

2.5 TRANSPORTATION

2.5.1 Overview

Briarcliff Manor's transportation system is comprised of highways, streets and a rail line. The Taconic State Parkway and State Routes 100, 9 and 9A traverse the Village in a north-south direction. These highways, together with the Metro-North Railroad (Hudson Line), form the backbone of Briarcliff Manor's transportation system. The Village's low-density development pattern heavily relies on auto transportation. The Metro-North railroad represents the primary alternative transportation mode for residents commuting to New York City. The majority of these commuters drive to the train. Westchester County's Bee-Line bus service provides routes to White Plains, Tarrytown and Port Chester along Routes 9 and 9A.

The circulation pattern in the Village is constrained due to the effect of the varied topography on the road network. The Village is well served in a north-south direction by the arterial Routes 9, 9A and 100 as well as the Taconic State Parkway. On the other hand, travel in an east-west direction is less straightforward, as Long Hill Road, Pine Road, Elm Road and Scarborough Road are narrow, with numerous hills and turns. Pleasantville Road serves both as an arterial, carrying through traffic, and also as a local road, being the commercial spine of the downtown.

2.5.2 Functional Classification of Roadways

Transportation planners and engineers have devised standard categories for roadways so that roads can be designed based on their function. Certain roadways are intended to carry high volumes of through traffic, while others are primarily for local traffic and providing access to adjacent lands. When conflicts occur in the use of roadways, congestion and crashes are usually the result. The functional

classification of Briarcliff Manor's road system is depicted in Figure 2-12 and is as follows:

Limited Access Highways

These roads provide regional access for vehicles traveling through Briarcliff Manor. They primarily carry high-speed and long distance through traffic. All access and egress occurs via grade-separated interchanges, and access to individual properties along the rights-of-way is prohibited. The Taconic State Parkway is the only road of this type in Briarcliff Manor.

Arterials

Arterials are designed to carry traffic between Briarcliff Manor and the surrounding towns and villages. Arterials are generally state roads, (Routes 9, 9A and 100), but Pleasantville Road and South State Road also function as arterials. The width of the pavement of the arterial should be sufficient to permit the movement of traffic in both directions. Along with direct access (driveways, curb cuts), on-street parking should be discouraged along arterials. The Village Board and Planning Board should, when possible, discourage direct access to arterial roads from adjoining land, as a component of an access management plan.

Collector Roads

These roads generally function as connectors between local roads and arterials. Collector roads interconnect various sections of the village and are the principal means of circulation to the residential areas. Pine Road, Elm Road, Long Hill Road, Scarborough Road, Sleepy Hollow Road, Old Briarcliff Road, North



