

JANUARY 13, 2025



TOWNSHIP OF RANDOLPH

CIRCULATION ELEMENT OF THE MASTER PLAN

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ACKNOWLEDGMENTS

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***The original of this report was
signed and sealed in accordance
with N.J.S.A. 45:14A-12.***

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EXECUTIVE SUMMARY

The New Jersey Municipal Land Use Law (MLUL) Requires the Planning Board to prepare a Master Plan that, in addition to required Elements, may contain a variety of other elements, including a Circulation Plan Element. The Circulation Plan Element is covered under N.J.S.A. 40:55D-28b: (4).

This updated Circulation Plan Element serves as a follow-up to the 1992 and 2006 Circulation Plan Elements, and re-examinations, which note that the location of Randolph Township in the

center of Morris County has impacted its roadways with significant levels of commercial and residential development to the west and to the east. The Circulation Plan Element has been revised to reflect the latest traffic count statistics provided by Morris County and builds on the recommendations in prior Circulation Plan Elements.

Additionally, significant development has been planned or approved as a result of the Township's Third Round Affordable Housing obligation, which is anticipated to affect the existing roadway system. This update identifies areas that are most likely to be impacted based on their current conditions and proximity to new development.

GOALS & OBJECTIVES

Based on the findings of the past Master Plan background studies and public input, review of the updated Morris County traffic data, anticipated development changes, the circulation goals of this Circulation Plan Element of the Master Plan are as follows:

- Facilitate safe movement by all forms of transport (pedestrian, bicycle and motor vehicle) throughout the Township, with particular emphasis on improving accessibility for pedestrians and bicycles as traffic continues to increase Township-wide.
- Future residential and commercial development should continue to be encouraged to interconnect their sites with vehicular and pedestrian linkages, particularly in Mt. Freedom and as outlined in the 2006 Route 10 Corridor Study.
- To provide safe pedestrian connections throughout the Township, and to support this goal, provide the necessary signage, lighting, or other control devices or to upgrade any existing control devices.
- Work collaboratively with the New Jersey Department of Transportation to undertake improvement projects, particularly on Sussex Turnpike and Route 10.
- Opportunities to expand mass transportation in Randolph Township should be pursued with the assistance of developers and other government agencies.
- Continue to provide high-quality and sought after community-based rideshare services to help meet the needs of all Randolph residents.
- Continue to focus on maintaining the Township's trail system and identifying opportunities to expand the system to achieve a more connected system.
- To provide continued and adequate enforcement of the mitigation needed for the areas of concern as recommended by the Traffic Advisory Committee.



ACTION PLAN RECOMMENDATIONS

The following recommendations have been compiled as a result of the preparation of this Circulation Plan Element. The Planning Board has determined that the most effective way to utilize these recommendations is to categorize them in the terms of “ongoing”, “immediate”, or “intermediate”. These terms are intended to provide a prioritization of needs.

IMMEDIATE

- The Township has engaged with New Jersey Department of Transportation on the Route 10 Corridor, and the Township should continue to work collaboratively with the NJDOT on their plans for the corridor and continue to provide local knowledge and input as necessary.
- Require new development to address traffic and level of service issues at impacted intersections and corridors.
- Utilize the Traffic Advisory Committee’s list of areas of concern to determine what mitigation measures are possible.
- Determine any possible impacts to the Township or its residents in the consideration of the adoption of a Safe Routes to Schools resolution - which would help enforce the development of sidewalks and other pedestrian linkages and create eligibility for funding for similar projects.

INTERMEDIATE

- Roadway classifications as currently defined and organized in the Township Ordinances should be updated to the standards based on the Federal Highway Administration guidelines and include such factors as volumes, numbers of lanes, type of area (urban or rural) served, etc. if they are not consistent. Any update to the Township Ordinances should avoid impacts to how roadway classifications are presently utilized.
- Incorporate the trail recommendations from the Trails Advisory Committee into an updated Trails Master Plan, and identify funding resources to accomplish the recommended trail extensions.
- Seek collaboration with NJ Transit to expand or modify existing public transportation services as the Township continues to grow.
- Prepare a feasibility analysis for bike path connections throughout the Township to create safe and connected bike routes, with an emphasis on connectivity to trail heads and other existing Township open space and recreation facilities.

