# NMP 2020-2030: TRANSPORTATION

## INTRODUCTION

The Transportation Chapter of the Master Plan provides an overview of Newington's transportation network, identifies current transportation issues, and recommends actions to improve transportation in and around the community. As Newington strives to enhance the Town's economic vitality, quality of life and environment, a multi-modal planning approach to mobility becomes more important. This approach considers multiple forms of transportation, adjacent land uses and the connecting street network to develop innovative transportation solutions that balance the needs and finances of the community and protection of the environment.

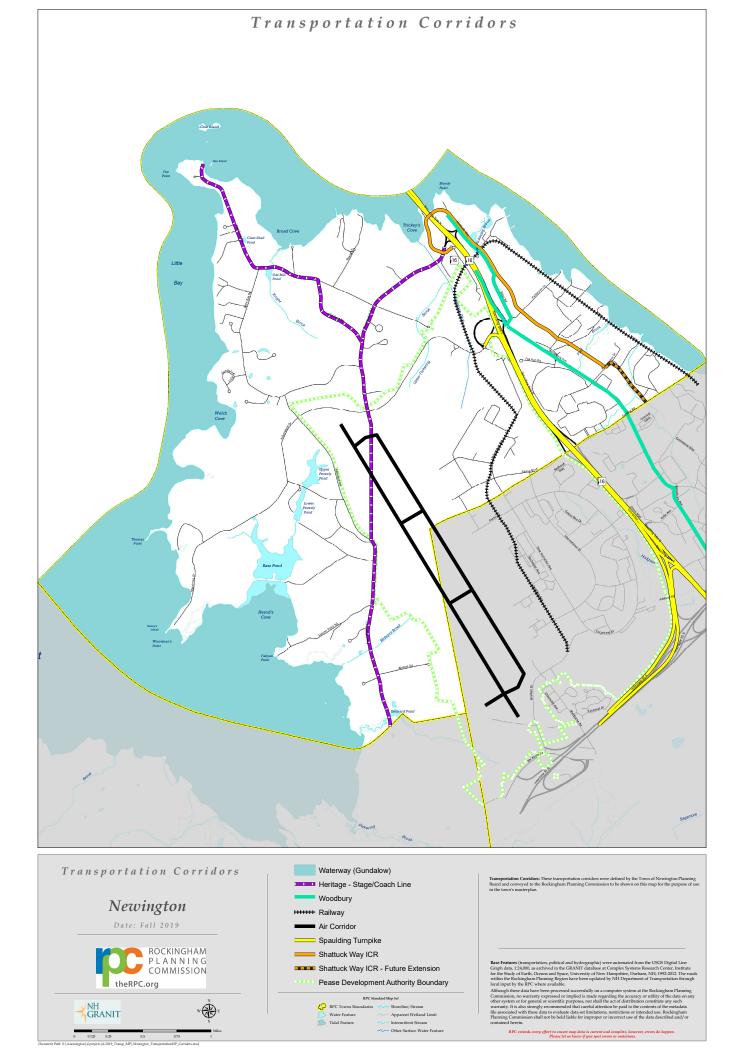
#### **NEWINGTON'S TRANSPORTATION NETWORK**

Newington has a complex transportation network for a town where residents make up less than 1% of the daily transportation volume. The network encompasses rural roads, a major state turnpike, a deep-water port, rail service, and portions of an international airport. This network is key to mobility for its citizens and economic development in town. Future land use, particularly in the Industrial, Waterfront Industrial, and Commercial and Office Zones, will occur with improved access, efficiency and interconnections between properties.

In the 1990's the Newington Planning Board developed a transportation strategy in conjunction with the NH Department of Transportation (DOT) and Rockingham Planning Commission (RPC) based on key travel corridors for efficient access and movement. The Planning Board identified seven arterial and collector corridors. Arterial corridors are the busiest roads, providing local connections but primarily pass people and goods through Newington quickly. Collector corridors provide similar pass through, but are slower and allow for more stops, cross-flow traffic, and turnoffs for local access. Remaining local roads are feeder and cross-traffic routes. Arterial corridors dominate with most converging towards Bloody Point, steered by years of limited cross-town access established by Pease Air Force Base.

From their development, Newington roads have been a mix of private, town, and state-owned routes; the Planning Board sees this multi-ownership balance continuing. The Board has identified seven arterial and collector corridors which are described below and displayed on Map 1.