Scarborough Road Bridge

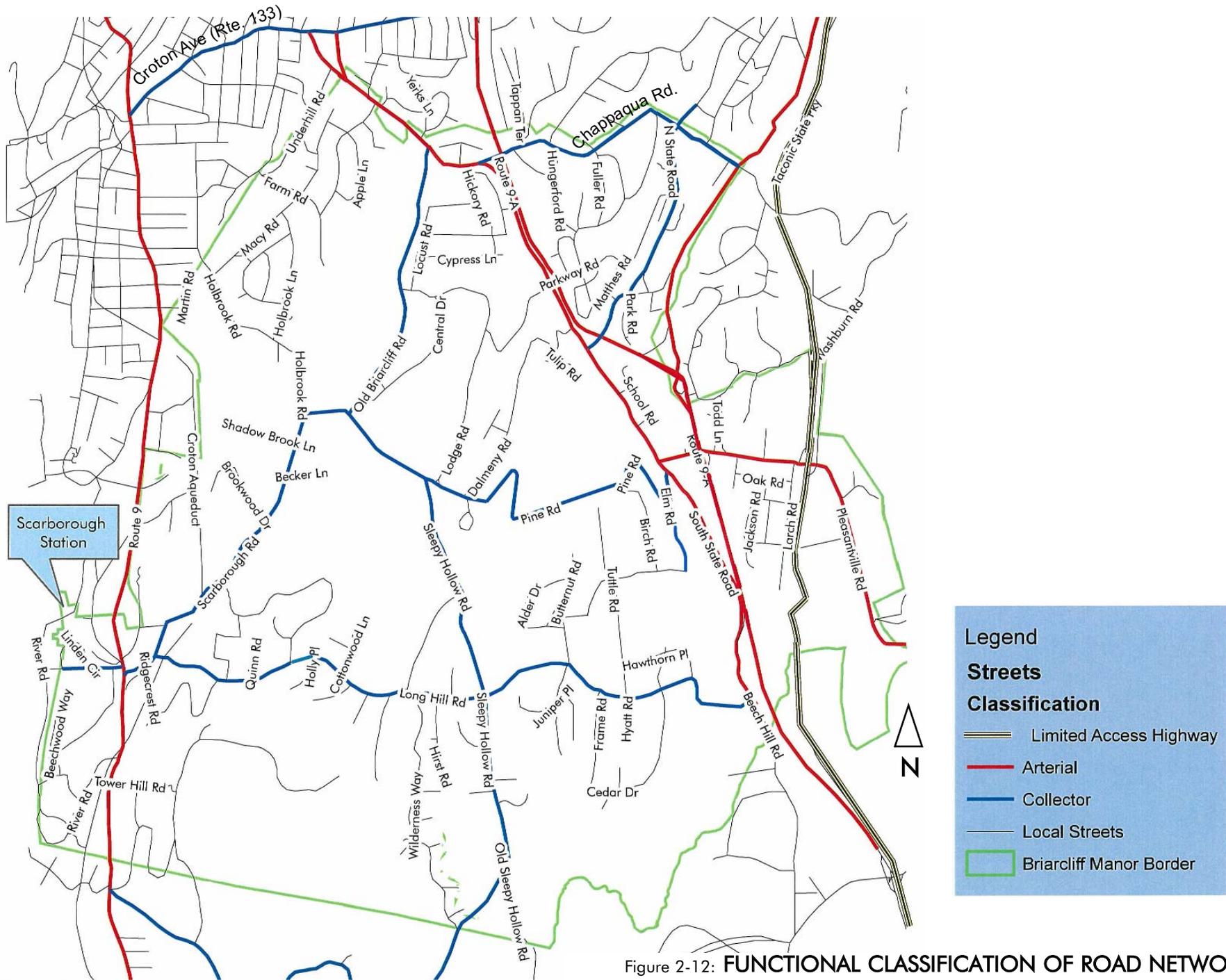


Figure 2-12: **FUNCTIONAL CLASSIFICATION OF ROAD NETWORK**
 BRIARCLIFF MANOR COMPREHENSIVE PLAN

State Road, and Chappaqua Road are collector roads. They are typically a little wider than local roads to permit the passage of one lane of traffic in each direction without interference from parked or standing vehicles.

Local Roads

These are all other streets. They provide direct access to the properties located along them, and should not be designed to carry through traffic. The Village Board and Planning Board should require local roads to have sufficient width to permit two-way traffic to pass safely. In low density residential areas (with minimum lots of one or more acres in size), where parking is usually provided on each lot, a two-lane travel way should be adequate. In higher density areas, a wider road should be provided to allow for parking on one or both sides.



Tuttle Road

2.5.3 Traffic Volumes

Traffic volumes are shown in Figure 2-13. The highest volumes occur on the limited access highway in the study area, the Taconic State Parkway. The Average Annual Daily Traffic (AADT) for 2004 was approximately 83,000 just south of the Village line and 77,000 within the Village. AADT is an estimate of the total volume of traffic on a highway segment for one year, divided by the number of days in the year. The number shown is the total two-way traffic volume. Route 9A carries approximately half as much traffic as the Taconic, with volumes ranging from 38,000 to 44,000 within the Village. The collectors, Long Hill Road and Pine Road, carry a fraction of that traffic and accommodate fewer than 1,500 vehicles per day.

The New York State Department of Transportation (NYSDOT) will expect to complete a ramp by the end of 2007 to connect Route 9A southbound to the Taconic State Parkway southbound. "Ramp X" will roughly parallel the existing ramp linking the northbound Taconic State Parkway to the northbound Route 9A just north of Route 117. This project will lead to a slight shift of traffic volumes between Route 9A and the Taconic State Parkway and provide some relief in the morning peak traffic through the Village on Pleasantville Road.