ONGOING

- Encourage the construction of sidewalks for new development, and as noted in Table 2 of this Plan, to create connectivity and pedestrian linkages that may help offset vehicular traffic issues.
- Collaborate with the County and State agencies on roadways in their jurisdiction especially in areas of proposed multi-family development on Route 10 and in Mt. Freedom.
- Continue to monitor ongoing development in Randolph and in adjacent municipalities and its impacts on the roadway network.

INTRODUCTION

To develop recommendations for future improvements to the Randolph Township circulation system, the existing transportation system must be reassessed. This assessment is accomplished through an evaluation and update of information provided in the 1992 Master Plan and 2006 Master Plan regarding the Township's roadway classifications, traffic volumes, traffic safety problem areas and proposed roadway improvements.

PLANNING PROCESS

The purpose of this plan element of the Master Plan is to address planning issues relating to roads, sidewalks, and trails in the Township. This current plan element serves as a follow-up to the 1992 and 2006 Plans, which noted that the basic circulation pattern of the Township was well established, but that some modifications and improvements were needed to upgrade the local circulation network.

The 2006 Plan utilized traffic statistics compiled by Morris County on the municipal and county roadways within the Township to make a series of recommendations for improvements.

This update of the Circulation Plan includes a review of the 2017 New Jersey Complete Streets Design Guide and the review of the 2018 Morris County Circulation Element. This data, along with the latest 2023 Morris County traffic statistics, were used to help prepare the Action Plan Recommendations.

Additionally, this Plan looks at all modes of transportation and circulation within the Township, including the trails plan and seeks to identify gaps or areas that could be improved for more connected and comprehensive pedestrian and bicycle circulation routes.

BACKGROUND

PRIOR PLANS

Randolph Township, like many other municipalities in New Jersey continues to experience a significant increase in housing. As noted in the 1992 Plan, Randolph's road system is affected by traffic growth from neighboring municipalities in addition to locally-generated traffic. Although it is generally undesirable to have a high volume of "through" traffic traveling along Township roadways, Randolph Township's geographical location does not permit otherwise. The Township anticipates that

development from not only within the Township, but likewise in neighboring municipalities will have impacts on the roadway network.

The 2006 Circulation Plan identified a number of vehicular circulation “problem areas” that need improvement due to issues such as: limited sight distance, difficult alignment, dangerous reverse curve, or steep roadway grade. Many of these areas were carried over from the 1992 Master Plan and had not yet been mitigated.

MORRIS COUNTY CIRCULATION ELEMENT (2018)

The 2018 Morris County Circulation Element contains updated traffic statistics and accident data for Randolph Township. Review of the traffic statistics in the “Traffic Volumes” section of this report shows limited changes in the traffic volume data on the county roads which are the main thoroughfares. However, it is unclear how the COVID-19 pandemic affected traffic counts taken between 2020 and 2022. While the average weekday volumes have fluctuated year to year during the 2010 to 2023 period, there are no general increase trends on the Township roadways.

The County Circulation Plan notes that the population in Randolph is projected to increase approximately 6% from 2010 to 2040 (from 25,730 persons to 27,280 persons).

The Plan notes under Table 4.1 that the “County Roads with the Highest Traffic Volumes, 2009-2014” include South Salem Street (CR 665) North of NJ 10 with 20,554 Annual Average Daily Traffic (AADT). Traffic congestion is an ongoing issue for Morris County and the region resulting in longer commutes, increased greenhouse gas emissions, lost worker productivity, and higher risk of crashes. Traffic volume is expected to grow throughout the County between 2014 and 2040, based on forecasts provided by the NJTPA’s North Jersey Regional Transportation Model – Enhanced (NJTRM-E). In particular, NJ-10 is proposed to see a 11.40% increase in traffic volume forecasted from 2014 to 2040.

Route 513 experienced the most crashes measured by County Route in Morris County, with 1,949 from 2009-2013. Additionally, this route has some of the most bicycle/pedestrian crashes with 64 total, although 40 of those were recorded in Dover.

