

5. Transportation and Circulation

Introduction

Seabrook has several modes of transportation and transportation facilities. The roadway system ranges from rural country roads that have changed little over the past 20-30 years to an eight-lane divided toll road that serves as the “gateway” to New Hampshire—its lakes, mountains and ocean beaches. Associated with the roadway system are more limited facilities for bicycles and pedestrians. At one time the town was served by commercial rail service as well as public bus transportation, but these services no longer extend to Seabrook.

Seabrook’s existing roadway transportation system mirrors the historical movement of people and goods and has played an instrumental role in the way that the town has grown and developed. The key roadway that contributed to the historic growth and development of the town and is still a major commercial corridor is US Route 1 that runs in a north-south direction. At one time this road, also referred to as Lafayette Road, was the “Main Street” of Seabrook. As noted in the Historic Resources Chapter this roadway was once the main street for Seabrook Village in North Seabrook and Smithtown in South Seabrook near the Massachusetts border. Other roadways have contributed to both access to and growth of the town. The most prominent of these is Interstate 95 that runs north south and has two interchanges that provide access to Seabrook—Massachusetts Interchange 60 at Route 286 that runs easterly to US Route 1A at Seabrook Beach and New Hampshire Interchange 1 at NH Route 107 that runs from the boundary with Kensington to the west to a major intersection with Route 1. US Route 1A runs north-south from the Hampton Town Line to the Massachusetts border at Salisbury providing access to the Seabrook Beach area. While there are several major roadways providing access and travel within Seabrook, travel and circulation is somewhat restricted in the east-west direction since there is only one bridge over I-95 that allow traffic to flow in that direction. Also the only two east-west connector corridors are state “limited access” highways (NH Routes 107 and 286). As a result the town has grown into three distinct areas: the beach and estuary area, the US Route 1 corridor area and western Seabrook.

Seabrook’s roadway system is more than a system of streets for automobile traffic to get from one place to another. It is also closely linked to the use of land adjacent to it. Roadways open up views and provide access. By their design and location they can determine the flow and safety of traffic. Streets are also used by cyclists, pedestrians, and residents in Seabrook’s neighborhoods. The scale and design of a roadway should be consistent with its intended use and function and should be integrated into the overall plan for the town.

From a regional perspective the growth in traffic with respect to land use has been quite dramatic.

We are consuming land in the region at a greater rate than previous generations, and not just because population is growing faster. Between 1953 and 1974, 0.75 acres of land were developed in Rockingham County for each person added to the population. Between 1974 and 1982, this rate of land consumption more than doubled to 1.59 acres per capita. This shift is due to a combination of factors including market trends, zoning, and natural constraints on remaining undeveloped land. The dispersed land use pattern it creates is reflected in a comparison of population growth to traffic volume in the region. From 1982 to 1997 population in Seacoast New Hampshire grew by about 38%, while traffic volume in the region grew by 169% - a factor of more than 4 to 1. *2009-2035 Long Range Transportation Plan, RPC, October, 2008*

Seabrook has also experienced this consumption of land and as of 2005 27.1% of Seabrook was in impervious cover—almost double from 1990 and third highest in Rockingham County behind only Portsmouth and New Castle. Similarly the traffic volumes increased, although not at the same rate as Seabrook’s physical growth. During the period of 1996 to 2009 daily traffic volume grew at Route 1 at the Massachusetts line from approximately 9,000 trips to 13,000 trips. Further north near Route 107 the volume increased from 22,000 in 1997 to 26,000 in 2007.

As Seabrook continues to grow, the town will need to respond to changing demands for providing a well-managed transportation system. This section of the Master Plan updates the inventory from the transportation chapter of the 1990 Master Plan and assesses the current transportation system, evaluates the community's desire for transportation and proposes recommendations for achieving the town's transportation goal and objectives. This chapter also includes a major section on the documentation and results of The Route Corridor Design Workshop as well as appendices for Administrative Classification System, Seabrook Roadway Maps, and Proposed Roadway Functional Class Standards.

Regional Transportation Planning

Seabrook is part of the Rockingham Metropolitan Planning Organization (MPO) that encompasses the same communities as the Rockingham Planning Commission (RPC) which manages the transportation planning program as the MPO. This organization was established in July 2007 through a joint agreement among the NH Department of Transportation (DOT) and the Rockingham Planning Commission. The MPO prepares regional transportation plans on a biennial basis that guide development of the transportation system for 20 years. Prior to this time the RPC had been part of larger MPO that included the Strafford Planning Region.

The most recent regional transportation plan was completed in October, 2008 and includes projects that are to be fully or partially funded by the state from 2009 to 2035. In addition to the long-range plan, a four-year Transportation Improvement Plan (TIP) was also completed in October of 2008. This plan identifies specific projects for implementation in each of the MPO communities through 2012. The Long Range Plan and TIP are prepared in compliance with the federal Safe, Accountable, Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFTEA-LU) and the Clean Air Act Amendments of 1990 (CAAA). The projects in the TIP and Long Rang Plan were adopted through a cooperative process between the NH DOT, the regional planning commissions and the local communities. The local communities have representation on a Technical Advisory Committee and a Policy Advisory Committee. The laws place strong emphasis on plans that:

- reflect locally established project priorities;
- are financially realistic;
- are consistent with the State's plan for air quality attainment (the 'SIP') and
- are developed with meaningful public involvement.

Proposed projects in the Long Range Plan should:

- support the economic vitality of the region,
- increase safety and security of the transportation system,
- increase accessibility and mobility of people and freight, protect and enhance the environment, promote energy conservation, and improve quality of life,
- enhance integration and connectivity of transportation system,
- Promote efficient system management and operation; and
- emphasize the preservation of the existing transportation system.

The following projects in **Table 5-1** are scheduled in the 2009 TIP for Seabrook.

**Table 5-1
2009 TIP Projects for Seabrook**

Roadway	Description of Work	Year Complete
I-95 (Blue Star Tpk.)	ITS (Intelligent Transportation System) Deployment; ITS initiative allowing for deployment of variable message boards and highway advisory radio to improve motorist safety	2010
I-95 (Blue Star Tpk.)	ITS Deployment; Primarily for open road tolling and variable message boards for traffic mitigation	2009--2012

The Long Range Plan for the RPC includes the following projects for Seabrook in **Table 5-2**. These projects are recommended by the RPC, but are not programmed for implementation. Construction years are estimates based upon the RPC Financial Plan.

**Table 5-2
MPO Long Range Plan Projects**

Federal Highway Projects	Cost Estimate	Construct. Start Year
• I-95 ITS Deployment Toll System and Electronic Information Signs to provide better information to travelers	\$4.2 M	2009
• I-95 congestion mitigation—general traffic mitigation planning; preliminary open road tolling	\$0.8 M	2009
Community Projects		
• Install signal at New Zealand Road and make crosslot connection between Rocks Road and the North Access Road.	\$0.25 M	2010
• Reconfigure rotary on US 1 at the MA state line to a four way intersection as per the US 1 Corridor Study. Widen US 1 to 5 lanes	\$2.5 M	2020
• Widen US 1 to 5 lanes between Walton Road and Lake Shore Drive	\$2.4 M	2020
• Add a 5th lane to US 1 in the vicinity of Railroad Avenue to create a consistent 5 lane cross-section	\$0.8 M	2020
• Widen US 1 to 5 lanes between NH 107 and the North Access Road.	\$3.1 M	2020
• US 1 - Transition from 5 lanes at the North Access Road to a 3 lane cross-section at the Hampton Falls town line	\$0.4 M	2020
• Curbed sidewalk linking Seabrook Beach community with Hampton Beach.	\$0.27 M	2022
Transit Projects		
• COAST service along US Route 1 from Portsmouth to Seabrook	\$1.2 M	2012

Source: Rockingham MPO Long Range Transportation Plan 2009-2030

In June of 2009 in preparation for the state 10 Year Plan for 2011-2020, the RPC worked with its member communities to prepare a set of projects that would be recommended to the state for inclusion in the State 10 Year Plan and also the regions' Long Range Plan. These projects were classified as one of the following:

- Inter-Regional Projects (benefits to multiple regions)
- Projects with Regional Benefits
- Projects with primarily Local Benefits
- Bridge projects
- Transit service expansions

As a result of this process, additional projects for Seabrook not in the original Long Range Plan were added to the Long Range Plan and others were re-prioritized. (*Prioritized Transportation Projects, Rockingham Regional Planning Commission, June 9, 2009*). Most noteworthy is that the I-95/NH Route 107 Interchange (#1) project to increase capacity was ranked Number 1 on the priority list of RPC Inter-Regional Projects. This bridge project is also included the NH DOT Ten Year Plan. This project would involve widening of the Route 107 Bridge, as well as roadway widening and off-ramp signalization. Provision is also expected to be made for pedestrians and bicycles. A portion of this project will be considered as mitigation for a commercial retail development. The widening of Route 1 to a fifth lane north of Lowe's and Market Basket retail malls intersection to NH Route 107 in Seabrook was the highest ranked RPC Regional Project.

Both of these projects have now been made possible through an agreement among the Town of Seabrook, the NH Department of Transportation (DOT) and a private retail mall developer—DDR, provided the developer initiates construction prior to 2013.

For Local Projects the installation of a traffic signal at Rocks Road was ranked 6th in the Local Project category. The extension of the COAST Service from Portsmouth to Seabrook was ranked first for Transit Service Projects.

Finally, the Regional Economic Development Center has recently prepared its *Comprehensive Economic Development Strategy* (CEDS) and has identified two roadway projects for Seabrook. Both projects have been recommended for the Intermediate Project Priority List. The first is the NH Route 107/I-95 bridge expansion project and the second is the Route 1 widening south of the Route 107 signal on US Route 1, both of which are in the RPC Long Range Transportation Plan. Both of these are potential funding candidates for Economic Development Administration funding because of Seabrook's relatively high unemployment rate.

Regional Highway Network within Seabrook

Within the region there are a number of transportation routes that carry the majority of long distance travel both within and to and from the region. These routes carry the highest volumes of people and goods between the communities and the regional employment and other activity centers. A number of these major routes are within the Town of Seabrook

Interstate 95 (I-95) is an eight lane, toll facility that crosses the southeastern portion of the RPC between Massachusetts and Maine. The route serves as a major commuter transportation corridor in the region, as well as handling year round tourist traffic between southern and northern coastal New England and the Maritime Provinces of Canada. Because of the tourist traffic, volumes on the roadway vary significantly by time of year from an average of 69,000 (2008) vehicles per day in the winter, to 129,000 (2007) vehicles on an average weekend day at the peak of summer traffic in August. It is classified as a major arterial roadway by NH DOT.

US 1 is a heavily developed two lane roadway for most of its length that provides local connections to communities along the Seacoast, access to NH beaches for tourists, as well as high levels of commercial activity. Volumes stay above 20,000 vehicles per day through much of the area between Seabrook and Hampton, and drop off in North Hampton and Rye to the 15,000-18,000 range. US 1 itself continues through Portsmouth, and crosses to Maine via the Memorial Bridge. It is classified as a minor arterial roadway by NH DOT.

NH 1A (Ocean Boulevard) is a four lane coastal roadway, which was recently designated as a New Hampshire Scenic Byway. This roadway is residential along its eastern side and is commercialized at the intersection with NH Route 286 and at River Road. In the summer, it is congested with both motorized and non-motorized beach traffic. Average Daily Traffic (ADTs) ranges from 11,700 in Seabrook to 8,000 in New Castle. It is classified as a minor arterial roadway by NH DOT.

NH Route 286 is an east-west limited access two-lane roadway in south Seabrook that links I-95 and US Route 1 to NH Route 1A. It is heavily travelled during the summer months with average daily traffic counts of 16,000 vehicles per day.

NH Route 107 is an east-west roadway that extends from the Kensington town line to a traffic signal on US Route 1. It is a two-lane roadway from the Kensington town line to the I-95 interchange where it becomes two-way in both directions to US Route 1.

Key Local Roadway Network within Seabrook

Centennial Street functions as local collector roadway and carries traffic in a north-south direction connecting Farm Lane Road and Walton Road. This roadway consists of two lanes with one travel lane in each direction. It has a generally flat alignment except where it dips to cross Cains Brook near Walton Road.

Walton Road acts as local collector roadway carrying traffic in an east-west direction from an intersection near Town Hall on Route 1 to its easterly terminus at the Hampton-Seabrook Estuary. This roadway consists of two lanes with one travel lane in each direction. It has a generally flat to undulating alignment.

Railroad Avenue functions as a local collector roadway and carries traffic in an east-west direction between US 1 and several local streets. At US Route 1 there is a signalized intersection with the re-located Pine Street. It eventually turns into Farm Lane, which terminates at a ramp access to a tidal creek that discharges into the Hampton-Seabrook Estuary. It has a generally flat alignment with two lanes with one travel lane in each direction.

