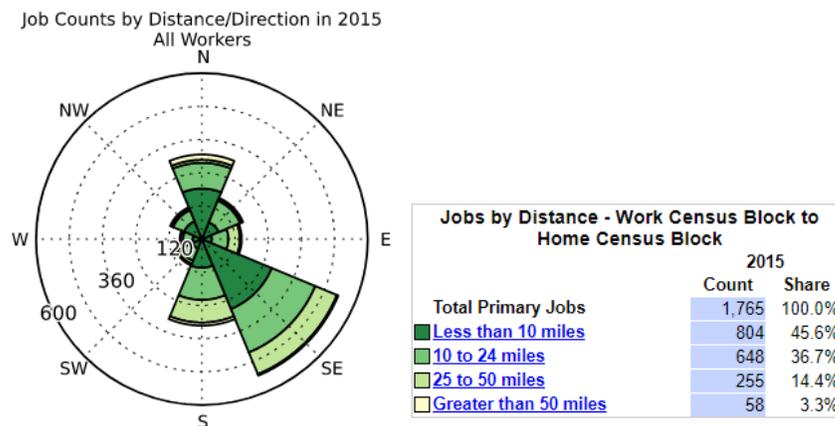
Figure 9-4: Travel Time to Work



Source: 2011-2015 American Community Survey

Figure 9-5 shows that over 50% of Boscawen’s commuting residents travel distances to work in excess of ten (10) miles. This statistic highlights the importance of the arterial and collector road system that serves the Town. In all future planning decisions, at the local, regional or state level, Boscawen should ensure that the functionality of these important routes are maintained and that future land-use and transportation decisions support the functional characteristics of Boscawen’s road network to ensure continued ease of access for residents and visitors to the Town.

Figure 9-5: Distance/Direction to Work, 2015



Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap Application

Understanding the commuting patterns of the labor force in the community can assist in planning roadway improvements that will make important travel routes more efficient, safe, and promote economic growth in a sound and coordinated fashion. Similarly, local residential roads that are not suited for heavy commuter traffic should be identified and this “through traffic” should be minimized wherever viable alternatives can be provided. Traffic counts should be reviewed and analyzed to identify roads that have shown an increase in traffic over the years. Finally, yearly traffic counts should be carried out on

roads that the Town sees as a concern in order for reliable usage patterns to be analyzed.

## Land Use and Transportation

### NEW DEVELOPMENT

New development is often phased over extended periods of time and the ultimate, as well as the immediate, impacts of development on traffic volumes and transportation systems should always be considered. By requiring transportation/traffic impact studies for new developments of a certain size or for developments located in areas where significant transportation problems are known to exist, the Planning Board can effectively evaluate the scope of impacts associated with any new development.

As federal and state assistance for local road construction has decreased (in most cases), in recent years, and will likely continue to decrease in future years, the construction, improvement, and maintenance of local roads has increasingly become the responsibility of municipalities and developers.

The following policies should be considered when the Planning Board reviews any significant development:

1. Consider transportation and land use together.
2. Link access regulations to roadway function.
3. Connect local streets between subdivisions.
4. Design subdivisions with access onto local streets rather than major state highways or local collector roads.
5. Practice good site planning principles by providing separation between driveways and intersections.
6. Provide sufficient space on site to allow for vehicles to maneuver and queue on-site.
7. Correct existing problems as opportunities arise.
8. Coordinate approvals for subdivisions and site plans with NHDOT District 2, and NHDOT District 5.
9. Establish Memorandums of Understanding (MOUs) between the Town and NHDOT Districts 2 and District 5 to create a coordinated project review and approval process.

The two basic methods for securing developer participation in roadway and other infrastructure improvements necessitated by new development are through negotiated development agreements and through the assessment of formula based development impact fees. Given the relatively slow pace of growth and that all moderate to high volume roadways in the community are the responsibility of the New Hampshire Department of Transportation, a formula based impact fee system with its relatively high cost to establish and administer may not be appropriate for the Town at this time.

### CONNECTIVITY

For the roadway system to be effective, efficient, and serve to maintain a sense of community, the roadway system should exhibit a sense of connectivity. Roadway connectivity refers to a street system that provides multiple routes and connections to the same origins and destinations.

A well-connected street system provides motorists, pedestrians and bicyclists better, more direct and shorter travel routes to schools, shopping and other neighborhoods. A well-connected street system not only provides shorter and more efficient connections but also serves to reduce traffic congestion along the major arterial roadways. A well-connected street system also improves emergency response times for firefighters, police, and ambulance services.

The Town of Boscawen has limited opportunities to enhance highway connectivity due to the presence of the Merrimack River along its entire eastern boundary and the Contoocook River to the south, combined with the rugged hilly terrain (bisected by streams and wetlands) which makes up the majority of the community to the west of US 3 and US 4. Even in these conditions the Planning Board should take every opportunity to connect roadway systems when development occurs, in order to provide alternative access in order to improve emergency response times and provide alternative means of access in emergencies.

### ACCESS MANAGEMENT

Access management involves providing (or managing) access to land development while simultaneously preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed. It is the practice of coordinating the location, number, spacing, and design of access points to minimize site access conflicts and maximize the traffic capacity of a roadway. Access management is of particular importance in Boscawen due to the limited opportunity to provide alternative corridors to divert traffic from King Street (US 3 and US 4).

### TRAFFIC CALMING

Traffic calming is a significant challenge for most communities in the United States. This is particularly true for small, rural communities in New Hampshire where the main roadway through the town serves a dual role. Outside the town, the roadway provides high-speed travel over long distances; within the built-up area, however, the same roadway accommodates local access, pedestrians of all ages, on-street parking, bicycles, and the many other features unique to the character of a community. This convergence of roadway purposes presents both an enforcement challenge for the community and a potential safety problem for the public.