- Waterway Corridor Native Americans and early settlers used the waterways of the Piscataqua River, Little Bay, and Great Bay to reach within ½ mile of any point in Newington. Travel took little effort for even heavy shiploads but was slow and dependent on the current and winds.
- Heritage Corridor Early land travel crossed the dry, highest land from Greenland to Fox Point or Bloody Point. The horse, wagon, and stage coach followed the Hampton to Dover trail along what became Route 151 to the Furber Point or Bloody Point ferries, or down Old Post Road to Fox Point and the first Piscatagua River Bridge.



- Woodbury Corridor Early travelers from Portsmouth going inland followed Woodbury Avenue to Old Dover Road to River Road to Bloody Point. This corridor became the start of NH Route 16 and US Route 4, an inland gateway through the heart of Newington's industrial and commercial zones. To preserve through traffic capacity, the Newington Planning Board has adopted a strict policy of limited direct access to north Woodbury Avenue from adjacent property. The Planning Board favors feeder roads serving multiple businesses at spaced intersections and encourages private side or back road connections between adjacent lands and businesses. The Woodbury Corridor Annual Average Daily Traffic (AADT) volume in 2018 was 11,000 14,000 vehicles.
- Railway Corridor In 1873, brewer Frank Jones financed the rail lines along the Piscataqua's western shoreline and the Bloody Point to Dover Point bridge, securing heavy industry access in eastern Newington with fisheries, Shattuck shipyards, and storage docks for minerals, oil, and gas. In the 1950's, US Air Force established a rail right-of-way that still exists today and leads from Newington Station into the Pease Tradeport and south. This right-of-way is owned by the Pease Development Authority and has been abandoned; the rails have been removed.
- Air Transport Corridor The flat sands and gravel slopes in central Newington, previously converted from forestland to farmland, became the future runways of Portsmouth Field, and then Pease Air Force Base. This established an air corridor for commercial cargo and passengers and continued military use as Portsmouth International Airport at Pease.
- Spaulding Turnpike Corridor By the mid 1950's transportation demands increased into inland New Hampshire and the first "bypass" to the Woodbury Avenue corridor was added as a major multi-lane arterial about the same time as Pease Air Force Base was being built. As traffic has increased, lanes have been added and interchanges limited to feeder connections at Gosling Road, Woodbury Avenue, and Shattuck Way. The Spaulding Turnpike AADT volume for 2018 ranged from 56,000 – 70,000 vehicles.
- Shattuck Way Industrial Corridor In the mid 1990's the Planning Board identified Shattuck Way as a second heavy industrial traffic bypass to Woodbury Avenue, preserving the route's capacity to serve Newington's growing commercial zone and increasing pass through traffic along Woodbury Avenue. The arrival of a regional gas mainline and second energy plant to the town spurred the Planning Board to commission the Industrial Corridor Road Study with Town funds and to direct the energy plant to construct Shattuck Way. In 2019 NH DOT listed Shattuck Way as a candidate for designation as a Critical Urban Freight Corridor (CUFC). If designated, Shattuck Way would be eligible for improvement funds from the New Hampshire Freight Plan for projects that support national transportation goals. The Shattuck Way AADT volume in 2017 was 2,600 vehicles, most of which are heavy trucks. In the future, extending Shattuck Way to the Portsmouth line and beyond to Market Street would complete the waterfront freight route to Interstate 95.

Improving the transportation network brings together not only the Town but multiple state and regional agencies who use several established plans and programs to coordinate ideas and resources.

- The State of New Hampshire has a Long Range Transportation Plan which is administered regionally by the Rockingham Planning Commission (RPC) and contains the region's adopted policies, goals and objective, and specific project proposals to improve the transportation system of southeast New Hampshire through the year 2045. The Plan reflects the goals and objectives of RPC member communities, including Newington, NH DOT, and the RPC's Regional Master Plan. The 2023-2045 Long Range Transportation Plan includes a project at Pease Boulevard/New Hampshire Avenue/Arboretum Drive to add a northbound right-turn lane on New Hampshire Avenue at the intersection with Arboretum Drive and Pease Boulevard.
- The region has a Transportation Improvement Program (TIP) which is administered by the RPC for Newington and other towns in the region. The TIP is a multi-year program of regional transportation improvement projects scheduled for implementation over four succeeding Federal fiscal years. The TIP is prepared by the RPC, NH DOT, regional transit agencies, and municipalities. The 2019-2022 TIP includes projects in or abutting Newington, including reconstruction of the Spaulding Turnpike and replacement of the General Sullivan Bridge to provide a bicyclist and pedestrian connection between Newington and Dover.