Stard/Batchelder Road functions as local collector roadway and carries traffic in a north-south from the Hampton Falls town line to the Salisbury town line west of I-95. The roadway becomes Stard Road north of the signalized intersection with NH Route 107 and Batchelder Road south of this intersection. This roadway consists of two lanes with one travel lane in each direction. It has a generally flat alignment.

Ledge Road runs in an east west direction from an intersection with Batchelder Road to the east becoming Black Snake Road that intersects with Locust Street just over the South Hampton town line. It functions as a local collector for the Ledge Road neighborhood in the southwest section of Seabrook. This roadway consists of two lanes with one travel lane in each direction. It has a generally flat alignment.

Boynton Lane intersects with US Route 1 with STOP sign control and functions as a local street with no outlet. It provides access to the Southgate Shopping Center and a nearby residential area. This roadway consists of two lanes with one travel lane in each direction.

Lake Shore Drive is a two way local street that provides the sole means of access/egress to a residential area west of Route 1. It intersects with Route 1 at a signalized intersection opposite Home Depot.

Current Local Transportation Projects

At present, there are no capital roadway or transportation projects that are being funded locally. The town does prepare a capital improvement plan that includes roadway projects, but at present no capital projects have been approved. However, contained in the capital improvement plan are a series of roadway the repair and maintenance projects for town roads and associated structures including drainage structures that are included on the Town Warrant. In the 2010 Town Meeting the following projects were approved:

Project	Approved Funding
<ul style="list-style-type: none"> Improvements to town streets consisting of pavement overlays and adjustment to associated structures. 	\$183,000
<ul style="list-style-type: none"> Crack sealing repairs to town roads 	\$35,000
<ul style="list-style-type: none"> Design and construction of drainage improvements to town streets 	\$20,000

Roadway Classification System

In New Hampshire roadways are classified in several ways for administrative and functional purposes. The administrative classification system is based upon criteria established by the NH Department of Transportation (NH DOT) for purposes of maintenance and it identifies which level of governmental is responsible for maintenance and construction. The functional classification system classifies roads by capacity of a given roadway to handle traffic and by the particular land use setting of the roadway.

Administrative Classification

Roads and highways are classified in accordance with a state administrative classification system that assigns governmental responsibilities for construction and maintenance purposes. This system identifies six classes. Four of these are found in Seabrook. A full description of each class is found in **Appendix A**. See attached map **Figure B-1, Roads by Legislative Class in Appendix B**. The state lists 61.1 miles of roads in the Seabrook both public and private. Of these, 13.6 miles are state aid roads. They are classified as follows:

- **Class I-Trunk Line Highways**—are part of the primary state highway system except for portions that are within a designated urban compact area. The state pays for construction and maintenance for roads outside the compact area. There are no urban compact areas in Seabrook. There are 7.4 miles of Class I roads in Seabrook—all of which are Interstate 95 and US Route 1.
- **Class II-State Aid Highways**—are part of the state secondary highway system. The state also pays for construction and maintenance. Route 107 and Route 286 fall into this category. Seabrook has 6.2 miles of Class II highways.
- **Class IV-City Streets**—Seabrook does not have any city streets (urban compact area).
- **Class V-Rural Highways**—all other traveled roadways (outside compact area) that are maintained by the town. There are 39.3 miles of rural highways in Seabrook.
- **Class VI-Unmaintained Highways**—consist of all other public ways that have been discontinued or not maintained in a suitable condition for five years or more. Seabrook has only 0.3 miles of Class VI highways.
- **Private Roads**. These are privately maintained local roadways. There are 7.9 miles of private roads in Seabrook. The longest stretches of private roads are the two access roads to the Seabrook Nuclear Power Plant.

Functional Classification

Functional classification systems for Seabrook have been prepared by the NH DOT based upon federal standards in terms of the function the roadway serves. In many communities these systems are modified for local purposes, although Seabrook has not classified its road system this way. This system is based upon a determination of the role that each roadway system performs in terms of traffic capacity and land access. See attached map **Figure B-2, Roads by Functional Class in Appendix B**. The Seabrook functional classification system is similar to the legislative classification and is broken down as follows.

- **Arterial (Urban/Rural)** A network of continuous routes that provide mobility for relatively high vehicle volumes and high travel speeds (rural) with minimal interference to through traffic. The following roadways are classified as “arterials” in Seabrook—I-95 and US Route 1 and 1A. (7.4 miles).
- **Collector (Urban/Rural)** Branches off of the arterial system that provide access to adjacent lands and provide service for travel over relatively short distances, typically to other collectors and local streets. The following roadways are classified as “urban collectors” in Seabrook—NH Route 107, NH Route 286 and a portion of South Main Street. (5.4 miles)
- **Local (Urban/Rural)** Branches off of the collector system that provides direct access to adjacent land, but relatively little mobility between locations. Most of these are typically locally-maintained roadways. These included the remainder of the roadway system except for the private roads. (40.1 miles)

These classifications are useful for roadway planning, since they provide a means for implementing standards and specifications to handle appropriate levels of traffic, establish roadway character and

identify roadway sections for maintenance and reconstruction. For example, local roads could conform to the Street Design Standards in the town's Subdivision Regulations.

Once a Functional Classification System is established the town may want to prepare standards for each type of roadway. **See a sample system in Appendix C.**

Traffic Volumes

Traffic volume data is one of the components in evaluating traffic characteristics within Seabrook. This information is an important part of the process of establishing priorities for future roadway improvements. Design and safety standards for roadways typically incorporate traffic count data.

The most heavily traveled roadway in Seabrook is Interstate 95 which in 2009 recorded an average annual daily trip count of 87,000 vehicles. The NH DOT's Bureau of Transportation Planning monitors traffic throughout the state and publishes monthly reports for 79 locations. In addition the department conducts traffic counts during the summer months at additional locations. The only permanent station in Seabrook is at the I-95 crossover just over the Massachusetts state line. Average Annual Daily Traffic Counts for I-95 for the years 1996, 2004, and 2009 are reported below in **Table 5-3**.

**Table 5-3. Daily Traffic Volume-Interstate 95
Seabrook Interchange 1, 1970-2009**

Year	Volume	Change to 2009
1996	78,392	11%
2004	89,424	-3%
2009	87,000	

Source: Seacoast MPO, Long Range Transportation Plan

These increases are directly attributable to the increase in traffic experienced over the past 30 years from both through traffic to New Hampshire's White Mountains and Lakes Region and the coast of Maine, as well as the increase in commuter traffic from Seabrook and north to the job centers in Dover, Portsmouth and Kittery, Maine. Because of the steady increase in business development and associated residential growth that has occurred during this time period in Portsmouth, Hampton, Seabrook and further north, commuter and business traffic has also increased.

In addition to the permanent recorder on I-95, NH DOT has 11 other stations throughout the town where traffic is recorded. However, in any given year the state may conduct counts at seven or fewer locations. Some stations are counted only every 3-5 years. In order to obtain a trend analysis for volume change at the same stations, the following table—**Table 5-4**—compares data from 2006 and 2009 for five stations.

Of the 12 stations in the table only five could be compared over the four-year period from 2006 through 2009. Of these three showed modest increases while two showed declines. The increased traffic was recorded on US Route 1 (8.3%) and US Route 1A (9.8%) both at the Massachusetts state line. I-95 traffic volumes decreased only slightly while Route 286 declined by more than 12%. Since the levels of traffic on both these roadways reflect, in part, visitor or tourist traffic, the traffic reduction may be directly tied to the recent economic downturn that has discouraged tourist and traveler visits.

Table 5-4

Seabrook Traffic Counts by Station, Most Recent and 2006 to 2009

#	State Station	Location	Most Recent Count-AADT	Traffic Trends			% Change
				2006 AADT	2009 AADT	Change	
1	40903	I-95 at Mass Line		87,038	87,000	-38	<0.01%
2	409011	US Route 1 at Mass Line (Town Hall)	13,000 (2009)	--			
3	409012	US Route 1 near Lakeshore Drive	20,000 (2009)	--			
4	409051	US Route 1 at Mass Line		12,000	13,000	1,000	8.3%
5	409052	NH 286 near Mass Line	16,000 (2007)				
6	409054	NH 1A at Mass Line		6,100	6,700	600	9.8%
7	409055	US 1 South of Route 107	26,000 (2007)				
8	409056	NH 107 West of US 1	24,000 (2007)				
9	409057	NH 286 West of NH 1A		17,000		14,800	-12.9%
0	409058	NH 107 at Hampton Falls Brook (Dog Track)	10,000 (2007)				
1	409064	Walton RD at NH RR Bridge		3,300	3,400	100	0.03%
1	409065	Causeway Street over Hill Creek	780 (2007)				

Source: NH DOT

The 2000 Master Plan documented traffic counts for the most recent year at the same stations. At that time the I-95 station had a count of 81,005 AADT. Other stations with traffic volumes equal to or greater than 11,000 AADT were the following:

- US Route 1 at Town Hall 12,000 (1999)
- US Route One at Lake Shore 21,000 (1997)
- NH 286 at Mass Line 11,000 (1998)
- US Route 1 south of NH 107 26,657 (2000)
- NH 107 west of US Route 1 19,999 (1997)
- NH 286 west of 1A (Brown's) 17,115 (2000)
- NH 107 at Hampton Falls Brook 11,000 (1998)

Note: Traffic volume calculations can vary depending upon the length of time the counts were taken and the time of year the counts were taken. They will also vary from year to year depending in part on the state of the economy. For example, traffic volume was determined for the Lowes project using NHDOT data counts from 1997 and 2000. From this data it was determined that the Average Weekday Daily Traffic for the counter at Lakeshore Drive was 27,682 and 26,571 on the section of US 1 just south of NH Route 107. These results were much higher than those recorded at Lake Shore Drive during 2007 when the volume was 20,000 while they were just about the same for US Route 1 south of NH 107. When Kohl's was proposed an updated traffic count was done for the period of July 2003 and November 2004. The Average Weekday Daily Traffic for the counter at Lakeshore Drive was 28,323 (July 2003) and 25,238 on the section of US 1 just south of NH Route 107 (November 2004). These were the highest counts recorded and may be attributable to the time of year and the robust economy at that time.

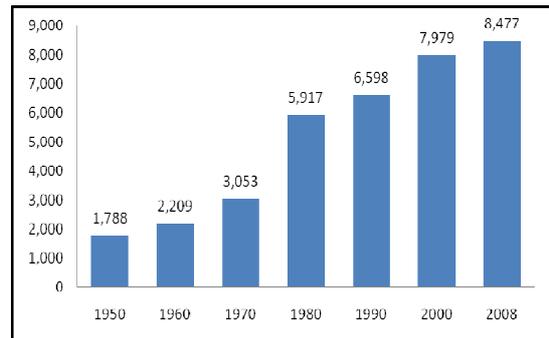
In general, it appears that the level of traffic has remained steady or declined at these stations for the past several years.

Components of Change to Traffic Volumes

Population Increase

A significant component of traffic volume increase is attributable to the increase in population. As noted in the Population Chapter of the Master Plan, since the end of World War II the population of Seabrook has grown steadily reaching 3,053 in 1970 and 6,598 in 1990. By 2000, the date of the most recent census, the population had reached 7,979, approximately 20% more than 1990.

During that period, traffic increased incrementally or was relatively level compared to counts after 2000. For example, in 1999 the count at Town Hall on Route 1 was 12,000 while in 2009 it was 13,000 or an 8% increase over the ten year period. This increase appears to have matched the population increase which as of 2008 was almost 8,500 or 6% more than in 2000. Similar traffic increases occurred within the Seabrook Region and Rockingham County.



Change in Employment

Another component that contributes to increased traffic is the increase in employment that requires many workers to commute to work. From 1990 to 2006, the increase in employment in Seabrook was over 25% while the major employment center in the Seacoast, Portsmouth, had an over 50% increase. **See Table 5-5.** While the rate of employment growth has slowed recently because of the economic downturn (the 2008 annual employment was approximately 6,000 or only a 0.5% increase in two years), as the economy improves there will be additional job growth.

Table 5-5 Community Employment Change (1990-2006)

Community	1990 Employment	2006 Employment	Total Change	% Change
Seabrook	4,515	5,713	1,198	26.5%
Hampton	5,684	6,316	632	11.1
Hampton Falls	617	519	-98	-15.9
Kensington	260	263	3	1.2
North Hampton	1,570	2,367	797	50.8%
Portsmouth	18,986	28,768	9,782	51.5%
South Hampton	96	149	53	55.2%
RPC Region	76,494	106,982	30,434	39.8%

Source: RPC 2009-2035 Long Range Plan

Of those employed, 4,330 commuted to work according to the 2000 US Census. Over 80% of the commuters traveled to work alone in a vehicle while almost 10% carpooled. A little more than 3% walked to work while a little less than 3% worked at home.

Of those that commuted by vehicle approximately 32% worked within Seabrook while 28% travelled to another New Hampshire community (primarily Portsmouth, Exeter and Hampton—approximately 10%) while the remainder travelled to either Massachusetts (39%) or Maine (1%). These numbers are similar to those in the 1990 Master Plan which analyzed 1990 commuting data. At that time almost 37% of Seabrook commuters worked in Seabrook, while over 43% worked in Massachusetts. In 1980 almost 40% of Seabrook commuters worked in town. Over the past 20 years, there appears to be a continuing increase in Seabrook workers travelling out of town for work—many to communities in New Hampshire with somewhat fewer to Massachusetts.