Addressing the issue through law enforcement alone often leads to temporary compliance at a significant cost. A more permanent way to reinforce the need to reduce speed is to change the look and feel of the road by installing traffic calming treatments that communicate to drivers that the function of the roadway is changing. Traffic calming has

been evaluated and used extensively within low-speed urban areas in the United States but less so in rural areas where driver expectations and traffic characteristics are different.

Lowering speed limits is a well-established method of improving pedestrian safety and other non-motorized modes of travel. The minimum speed limit a town can impose on town maintained roadways is 25 miles per hour based on an engineering study. Limits can be made lower at intersections (RSA 265:63) and in school zones (RSA 265:60). Traffic calming involves road design techniques using active or physical controls (bumps, barriers, curves, rumble strips, etc.) and passive controls, such as signs and traffic regulations, to reduce vehicle speeds. Traffic calming measures foster safer and quieter streets that are more accommodating to pedestrians and cyclists and enhance neighborhoods and downtown environments. The potential benefits of traffic calming include reduced traffic speeds, reduced traffic volumes – by discouraging “cut-through” traffic on residential streets – and often improved aesthetic quality of streets. An example of some effective and applicable traffic calming techniques include: Speed Humps, Speed Tables, Raised Crosswalks, Chicanes or Medians, Narrow Lane Widths, and Modern Roundabouts.

## **Regional and State Planning**

### CNHRPC Transportation Advisory Committee

The regional transportation planning process in the Central NH Region is driven by bottom-up community participation through the Planning Commission’s Transportation Advisory Committee (TAC). The TAC is an advisory committee to CNHRPC and is comprised of representatives from all twenty (20) Central NH communities. TAC representatives vary from municipal staff, such as town planners and road agents, to municipal officials, such as planning board members and selectmen. CNHRPC and NHDOT work collectively to inform all members of the TAC regarding transportation at the local, regional and state level. The members act as liaisons between CNHRPC, municipal and state officials as well as the general public.

TAC Members provide input on transportation related issues and the needs of the local and regional communities in Central New Hampshire. This is done partially by assisting CNHRPC staff with the development of transportation related plans and programs.

The TAC works with CNHRPC staff to develop the regional Transportation Improvement Program (TIP), which in turn provides input into the statewide Ten-Year Plan (TYP) update. In addition, CNHRPC staff also work with the TAC to solicit and provide guidance on local projects such as Road Surface Management Systems and Road Safety Audits. A well informed, well represented Transportation Advisory Committee is essential in regional coordination and the success of CNHRPC transportation planning activities.

### Regional Transportation Improvement Program (TIP)

The regional TIP is the process undertaken in each of the State’s nine regional planning commissions where projects originate for the statewide Ten-Year Plan (TYP). The process to prepare the Central NH Regional Transportation Improvement Plan (TIP) begins with

the CNHRPC soliciting project requests from local communities, followed by an evaluation process by the Planning Commission's Transportation Advisory Committee (TAC) where new and existing projects are prioritized.

The Regional TIP update process gives a clear indication of the different transportation needs in the Central NH Region. Just as the TYP is established as the transportation project guide for the state, CNHRPC will utilize this regional TIP to full effect to plan for current and future transportation needs in the Central NH Region.

### State of NH Ten Year Plan

The TYP identifies and prioritizes the critical transportation projects in New Hampshire in an ongoing effort to address transportation needs at the local, regional and statewide levels. The TYP is updated every two years – allowing transportation priorities to be revisited, existing projects to be removed as appropriate and allowing new projects including, roads, bridges, transit, rail and aviation projects to be added.

With the previous TYP as a starting point, the Plan process includes input from individual communities, the preparation of regional Transportation Improvement Plans (TIPs) by the nine Regional Planning Commissions (RPCs), numerous public hearings by the Governor's Advisory Commission on Intermodal Transportation (GACIT) and review and approval by the Governor and Legislature before it is adopted.

Performance measures and conditions such as pavement condition, traffic volumes, bridge ratings, congestion levels, safety issues, economic impacts, user surveys and available funding levels are considered in determining project need and prioritizing project implementation.

## **Other Transportation Networks**

### CLASS VI UNMAINTAINED HIGHWAYS, ROADS & TRAILS

Class VI roads are roads that are not maintained by a town, may be subject to gates and bars, and normally consist of a gravel or dirt surface. A Class V road can become a Class VI road if the town has not maintained it for five years or more. Under RSA 674:41, I(c), for any lot whose street access (frontage) is on a Class VI road, the issue of whether any building can be erected on that lot is left up to the Board of Selectmen who may, after "review and comment" by the Planning Board, vote to authorize building along that Class VI road, or portion thereof. Without such a vote, all building is prohibited.

Even if the Board of Selectmen does vote to authorize building, the law states that the municipality does not become responsible for road maintenance or for any damages resulting from the road's use. The purpose of RSA 674:41, I(c) is to prevent scattered and premature development.

The Town of Boscawen Zoning Ordinance (Section 3.05 Area, Frontage and Yard Requirements) requires all development to have frontage on state or locally maintained public highways.

Across the state, many communities are beginning to look at Class VI roads as candidates for designation as Class A Trails. These roads have little or no development associated with them, are scenic, have no inherent liability concerns, public access is already allowed, and also serve to connect large areas of open space, conservation, and/or agricultural lands. By reclassifying certain roadways that meet these criteria to Class A Trails, the community could be taking a step in creating a community-wide system of greenway trails. Unlike Class VI roads that the town does not maintain, towns, at their option, may conduct maintenance on Class A Trails. Boscawen also has a number of recreation trails including snowmobile trails.