## NEWINGTON'S ROADS AND INTERSECTIONS

Newington is a balance of State, Town, and Private roads. The town was once served by five state routes: 1<sup>st</sup> NH Turnpike (Old Post Road and Fox Point Road to 1<sup>st</sup> Piscataqua bridge), Route 151 (Newington and Nimble Hill Road), Routes 4 and 16 (Woodbury Avenue/Old Dover Road/River Road), and Spaulding Turnpike (STP). Routes 4 and 16 have been consolidated into the Spaulding Turnpike and NH DOT has been negotiating with Newington to accept maintenance responsibility for the remaining state road. Woodbury Avenue and Newington Road are the State routes not transitioned as of this Master Plan. Table 1 provides an inventory of all roads in Newington, both State and Town maintained.

Table 1: Inventory of Roads in Newington, excluding roads in Pease Tradeport and the Great Bay Wildlife Refuge

Road Name	Legal Class	Length (ft)	Paved Width (ft)	Right-of- way Width (ft)	Condition of Road based on 2018 Pavement Condition Assessment Index*
Airport Road	V	2,640	16	33	79/100
Avery Road	Private	2,000	24	75	NA
Beane's Lane	V	1,580	21	50	93/100
Brickyard Way	V	340	21	50	86/100
Captain's Landing	V	1,800	25	50	79/100
Carter's Lane	V	2,110	12	unknown	50/100

Coleman Drive	V	850	21	50	78/100
Dumpling Cove	V	895	26	50	92/100
Fabyan Point Road	Private	4,250	10	10	NA
Fox Point Road	V	7,075	18-21	43-50	78/100
Fox Run Road	V	2,270	16-36	50	NA
Gosling Road	V	5,500	26-46	unknown	67/100
Gundalow Landing	V	1,900	21	50	89/100
Hannah Lane	V	1,580	25	50	66/100
Hodgdon Farm	V	1,246	26	50	65/100
Little Bay Road	V	9,715	21	32-40	90/100
Little Bay Road Ext.	V	370	20	unknown	82/100
Lydia Lane	Private	250	22	50	NA
Mall Ring Roads	Private	10,700	30	unknown	NA
McIntyre Road	V	7,660	21	50	81/100
Motts Cove	V	693	26	50	75/100
Newington Road	II	6,440	21	50	NA
Nimble Hill Road	II	8,180	22	50	73/100
Old Dover Road	V	1,110	23	unknown	44/100
Old Post Road	V	3,270	18-21	28-36	81/100
Patterson Lane	V	2,590	20-21	38-60	72/100
Piscataqua Drive	V	720	36	60	NA
River Road	V	2,039	21	50	68/100
Rowe's Way	Private	570	24	30	NA
Shattuck Way	V	6,104	36	60	83/100
Spaulding Turnpike	1	12,400	76	300+	NA
Swan Island	V	850	21	50	37/100
Welsh Cove Drive	V	1,300	21	50	89/100
Wilcox Way	V	Under	construction	50	NA
Woodbury Avenue	V	7,310	60	100+	N

<sup>\*</sup>The Pavement Condition Index (PCI) is a quantitative number ranging from 0 to 100 that represents the quality of the road. The higher the number, the greater the general pavement condition. The PCI is calculated from road data inventory inputs such as the presence of cracking, potholes, and rutting.

Roads in New Hampshire are categorized into classes per NH RSA 229:5. Roads in Newington fall into the following categories:

- Class I highways are highways on the primary state highway system.
- Class II highways are highways on the secondary state highway system.
- Class V highways are highways that the town has the duty to maintain regularly and are known as town roads.

Scenic Roads - Preservation of Newington's historic and rural character is a primary goal of the Master Plan. The Town has acted proactively to protect the scenic qualities of Newington's local roads by designating all Class V roads west of the Spaulding Turnpike as Scenic Roads, per NH RSA 231:157-158. This statute states stone walls and trees in the public right of way cannot be removed or altered without the consent of the Planning Board, unless they are within three feet of the traveled surface and interfere with public safety. In emergency situations, the Road Agent may cut and remove trees with the permission of the Board of Selectmen. A Scenic Road designation does not preclude paving the road, nor does it limit the property rights of abutters.

Road Management and Maintenance Plan - The Rockingham Planning Commission completed a Road Management and Maintenance Plan for the Town of Newington in 2019. The Plan provides an inventory of local roads and assessment of road conditions to enable the Town to plan for pavement maintenance and rehabilitation. The Newington Board of Selectmen and the Road Agent have adopted the Plan as a basis for future maintenance of Newington roads, taking into consideration the impacts of climate change and the increase in extreme precipitation events on culverts and other road infrastructure. The Plan is available in the Appendix.