NEW JERSEY COMPLETE STREETS DESIGN GUIDE

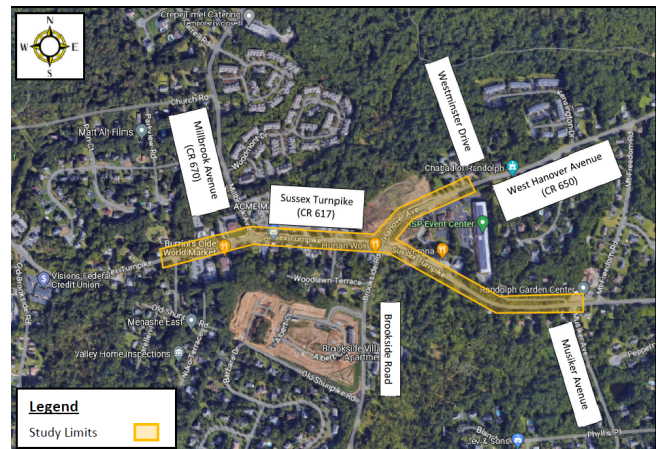
The 2017 New Jersey Complete Streets Design Guide states “Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a

complete street". The design of a Complete Street provides the same level of detail and attention that has been afforded to the movement of automobiles and heavy vehicles. This means that sidewalks, bicycle lanes and other elements be both comprehensive and interconnected with roadways. Complete Streets mean designing a street based on its unique context, including surrounding land use patterns, who uses the street and user need. The guide provides direction on how to implement street design principles that fit the local context and support more livable, sustainable, and resilient communities. The Design Guide also suggests that municipalities utilize a checklist similar to the NJDOT Complete Streets Checklist as part of their project approval process.

MORRIS COUNTY TRAFFIC STUDY

Morris County completed a Traffic Corridor Study for Mt. Freedom in March 2023, which was undertaken to quantify and assess traffic impacts at the signalized intersections of Sussex Turnpike (CR 617) and West Hanover Avenue (CR 650) and Sussex Turnpike (CR 617) and Millbrook Avenue (CR 670) due to planned development in the area.

Based upon the data and analysis conducted for this study, the Study concluded that the proposed developments will have minimal impacts to traffic operating conditions during the AM and Saturday Peak Hours at the



existing signalized intersections of Sussex Turnpike (CR 617)/Millbrook Avenue (CR 670) and Sussex Turnpike (CR 617)/West Hanover Avenue (CR 650). It also noted that during the PM Peak Hour, the southbound West Hanover right-turn movement currently operates at LOS F and will worsen as the proposed developments are built and become occupied. Additionally, during the PM Peak Hour the Millbrook Avenue intersection will have noticeable operational delays during the full-build conditions as a result of additional traffic and "activation" of the driveway approach.

The Study concluded that mitigation in the form of traffic signal timing adjustments appear to be warranted during the PM Peak Hour to alleviate existing and future delays at the Hanover Avenue southbound approach, while the Millbrook Avenue intersection appears to require timing adjustments at the time the northbound driveway access point becomes activated.



RESOURCE ASSESSMENT

ROADWAY CLASSIFICATION

A functional system of streets and highways provides a graduated system of traffic flow. Efficient and safe operation of the system requires that specific facilities be designed to serve a specific purpose within the street hierarchy. Classification of roadways are made according to the movement served by that roadway and not according to traffic volumes on the roadway. The functional classifications with respective definitions are summarized in Table VI-1.

Section 15-72.3 of the Land Development Ordinance (LDO) under Article V for Site Plan and Subdivision Requirements sets forth the roadways classifications. There are six roadway classifications within the Ordinance, which include: Local, Sub Collector, and Minor Collector streets, Major

Collector, Minor Arterial, and Major Arterial.

As noted in the 2006 Circulation Plan, the New Jersey State Department of Transportation (NJSDOT) had updated the classification of roadways located throughout the State, and in some cases, the classifications differed from the Township's Ordinance. The Township's classification remains the accepted class.

The New Jersey Residential Site Improvement Standards (RSIS) also include street classifications, although they only pertain to residential streets. Regardless, their classifications are important to note here because of their impact on the level of street improvement required for residential roadways.