**Table 9-7: Town Unmaintained Roads (Class VI)**

Class VI (Town Unmaintained) Roads	Approximate Length (ft.)
Cathole Road	9,000
Chadwick Hill Road ( <i>Small Section is Emergency Lane</i> )	5,000
Marlboro Road Segments	3,500
Marlboro Road (Class A Trail)	2,500
Morse Hill Road	6,000
Mutton Road	750
Newbury Street	5,700
Round Road Segment	1,500
Stirrup Iron Road Segment	2,000
Tote Road (East) <i>Private Rd</i>	2,000
Tote Road (West) <i>Private Rd</i>	2,750
Weir Road (Class B Trail)	6,500
<b>TOTAL</b>	<b>47,200</b>

Source: NHDOT

It is important to stress that reclassification of Class VI roads to Class A Trails will not inhibit the access rights of landowners along the roadways. In the case of a Class A trail, landowners can continue to use the trail for vehicular access for forestry, agriculture, and access to existing buildings. However, under such classification, new building development as well as expansion, enlargement, or increased intensity of the use of any existing building or structure is prohibited by state law. The town and owners of properties abutting Class VI roads are not liable for damages or injuries sustained to the users of the road or trail.

Class VI roads are an important component of a town’s transportation infrastructure due to their rural character and potential recreational opportunities. The community should evaluate the remaining Class VI roads to determine if any of these roads have the potential to be developed as Class A trails.

### SCENIC ROADS

A major component of a town's rural character can be its unpaved and scenic roads. These roads help to retain a sense of history and rural quality that Boscawen's residents have indicated a strong desire to maintain. RSA 231:157 allows towns by a vote at town meeting to designate any road other than a Class I or II highway as a Scenic Road. A municipality may rescind its designation of a scenic road using the same procedure.

The effect of designation as a scenic road is that, except in emergency situations, there shall be no cutting of trees with a circumference of 15 inches at 4 feet from the ground or alteration of stone walls by the town or a public utility within the right-of-way without a hearing, review, and the written approval of the Planning Board. This law does not affect the rights of individual property owners; nor does it affect land uses as permitted by local zoning.

In recognition of the fact that the state law is not very stringent, the statute was amended in 1991 to allow towns to adopt provisions other than what is spelled out in the law. These additional regulations could include giving protection to smaller trees or by inserting criteria for the Planning Board to use in deciding whether to grant permission. RSA 231:157 is an important piece of legislation for the preservation of culturally important and scenic roads in Boscawen.

## **Objectives and Recommendations**

### **OBJECTIVE 1**

Support the efforts of the New Hampshire Department of Transportation to ensure that state maintained roadways within the Town of Boscawen are adequately maintained, safe and provided with sufficient capacity to meet the needs of both residents, businesses and travelers through the region.

- Actively engage with the Central New Hampshire Regional Planning Commission and the New Hampshire Department of Transportation to ensure that Boscawen's transportation needs and priorities are adequately represented in the both the Regional and the Statewide Transportation Improvement Programs by participation on the CNHRPC Transportation Advisory Committee and the Ten Year Plan process.

### **OBJECTIVE 2**

Encourage future development to take place at locations where the primary road function is appropriate for the type of development proposed.

- As part of its Subdivision and Site Plan Review Regulations, the Planning Board should continue to review the functional classification of any road on which development is proposed to ensure that the proposed development is appropriate for the existing roadway function.

**OBJECTIVE 3**

Ensure a safe, reliable, and efficient system of bridges that will meet the transportation needs and goals of Boscawen.

- Continue to actively work with NHDOT to repair, replace, and/or upgrade bridges as needed.

**OBJECTIVE 4**

Utilize traffic count data from NHDOT & CNHRPC to evaluate highways and roads that may be adversely impacted by future development trends.

- Continue to work with NHDOT and CNHRPC to identify and conduct traffic counts on state maintained roads and highways on an annual basis.
- Carry out yearly traffic counts on local roads that the Town sees as a concern in order for reliable usage patterns to be analyzed.
- Publish traffic count data annually and post on the Town's website.

**OBJECTIVE 5**

Regularly monitor road conditions in the Town to ensure that road improvement projects that are strategically important to Boscawen's transportation network are adequately addressed.

- Work with the Central New Hampshire Regional Planning Commission to implement an RSMS program.

**OBJECTIVE 6**

Reduce the number of accidents in Boscawen that may be caused by unsafe road conditions or poor transportation infrastructure.

- Encourage the Town Administrator, Police Chief, Fire Chief, Director of Public Works and associated staff/committees to annually review accident locations and determine enhancements that could be made to improve safety.
- Identify and prioritize locations on local roads that need improvement on account of safety issues.
- Actively work with the NHDOT to address safety concerns on state maintained highways.

**OBJECTIVE 7**

Encourage the reduction in single occupancy vehicles.

- Promote ride share services such as Commute Smart NH and Park and Ride Facilities which would serve Boscawen commuters to improve the commuting experience of residents and to reduce congestion on major roadways in the region.

**OBJECTIVE 8**

Consider developer sponsored off-site improvements as part of any development that has an impact on Boscawen's transportation network.

- As a condition of the final approval of a Subdivision or Site Plan Application, the Planning Board, where appropriate, should require the developer to pay a proportionate share of the costs of municipal transportation related improvements, which are necessitated in whole or in part by the development. Such fees shall be limited to capital costs and shall be expended only on new or additional capital facilities. At its discretion, the Board may require the developer to construct capital improvements as an alternative.
- As a condition of the final approval of a Subdivision or Site Plan Application, the Planning Board, where appropriate, should require the developer to provide highway improvements made necessary by the applicant's development, including but not limited to, turning lanes, signalization or roundabouts at project entrances.

**OBJECTIVE 9**

Promote connectivity through the requirement of local street connections between existing, new and future developments.

- Require, when applicable, developers to provide rights-of-way and/or direct access to connect both new and existing developments.

**OBJECTIVE 10**

Incorporate a full set of access management provisions in the Subdivision and Site Plan Review Regulations. Improve access to existing properties during road construction projects, redevelopment, or proposed expansions of existing businesses.