2.5.4 Crash Data

Vehicle crash records for Briarcliff Manor covering the three year period from May 2003 through May 2006 were obtained from the Briarcliff Manor Police Department. The records covered both village and State roads. During that time period, there were three fatal accidents, 199 personal injury accidents and 909 property-damage-only (PDO) accidents. A PDO accident indicates that more than \$1,000 in damage occurred due to the collision. Accidents involving pedestrians and cyclists are included in the data, and cannot be displayed separately due to the limitations of the police record keeping. The crash data was geocoded for all crashes where there was an injury or a death. This is illustrated in Figure 2-14, which shows that several intersections and stretches of state and local roads had high injury occurrences.

The location with the highest number of crashes is the intersection of Route 9A with North State Road, where there were 30 personal injury crashes between 2003 and 2006, including one fatality. Twenty years ago (1986), a report by NYSDOT entitled Preliminary Study of Route 9A Intersections Concerning Possible Improvements Route 9 to Route 100 stated: "As the volume of Route 9A traffic increases, these intersections are becoming more of a problem from a traffic operations and safety standpoint." When written in 1986, the AADT along Route 9A was 26,800. Twenty years later traffic volumes have risen by more than 40% to over 38,000. An upgrade to this intersection is needed. In addition, this intersection is difficult to cross for pedestrians.

EXISTING CONDITIONS

Circulation: Traffic, Streets, Transit, and Pedestrians

The at-grade intersection with Route 9A at Chappaqua Road is also a high accident location, where 14 personal injury crashes occurred during the three-year period. The high number of crashes may be due to the high volume of through traffic which occurs along this important arterial.

The intersection of Route 9A with Pleasantville Road, northbound, also recorded a high number (22) of personal injury crashes. Although this intersection is grade-separated, the short ramp length to enter Route 9A may be the cause of these crashes. Further research will be required to determine the exact location of these crashes as they may have occurred on the ramp or



Downtown Gateway: Route 9A and North State Road

on Pleasantville Road. Five additional crashes occurred at adjacent intersections. This is the second highest crash total in the Village.

Along Route 9, there are two areas of concern. Along the short stretch between the intersection of Route 9 with River Road and the Village border with the Village of Ossining, fifteen crashes, including one fatality, were recorded between 2003 and 2006. High speeds along Route 9 coupled with the difficulty in making left turns probably lead to the high number of crashes. NYSDOT is expected to reconfigure Route 9 from four lanes to two lanes, with a turn lane and wider shoulders. This project should improve the safety of this stretch of roadway. Within this stretch is the confluence of roads where Scarborough Station Road, Scarborough Road, Revolutionary Road and Marlborough Road intersect with Route 9. Fifteen crashes occurred over a three year period at this location. The high usage of Scarborough Station, which is located at the end of Scarborough Station Road, may largely account

for the high crash rate here. Effort should be made to modify this complicated intersection.

Just south of the Village border, in the Town of Mount Pleasant, the intersection of Route 9 with Country Club Lane and Sleepy Hollow Road also experienced a traffic fatality during the past three years.