<u>Woodbury Avenue/Gosling Road Intersection</u> – A large amount of commercial and retail activity occurs on Woodbury Avenue and Gosling Road, generating a substantial amount of traffic at this intersection. Continued growth and development will stress the capacity of traffic control signals.

Woodbury Avenue/Piscataqua Road Intersection — Woodbury Avenue serves as a primary arterial in Newington, moving traffic between the commercial, industrial, and retail uses along the corridor both in Newington and Portsmouth, and the Spaulding Turnpike. The current roadway is deficient however in that it is only designed to facilitate motor vehicle traffic. The roadway is six lanes wide in places and there are no designated pedestrian crossing points at the entry to Fox Run Mall at Piscataqua Road, the entry road for The Crossings, or the onramp for the Spaulding Turnpike at Exit 4. Current signalized and unsignalized intersections are not designed to accommodate pedestrian crossings as they include no sidewalks, crosswalks, signal heads, or other facilities designed to provide access to, or improve the safety of, non-motorized roadway users. Current development activities in the area have increased the number and type of uses occurring along the corridor and any roadway improvements facilitated by new development should include rebuilding intersections to be pedestrian and bicycle friendly as well as accommodating movement along and across the roadway.

<u>Traffic Safety</u> – There is concern in town that Newington Road/Nimble Hill Road/Little Bay Road/McIntyre Road are being utilized to avoid congestion and construction on the Spaulding Turnpike, and to connect to Route 33 in Greenland. Drivers using GPS and traffic diversion apps are accessing local roads, resulting in increased traffic volume and speeds through the center of town.

<u>Access between Newington and Pease Tradeport</u> – To enhance commerce and mobility for residents, the Town and Pease Development Authority need to re-address access options for roadway interconnections along Arboretum Drive at Nimble Hill Road, McIntyre Road, and other locations.

## **PUBLIC TRANSPORTATION**

Newington's business district is served by two public transportation systems: the Cooperative Alliance for Seacoast Transportation (COAST) and UNH Wildcat Transit. COAST's trunk Route 2 connects Rochester, Dover, Newington and Portsmouth with Newington service to the Mall at Fox Run, the Crossings, and businesses along Shattuck Way. COAST Route 40/Pease Trolley connects the mall complex, Walmart, Pease TradePort and downtown Portsmouth. Both services operate Monday-Saturday. UNH Wildcat Transit Route 4 connects Durham, Newington and downtown Portsmouth with stops at the malls, Walmart and along Woodbury Avenue. These services are valuable in connecting both employees and customers to Newington businesses that make up a large portion of the local tax base. Larger employers increasingly expect transit to be provided by municipalities as a core public service.

Newington's village center and residential areas are more difficult to serve cost effectively with fixed route transit given their low population density. Newington, like much of the state, will see a growing need for transportation options in the coming decade with the aging of the baby boom generation. Newington has a relatively high population of older adults with a median age (53.7 years), among the highest in the state. According to the AARP, approximately 20% of Americans over age 65 don't drive but need transportation assistance to continue to live independent, active lives and be able to age in place. Ensuring adequate and flexible transportation options for residents was a theme at the master plan visioning forums.

COAST currently provides demand response paratransit service within 0.75 miles of transit stops for individuals with disabilities under the Americans with Disabilities Act (ADA). COAST also provides medical transportation for seniors and individuals with disabilities through its TripLink call center that is not restricted based on ADA eligibility.

Private sector transportation options such as traditional taxis as well as Uber and Lyft are available in the region and can be appropriate options for many who don't drive or prefer not to drive, are relatively tech savvy, and able to pay market rates. A limitation of these options is that they are generally not accessible for individuals with wheelchairs or other mobility devices.

A cost-effective solution for senior transportation that is expanding in many parts of the state is volunteer driver programs. Volunteer programs such as TASC, Ready Rides and the Portsmouth Senior Transportation Program serve many seacoast communities, coordinating volunteers to provide rides to medical appointments and other trip types. None currently serve Newington. Programs typically make decisions to add communities to their service area based on a combination of available local volunteers and a commitment of municipal funds. Developing local volunteer driver capacity, or otherwise addressing growing senior transportation needs, will be an important consideration for the town in the coming decade.