- Incorporate access management provisions for each functionally classified street in both the Site Plan and Subdivision Regulations.
- Improve access management to enhance safety and traffic flow on existing development on arterial and collector roads as opportunities present themselves.
- Enter into a Memorandum of Understanding with NHDOT District Engineers to coordinate permitting for access to new and redeveloped development along state maintained highways in Boscawen.
- Consider access management techniques to minimize the effect of abutting land access on the mobility of through traffic for arterial streets.

**OBJECTIVE 11**

Use traffic calming techniques to make Boscawen more accessible and safer for all road users.

- Promote a "share the road" campaign to alert drivers to the possibility of pedestrians and bike users at certain locations in Boscawen.

- Investigate the use of low cost methods to increase safety and support non-motorized transportation, such as raised crosswalks, striped or colored crosswalks, increased signage, and reduced lane widths to provide larger shoulders for pedestrian and bicycle use.
- Investigate the use of appropriate traffic calming measures to discourage high speeds where the potential for conflict with other roadway users exists.

### **OBJECTIVE 12**

Enhance existing sidewalk systems along US 3 and US 4, especially along King Street and Main Street, to promote pedestrian and bicycle transportation in the community.

- Encourage the Public Works Department to consider widening, striping, and paving the shoulders of Town roads to provide shared shoulders/bike lanes.
- Work with the NH DOT to provide wider shoulders along state maintained highways for pedestrian and bicycle use.

### **OBJECTIVE 13**

Assist transportation providers to insure that transportation options are available to all residents of Boscawen regardless of socio-economic status.

- Coordinate with Concord and surrounding towns within the region to expand the CAT fixed route bus system.
- The Town should provide financial assistance and continue to promote the volunteer driver programs serving Boscawen.

### **OBJECTIVE 14**

Discourage inappropriate, scattered and premature development along Class VI roads.

- Identify for designation, as Class A Trails, some of the Class VI roads within Town by working with abutting landowners and the Conservation Commission. The identified Class VI roads should connect water bodies, open space, forest, conservation, existing trails and recreational areas, and/or agricultural land.

### **OBJECTIVE 15**

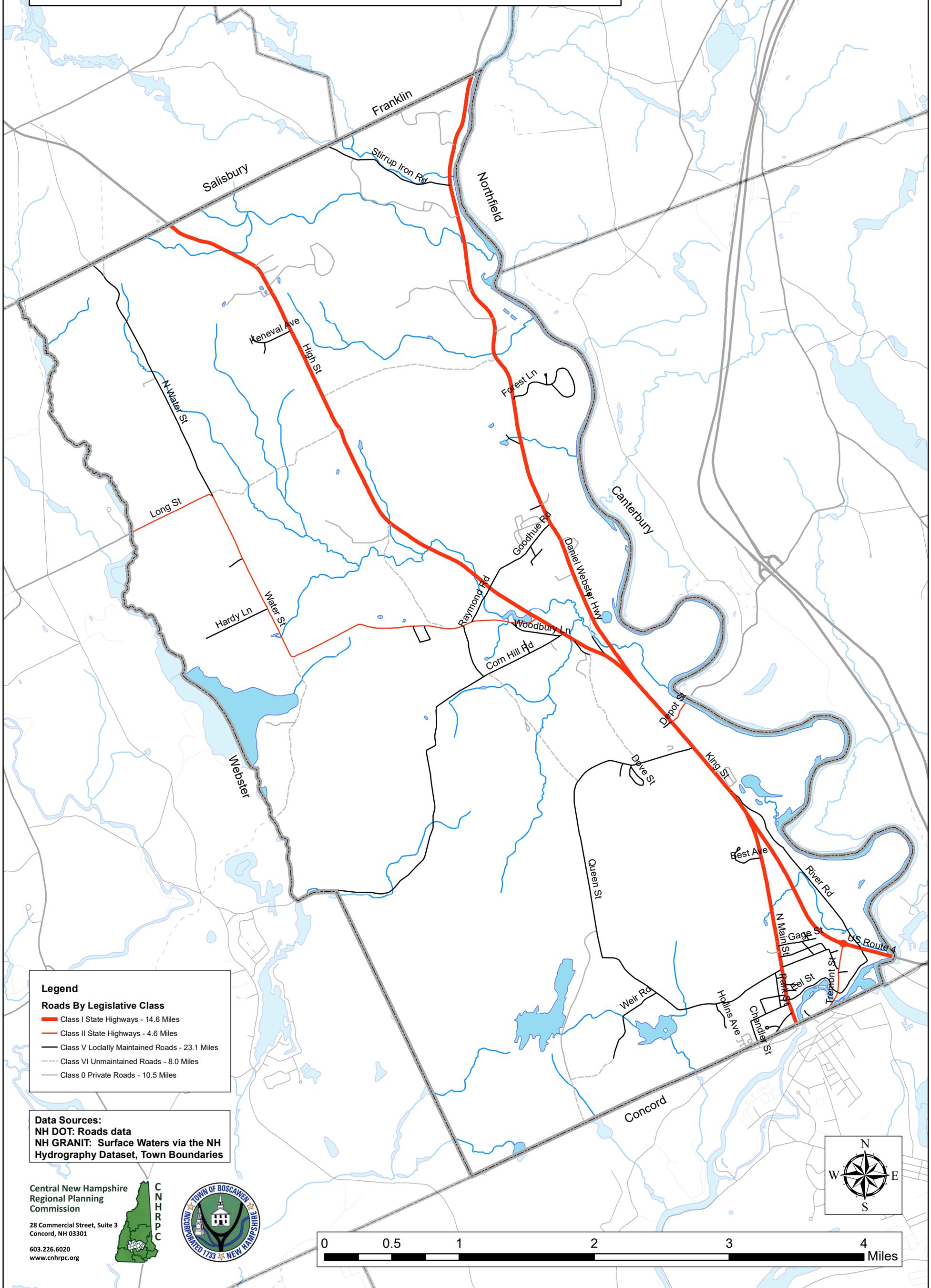
Encourage, support and facilitate an expanded Town Trail network in Boscawen.