**Table 1. Township of Randolph
Roadway Classification and Street Hierarchy**

STREET NAME	CLASSIFICATION
NJ Route 10	Major Arterial
Sussex Turnpike	Minor Arterial
Dover-Chester Road	Minor Arterial
Quaker Church Road	Minor Arterial (as shown in the Master Plan)
Reservoir Avenue	Minor Arterial
West Hanover Avenue	Minor Arterial
Millbrook Avenue	Major Collector
Schoolhouse Road	Major Collector
Center Grove Road	Major Collector
South Salem Street	Major Collector
South Morris Street	Major Collector
Canfield Avenue	Major Collector
Shongum Road	Major Collector
Calais Road	Major Collector
Pleasant Hill Road	Major Collector
Franklin Road	Minor Collector
Park Avenue	Minor Collector
Morris Turnpike	Minor Collector
Radtke Road	Minor Collector
Carrell Road	Minor Collector
Quaker Church Road	Minor Collector (as shown in Master Plan)

The Ordinance notes that "the functional classification system breaks Randolph's roadways into the following classifications based on the 1992 Master Plan". These are the current definitions and classifications, and are as follows:

MAJOR ARTERIAL

Intended to provide a high degree of mobility and serve longer trips than minor arterials. Principal function is movement, not access. Should be excluded from residential areas.

New Jersey Route 10 is predominately four lanes wide within the Township. A six lane cross section with three lanes of travel in each direction exists from the Township of Denville municipal border to South Salem Street. The westbound direction continues to be three lanes wide to a point approximately 1,500 feet west of the intersection with Millbrook Avenue. The remaining length of Route 10 consists of a four lane cross section with two lanes of travel in each direction. Route 10 is a major arterial traversing the northern portion of the Township in an east-west direction. Route 10 is divided by a paved median from the Denville Township boundary west to just west of the Millbrook Ave intersection.

MINOR ARTERIAL

Minor arterial: Interconnect and augment the major arterial systems. Accommodate trips of shorter lengths. Operating speeds and service levels are lower than major arterials. Should be excluded from identifiable residential neighborhoods.

Sussex Turnpike (County Route 617) is a minor arterial road traversing Randolph in a north-west to southeast direction. At the northwest boundary with Roxbury Township, Sussex Turnpike begins at a grade-separated interchange with Route 10, providing access to/from Morris Township and points southeast.

Dover-Chester Road (County Route 513) is a minor arterial traversing the Township in a southwest to northeast direction. Route 513 provides access to Chester Township to the southwest and continues north to Quaker Church Road. At the intersection with Route 10, in the northbound directions there is one left/straight lane and one straight/right lane. The southbound direction has a left turn lane and one straight/right lane. The intersection also contains near-side jughandles.

Just north of Route 10, Dover-Chester Road is a two-lane roadway with a "T" intersection with Quaker Church Road.

Quaker Church Road (County Route 513) is a minor arterial traversing the Township in an east to west direction. The County portion of Quaker Church Road stretches east from Dover Chester Road to Reservoir Avenue.

Reservoir Avenue (County Route 513) is a minor arterial stretching in a north to south direction between Quaker Church Road and the municipal boundary with the Town of Dover.

West Hanover Avenue (County Route 650) is an east-west minor arterial road beginning at an intersection with Brookside Road and Sussex Turnpike, and continuing to the eastern boundary with Denville, Parsippany, and Morris Townships. West Hanover Avenue provides access to various residential neighborhoods in the southeastern part of Randolph, while at the same time carrying through traffic to and from points east of the Township.

MAJOR COLLECTOR

Major collector: Primary function is to distribute traffic between local streets and the arterial system.

Millbrook Avenue (County Route 670) south of School House Road) is a 2-lane north-south major collector roadway connecting Sussex Turnpike with South Morris Street in the Town of Dover. North of Route 10, Millbrook Avenue is designated as County Route 656. It collects and distributes traffic between minor collectors and the arterials such as Route 10 and Sussex Turnpike.

School House Road/Center Grove Road (County Route 670) is a major collector roadway connecting Millbrook Avenue to the Town of Dover. It is a 2-lane roadway except for the 4- to 5-lane cross- section that exists from Lawrence Road north to Quaker Church Road. Route 670 collects and distributes traffic to/from Route 10 and provides access to/from the County College of Morris.