## PORT FACILITIES

Portsmouth Harbor is the largest and the sole deep-draft port in the state handling approximately 3.5 million tons of shipping annually. Fed by the confluence of multiple rivers into the Great Bay Estuary, the harbor remains unencumbered by ice, providing year-round access for goods essential to the commerce of New Hampshire. The NH Port Authority, under the Pease Development Authority (PDA), controls over 1500 moorings and multiple state docks. Newington's waterfront district occupies over 50% of the harbor. It is unique because of the Town's action to only allow ocean-dependent industry in this zone. Continuing this policy is essential for the state's economy and as a continuing source of over 60% of the Town's revenue.

The Port encompasses a 6.2 mile-long channel along the Piscataqua River, 42 feet deep, with air draft of 135 feet, and generally 400-600 feet wide. The channel runs northwesterly from deep water between New Castle and Seavey Island to a turning basin approximately 1,700 feet past the Atlantic Terminal Sales dock in Newington. Bedrock at bends in the river was blasted in 1966 to widen the channel to approximately 700 feet to ease ship passage. The harbor includes two 42-feet deep turning basins. The first turning basin is located opposite the Port Authority dock in Portsmouth and is 950 feet wide. The second is at the end of the channel in Newington and is 850 feet wide. This upper turning basin is scheduled for a deepening and widening in 2022 provided state & Federal funds are available.

Management of the Port is the responsibility of the Pease Development Authority's Division of Ports and Harbors, which oversees state piers in the harbor. Newington has five active commercial piers located at Pickering Riverside, Little Bay Lobster, Tyco, Sea 3, and Sprague (2 land locations) with over 3 million barrels of bulk storage facilities for oil, gasoline, liquified petroleum gas, asphalt, salt and numerous other materials. The port also handles large quantities of salt and gypsum rock. Industries located in Newington that rely on the port facilities include Little Bay Lobster Company, the world's largest harvester of lobsters; two generating plants, EP Newington Energy and Granite LLC Energy; Sea-3 propane facilities, Riverside Pickering marine contractors, and SubCon, a manufacturer of deep sea fiber optic cables. The Sprague Energy Terminals off Shattuck Way provide storage for fuel, heating oil and kerosene, as well as dry bulk and liquid bulk material storage and handling. In Newington, access to port facilities is made via Shattuck Way and Woodbury Avenue within a mile of interstate turnpikes.

Multiple options for additional piers await to be developed adjacent to the former Mobil Oil tank farm site, at the Mahoney/WWI shipyard site, and at the prior Air Force fuel farm site with nearby land site connections for these piers range from a few acres to over 15 acres. Newington has no funds or access to grants to support port facilities; however, it is actively involved in long range planning for port expansion in support of the NH Division of Ports and Harbors as they seek grant funds to rehabilitate facilities.

Harbor Escort, Security and Emergency Response for the Port are shared responsibilities: Escort pilot and tugs complete over 800 round trip movements each year (generating \$30K per RT). Rescue vessels from city of Portsmouth, town of Newington, US Coast Guard, US Navy and Moran commercial firm serve the harbor. Casualty landing points are designated at Great Bay Marina,

NH Port Authority, and the coast guard station (latter manned by 25 people per shift). Also, prepositioned containment boom barges for spill containment are positioned on moorings. Fire suppression is provided by Drum Point and Town Point tugs at 500 gpm, Handy Four tug at 1000 gpm, and two Navy contract tugs at Little Bay Lobster providing 3500 gpm each (additional unspecified shipyard capabilities from US Navy). Policing is provided by 12 individual, federal, state, and local departments around the harbor.

#### RAIL CORRIDORS

Pan Am Railways owns and operates the Newington Branch rail corridor that runs through Newington's Waterfront Industrial Zone near the shore of the Piscataqua River. Freight service is available via the Portsmouth Branch, which begins at Rockingham Junction in Newfields and travels through Stratham, Greenland and Portsmouth before entering Newington. The Newington Branch is 3.5 miles in length and terminates at the C.H. Sprague and Son's bulk storage facility. The Pease Development Authority is preserving a State-owned rail corridor from the Sprague facility across the Spaulding Turnpike and southward along the aviation industry zone. Should heavy rail be needed for future Tradeport industry or a potential light rail commuter rail system is viable, it could continue to the south Tradeport access roadway and reconnect with the PanAm rail in Greenland.

#### PEASE AIR TRAVEL

Portsmouth International Airport at Pease is owned and operated by the Pease Development Authority. The military is a major tenant with the Pease Air National Guard sharing the runway with general aviation flights and aircraft training operators. The airport is a military port of entry and a U.S. Customs port. Domestic and international terminal passenger services are increasing with an increase in the number of passenger airlines serving the airport. Plans are underway to expand the terminal to add a new concourse and passenger and baggage screening facilities.