Relative to other communities in the region, Seabrook still has a relatively high number of commuters who commute within town. According to the RPC Long Range Plan, Seabrook has a higher

percentage of internal commuters than either Hampton or Salem, although it is dwarfed by Portsmouth where over 50% of its commuters work within the city itself.

Accidents

One of the key items in determining a roadway's sufficiency is its safety. In an effort to assess roadway safety, it is useful to examine accident data. Accident data is collected by local and state police and then provided to the NH DOT. At present, the original data may not always be consistent in terms of location. Locations can be by street address, distance from an intersection or given as a street name that may not always correspond to the town's street map or may be referred to as a route # or local roadway name. For example, accidents may be recorded as occurring on US Route 1 or Lafayette Road.

While NH DOT maintains the most comprehensive data base, it uses the information only for its roadway planning projects. The data is not usually analyzed on a more detailed basis for local planning purposes to determine high accident areas. Such analysis is important if there are a high number of accidents in a given location over a given period of time; such a roadway becomes a safety concern to be addressed.

In 1995 there were 205 accidents town-wide in Seabrook. For the three-year period 1999 to 2001, NH DOT Location Data Reports noted a total of 937 accidents town wide or approximately 312 per year. Of these, approximately 120 or more than 30% occurred on US Route 1 between Lake Shore Drive and NH Route 107. Another 44 occurred in the vicinity of the NH 107/US Route 1 intersection, the highest frequency single location in Seabrook. This location was followed by the Railroad Avenue-Pine Street intersection with 26 crashes.

For the three year period of 2001 to 2003 the NH DOT Location Data Reports recorded 1012 crashes town-wide or an average of 337 per year. During this period the crashes were recorded at the following locations on US Route 1 as shown in **Table 5-6**.

Table 5-6. Accidents on US Route 1, 2001-2003

Location	Number of Accidents
US1/Lakeshore Intersection	14
US 1/Wal-Mart	6
US 1/Boynton Lane	8
US 1/Irving	2
US1/Southgate	6
US1/Railroad Ave/Pine Street	22
Total	58

Source: Seabrook Police Department, NH DOT

By comparison for the five plus year period from January 2005 through March, 2010, the total number of accidents was 1993 or a little less than 398 per year (*Seabrook Police Department*). Since 2003 the year with the highest single number of accidents in Seabrook was 2005 with 342. Since that time the number of accidents has ranged from 265 to 304 town-wide. From 2005 through 2009, based on Town of Seabrook accident data, the roadways with the highest number of accidents are Lafayette Road (US Route 1), NH Route 107 and NH Route 286 as shown in **Table 5-7** below.

**Table 5-7. Highest Number of Accidents; Average per Year
2005-2009(through March 2010)**

Location	Total Accidents	Ave. Number of Accidents
US 1-Lafayette Road	1006	336
NH Route 107	239	46
Ocean Boulevard	110	21
NH Route 286	147	28
Batchelder Road	85	16

Source: Seabrook Police Department

No other roadways came close to these in terms of the number of accidents. Those that had 10 or more accidents during this 6 year period are shown in **Table 5-8**.

**Table 5-8. Locations of 10 or More
Total Accidents, 2005-2009**

Location	Number of Accidents
Centennial Street	20
Cimarron	12
Collins Street	12
Ledge Road	16
Liberty Lane	13
Lowell Street	13
Main Street/South Main Street	31
Pine Street	10
Railroad Avenue	27
Stard Road	19
Walton Road	49
Washington Street	21
Weare Road	10

Source: Seabrook Police Dept.

Based on these data, easily the highest number of reported accidents occur on US Route 1. A recent study has been completed for this roadway corridor to improve traffic movement and safety.

Bridges

The New Hampshire DOT and the Town of Seabrook Department of Public Works are responsible for bridge maintenance and construction. If a bridge is on a state-aid roadway, it is the responsibility of the state and if on a locally maintained roadway, it is the responsibility of the town. There are six bridges in Seabrook—four under the jurisdiction of the DOT and the remaining two under the jurisdiction of the town.

The New Hampshire DOT has a state-wide bridge inspection program that is based on the National Bridge Inspection Standards System. All bridges are inspected every two to three years and depending upon location, use and condition may be inspected on a less formal basis more frequently. In Seabrook, the last documented inspection was in 2008. Bridge condition is rated on a numerical rating system (FSR) from 1-100 where the higher the number rating, the better the condition of the bridge. **See Table 5-9**. From this inspection rating program priorities are established for maintenance, repair and replacement of bridges. If a bridge is red listed, it receives the highest priority for repair and/or replacement. One state bridge has been red listed, the Boston & Maine RR bridge. It no longer carries rail traffic and has been considered by the state to be potentially part of

public bike/pedestrian trail that would be part of the New Hampshire Seacoast Greenway. **See further discussion of this Greenway below under the Bicycle Route/Paths section.**

Table 5-9. Seabrook Bridge Inventory

Location	Last Inspection	Jurisdiction	FSR Rating
Veterans Memorial; NH 107 over I-95	Sept. 2008	State; Turnpike Bureau	72
NH 286 over the Boston & Maine RR	April 2008	NHDOT	72.4
NH 286 over Blackwater River	April 2008	NHDOT	87.5
Boston & Maine over Walton Road*	Nov. 2008	NHDOT	Red List
Centennial Street over Cains Brook	Jan. 2008	Seabrook	80.2
Causeway Street over Tide Mill Creek	Jan. 2008	Seabrook	84.4
* Structurally Deficient—State Red List			

Source: NH DOT

Alternative Transportation

Rail

At present, there is no passenger rail service to or from Seabrook. The closest passenger rail service is from either Newburyport, Massachusetts or Exeter, New Hampshire which has one of the passenger stations for the new AMTRAK Downeaster service that travels over tracks currently owned by Guilford Transportation (formerly the Boston and Maine Railroad) between Portland and Boston. Both of these locations are Intermodal Transportation Centers that could potentially provide connecting bus or other public transportation services to/from Seabrook.

There is also a north-south abandoned rail line just east and parallel to US Route 1. This former passenger and freight line is currently owned by NH DOT which is holding on to the right-of-way as part of its plan to convert it to a rail trail for bicycle travel.

Air

The closest major airport is at the Pease International Tradeport located in Newington approximately 15 miles north of Seabrook off the Spaulding Turnpike. This facility handles both freight and cargo services and limited passenger services. A new passenger terminal and customs and inspection center was opened in 1999 that allowed for both domestic and international flights. At present, there is no commercial air travel out of this facility although there is still air freight service. The Tradeport is home to the NH Air National Guard and has a two-mile long runway that can accommodate the country's largest commercial and military uses. Another small privately-owned air facility is located in Hampton that can handle small corporate and light aircraft as well as provide servicing and storage.

In addition to Pease, national and international flights are available at three large regional airports all within one and half hours from Seabrook—Logan Airport in Boston, Portland International Airport in Maine and Manchester Airport in New Hampshire. Manchester Airport was expanded several years ago and is now a major northern New England regional facility.

Public and Private Transit Services

Seabrook is currently served by a very limited network of transit services.

Taxi/Car Service

Although there is no provide taxi service in town, the Seabrook Senior Center does provide a taxi service for senior citizens. In addition, a coalition of area churches has established a program (Transportation

Assistance to Seacoast Citizens—TASC) to organize a “demand-responsive” ride system for individuals without automobiles to get to doctor appointments, grocery shopping, etc.

Bus Service

There is no public transportation service that directly serves Seabrook. The COAST system (Cooperative Alliance for Seacoast Transportation) operates in the Portsmouth and Exeter areas with no routes to Seabrook or Hampton. COAST is a non-profit bus system that provides service in southeastern New Hampshire. COAST also provides a demand responsive service through a program that provides a link between various paratransit providers to offer a comprehensive cooperative paratransit system for much of the Seacoast.

There are no private bus services that directly serve Seabrook. C & J Trailways now operates from Portsmouth in a new intermodal facility at the south end of Pease International Tradeport. C & J operates 13 round trip runs per day between the Tradeport and Logan Airport via South Station. It also has a stop in Newburyport just off I-95. Vermont Trailways (a subsidiary of Greyhound Bus Lines) operates a fixed route from Portland to Boston via downtown Portsmouth. This bus operator also provides interconnecting service to other New England cities as well as other locations in the United States and Canada. There is one private coach system—the Coach Company—that operates a commuter bus line from Newburyport.

Lamprey Health Care

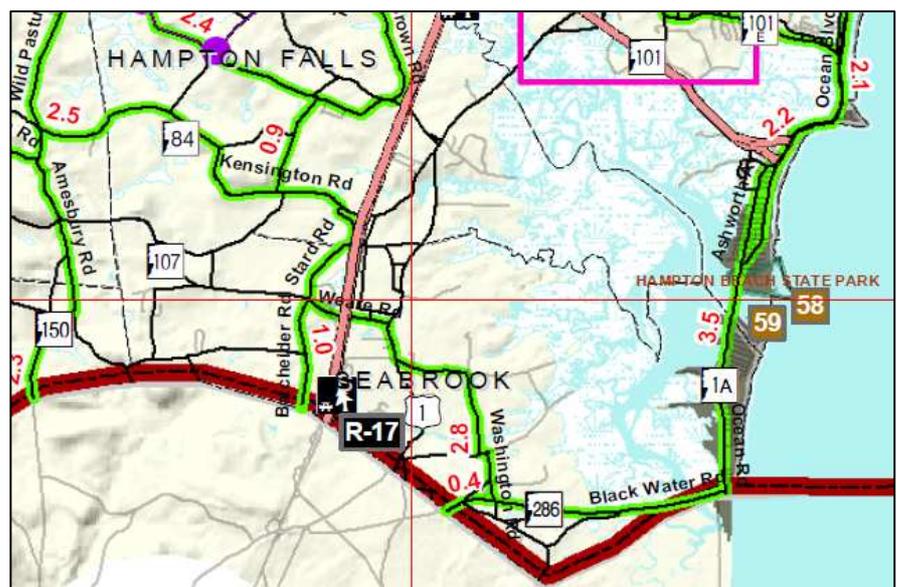
Lamprey Healthcare operates the several routes in Rockingham County for COAST to provide access to shopping for the public, with a special focus on senior transportation. On Fridays, it operates a single roundtrip bus service from the Community Center to the shopping malls in Newington and Portsmouth with various stops along US Route 1.

Bicycle Routes/Paths

At present, there is no formal inventory of bicycle routes and paths in Seabrook. The town is part of a regional bicycle network as defined by the New Hampshire DOT. The DOT has designated a statewide bike route that goes through Seabrook as shown on **Figure 5-1** below. It encompasses Route 1A which connects to Route 286, Washington Road, Centennial Avenue, Railroad Avenue, Route 1 and Weare Road that connects to Stard and Batchelder Roads.

Figure 5-1. NH DOT Bike Route in Seabrook

Seabrook has also been included as part of the NH Seacoast Greenway (NHSG) a proposed 17-mile, non-motorized recreation corridor that will pass through eight coastal communities in New Hampshire: from Seabrook to Portsmouth. **See Figure 5-2.** The currently preferred route is along the Hampton Branch of the Eastern Rail Corridor. The southernmost 4.5 miles of the rail corridor, from the Massachusetts border in Seabrook to the center of Hampton, is owned by the State of New Hampshire.



Source: NH DOT

The NHSG is part of a larger corridor concept called the East Coast Greenway (ECG) running approximately 3,000 miles that will connect cities, towns and natural areas along the Eastern seaboard from Calais, ME to Key West, Florida. Uses will include walking/hiking, bicycling, cross-country skiing, horseback riding and other non-motorized activities.

At present, there is no formal policy with respect to provision of bike lanes on roadways within Seabrook. For example, on local roads it could be a shared bike lane with vehicles whereas a collector might have a separately designate bike lane.