South Salem Street (County Route 665) connects Dover to the northwest with a grade separated interchange at Route 10 to the southeast. This roadway passes

through Victory Gardens Borough which is straddled on both sides by Randolph Township.

South Morris Street is a two-lane major collector roadway connecting Dover to the northwest with Route 10 to the southeast. A majority of this roadway lies in Dover; however, all traffic oriented to/from westbound Route 10 that utilizes South Morris Street must pass through Randolph.

Canfield Avenue is a two-lane major collector roadway connecting Route 46 to the north with Route 10 to the south. Uses along Canfield Avenue include the Canfield Industrial Park, Canfield Mews Apartment Complex, Aspen Community Complex and a New Jersey Department of Motor Vehicles Inspection Station.

Lawrence Road/Everdale Road/Shongum Road is a two-lane major collector roadway system which collects and distributes traffic between residential subcollectors and West Hanover Avenue.

Calais Road/Pleasant Hill Road is a two-lane, east-west major collector roadway connecting residential areas in Randolph and Chester and Roxbury Townships to the west with Sussex Turnpike to the east. Pleasant Mill Road provides some widened improved sections where residential subdivisions have been constructed.

MINOR COLLECTOR

Minor collector: Primary function is to provide land access.

Quaker Church Road/Franklin Road is a two-lane minor collector roadway that collects and distributes traffic between residential properties and the north/south roadways that access Route 10.

Park Avenue is a two-lane minor collector roadway connecting Sussex Turnpike to the north with Dover-Chester Road to the south.

Carrell Road is a two-lane minor collector roadway that varies in width with widened improved sections including curbing near the newly developed residential subdivisions. Carrell Road has residential uses on both sides.

Morris Turnpike is a two-lane minor collector roadway that generally runs in the north-south direction and connects Route 10 to Calais Road (and becomes Dolly Bridge Road just south of Calais). It is briefly interrupted at the Sussex Turnpike intersection and is not aligned at this intersection.

Radtke Road is a two-lane minor collector roadway that connects West Hanover Avenue and Shongum Road. Radtke Road connects much of the upper portion of the Shongum Lake community local roads and provides access to the Mt. Freedom area.

