

## **TRANSPORTATION**

### **Introduction**

Understanding Atkinson's transportation system requires an awareness of its residents and its road infrastructure. Atkinson is predominantly a residential community in which its residents commute out of town for employment. Route 93 to the west in Salem/Windham and Route 495 in Haverhill, MA are the two most relied upon highway systems for Atkinson residents. Access to these highways are primarily via Routes 111 and 121, respectively. Increasing congestion on these highways can be attributed not only to the commuting patterns of Atkinson's residents, but also to the travel patterns of motorists from outside Atkinson. Route 111, in particular, has experienced an increased level of congestion caused by its use as an east/west corridor.

The reliance of Atkinson's residents on the automobile for full-length (home to work) commuting is easily understood. Mass transit service adequate for commuting purposes is not available in Atkinson. While the NHDOT provides three park and ride lots (which were constructed to facilitate carpooling) within a short distance of Atkinson in Windham, Londonderry and Plaistow, there is minimal use of these lots by Atkinson residents. Increased usage of the existing park and ride lots would have little or no effect on the transportation system in Atkinson, as residents would still be reliant on their automobiles to get to these lots.

From a regional perspective, Atkinson suffers the pitfalls of being a community with no direct interstate access, no formal local park and ride lots, and no mass transit system.

Atkinson's geographic location within a rapidly growing region, coupled with generous accessibility to streets and highways have been the most significant element in shaping today's community patterns. They have not only been responsible for the rapid growth, but they also have been responsible for the location and size of developments that have taken place in the community. Inasmuch as they are a prime determination in development patterns in a community, they must be considered as part of the Master Planning effort.

Notwithstanding the transportation function our roads serve, they also establish the setting from which we view the Town. The views from the roads in Town, views of scenic vistas, pronounced landscapes as well as the places people work and live form the visual impressions of the community.

The predominant southerly development pressures in Atkinson are a direct result of the highway accessibility to the south and nearby employment centers in Massachusetts. Salem Road, Broadway and Route 121 which link the southern portion of the community to Haverhill contribute to the development patterns of Atkinson.

While the primary function of our transportation system is to facilitate the movement of people, goods and services into, out-of and throughout town, it is also the framework upon which Atkinson is built. The existing roads not only provide direct access to private properties, but also

provide opportunities for connection to new roads.

Admittedly, Atkinson's dominant traffic patterns reveal a strong north/south orientation which is heavily reliant on Main Street, Maple Avenue, East Road, Providence Hill and North Broadway.

### Street and Highway Classifications

In Atkinson, there is merit to evaluating the local functions of highways including all Class V highways. In addition to Routes 111 and 121, the town has within its jurisdictional responsibilities major collector highways consisting of the following:

- Maple Avenue and East Road are the primary north/south connectors.
- Westside Drive, Academy Avenue, Sawyer Avenue and Providence Hill Road are the primary east/west connectors.

Although never intended or designed for such use, other roads are evolving into collector roads, including Bryant Woods, Indian Ridge, Robie Lane, Sawmill Road, and Line Brook Road.

In addition to the major collectors, there are primary service roads which consist of Meditation Lane, Salem Road and Island Pond Road. The remainder of the road network can be identified as service roads catering mostly to abutting properties.

### Town Responsibilities

The Town of Atkinson is responsible for approximately 78% of the total road mileage within its bounds. While the initial construction of new roads within the community is the primary responsibility of developers, it is the community's responsibility to make major improvements on the town road network and maintain the same. As the adjacent table indicates, the Town of Atkinson has approximately 154 persons per linear mile of town road responsibility. Comparatively, Salem has 179 persons per linear mile. However, consideration must be given to the fact that 26,475 people live in Salem compared to Atkinson's 5,595 residents.

The purpose of providing the above statistics is not meant to criticize or suggest regulatory changes are needed in Atkinson, but rather to quantify density/road maintenance relationships within other communities in the region. Assuredly, if the Planning Board makes the determination that the zoning ordinance or subdivision regulations are having the effect of creating excessive road construction, corrective amendments could be made thereto.

In exercising the responsibility for road maintenance, the Town of Atkinson has provided the minimum level of maintenance necessary to sustain the heavy traffic pattern on local streets. In areas where roads were recently improved, the standards are quite high, while older roads, such as Maple Avenue, West Side Drive, portions of Main Street, Providence Hill Road and Sawyer

Avenue, are roads of long standing in the community. Some of these roads go through land too

wet for road construction, resulting in maintenance difficulty. Yet, in most instances, Atkinson has maintained an adequate and sound street and highway network which, with some minor improvements, will continue to serve the community well.

The local responsibility of streets and highways must be viewed in light of not only present but future demands, and there are instances where highway improvements will be recommended and should be receiving consideration as part of the continued operating budget for improvements and capital reconstruction to assure safer highways, particularly on collector streets.