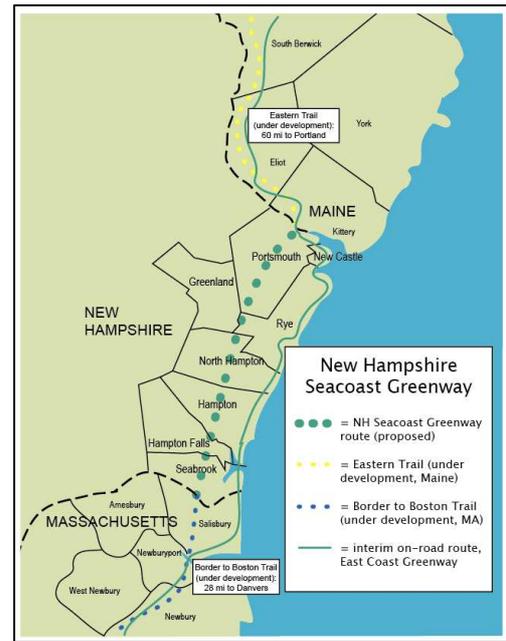


Figure 5-2. NH Seacoast Greenway

Pedestrian Facilities/Sidewalks

Sidewalks

Seabrook has a number of sidewalks, the majority of which are concentrated in or near the Route 1 corridor. Most of these are either concrete or asphalt construction. Along US Route 1 these sidewalks often incorporate granite curbing. Where sidewalks are on the outer edges of the urban areas or in subdivisions, they are more likely to be constructed of asphalt. At present, the town does not have an up-to-date inventory of sidewalks in terms of type, location or condition. Such an inventory would be desirable to better maintain and repair these facilities. In its subdivision regulations, the town may require sidewalks where there are three or more lots comprising a subdivision. These sidewalks must be 5 feet wide with granite curb or 5-foot wide plus 6 feet of grassy swale for drainage.

Crosswalks

Another element of a good pedestrian network is properly sited and constructed crosswalks. Similar to sidewalks, there is no formal inventory of crosswalks in the Seabrook. Most of the crosswalks are located in high traffic volume areas such as along Route 1 and Route 1A. Crosswalk placement should be part of a coordinated pedestrian facility plan and needs to be coordinated with NH DOT when state roads are involved.

The US Route 1 Corridor

Introduction

The US Route 1 Corridor is the defining transportation link in Seabrook. It runs in a north-south direction from the Massachusetts border to the Hampton Falls town line. Over the past 15 years it has been the major area of development in the town and has defined both the level of traffic and the character of much of Seabrook. Almost all of the development along the Corridor has been commercial retail—primarily “big box” department stores and national chain restaurants.

With the development of this Corridor there have been a number of traffic studies undertaken to assess the impact of these developments and suggest mitigation strategies to accommodate the projected growth in traffic.

In addition, the Rockingham Planning Commission with assistance from traffic and planning consultant prepared a *Draft US Route 1 Corridor Study* in April of 2008. This study looked at the full length of the Corridor from Seabrook to Portsmouth. The results of the study recommendations for Seabrook are described more fully below.

Finally, the Town of Seabrook in June of 2010 engaged a planning team to examine the Route 1 Corridor to come up with conceptual drawings and graphics and recommendations as a basis for future planning and management of the Corridor, particularly with respect to the adjacent land uses.

Private Development Traffic Assessments

Lowes/Kohl's Traffic Impact and Assessment Study

In 2003 a Traffic Impact and Assessment Study was conducted as part of the first phase of the Lowe's/Kohl's development just north of the Seabrook Community Center. The development of this site took place in two phases—the construction of the Lowe's home center was phase one and the construction of Kohl's department store was phase two. This study looked at projected traffic generation from the Lowe's project and assessed the impact on six nearby intersections.

The applicant for the project used existing NH DOT traffic data counts from 1997 and 2000 for base data. From this data it was determined that the Average Weekday Daily Traffic for the counter at Lakeshore Drive was 27,682 and 26,571 on the section of US 1 just south of NH Route 107. At the same time the NH DOT was planning a major reconstruction of US Route 1 from the project site northerly to Rocks Road. This widening resulted in a four-lane section south of Railroad Avenue to Perkins Avenue and a six lane highway from Perkins Avenue past NH Route 107 to New Zealand Road. With improvements for turning lanes at the site driveway, it was determined that the adjacent intersections would have the capacity to handle any additional traffic generated by the proposed project with the worst case waiting time of up to 35 seconds for the overall intersection with individual lanes being greater than one minute.

When the Kohl's project was proposed, a follow-up traffic study was conducted in February of 2007. The applicant for the project used existing NH DOT traffic data counts from July 2003 and November 2004. From this data it was determined that the Average Weekday Daily Traffic for the counter at Lakeshore Drive was 28,323 (July 2003) and 25,238 on the section of US 1 just south of NH Route 107 (November 2004). **See also the previous discussion about Traffic Counts in the Traffic Volume Section.** The counts at Lake Shore Drive were higher than in 2000 while the counts near NH Route 107 were slightly lower. Analysis of the intersection adjacent to the proposed development project that it will remain under capacity through 2018, although some individual lanes will exceed the current capacity.

DDR Traffic Impact and Assessment Study

In 2006/2007 another major traffic study was conducted for a proposed major shopping center just north of the NH 107 intersection with US Route 1. This study was also conducted in two phases—one for a partial build of the center and the second for the full build which would result in a 450,000 sf commercial retail center.

As base data the applicant used existing NH DOT traffic data counts from August 2004. From this data it was determined that the Average Weekday Daily Traffic for the counter on the section of US 1 just south of NH Route 107 was 29,350 trips per day—significantly higher than that reported in November above (25,238). Such a difference may be attributable to seasonal variation. Additional counts were taken on NH 107 at Hampton Falls Brook resulting in Average Weekday Daily Traffic of 12,500.

At the same time, the applicant was preparing its study, the Rockingham Planning Commission was preparing a US Route 1 Corridor Study from Seabrook to Portsmouth. This study recommended that US Route 1 remain primarily a five-lane roadway—two lanes in each direction and a center-left lane at major intersections. Consequently, the proposed mitigation measures offered by the applicant did not consider widening US Route 1 in this area.

After the Lowes/Kohl's development was approved, the applicant also assessed the traffic impact and developed a set of improvements to the Route 1 Corridor for Phase 1 of the project as follows:

- Widening of Provident Way to provide a turning lane into the site and a through lane eastbound and a single lane westbound.
- Improvement to the lane configuration and signal timing equipment at the signalized intersection of US Route 1 and NH Route 107/Provident Way.
- Adding a separate left hand turn lane on NH Route 107 at the Spur Road intersection.
- Installation of signal on NH 107 at the I-95 southbound off-ramp.

Further improvements for the Phase 2 project included:

- Installing new signalized intersection along US Route 1 at the Project Site Drive/New Zealand Road. Providing a five-lane roadway at the intersection with two through lanes and a center left turn lane that would transition to current three-lane cross section north of the site.
- Construction of an additional westbound lane on NH 107 at the I-95 northbound ramps and additional lane over the I-95 Bridge to the southbound on ramp.
- Willingness to establish cross-easement agreements to allow traffic to use travel between adjacent businesses without going back out onto Route 1.

The applicant has also agreed to take responsibility for a portion of the I-95/Route 107 bridge improvements.

RPC US Route 1 Draft Corridor Study

In April, 2008 the Rockingham Planning Commission (RPC) completed a draft Corridor study for US Route 1 from Seabrook to Portsmouth in cooperation with NH DOT. This study is an update of a previous Corridor plan that was conducted in 1989, a plan that was not fully implemented. The goal of this study is to provide a long-term vision for the Corridor that will provide a “blueprint” for each community, the RPC and the DOT. There are five objectives that study sought to achieve to realize this goal:

- Identify and quantify the extent of existing deficiencies;
- Identify conceptual roadway improvements;
- Identify locations where Access Management techniques can be implemented;
- Integrate planning for all modes of travel;
- Identify sources of traffic diversion to local roadways and changes to reduce it; and
- Identify potential land use and zoning changes that can help manage the growth of traffic along the Corridor.

The study identified several findings with particular relevance to Seabrook.

- The entire Corridor averaged approximately 400 traffic accidents per year between 1999 and 2004. This is supported by recent data for accidents for the past five years in Seabrook where there were over 1000 accidents or approximately 200 per year along US Route 1 (Lafayette Road).
- Most signalized intersections are currently operating at an acceptable level of service (LOS). The exception to this in Seabrook is the Wal-Mart access road.
- Most un-signalized intersections have poor or failing left-turn movement conditions to access US 1.
- Future year analysis indicates that all examined unsignalized intersections will have LOS F (failing) for left turns and some other movements by 2022.
- Growth in retail land use along the Corridor has had a significant impact on traffic, primarily in Seabrook and Portsmouth.
- Public comment has been strongly against extensive widening of the roadway in many of the communities, and is greatly concerned with “cut-through” traffic on local roads that offer an alternative to Route 1 such as New Zealand Road in Seabrook.
- There is currently no regular transit service operating along the length of US 1, and none planned in the immediate future. COAST does have a service along much of the Corridor including Seabrook, but only limited to one day.
- The cost of Interstate 95 tolls in Hampton can affect the traffic conditions on US 1, i.e., diversion of traffic onto US 1 and other local roadways.
- Continuing growth along US 1 will necessitate widening the roadway in many locations. Access management and a consolidation of future growth in defined “nodes” can help to mitigate this need.

Recommended Roadway Improvements for Seabrook

The draft Corridor report recommends the following improvements within Seabrook beginning at the southern border with Massachusetts. As a general recommendation the report suggests a five-lane roadway with separate turn lanes at intersections for the full length of Route 1 within Seabrook as well as provision of future bike lanes and sidewalks on each side of the roadway.

1. *Improvement to Current Traffic Pattern at Town Hall*

Three alternatives were proposed including:

- A signalized intersection just south of Town Hall that would remove the current roundabout configuration. This alternative has significant impacts on private property adjacent to the intersection as well as to the cemetery located to the east of the roadway. **See Figure 5-3.**
- A two-lane roundabout at the northernmost part of the existing rotary that would tie directly into Walton Road and Folly Mill Road. While this alternative works from a traffic management aspect, it could potentially impact the historic church adjacent to the intersection and was not seen as a favorable alternative. In addition, a two-lane roundabout was seen as potentially confusing to motorists. **See Figure 5-4.**
- Replace the existing configuration with a single signalized intersection that would realign Main Street opposite Walton Road so that both streets intersect Route 1 at a single point. Route 1 at the intersection would consist of two through lanes, and an exclusive left-turn lane in each direction separated by a raised center median. This places a roadway through what is now the parking lot for the Town Offices and splits off the church. Preferred alternative by the Study from aspect of traffic circulation. **See Figure 5-5.**

Note: See Route 1 Corridor Design Workshop discussion below that proposes an additional alternative

2. *Widen to Five Lanes north of Town Hall*

North of Town Hall, widen Route 1 to a 5-lane cross section consisting of two through lanes in each direction separated by a two-way center turn lane. This section would transition into the existing 5-lane cross section at the existing signalized intersection at Lakeshore Drive. Also calls for raised center median at both Lake Shore Drive/Home Depot and Gretchen Road intersections. Finally, recommends future cross-connections between existing retail properties on both east and west side of Route 1 and future transit stops for public transportation.

3. *Boynton Avenue Intersection Upgrade and Existing Retail Cross Connections*

With proposed upgrade to Boynton Lane intersection as part of an adjacent development, provide full crosswalks and pedestrian accommodations given the proximity of the Seabrook Community Center. Implement stretches of raised median to reduce unnecessary turning and provided opportunity for median plantings. Consider interconnecting the Community Center to signal at Boynton Lane. **See Figure 5-6.**

East of US 1, a cross-lot connection between Boynton Lane and Wal-Mart would also be a useful addition, allowing travel between the many businesses of the Market Basket, Wal-Mart, and Home Depot plazas without using US 1. Future connections northward could extend these side connections to Railroad Avenue and would enhance both connectivity and access to businesses.

Note: This action completed except for formal interconnection to Community Center and retail cross connections.

4. *Widen from 4 to 5 Lanes North to Railroad Avenue*

Widen Route 1 from 4 to 5 lanes from Railroad Avenue north to Route 107 with Railroad Avenue signals improved accordingly. Pine Street has already been connected to Railroad Avenue and a similar configuration should be considered for Autumn Way. Smalls and Perkins Avenues could be connected as well, providing residential neighborhoods on the west side of US 1 with a connection to a traffic signal for improved access. Opportunities should also be examined that would provide the same type of connections along the eastern side of Route 1 between Railroad Avenue and Provident Way. **See Figure 5-7.**

5. *Route 107/Provident Way Intersection*

This intersection was recently upgraded. Depending on the outcome of the proposed major retail development northeast of this intersection, the configuration of the Provident Way approach could change the nature of this intersection. It would also need to address capacity and safety issues on NH 107, resulting in impacts to Route 1 traffic that may need to be addressed. **See Figure 5-8.**

6. *Route 1/New Zealand Road intersection*

Installation of a traffic signal at the Route 1/New Zealand Road intersection, located approximately 500 feet to the north of the Route 107 intersection on condition that access from Spur Road is discontinued to Route 107. Although this would place two signals relatively close together, it would allow for safer and more efficient access from New Zealand Road and the adjacent properties. The direct access to US 1 for the apartment complex would be eliminated and replaced with a full driveway on New Zealand Road. **See Figure 5-9.**

7. *New Zealand Road to North Access Road*

Implement 5-lane roadway with raised center median to the North Access Road of the power plant. In addition, install new roadway connecting Gove Road to Route 1 opposite the North Access Road, forming a fourth leg to this signalized intersection. Construct a connecting road between Rocks Road and the North Access Road, providing both a connection to more parcels, and removing the truck traffic bound for the transfer station from much of the residential part of Rocks Road. This option is currently in discussion with Florida Light and Power (Seabrook Plant ownership). **See Figure 5-8.**

8. *Transition to 3 Lanes north of North Access Road*

North of the North Access Road, the Corridor would transition to a 3 lane cross section consisting of a single through lane in each direction and a center two-way turn lane. Also recommended: widen shoulders to 8 feet in areas without curbing and to 5 feet in areas with curbing. Install intermittent placement of raised (and landscaped) center lane median.