- The Town has a unique opportunity to attract visitors, and economic activity, by supporting, and assisting where possible, the Northern Rail Trail from Concord to Franklin.
- Consider additions to the existing network of walking and snowmobile trails.
- Provide trail connections between US Route 4 and the Northern Rail Trail.

# Roads by Legislative Class Map

## Boscawen Master Plan

Map adopted December 4, 2018



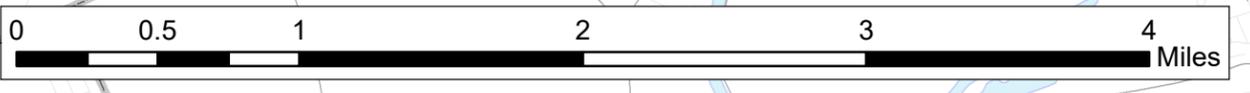
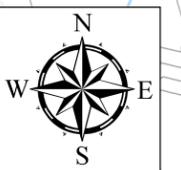
**Legend**

**Roads By Legislative Class**

- █ Class I State Highways - 14.6 Miles
- █ Class II State Highways - 4.6 Miles
- █ Class V Locally Maintained Roads - 23.1 Miles
- █ Class VI Unmaintained Roads - 8.0 Miles
- █ Class 0 Private Roads - 10.5 Miles

**Data Sources:**  
 NH DOT: Roads data  
 NH GRANIT: Surface Waters via the NH Hydrography Dataset, Town Boundaries

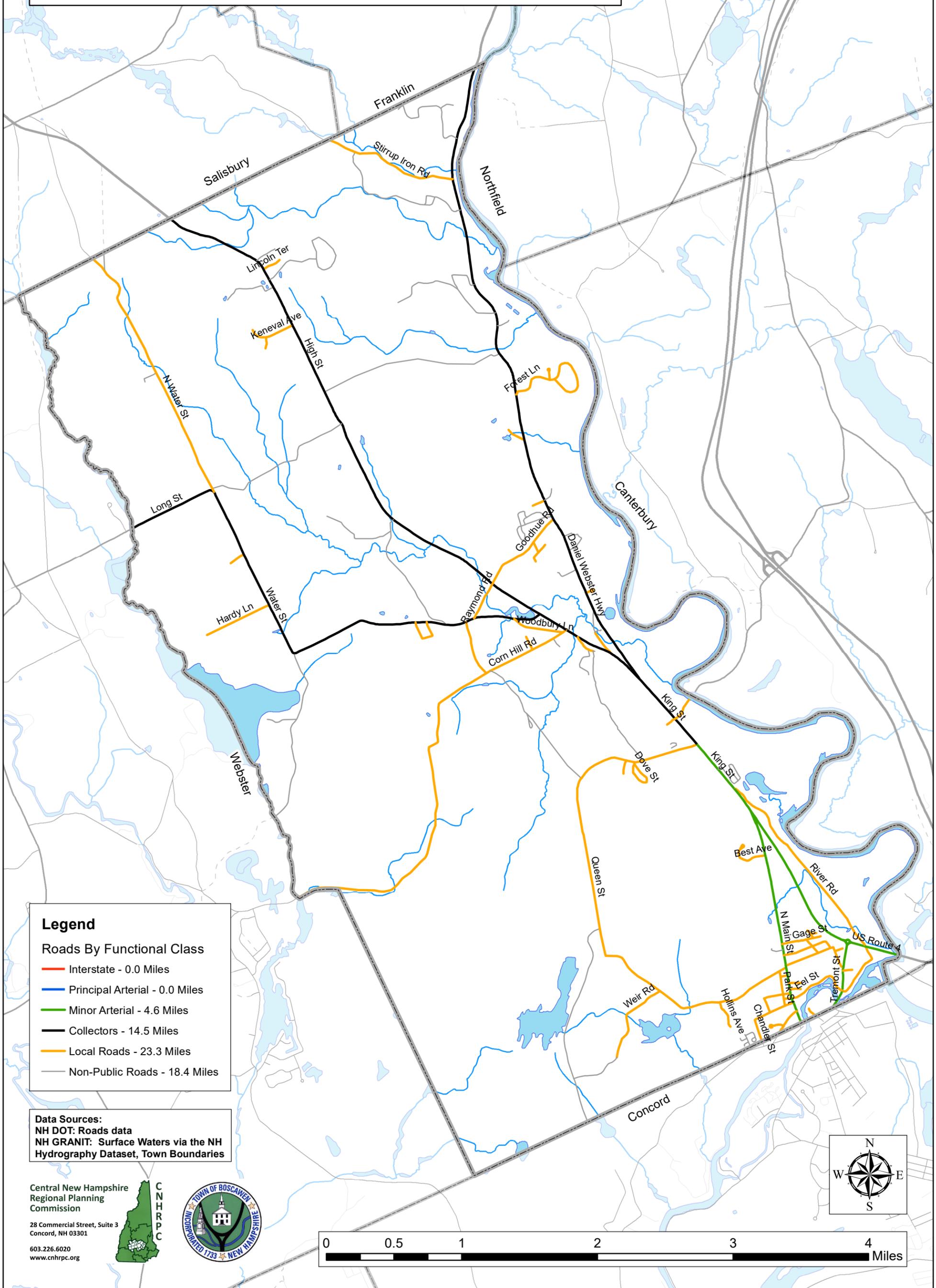
Central New Hampshire  
 Regional Planning  
 Commission  
 28 Commercial Street, Suite 3  
 Concord, NH 03301  
 603.226.6020  
 www.cnhrpc.org