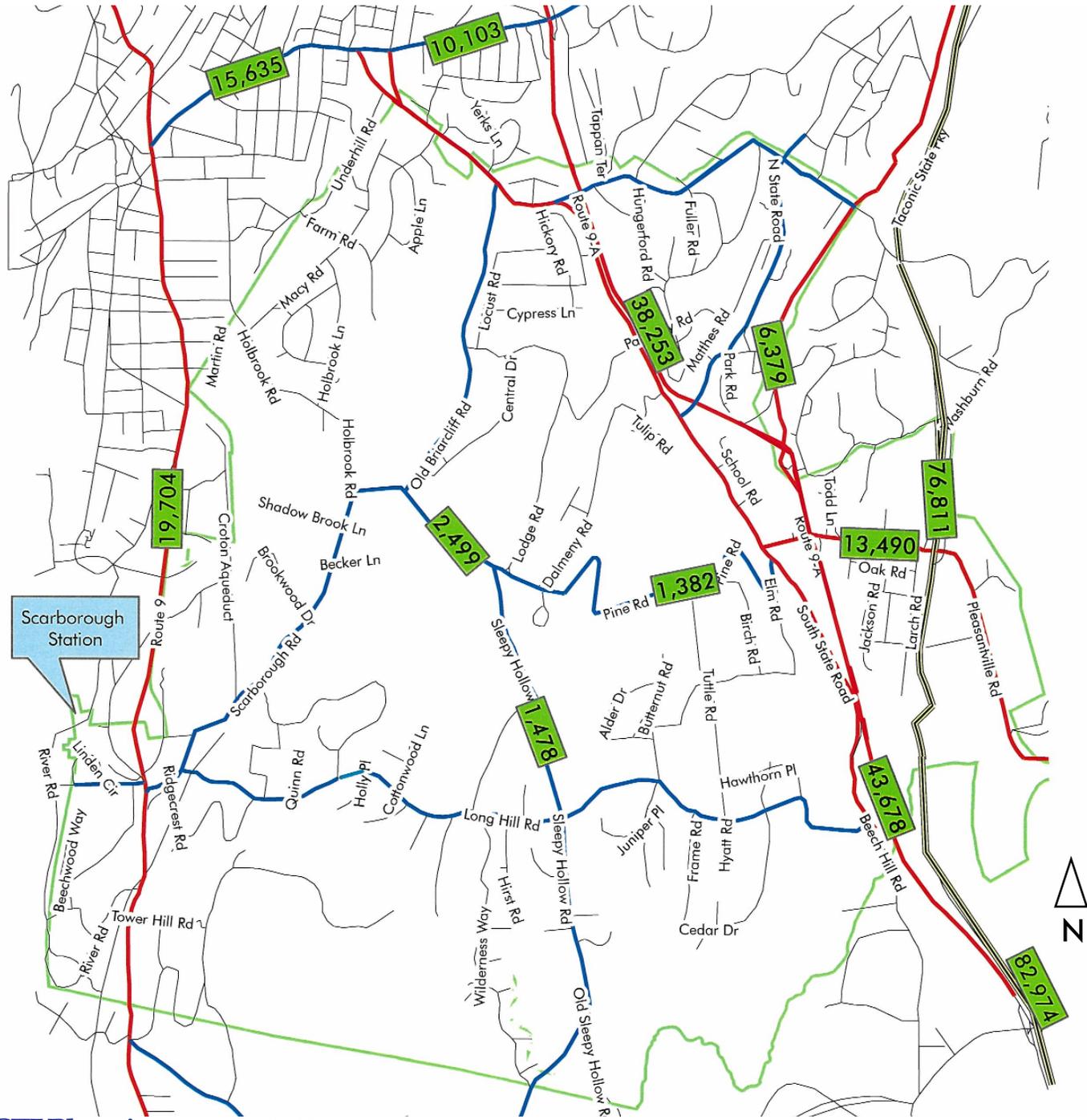
The intersection of Route 100 and Chappaqua Road experienced seven injury crashes between 2003 and 2006. NYSDOT has signalized this intersection. The number of crashes at this intersection should decrease.

2.5.5 Planning Issues

Access Management

A Village access management plan will improve the traffic flow and safety in the Village and reduce congestion and conflict created by excessive driveways along the arterials and collectors. Access management strategies aim to alleviate the inherent conflicts between the function of through traffic of an arterial and the local function of access to abutting properties. As traffic volumes increase along the arterials, conflicts become more and more problematic in terms of congestion and accidents, and will eventually hamper the economic well being as well as the quality of life, in the Village. Eventually it will become difficult to make left turns onto and off arterials, which may lead to a further increase in accidents along Route 9 and Pleasantville Road, which have some stretches with numerous curb cuts.

Studies have shown that an effective access management program can reduce crashes by as much as 50%, increase roadway capacity by 25% to 45%, and reduce travel time and delay as much as 40 to 60 percent. The Village of Briarcliff Manor shares the responsibility for the traffic flow along the arterials, even though most of them are state highways.