Figure 5-3. Eliminate Traffic Circle; Divert Folly Mill Road

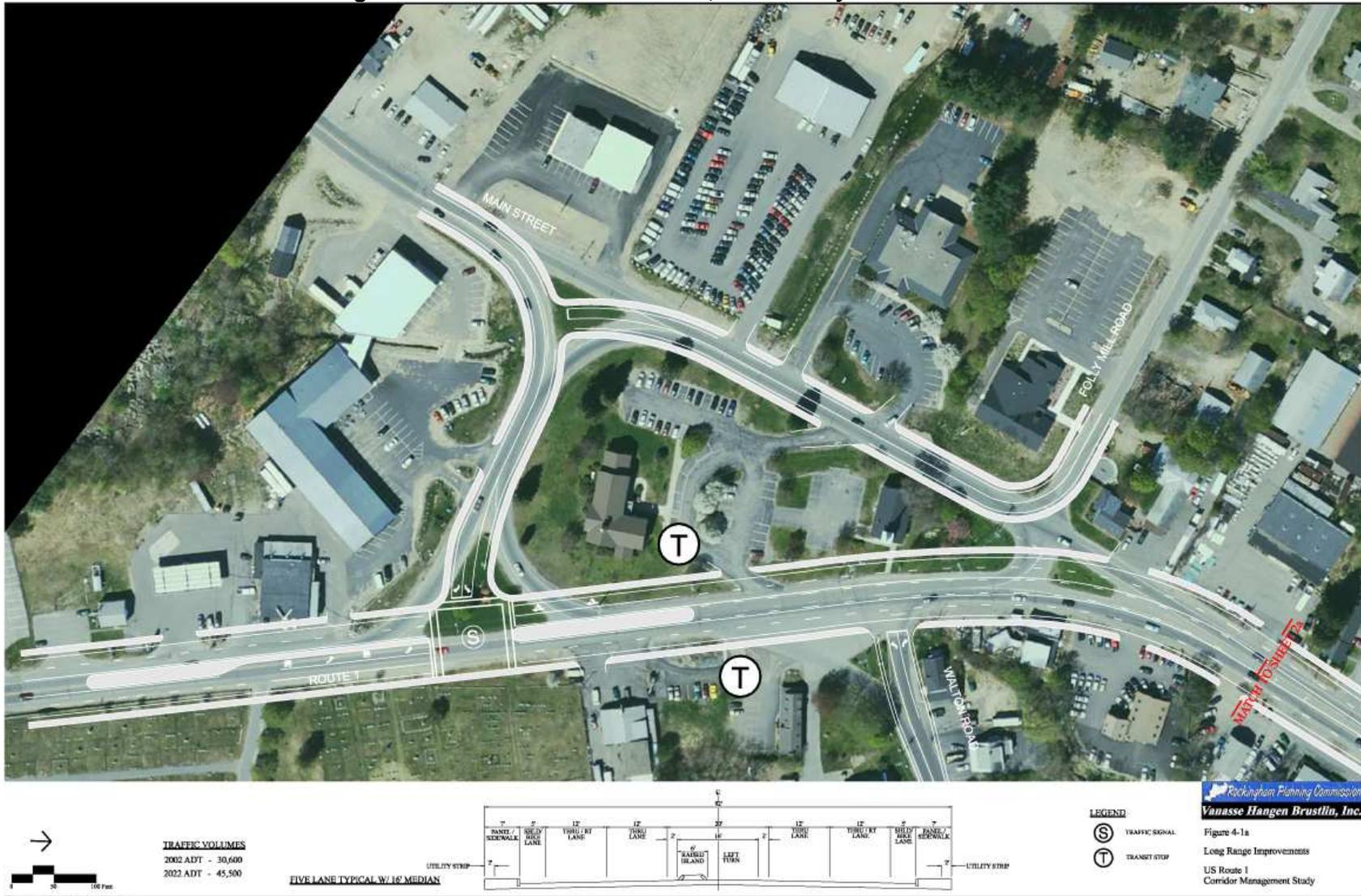


Figure 5-4. Implement Rotary at Folly Mill Road



Figure 5-5. Add Signal at Walton Road Connecting to Main Street

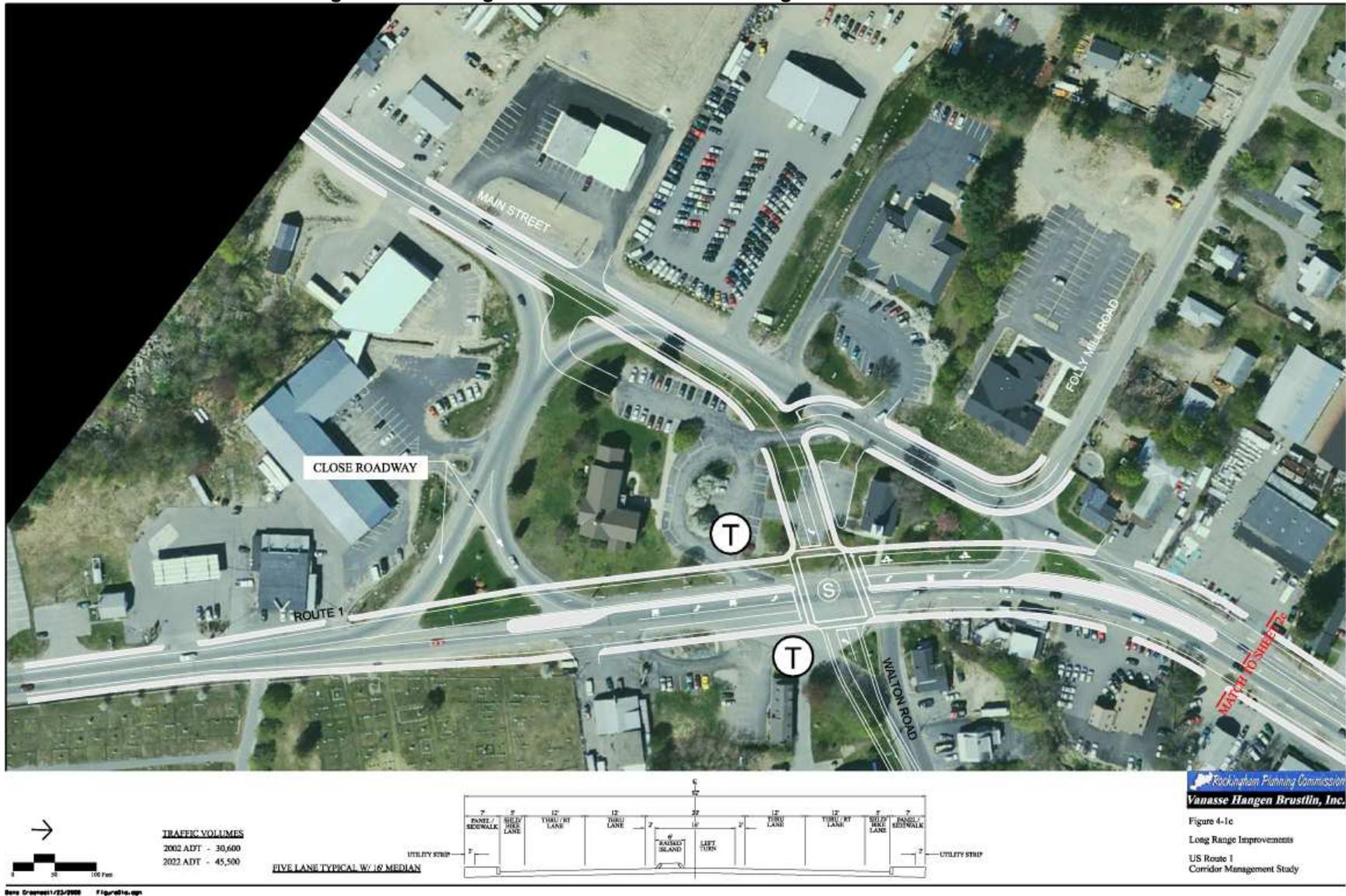


Figure 5-6. Boynton Avenue Intersection Upgrade & Interconnection to Community Center



Figure 5-7. Lane Widening to Railroad Avenue and Potential Cross-Connections to Pine Street Signal



Figure 5-8. US 1 and NH 107 Intersection with new Signal at New Zealand Road

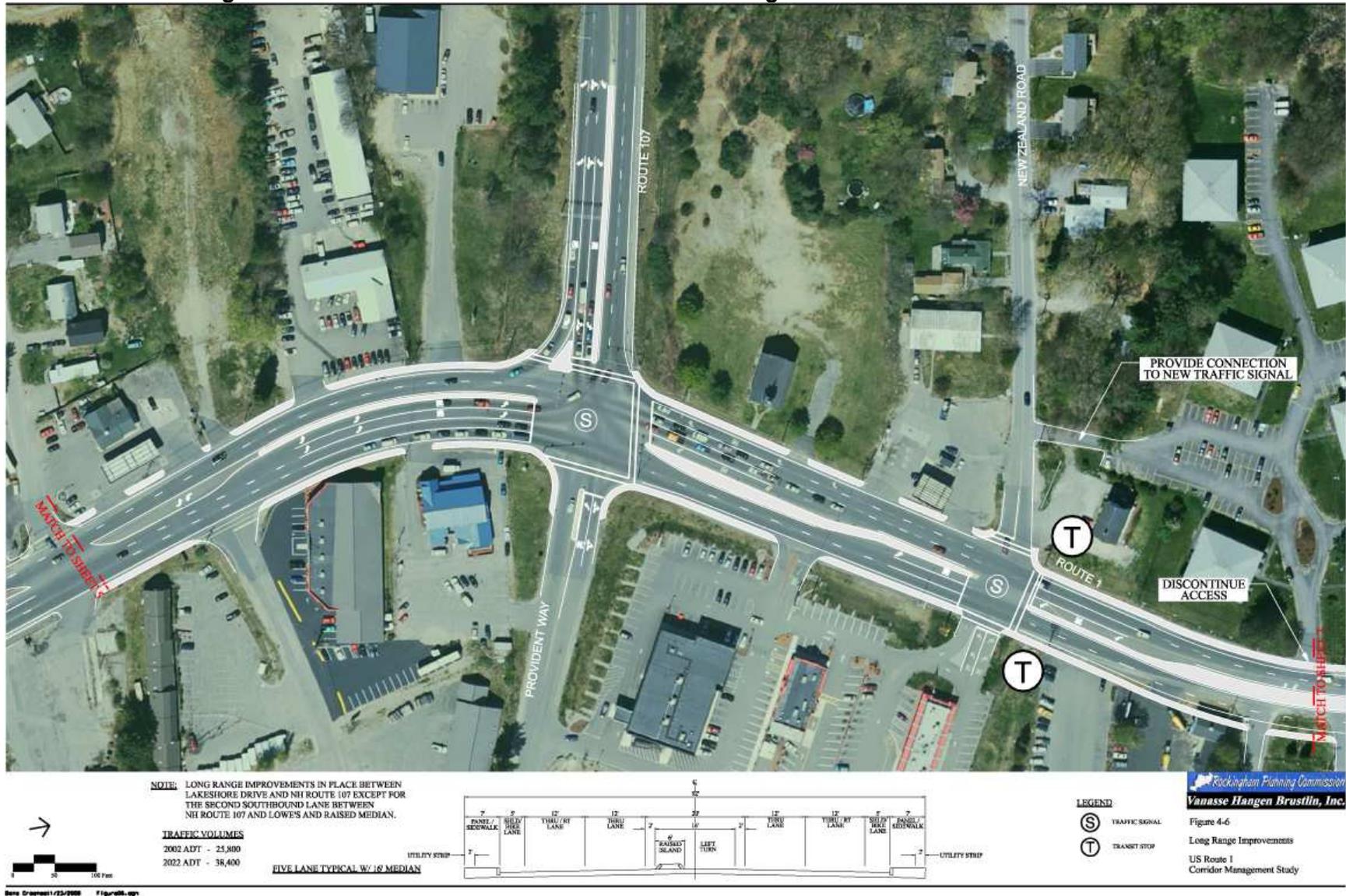
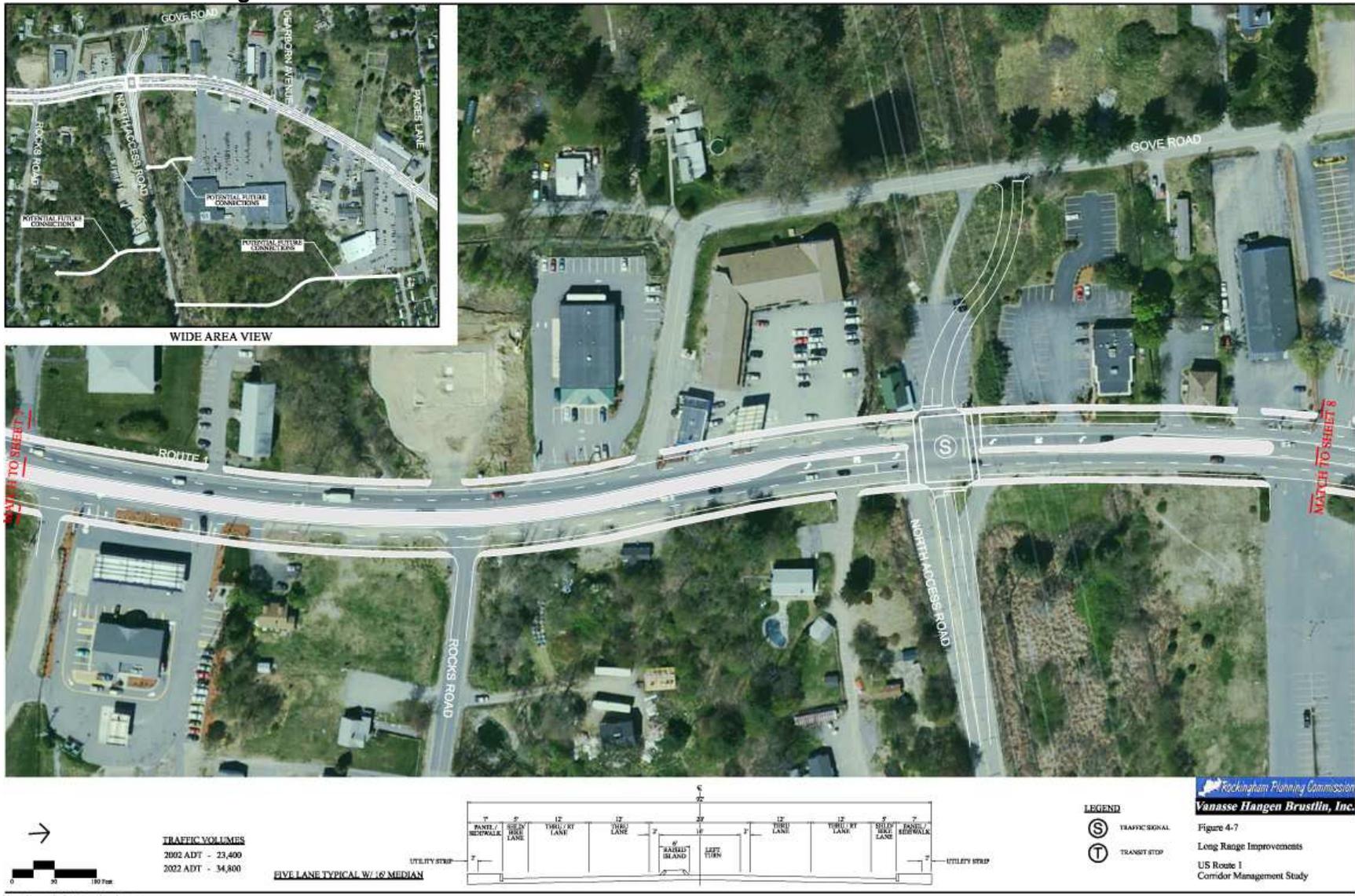