# Roads by Functional Class Map

## Boscawen Master Plan

Map adopted December 4, 2018



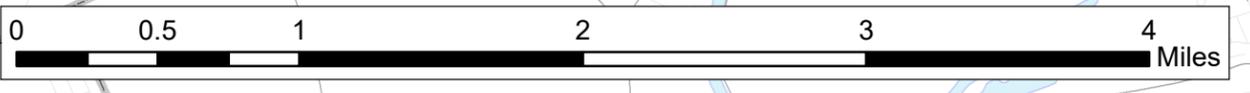
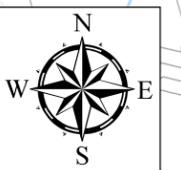
**Legend**

**Roads By Functional Class**

- Interstate - 0.0 Miles
- Principal Arterial - 0.0 Miles
- Minor Arterial - 4.6 Miles
- Collectors - 14.5 Miles
- Local Roads - 23.3 Miles
- Non-Public Roads - 18.4 Miles

**Data Sources:**  
 NH DOT: Roads data  
 NH GRANIT: Surface Waters via the NH Hydrography Dataset, Town Boundaries

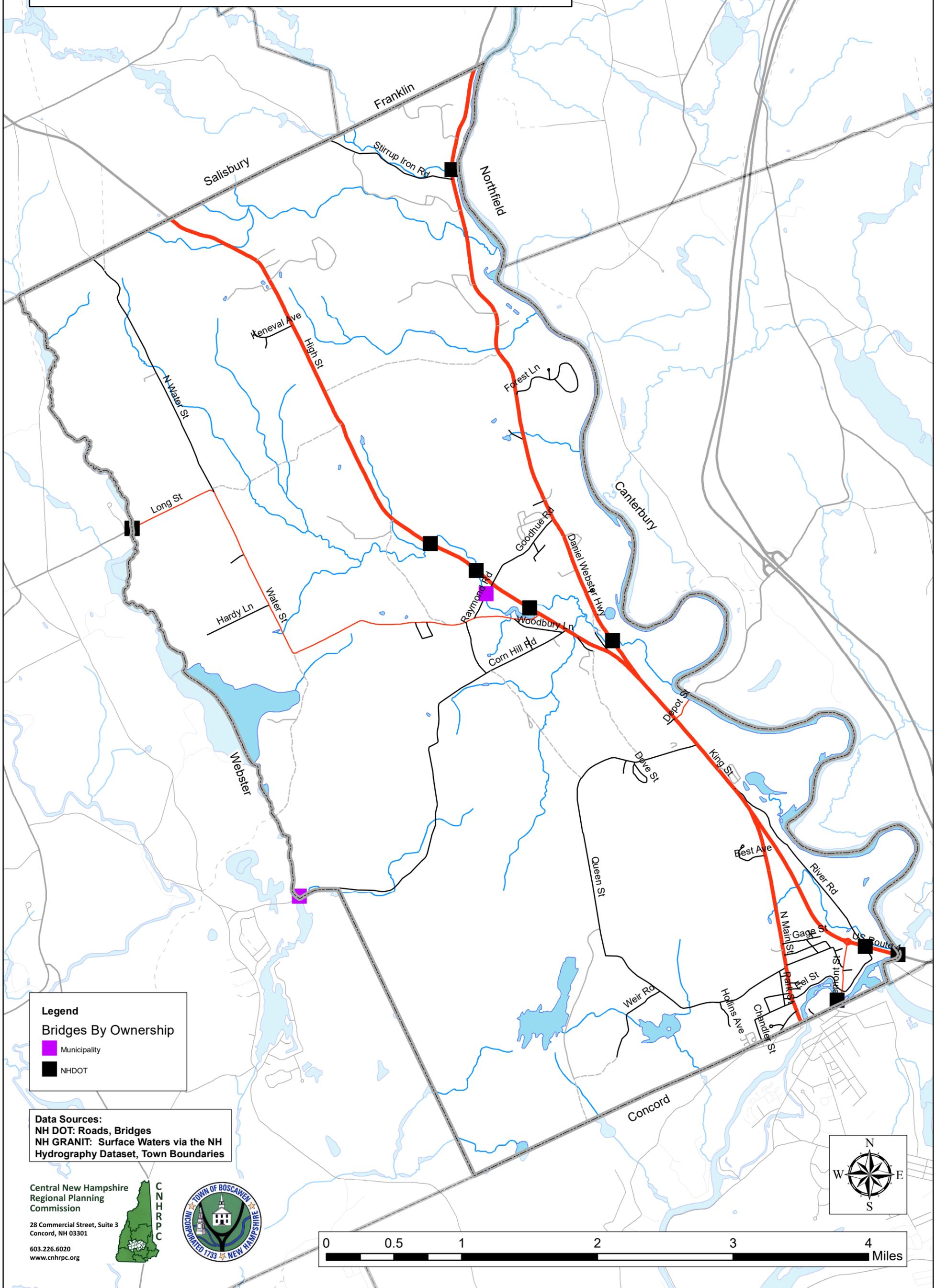
Central New Hampshire  
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 Commission  
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 Concord, NH 03301  
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# Bridges Map

## Boscawen Master Plan

Map adopted December 4, 2018

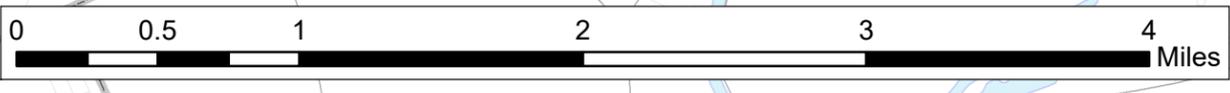


**Legend**  
**Bridges By Ownership**

- Municipality
- NHDOT

**Data Sources:**  
NH DOT: Roads, Bridges  
NH GRANIT: Surface Waters via the NH Hydrography Dataset, Town Boundaries

Central New Hampshire  
Regional Planning  
Commission  
28 Commercial Street, Suite 3  
Concord, NH 03301  
603.226.6020  
www.cnrpc.org