All Figures are 2004
Annual Average
Daily Traffic (AADT)
Showing Total Volume
in Both Directions

Figure 2.13: TRAFFIC VOLUMES

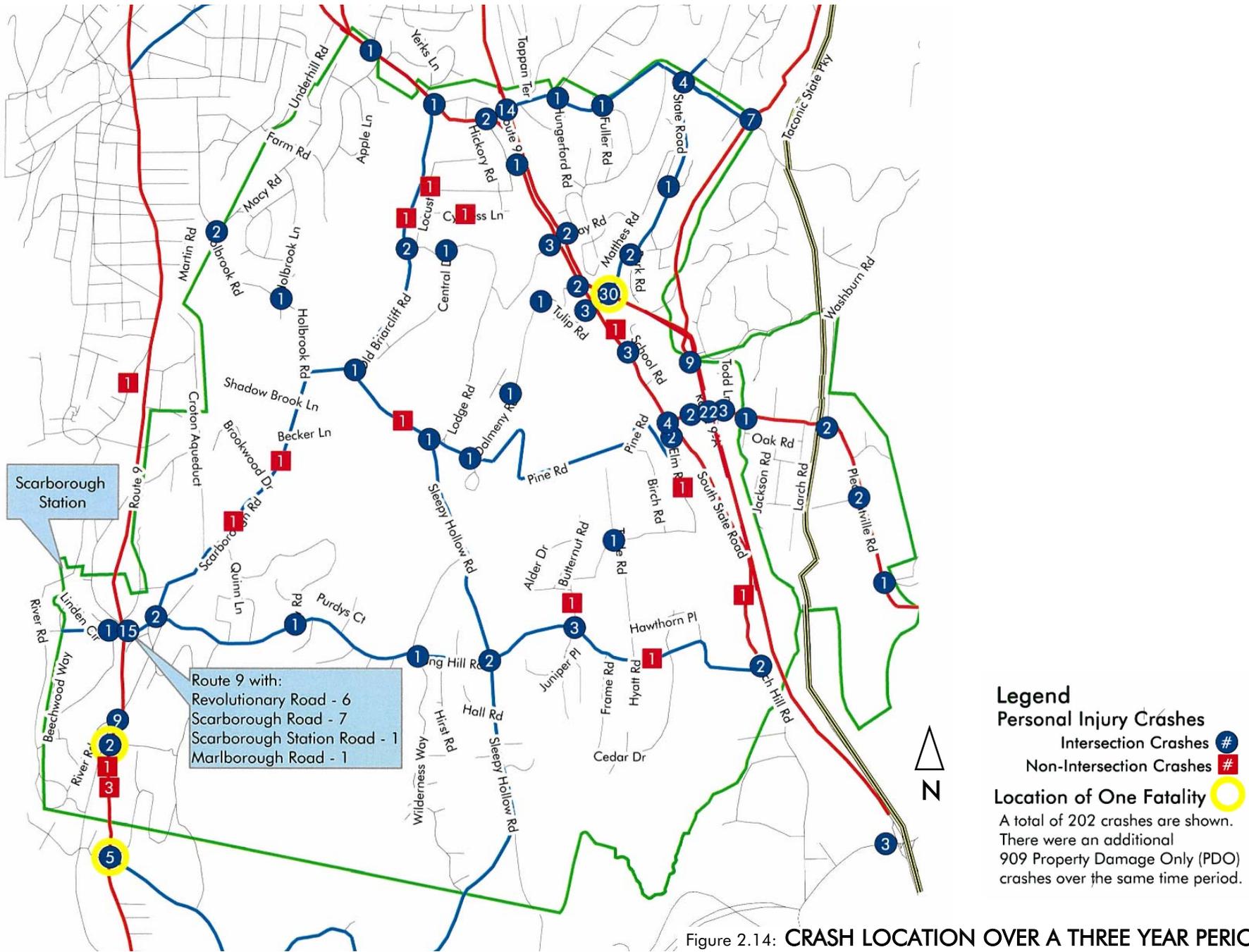


Figure 2.14: CRASH LOCATION OVER A THREE YEAR PERIOD
 MAY 2003 TO MAY 2006

Though property owners need to get a permit from NYSDOT, the state has limited authority to control and manage access along the state roads. The land use authority of the Village offers the best regulatory means to manage access along an arterial. By developing an access management program, the Village can work to minimize the most hazardous movements (left turns in and out) in the village.

Among the many benefits of a managed roadway are increased public safety, reduction of congestion, extended life of the roadway, and improved appearance of the built environment. Access management also serves to both preserve the transportation functions of roadways as well as the long-term property values and the economic viability of abutting development. A further benefit is the ability to concentrate commercial activity in a smaller area, which is less damaging to the landscape and the environment.