Figure 5-9. New Connection for Gove Road and Potential Cross-Connections



Route 1 Corridor Design Workshop

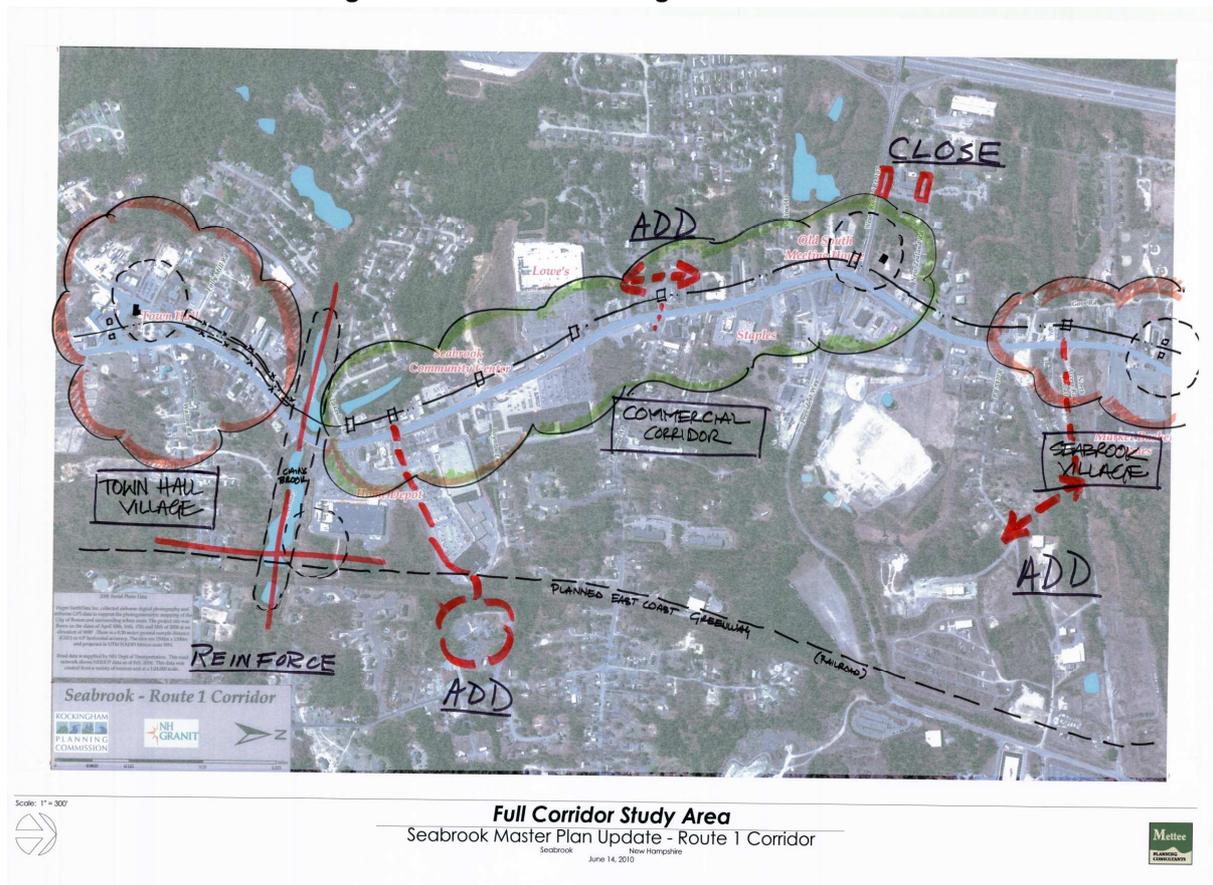
On Monday June 14, 2010, a Route 1 Corridor Design Workshop was held in the Seabrook Library from 12 to 7 pm. This workshop involved the collaboration of numerous design and planning professionals to come up with conceptual plans for the future of the Corridor. During this workshop a number of townspeople and town staff provided helpful suggestions to the design team in terms of the approach and concepts that the team was considering or had prepared.

The result of this effort was a series of concept plans and renderings that provide Seabrook with suggested futures for the Corridor.

Overall Future of Corridor—Three Planning Areas Proposed

Based on the results of the Listening Session on May 4th 2010 with the Planning Board and town citizens, as well as various discussions of the Master Plan Update Steering Committee and the collaborative effort of the design team, an overall concept plan for the Corridor was established. It involved three general planning areas for the Corridor as shown in **Figure 5-10** and briefly described below.

Figure 5-10. Three Planning Areas of Route 1.



Town Hall Village (Smithtown)

An area in south Seabrook that was originally part of the historic village of Smithtown with the Seabrook Town Hall as the core area extending from the Massachusetts Town Line to approximately Cains Brook/Lake Shore Drive. Proposed to be a mixed use, village-like area.

Commercial Corridor

The middle area of the Corridor that extends from Cains Brook to the Route 107 intersection with Route 1 near the Old South Meeting House. Proposed to retain its commercial character with option for more mixed use opportunities when large building box retail seek a change in use or wish to redevelop.

Seabrook Village

Comprises an area in north Seabrook that extends from the Route 107 intersection to the Hampton Falls town line. Also proposed to be a mixed use, village area.

This three-area approach was discussed during a public break in the workshop and the citizen participants indicated general approval for this type of change along US Route 1.

Town Hall Village

Concept 1

The Town Hall Village concept is intended to provide an opportunity for a mixed use village-like area that incorporates the current Town Hall and Methodist Church. In order to achieve this concept the Design Workshop Team proposed several changes to the current situation. These are illustrated in Figure 5-11.

Figure 5-11 Proposed Town Hall Village, Concept 1



The proposed changes include:

- Relocating Folly Mill Road behind the church meeting hall and wrapping it around the US Post Office to re-connect with Main Street across from Town Hall. One Post Office access to Main Street would be closed with proposed access from relocated Folly Mill Road.
- Closing off the southern leg of the current rotary while maintaining access to the adjacent properties via Main Street or an access road from Main Street.
- Introducing a signalized intersection on Route 1 at Walton Road, providing access to the proposed “village” area and Main Street.
- Re-locating the church to an adjacent site closer to the meeting hall and in a position of prominence when viewed from Route 1 (south moving traffic). **See Figure 5-12**—a “bird’s eye” rendering of this relocation.
- Maintaining the current location of the Town Hall and adding green space to the south allowing potential for expansion.
- Adding a welcoming gateway structure on Route 1 just south of the Town Hall and north of the Massachusetts state line. Similar gateways could be constructed on Route 1 just south of the Hampton Falls line and on Route 107 just prior to the intersection Route 1. **See Figure 5-13**. A prototypical welcome sign is illustrated in **Figure 5-14**.
- Incorporating sidewalks within the village area and along Route 1 to Lake Shore Drive/Cains and Cains Mill Ponds, making a connection from the village to a passive recreation area.

Figure 5-12. Relocated Church—Village Concept 1

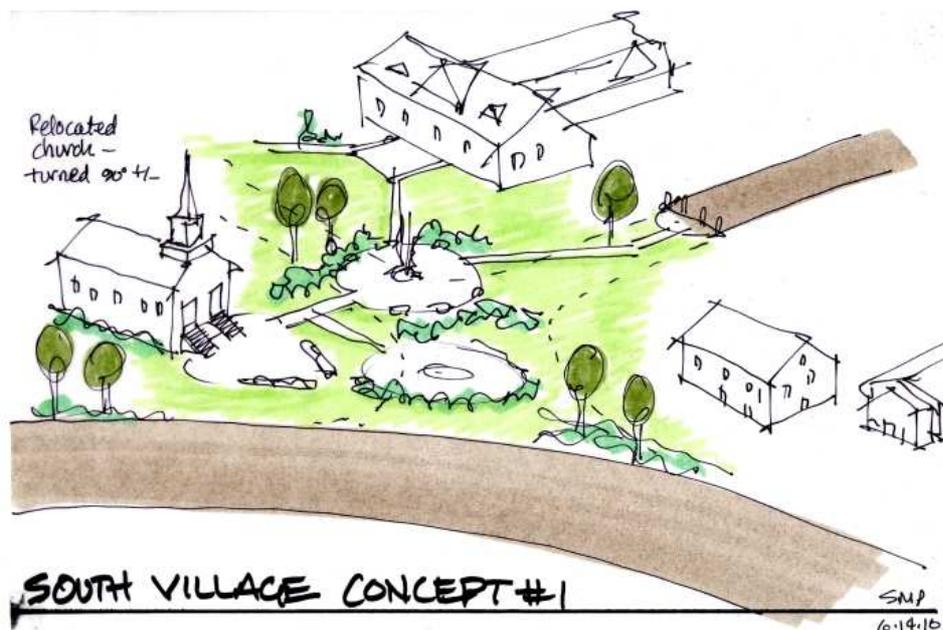


Figure 5-13. Gateway Concept

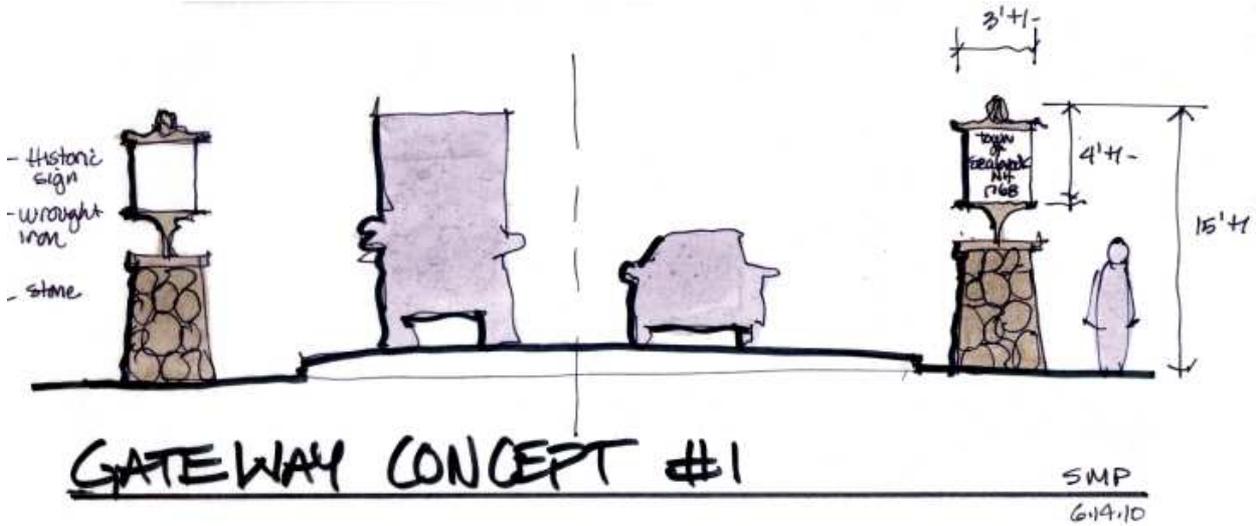


Figure 5-14. Welcome Sign on Gateway Post

Concept 2

Concept 1 was discussed during a public break in the workshop and the participants agreed that the proposed changes and re-design of this area had merit. Subsequent to the public break, the Design Team then enhanced the original concept by adding peripheral mixed uses that included residential, retail and professional offices, particularly south of the Town Hall. This concept maintained much of the original concept, but relocated Folly Mill Road to a point further south on Main Street allowing the property south of post office to become townhouse-type residential.