# Average Annual Daily Traffic Map

## Boscawen Master Plan

Map adopted December 4, 2018

North Water St  
At Salisbury TL  
2017 - 132  
2014 - 130  
2011 - 130

US 4 (High St)  
At Tannery Brook  
2017 - 3,537  
2014 - 3,600  
2011 - 3,300

Goodhue Rd  
East of US 4  
2017 - 519  
2014 - 510  
2011 - 560

US 3  
North of US 4  
2015 - 5,200  
2012 - 5,000  
2009 - 5,300

US 3/US 4  
South of Queen St  
2017 - 12,875  
2014 - 12,000  
2011 - 12,000

US 4  
West of US 3  
2015 - 6,100  
2012 - 6,200  
2009 - 6,600

Corn Hill Rd  
At Webster TL  
2017 - 559  
2014 - 640  
2011 - 640

US 4  
East of US 3  
2017 - 8,969  
2014 - 8,800  
2011 - 8,500

Harris Hill Rd  
South of US 4  
2017 - 7,032  
2014 - 6,700  
2011 - 6,700

US 3 (North Main St)  
North of Gage St  
2017 - 4,489  
2014 - 3,600  
2011 - 4,300

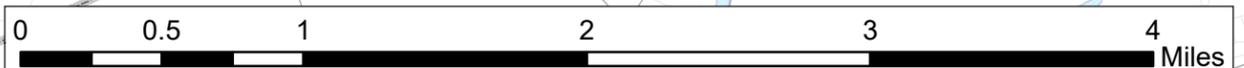
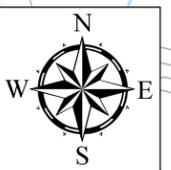
East St At  
Contoocook River  
2017 - 6,195  
2014 - 5,800  
2011 - 6,200

### Legend

 Count Locations

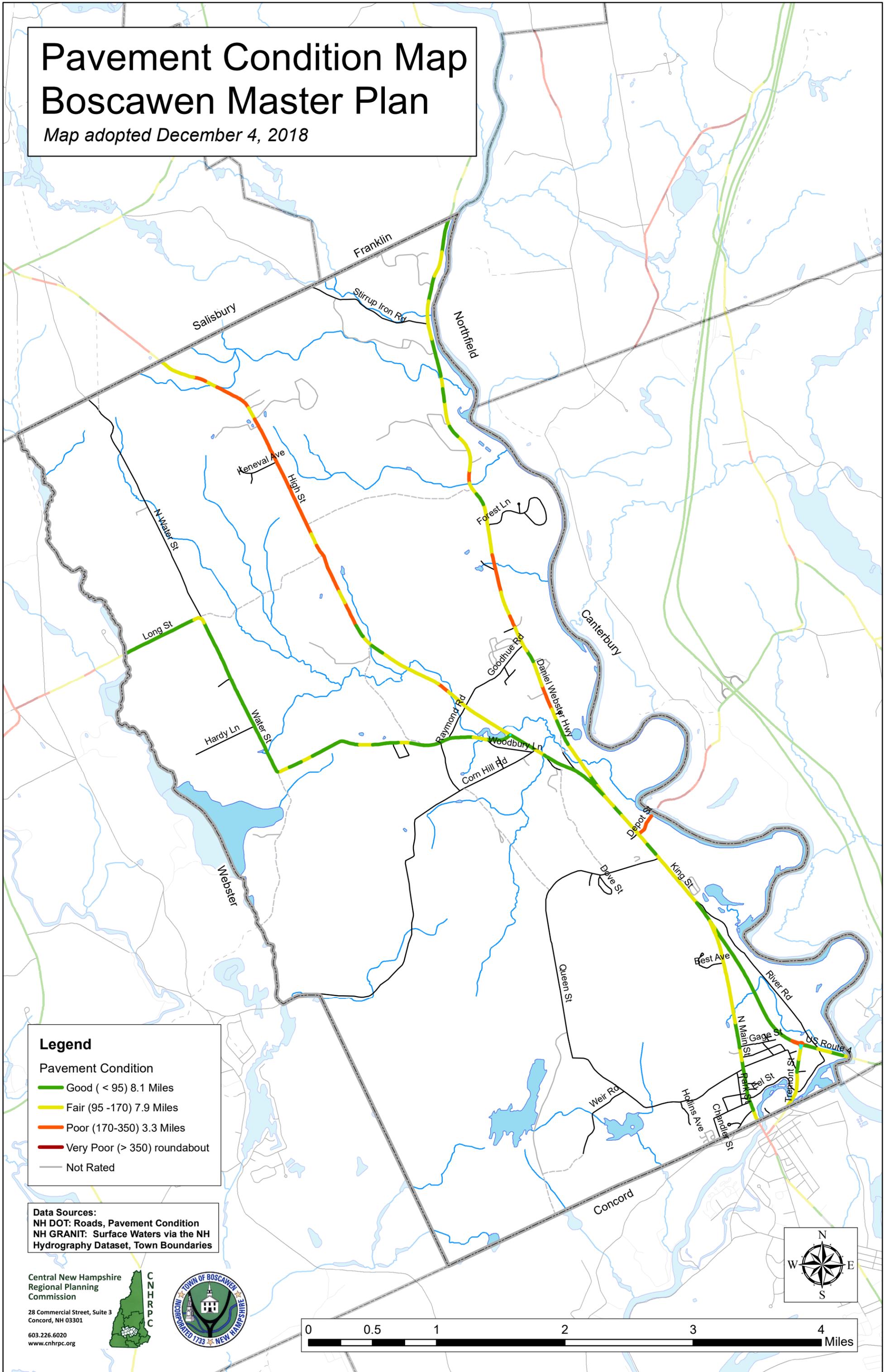
**Data Sources:**  
NH DOT: Roads data, Traffic Volumes  
NH GRANIT: Surface Waters via the NH Hydrography Dataset, Town Boundaries