### **BICYCLIST AND PEDESTRIAN ROUTES**

Public input forums and the community survey conducted for the Master Plan identified frequent use of local roads by residents for running, walking and bicycling, and the need to provide better safety for bicyclists and pedestrians. The Town takes a different approach to bicyclists and pedestrian routes depending on their location:

Town residential roads are beautiful routes but offer little if any shoulder to provide a margin of
safety for bicyclists and pedestrians. Residents prefer to avoid curbed sidewalks in favor of side
trails and paths in order to enjoy the rural character of the areas. A complicating factor is that
many older residential roads have little if any shoulder right of way (ROW) which could be safely
used for walking or biking. Options for providing safer routes for bicyclists and pedestrians

include widening the shoulder in areas where the ROW and terrain permit and establishing stone dust or asphalt paths separated from the road by a grass strip. The separated paths would provide the safety of being separated from vehicular traffic with a more rural feel but would be costly and require additional care to maintain.

 Town roads in the business districts with commercial and office traffic are required to have curbed sidewalks and crossing safety improvements, utilizing an existing sidewalk network and parking lot aisles. As parcels along Woodbury Avenue are redeveloped, sidewalk and crossing improvements will be needed between the entrance to the Crossings on Woodbury Avenue and Gosling Road and along Gosling Road to provide safe access to the existing bus stop.

Newington is a central link in the State Bicycle Route. Maintaining a pedestrian and bicycle link across Little Bay has been a core component of the Newington-Dover Little Bay Bridges construction project. For years the General Sullivan Bridge has provided a crossing for bicycle commuters and recreational riders from Dover, Durham and points north into Newington and Portsmouth. The Bridge has been permanently closed and NHDOT is evaluating alternative designs. In the interim, NHDOT has opened the right shoulder of the northbound Little Bay Bridge for walking and bicycling traffic during construction with a protective traffic separation barrier. Newington maintains belief that a replacement to the General Sullivan Bridge is needed for long-term bicycle and pedestrian traffic. The remaining State Bicycle Route connection from the General Sullivan Bridge to Pease follows Shattuck Way to Nimble Hill Road. Bicyclists turn left onto Fox Point Road to a bike path cut through to the Tradeport following the road eventually leading to the Portsmouth traffic circle. Bicyclists riding further south toward South Newington follow Nimble Hill Road to Little Bay Road to McIntyre Road and onto Newington Road. The public forums also highlighted growth of cut-through traffic and speeding on these roads, suggesting a need for traffic calming to bring down speeds and potentially make the roads less attractive as cut-through routes.

#### TRANSPORTATION RECOMMENDATIONS

- Improve traffic signal coordination along Woodbury Avenue and Gosling Road.
- Research traffic calming techniques for Nimble Hill Road, Little Bay Road, and McIntyre Road to
  minimize impacts of through traffic. Providing additional shoulder width on these roads while
  maintaining narrow travel lane striping would have safety as well as maintenance benefits without
  increasing speeds.
- Improve bike route safety along Newington Road, Nimble Hill Road, Little Bay Road, and McIntyre Road to facilitate movement from the General Sullivan bridge to the NH 33 and NH 151 corridors.
- Continue support for a transit connection to Pease and to commercial areas on Woodbury Avenue/Gosling Road.
- Improve safety of transit stops at Gosling Road.
- Complete classification counts (volume + vehicle type) at Turnpike interchanges and along Shattuck Way to better understand the volume of truck traffic and need for any improvements on that facility.
- Conduct volume counts on Nimble Hill Road and Little Bay Road to improve understanding of potential cut-through traffic issue.

- Advocate for prioritizing Shattuck Way in the State's Critical Urban Freight Corridor to enable funding for road improvements.
- Redevelopment of the Fox Run Mall may provide opportunities for other transportation improvements.
- Monitor plans for growth and improvements to the Port keeping in mind that the Town has no funds nor access to funds to support port facilities.
- Advocate for dedicated, permanent bicycle and pedestrian lanes on the Little Bay bridges, separate from highway traffic and the breakdown lanes, to replace the General Sullivan Bridge.
- Require expanding and new commercial and industrial development in the Waterfront Industrial
  Zone to construct the infrastructure needed to support the industrial activity power, water,
  sewer, roads, and railways. This infrastructure needs to be in place before additional
  development begins.