A village-like layout with an internal road was also proposed that would include a "Grand Lawn" to separate the Town Hall area from the proposed mixed use area to the south. This area would encourage a mix of uses including residential, retail and business/professional offices. See Figure 5-15 below that illustrates this concept as well as Figure 5-16 that illustrates this concept from a bird's eye view. Figure 5-17 is a proposed typical cross-section through the new Main Street. Figure 5-18 provides a prototypical New England-style building facade that might be considered as part of developing building design guidelines for the proposed village center.

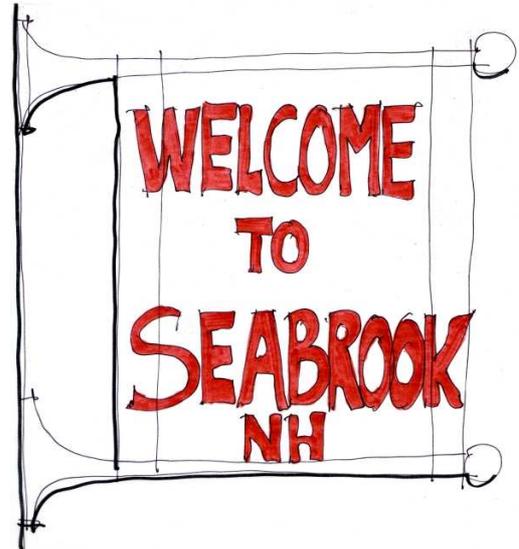


Figure 5-15. Town Hall Village Concept 2



Figure 5-16. Bird's Eye View of Village Concept 2



Figure 5-17. Prototype Cross-Section of Main Street—Village Concept 2

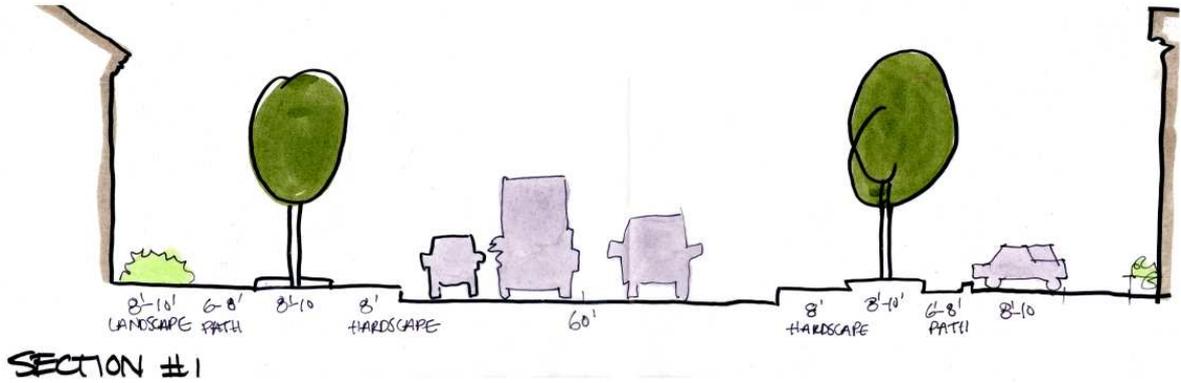


Figure 5-18. Prototypical New England Style Facade—Village Concept 2



Commercial Corridor—A Redevelopment Opportunity

The Commercial Corridor Redevelopment Concept is intended to illustrate the potential for a mixed use, more pedestrian-friendly environment within the current Commercial Corridor along Route 1. The Home Depot/Wal-Mart area was selected as potential location for such a change, although similar changes might be considered for other large retail plazas along the Corridor. In order to achieve this concept, the Design Workshop Team proposed several significant changes to the current situation. These are illustrated in **Figures 5-19 and 5-20**.

Figure 5-19—Re-designed Home Depot/Wal-Mart Plaza Area



Home Depot-Wal Mart Redevelopment Opportunity Node

Proposed changes include:

- Reducing the footprint of the Wal-Mart building to allow for a pedestrian sitting area in a vest pocket park.
- A series of mixed use storefront type buildings along Route 1 at the front of the property with minimal setbacks. These would be designed to be consistent with Seabrook's traditional, historic architecture.
- Re-designed Wal-Mart Building in with more traditional architectural style.
- Footprint for small parking garage.
- Pedestrian walkways throughout to connect shoppers/visitors to all stores/services.

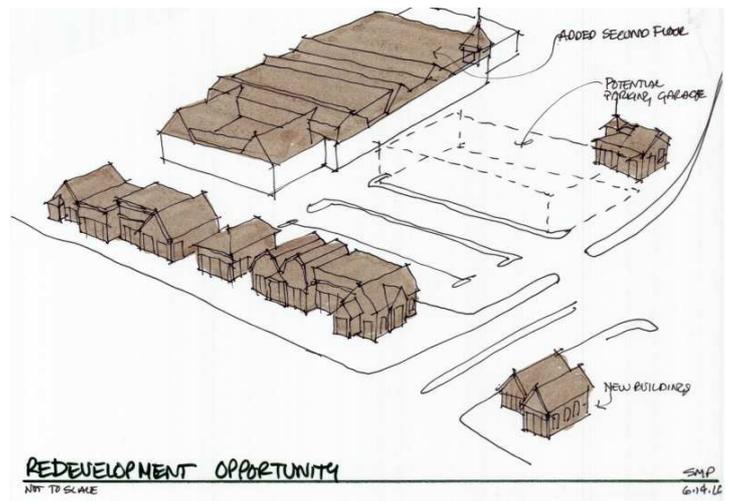


Figure 5-20—Conceptual Wal-Mart Plaza Redesign

- Pedestrian/bicycle connection to Route 1, future rail trail and Cains Mill Pond.
- Attractive landscaping long Route 1 and within the project site.

Commercial Corridor—Standards

Sample Draft Corridor Principles/Guidelines

Development along Route 1 is typical of commercial Corridor growth in many communities, characterized by a wide variety of architectural styles, signs, light fixtures, and landscape treatments. A number of developments may be praised for their appearance, while others have raised community concern. Such tensions are not uncommon, especially in areas of rapid commercial growth.

The following principles provide draft guiding statements about the desired physical appearance of the Route 1 Commercial Corridor

General Site Design Principles

- New and redeveloped properties should incorporate open space areas.
- Provide opportunities for pedestrian and bicycle circulation.
- Provide proper vehicular/pedestrian/bicycle connections onto and off of the site.
- Lots should be designed to complement adjacent buildings, the site, and the Route One Corridor without becoming a dominant visual element.
- Minimize the amount of impervious material and implement LID techniques for stormwater management.

Parking

- Provide convenient, safe, and attractive parking.
- Encourage parking to rear and side of buildings.
- Break up the scale of parking lots by reducing the total amount of paved surface visible from the road and incorporating landscape features (islands, walkways, etc.).

Landscaping

- Create suitable buffers between residential and commercial uses.
- Preserve existing trees and plant materials to the greatest extent possible.
- Use variety of plant material—primarily native or non-invasive species—to maintain visual and seasonal interest.
- Parking lot islands should be large enough to for trees to achieve full maturity.
- Trees should be selected and located to complement the building elevation.
- As part of the Site Plan application a written maintenance plan for all landscape materials installed on the property.

Suggested Corridor Standards—See Figure 5-17 above.

- 50-60 foot paved surface. No medians with exceptions for intersections to provide vehicular and pedestrian crossing safety.
- 5-8 foot of hardscape for snow piles adjacent to roadway.
- 8-10 foot vegetative strip for trees and landscape materials.
- 6-8 foot path/sidewalk.
- 8-10 foot vegetative strip in front of building or parking area.
- Roadside trees should be 10-15 feet from the edge of Route 1.
- Street-side trees should be planted at no more than 50 feet on center.

Old South Meeting House Opportunity Area

The Open Space/Gateway/Passive Recreation Concept at the intersection of Route 107 (Weare Road) was based in part on the interest expressed in this area—an approximately 3-acre town-owned parcel— during the Listening Session. It is intended to illustrate the potential for an open space/passive recreation area. Because of its strategic location, this area could also become a gateway visitor area. **See Figure 5-21.** The concept plan illustrates the following features:

- Gateway posts along Route 107.
- Closing of Spur Road
- Incorporating the Old South Meeting House as a visitor/historic center.
- A series of walking/biking trails for nearby residents and visitors



Figure 5-21. Gateway Center

The following individuals participated in the US Route 1 Corridor Design Workshop

- Jack Mettee, AICP, MPC, Land Use Planner/Leader
- Julie LaBranche, RPC, Land Use Planner
- David Walker, RPC, Transportation Planner
- Doug Greiner, ASLA, g2+1, Landscape Architect
- Shannon Alther, AIA, TMS Architects, Architect
- Dana Lynch, PE, Civilworks, Traffic/Civil Engineer

Summary and Observations

Impact of Land Use and Land Use Regulations on Transportation

Land use is both influenced by, and influences, a community's transportation system. Much of the development pattern in Seabrook over the past 50 years relies on the use of the automobile. Auto trips reflect people moving between land uses: from homes to places of work; between one home and another and between homes/workplaces to stores. The current zoning pattern encourages this type of vehicular movement because uses tend to be separated by single purpose zones—residential, commercial and industrial. By encouraging this type of separation, it becomes necessary to travel by vehicle from place to another for almost any activity.

In Seabrook, the Route 1 Corridor has become highly congested, because it is primarily a Commercial Zone for 500 feet on either side of the roadway. This has resulted in large commercial retail chain stores such as Wal-Mart, Home Depot, Lowe's and Kohl's. The Town Meeting amended the zoning for the Commercial Zone at the 2010 Town Meeting. The ordinance now allows more than one building per lot if the total building footprint is greater than 50,000 sf. By encouraging more buildings on large lots the impact of large "big box" stores will be minimized.

Transportation System Issues and Needs

Route 1 Traffic Congestion

The Route 1 Corridor is the most heavily travelled roadway in Seabrook and at peak hour traffic periods portions of the roadway, especially areas such as the south travel lanes just south of the Route 107 intersection, are very congested. This congestion is the result of heavy traffic, poor signal timing and roadway constrictions.

Much of this congestion has resulted from the rapid commercial development of the corridor since 1990 which generated significant volumes of traffic. This development included "big box" retail stores, large supermarkets and national chain restaurants. Respondents in the Community Survey indicate little support for additional retail activity. For example only 18% supported more grocery stores and only 21% supported more retail malls. In addition, one of the major challenges identified in the 2008 Community Forum was the issue of traffic and transportation.

It would appear that there is a need not only to deal with traffic congestion, but also the types of uses that are encouraged through the town's land use regulations. **See Route 1 Corridor Study** for additional information and analysis.

Alternative Transportation

Seabrook has very little in the way of public transportation. There is no rail service and very limited bus service (once per week along Route 1 to Portsmouth and Newington). The Community Forum and Survey indicated a desire for more public transportation. In the survey 71% of respondents would like to see more access to public transportation (rail, busses, etc.). There also appears to be a need for a more formal approach to pedestrian circulation (sidewalks) and bicycle routes/lanes.