The goal of an access management plan is to improve traffic flow and safety along the arterial without reducing access. The Village should, when possible, group the turning movements in and out of properties by encouraging a connection between adjacent properties or shifting driveways to side streets to minimize the more problematic turns, i.e., the left turns. Accident rates along arterials are related to the density of driveways. The elimination or discouragement of certain turns in and out driveways is often perceived as a reduction in accessibility. However, this potential reduction is generally offset by increased accessibility to the property from side streets or from adjacent properties. Limiting connections will facilitate traffic flow along the Route 9 and Pleasantville Road, allowing the roads to more safely accommodate current and future traffic volumes. The Village may need to study the land uses, lots and driveways along Route 9 and Pleasantville Road (and other arterials and collectors) in order to map out the potential connections between adjacent properties. Then, as properties come forward for subdivision or site plan review by the Village Planning Board, access management strategies can be required.

Parking at Scarborough Station

Briarcliff Manor is home to Metro-North's Scarborough Station, which offers direct service to New York City's Grand Central Station. Approximately 750 riders board southbound trains from Scarborough Station during the AM peak period (Metro-North, 2004). The parking lot at the station is operated by two separate entities, the Village and the Briarcliff Bus Company. The Village owned lot contains approximately 309 spaces and monthly or annual parking permits are available to all Village residents. Approximately 450 permits were sold in 2005. The Briarcliff Bus parking lot is located in the Village of Ossining. The lot is privately-operated, open to residents and non-residents, and charges for parking. Availability of parking at the station has been a longstanding issue in the Village. Metro-North Railroad is scheduled to begin reconstruction of Scarborough Station in 2008. During the construction phase, approximately eight to ten spaces in the Village lot which are owned by Metro-North and leased by the Village will be used as a staging area for construction, further limiting the existing supply of parking.



Scarborough Train Station

In November 2005, BFJ Planning performed The Parking Needs and Accessibility Study (BFJ, 2005) to determine the cost and feasibility of expanding the parking supply at the station. This report listed several options for improving parking conditions at Scarborough Station. The Board of Trustees has commissioned a five member resident committee to analyze the alternatives and make recommendations to improve the parking situation at the station.

EXISTING CONDITIONS

Circulation: Traffic, Streets, Transit, and Pedestrians

Enhancing the Village's Trailway System

The North County Trailway is a paved bicycle and pedestrian path that travels through Briarcliff Manor. The trailway is located primarily on right-of-way lands of the former Putnam Division of the New York Central Railroad. The trail travels in a north-south orientation and is generally parallel with Route 9A within the southern portion of Briarcliff Manor. At the intersection of Route 9A and Route 100, the trailway travels upon the shoulder of Route 100, before traveling in a general parallel path to Route 100.



Walking Path on Old Croton Aqueduct

The Old Croton Aqueduct Trail also runs through Briarcliff Manor. It is a mostly unpaved trail that parallels the Hudson River for 26.2 miles. The trail is part of the Hudson River Greenway Trail. In the southern portion of the Village, the trail runs along River Road, as far as Scarborough Station, where it turns eastward until it intersects with Scarborough Road, and turns north. It then travels up to the New Croton Reservoir.

Since the last comprehensive plan, the trail network was expanded with the Kate Kennard Trail, dedicated in 1988. This mile-long trail is part of a permanent public easement made possible by the Rosecliff residential development.



New Walking Path

A report by Cherbuliez/ Munz, PLLC landscape architects and site planners recommended the addition of several trails to augment the current system. These trails travel through Pine Road Park, Pocantico Park, Aspinwall Road land, the Water Tank Site (off Farm Road) and Philips Electronics and the Barrington Property. In addition, the proposed County Riverwalk trail will run along the Hudson River north of the village, travel just east of Scarborough Park and connect with the Old Croton Aqueduct Trail. On-road routes are recommended to connect these trailways and run along Sleepy Hollow Road, Juniper Place, Aspinwall Road and Macy Road. Parking areas are recommended at the entrance to Pocantico Park, Pine Road Park, Aspinwall Road land and the Water Tank Site.



North County Trailway Entrance on South Sate Road