### COMPARATIVE ROAD MILEAGE AND POPULATION: ATKINSON AND AREA TOWNS

Town	Class I	Class II	Class IV	Class V	Class VI	Total	Town Roads*	1990 Population	Persons per Road Mile
Atkinson	0	9.43	0	36.262	.510	46.202	36.262	5,595	154
Danville	0	6.711	0	20.504	5.336	32.551	20.504	2,534	124
Hampstead	0	15.344	0	46.758	2.033	64.135	46.758	7,128	152
Plaistow	2,045	14.702	0	30.490	.372	30.490	59.42	7,504	126
Salem	9.372	7.530	96.299	51.492	2.013	166.666	147.791	26,475	179
Sandown	0	6.811	0	36.853	5.828	49.492	36.853	4,060	110

#### State Classification of Highways:

- Class I: Highways on the primary State highway system, excluding all portions of such highways within the compact sections of towns and cities of 7,500 inhabitants and over. The State assumes full control and pays cost of construction, reconstruction and maintenance of its sections; the portions in compact areas controlled by the towns and cities under Class IV highways.
- Class II: Highways on the secondary State highway system, excluding all portions of such highways within the compact sections of towns and cities of 7,500 inhabitants and over. All sections improved to the satisfaction of the Commissioner are maintained and reconstructed by the State. All unimproved sections, where no state and local funds have been expended, must be maintained by the town or city in which they are located until improved to the satisfaction of the Commissioner.
- Class III: Recreational roads which consist of all roads leading to, and within, State Reservation designated by the Legislature. The State Highway Department maintains full control of reconstruction and maintenance of such roads.
- Class IV: Town and city streets which consist of all highways within the compact sections of towns and cities of 7,500 inhabitants and over. Extensions of Class I and II highways through these areas are included in this classification.
- Class V: Rural highways which consist of all other traveled highways which the town or city has the duty to regularly maintain.
- Class VI: Unmaintained highways including all other public ways, including highways discontinued as open highways, highways closed subject to gates and bars, and highways not publicly maintained in suitable condition for travel for five years or more.

\* Town Road total does not include Class VI Highways

Sources: New Hampshire Department of Transportation  
1994 NH Office of State Planning

### Traffic Counts

The following counts of traffic in Atkinson, conducted by the New Hampshire Department of Public Works and Highways, were for annual average daily traffic (AADT) and do not reflect peak hour or peak days in Atkinson's traffic pattern.

The count in Atkinson on Route 121 at the Plaistow town line has increased from 6,200 in 1977 to 10,000 in 1995.

Traffic counts at the Hampstead town line on Route 121 reveal growth considerably higher than at the Plaistow town line. In 1978, 2,800 cars were counted, while in 1995, the number rose to 7,100 vehicles, translating into an annual rate of increase of 5.6%.

In comparison, on East Road the traffic has increased from 2,200 vehicles per day in 1978 at the Plaistow town line to 4,600 in 1994, an annual increase of 4.7%.

Atkinson's growth and traffic volumes indicate that the traffic in Atkinson is not all locally generated and is, at least partially the result of increased through traffic within the community.

### Traffic Projections

Projecting future traffic trends relies on population and employment projections, assumes that traffic patterns remain consistent and that vehicle mile trips will continue increasing at historical rates. It should be obvious that projecting future traffic is anything but an exact science. Factors influencing peoples travel patterns include a plethora of factors including, but not limited to; congestion levels, automobile alternatives, fuel prices, and employment options and locations.

Notwithstanding these factors, reasonable projections can be made for the Town of Atkinson, provided that the basis of the projections is clearly understood. For the purpose of this Master Plan, population and employment opportunities will be the foundation of the projections.

### POPULATION HISTORY AND PROJECTIONS

TOWN	1970	1980	1990	1995	2000	2005	2010	2015	AVERAGE ANNUAL GROWTH RATE 1990-
<b>ATKINSON</b>	2,291	4,397	5,188	5,272	5,788	6,318	6,806	7,304	1.38%
Danville	924	1,318	2,534	2,663	3,007	3,369	3,712	4,070	1.91%
Hampstead	2,401	3,785	6,732	7,044	7,830	8,646	9,407	10,191	1.67%
Plaistow	4,212	5,609	7,316	7,497	8,060	8,628	9,141	9,656	1.12%
Salem	20,142	24,142	25,746	25,918	27,410	28,887	30,205	31,510	0.81%
Sandown	741	2,057	4,060	4,272	4,940	5,661	6,356	7,095	2.26%

The population history and projections contained in the table above project an annual growth rate of 1.34% between 1990 and 2015 for Atkinson and the five surrounding towns listed. This growth rate translates into an additional 19,380 residents by the year 2015. The fastest growth rates of the communities in the region include Hampstead and Windham; the largest population increases are projected to occur in Salem, Windham and Hampstead, respectively.