Other Transportation Issues

Bridges—Of the six bridges in Seabrook, only two are controlled by the town. Based on the data from NH DOT all the bridges except the RR Bridge over Walton Road are in acceptable condition. The RR Bridge has been "red listed" and will need repair if the railroad right-of-way is used for a rail trail or future railroad line

Intersections—there are a number of problem intersections especially those along the Route 1 Corridor, including the Route 107/US Route 1 signal and nearby road links, especially Route 1 south of the intersection. These will need to be addressed in the near future.

Land Use—the town's existing zoning and land use regulations do not encourage a mix of uses and transportation modes especially in the Route 1 Corridor. There are also no specific provisions in these regulations to provide more opportunities for pedestrian travel, bicycling and public transit. In addition, there are no specific provisions for architectural or landscape standards. Consequently, the Corridor has become a significant retail commercial area with large single-story buildings or smaller national chain stores with vast areas for surface parking. There is limited landscaping to buffer the visual impact of this type of development. The town will need to address land use regulations to better minimize the impact of such development and encourage smaller mixed use buildings.

Access Management—There are a large number of accidents on certain roadways in Seabrook, including US Route 1 and NH Routes 107 and 286. Many of these accidents are the result of turning movements onto and off of these roadways, especially during periods of high traffic volume.

Seabrook should consider the need to implement access management strategies along US Route 1, NH Route 107 and 286 and major collector roadways to ensure efficient and safe movement of traffic. These strategies are intended to address the limited capacity of existing roadways to accommodate additional traffic and curb cuts that result from growth near or adjacent to these roadways. Such techniques include restricting the number of driveways per lot, consolidating driveways, shared driveways, varying the distance between driveways based on roadway posted speed or volume of traffic and increasing minimum lot frontage on major collectors and arterials. The box below provides a list of some of these techniques.

Managing Roadway Access in Your Community

- Restrict the number of driveways per lot and locate driveways away from intersections.
- Encourage access on side-street when activity is on corner with arterial.
- Connect parking lots and consolidate driveways. Encourage shared driveways.
- Provide residential access through neighborhood streets not along collectors/arterials.
- Promote a connected street system rather than dead ends and cul-de-sacs.
- Vary distance between driveways based on roadway posted speed or volume of traffic.
- Increase minimum lot frontage on major collectors and arterials.
- Encourage internal access to commercial shopping center outparcels.
- Encourage automobile interconnection between commercial developments.
- Encourage right turn deceleration and acceleration lanes/tapers.
- Add protected left hand turn lanes at entrances to commercial retail centers.
- Use of frontage roads for commercial & industrial development.
- Regulate design of driveways, such as adequate turning radius; one way in & out
- Proper signage that avoids sign clustering and does not visibly hinder view of access.

Action Plan

Vision Goal for Transportation

Provide and maintain a transportation system that allows for the efficient and safe movement of people and goods and provides adequate access to places of employment, neighborhoods, commercial and shopping areas and recreational facilities.

Objective 1: Maintain and, where appropriate, improve the current roadway system to provide efficient traffic flow along the major roadway corridors while maintaining a safe environment for pedestrians.

Actions

- T1.1: Adopt a Memorandum of Understanding between the town and the NH DOT with respect to access management for US Route 1.
- T1.2: Implement an access management program for all major roadways including US Route 1, NH Route 286, and NH Route 107. This plan would incorporate such techniques as shared driveways, consolidated driveways and interconnections between adjacent parking areas that are on two different lots as identified in the *US Route 1 Corridor Study*, April, 2008.
- T1.3: Widen the US Route 1 just south of the Route 107 intersection to the Lowe's retail mall intersection to incorporate two (2) southbound and two (2) northbound travel lanes.
- T1.4: Implement and monitor a coordinated signal timing program on US Route 1.
- T1.5: Continue to inspect local bridges every two years and cooperate as needed with the state DOT in its periodic inspection program.
- T1.6: Work cooperatively with the NHDOT to assure that any state bridges that are rebuilt or reconstructed provide adequate space for pedestrians and bicycle travel.
- T1.7 Re-connect the eastern segment of Folly Mill Road with the road's western segment. This would provide alternative east-west route to Route 107—currently Seabrook's only evacuation route during general emergency. (*2000 Master Plan*)
- T1.8 Extend Boynton Lane easterly to Centennial Street to enhance fire and police response times and provide additional access to town's civic services—police, fire and library. (*2000 Master Plan*)
- T1.9: Widen Route 107 Bridge over I-95 to five lanes. (*2000 Master Plan*)
- T1.10: Consider adopting the recommendations of the Amended DRAFT *US Route 1 Corridor Study*, April, 2008, as amended for the area north of the Route 107 intersection that includes adding a 5-lane cross-section north of New Zealand Road to the Hampton Falls town line.
- T1.11: Construct an access road between Rocks Road and the North Access Road. This would redirect traffic to an existing signalized intersection and eliminate long wait times at the Rocks Road/US Route 1 intersection.

- T1.12: Amend the Site Plan and Subdivision Regulations to incorporate a set of access management standards that promote roadway safety and maintain traffic capacity through appropriate location and design of driveways and intersections. Such standards would include safe site distance, minimum distance between driveways, maximum number of driveways per lot, corner clearances, shared driveways, etc.
- T1.13: Work with the RPC or traffic consultant to establish Travel Demand Management (TDM) standards/programs to encourage reduction of vehicular traffic to large commercial developments.
- T1.14: Monitor the “Level of Service” at key intersections within Seabrook, especially in the Route 1 Corridor, to ensure that the proposed improvements recommended in the Corridor studies achieve the desired results. Consider acquiring traffic counter equipment to monitor traffic along this Corridor.
- T1.15: Establish a system of truck routes within Seabrook in coordination with local businesses for various levels of commercial traffic that is consistent with the goals of this Master Plan and minimizes impacts to residential areas of the town.
- T1.16: Initiate traffic calming techniques on collector and minor local roads in residential areas.
- T1.17: Connect parking lots with interconnecting roadways to reduce traffic on main frontage roads, especially in the US Route 1 Corridor. *(Modified from 2000 Master Plan)*
- T1.18: Undertake a Route 107 Corridor Study west of I-95 to analyze and determine what actions might be appropriate to mitigate the impact of future development.

Objective 2: Encourage, develop and maintain a range of non-automotive transportation alternatives that are easily available to the residents of Seabrook.

Actions

- T2.1: Maintain and expand the system of pedestrian ways, bicycle paths and sidewalks throughout the town by establishing priorities and policies to both links the existing system and for construction of new facilities, including requiring payment for such facilities by applicants for commercial development and redevelopment.
- T2.2: Undertake a town-wide sidewalk inventory that includes the location, length, type of material and current condition.
- T2.3: Establish a trail master plan that creates a system of bicycle routes and multi-use trails/paths for the enjoyment of Seabrook citizens that is coordinated with state and regional trail systems. This plan should also identify the type of bike path facilities for local, arterial, and collector roadways as well as to establish standards for bike lane width, roadway striping and signage. *(Modified from 2000 Master Plan)*
- T2.4: Properly mark and sign the state designated bike route including US Route 1A and NH Route 286. *(Modified from 2000 Master Plan)*
- T2.5: Work with regional transportation agencies, such as COAST and the MBTA, to establish a public transit program to serve Seabrook, particularly within the US Route 1 corridor.

Objective 3: Establish and maintain a roadway hierarchy that ensures that local roads are safe for auto travel and that neighborhood, collector and urban center roadways are compatible with the character of these areas.

Action

- T3.1: Update and enhance the current roadway standards in the town's Land Use Regulations similar to those identified in this Master Plan as standards identified in **Appendix C.**

Objective 4: Promote transportation policies and improvements that are consistent with the town's policies for protection of natural and historic resources and minimize the impact on residential neighborhoods.

Actions

- T4.1: Update and enhance the current roadway design standards to ensure that there is minimal impacts to the town's streams and brooks as well as to ensure impacts from drainage do not degrade stream and pond water quality.
- T4.2: Adopt standards within Site Plan Review that would require vegetative buffers around and within all new commercial and industrial development—including roadway frontage. *(2000 Master Plan)*
- T4.3: Update Site Plan Review standards to ensure that commercial development provides appropriate levels of landscaping and pedestrian walkways. *(Modified from 2000 Master Plan)*

Objective 5: Participate in the coordination of state and local transportation planning that addresses both local and regional needs.

Actions

- T5.1: Continue to participate in the Rockingham Planning Commission (RPC) planning process for regional transportation planning. Advocate for the Town's interests through staff communications as well through participation in both the Technical Advisory Committee and Policy Committee of the RPC.
- T5.2: Continue to pursue funds from state and federal programs, including, but not limited to, Transportation Enhancement (TE) and Congestion Mitigation and Air Quality (CMAQ) grant programs.
- T5.3: Work cooperatively with the state district highway engineer on development projects that have direct impact on state roadways within Seabrook.
- T5.4: Participate with surrounding communities, as needed, on issues and projects that have regional transportation projects that can affect and benefit Seabrook or surrounding communities such as the Route One Corridor Study and the NH Seacoast Greenway.
- T5.5: Consider the adoption of the proposed concepts and corridor guidelines from the Route 1 Corridor Design Workshop, including the Smithtown area and the former Seabrook Village area in north Seabrook.

Objective 6: Continue ongoing process of funding for transportation enhancement projects.

Actions

- T6.1: Continue to inspect and maintain local roadway system through the town's operating and capital improvement budgets. These would include:
- Improvements to town streets consisting of pavement overlays and adjustment to associated structures,
 - Crack sealing repairs to town roads, and
 - Design and construction of drainage improvements to town streets.

(See also Actions CS 4.2, 4.3, 4.4, and 4.6 in the Community Services and Facilities Chapter of this Plan.)

T6.2: Encourage public/private cooperation in the financing of additions and improvements to the transportation system, especially when related to new or expanded development projects.

**Appendix 5A –
Roadway Classifications**

Appendix 5A

Roadway Classifications

ADMINISTRATIVE CLASSIFICATION SYSTEM

Class I, Trunk Line Highways: All existing or proposed highways that are part of the primary state highway system. The NHDOT is responsible for maintenance and construction costs of these highways except for those portions which lie within compact sections of towns and cities with a population of 7,500 or more. Those sections are the responsibility of the cities or towns as Class IV highways.

Class II, State Aid Highways: All existing or proposed highways that are part of the secondary state highway system. Maintenance and construction costs are controlled by NHDOT. Portions of these highways that are within compact sections of towns and cities with a population of 7,500 or more are classified as Class IV highways.

Class III, Recreational Roads: All roads in or leading to and from state reservations as specified by the Legislature. Maintenance and construction costs are the responsibility of NHDOT.

Class IV, Town and City Streets: All highways located within compact sections of cities and towns with populations of 7,500 or more. Maintenance and construction of these highways is controlled by towns and cities.

Class V, Rural Highways: All other traveled highways that are controlled by towns and cities.

Class VI, Unmaintained Highways: All other public roadways; includes highways that have not been suitably maintained for travel for five years or more, highways closed subject to gates and bars, and highways discontinued as open highways.

Scenic Roads: These roads (excluding Class I or II highways) are designated by the town or city such that maintenance and construction of these roads is strictly regulated. Removal or cutting of trees, or destruction of stone walls is strictly prohibited except as provided for under RSA 231:157.

Appendix 5B

Roadway Maps

Roads by Legislative Class



Seabrook, New Hampshire
Master Plan Update

Roads by Legislative Class

Public Roads

	Class I	7.4 Miles
	Class II	6.2 Miles
	Class V	39.3 Miles
	Class VI	.3 Miles
	Class VI	53.2 Miles

Other Roads

	Private Roads	7.9 Miles
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Total: 61.1 Miles

Data Sources:
Roads data set from NHDOT, January, 2010.

Other base data sets from NH GRANIT, University
of New Hampshire.



0 1,000 2,000 3,000 4,000
Feet



April, 2010

Roads by Functional Class



Seabrook, New Hampshire
Master Plan Update

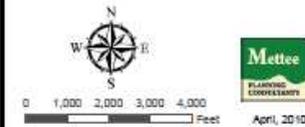
Roads by Functional Class

Public and Private Roads

	Arterial	7.4 Miles
	Collector	5.4 Miles
	Local	40.1 Miles
	Other (Class VI, Private)	8.2 Miles
		61.1 Miles

Data Sources:
Roads data set from NHDOT, January, 2010.

Other base data sets from NH GRANIT, University
of New Hampshire.



Appendix C –
Proposed
Functional Class Standards

***Proposed
Local Roadway Functional Class Standards***

Urban

Rural

Collector		
Right of Way	60'	60'
Street Width	40'	30'
Design Speed (mph)	20-25	25-35
Drainage	Closed	Open/Closed
Capacity (ADT)	1-6,000	2-4,000
Parking	Always	Usually
Sidewalks	Always	
Bicycle Lane	Recommended	

Local/Minor		
Right of Way	50'	50'
Street Width	24'	22'
Design Speed (mph)	20-25	25-35
Drainage	Closed	Open
Capacity (ADT)	200-1,000	1,000-3,000
Parking	Always	Never
Sidewalks	Always	Never
Bicycle Lanes		