Central New Hampshire  
Regional Planning  
Commission  
28 Commercial Street, Suite 3  
Concord, NH 03301  
603.226.6020  
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# Pavement Condition Map Boscawen Master Plan

Map adopted December 4, 2018



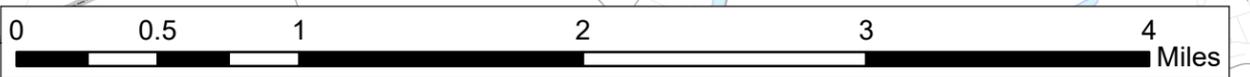
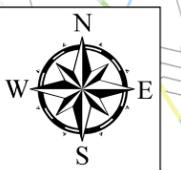
**Legend**

**Pavement Condition**

- Good (< 95) 8.1 Miles
- Fair (95 -170) 7.9 Miles
- Poor (170-350) 3.3 Miles
- Very Poor (> 350) roundabout
- Not Rated

**Data Sources:**  
 NH DOT: Roads, Pavement Condition  
 NH GRANIT: Surface Waters via the NH Hydrography Dataset, Town Boundaries

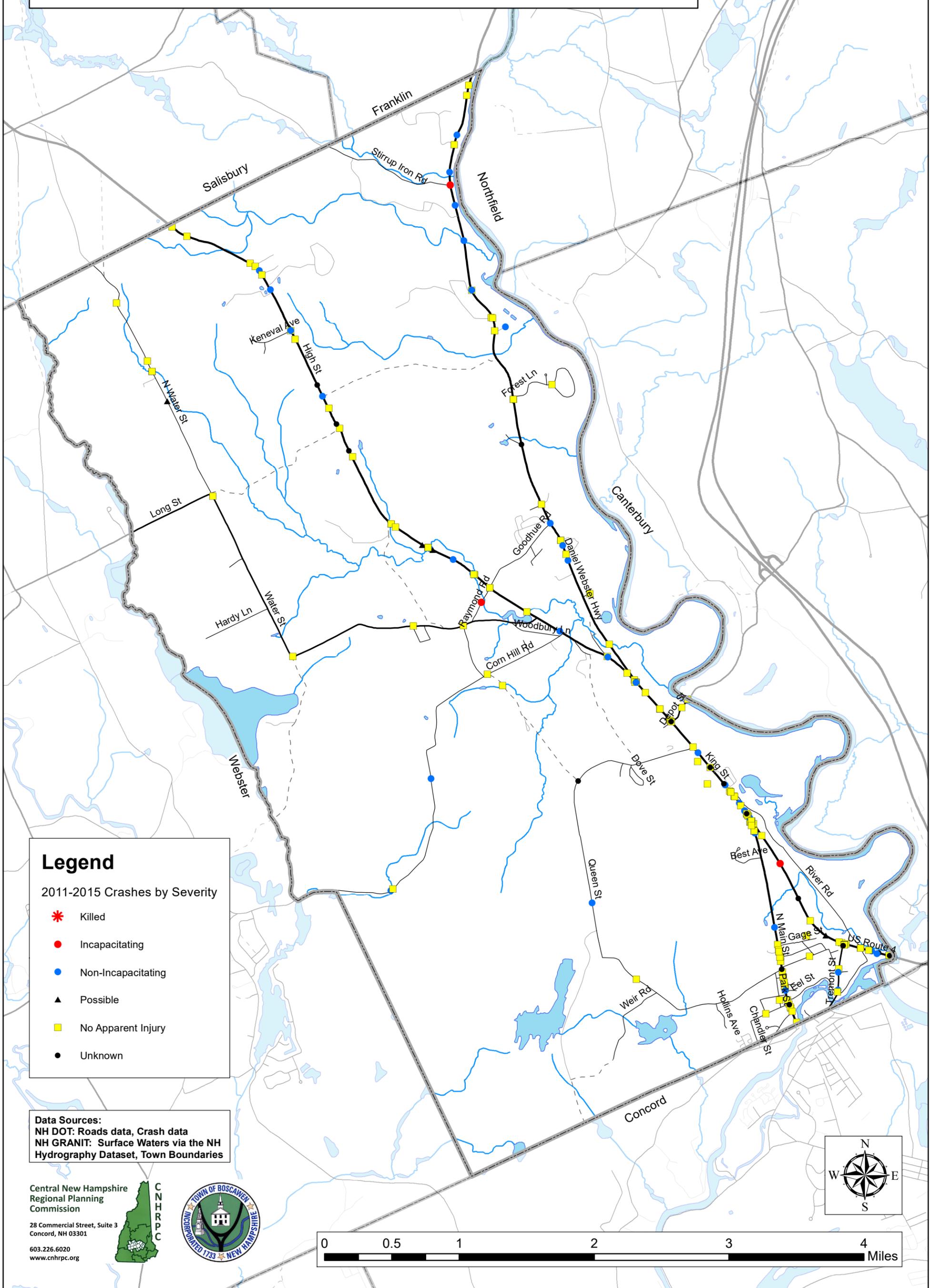
Central New Hampshire  
 Regional Planning  
 Commission  
 28 Commercial Street, Suite 3  
 Concord, NH 03301  
 603.226.6020  
 www.cnhrpc.org



# 2011-2015 Crashes by Severity Map

## Boscawen Master Plan

Map adopted December 4, 2018



### Legend

2011-2015 Crashes by Severity

- \* Killed
- Incapacitating
- Non-Incapacitating
- ▲ Possible
- No Apparent Injury
- Unknown

**Data Sources:**  
 NH DOT: Roads data, Crash data  
 NH GRANIT: Surface Waters via the NH Hydrography Dataset, Town Boundaries

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