### AREA EMPLOYMENT PROJECTIONS

Town	1980	1990	Average annual growth rate 1980-90
<b>ATKINSON</b>	238	458	6.8%
Danville	58	115	7.1%
Hampstead	512	1,148	8.4%
Plaistow	2,090	3,218	4.4%
Salem	8,150	14,755	6.1%
Sandown	32	104	12.5%

The table above presents data from the New Hampshire Department of Employment Security on employment for Atkinson and surrounding towns for the period 1980 to 1990. According to these estimates, employment opportunities in these towns increased by approximately 40% over the last decade. The majority of the employment growth was concentrated in the urbanized towns of Salem, Plaistow and Windham, and most noticeably in Salem.

The interrelationship between population growth, employment patterns and growth ultimately affect transportation patterns and vehicle miles driven. Nationwide, vehicle trips and vehicle miles traveled have increased at rates far greater than either population or housing growth. The relatively low cost of vehicles and fuel coupled with highly accessible road networks have fostered this trend. A review of the population and employment projections provided herein clearly indicates that continued growth is inevitable. Perhaps the most telling conclusion that can be drawn from these projections is that relatively rapid growth is occurring in the communities surrounding Atkinson. While this is not surprising, it does reinforce assumptions made elsewhere in this Master Plan.

### Street Construction Program

While the Road Agent has prepared a ten-year road reconstruction plan, the Town recognizes the necessity to increase its road reconstruction planning effort. Future planning efforts should be considerate of the present and future travel patterns of Atkinson's residents and non-residents alike. Road maintenance and reconstruction projects undertaken by the Town should likewise be considerate of present and projected levels of traffic, in order that roads are reconstructed or maintained to an appropriate standard.

By improving these situations, the town, through its road agent and the Board of Selectmen, may apply for state participation in any of these improvements. This is suggested because of the availability of state funds on a matching basis, thereby stretching local dollars and creating a safer and better road network in the town.



Along with these improvements, it is suggested that the town seek redesignation of Providence Hill Road and Sawyer Avenue in order to make them part of the state's secondary highway system and/or eligible for Federal Aid. This is urged because of the regional traffic resulting from Route 121 traffic traveling to the Island Pond Road section in the Town of Salem.

### Land Use and Transportation

One of the most compelling components in land use planning of late is the study and understanding of the relationship between land use planning and transportation planning. In the recent past these two disciplines have become less and less connected despite the great impact each has upon the other. With the passage of the federal transportation authorization legislation of 1991 the Intermodal Surface Transportation Efficiency Act (ISTEA), and the Clean Air Act Amendments (CAAA) of 1990 the land use/transportation planning link has become a practical means for curbing the adverse affects of urban sprawl and over-reliance upon single-occupant automobiles that have become trademarks of American society.

Recent interest in the impacts of these two planning disciplines upon one another has resulted in a number of policies that can be adopted by municipalities to attempt to improve air quality and reduce unnecessary trips by automobiles within a community. A number of these policies are included here for the potential use by the Town of Atkinson in addressing these concerns.

- A. The Town should explore the feasibility of the construction of sidewalks in the areas near schools which are not serviced by buses, as well as other areas which may be appropriate.
- B. Adopt town level regulations for subdivision and site plan review that encourage pedestrian and bicycle traffic. If amenities for this kind of transportation are provided in town, individuals are given alternatives to automobile trips.
- C. Encourage development design that incorporates amenities for public transportation in the development regulations that would serve to make public transit service an alternative to the automobile.
- D. The Town should take a pro-active approach in securing federal funding for transportation improvements. Federal funds are available to communities for projects ranging from intersection improvements to bicycle and pedestrian amenities.
- E. The Town should review its municipal procedures to ensure that adequate attention is given to the siting of driveways for residential and commercial activities to insure the future integrity of heavily traveled transportation corridors.

#### Recommendations:

1. The Planning Board, in cooperation with the Board of Selectmen, Road Agent and Highway Safety Committee should develop a comprehensive ten-year road reconstruction plan and update the CIP to incorporate the forecasted expenditures.
2. The Planning Board, in cooperation with the Board of Selectmen, should take a more pro-active role in resolving regional traffic problems such as the traffic congestion problem along Route 125 in Haverhill, MA.
3. The Planning Board in cooperation with the Board of Selectmen, Road Agent and Highway Safety Committee should consider the construction of sidewalks in the areas near schools which are not serviced by buses, as well as other areas which are may be appropriate, and update the CIP to incorporate these forecasted expenditures.
4. Considering the different uses of various roads, street construction specifications reflecting these usages should be considered.
5. Road construction standards should be amended based upon American Association of State Highway and Transportation Officials (AASHTO) recommendations.