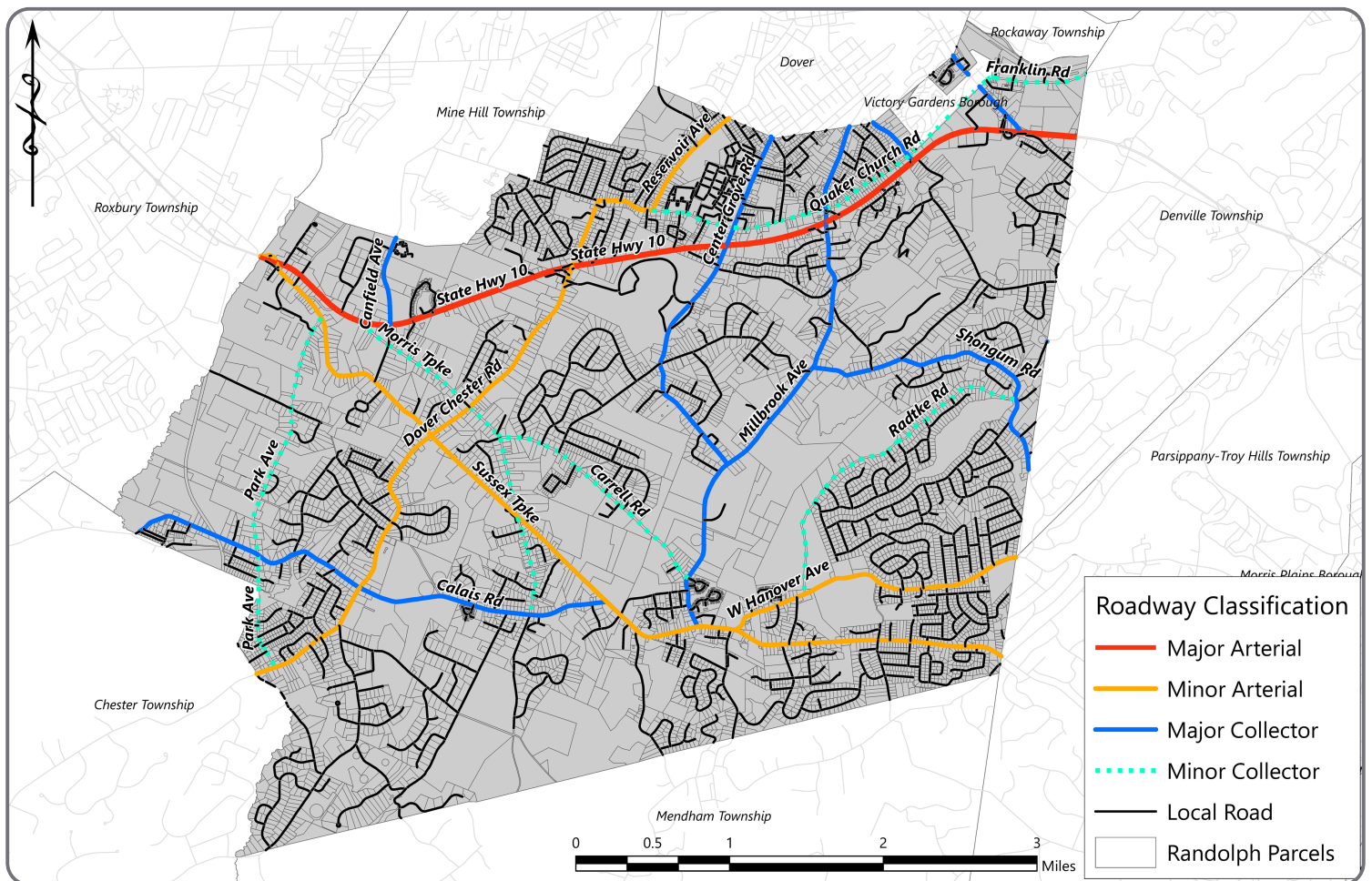
SUB-COLLECTOR

Primary function is to provide intra-neighborhood traffic movement. It is not intended to connect adjoining neighborhoods or subdivisions and should not carry regional through traffic.

LOCAL

Provides land access and can exist in any land use setting. Movement is incidental and involves travel to and from a collector facility. Marginal access included.

Figure 1: Map of Road Classifications



PUBLIC TRANSPORTATION

BUS SERVICE

As stated in the 1992 Master Plan, several modes of public transportation are available in Randolph Township including bus and limited paratransit service. The issues involved with each form of public transportation are discussed below.

While the previous Circulation Plan Element identified that the Morris County Metro ("MCM") operates the MCM2 bus line under agreement with New Jersey Transit, these routes were restructured in 2010. The MCM routes 1, 2, 3 and 10 were transformed into six new 800-series bus routes. In Randolph, the MCM-2 was restructured to the 875 bus route (Morristown-Dover-Roxbury). The 875 route has 9 stops departing from Rail Station Parking Lot Off Morris St in Morristown and ending at Mary Louise Ave at Parking Lot Entrance in Roxbury.

These bus stops are shown below and are located at the following intersections:

- PARKING LOT #6 NEAR STUDENT CENTER
- CENTER GROVE RD AT QUAKER AVE
- SOUTH SALEM ST AT WASHINGTON AVE

Bus service currently operates Monday through Friday, from Morristown to Randolph and Roxbury every 1.5 hours (6:45 a.m. to 5:08 p.m.); and to Morristown starting in Randolph (the CCM parking lot) every 1.5 to 2 hours (7:30 am to 6:17 pm).

The 875 route as a whole was created to achieve the following:

- Serves County College of Morris in Randolph
- Timed connections with selected NJ TRANSIT Morris & Essex trains at Dover Station during AM peak and early afternoon for students traveling to/from the County College of Morris in Randolph
- Serves St. Clare's Hospital in Dover
- Serves Main Street in Wharton
- Serves Marketplace at Rockaway (Wal-Mart) & Rockaway Townsquare
- Limited service to Roxbury & Ledgewood Malls in Roxbury via NJ 10 (selected trips)

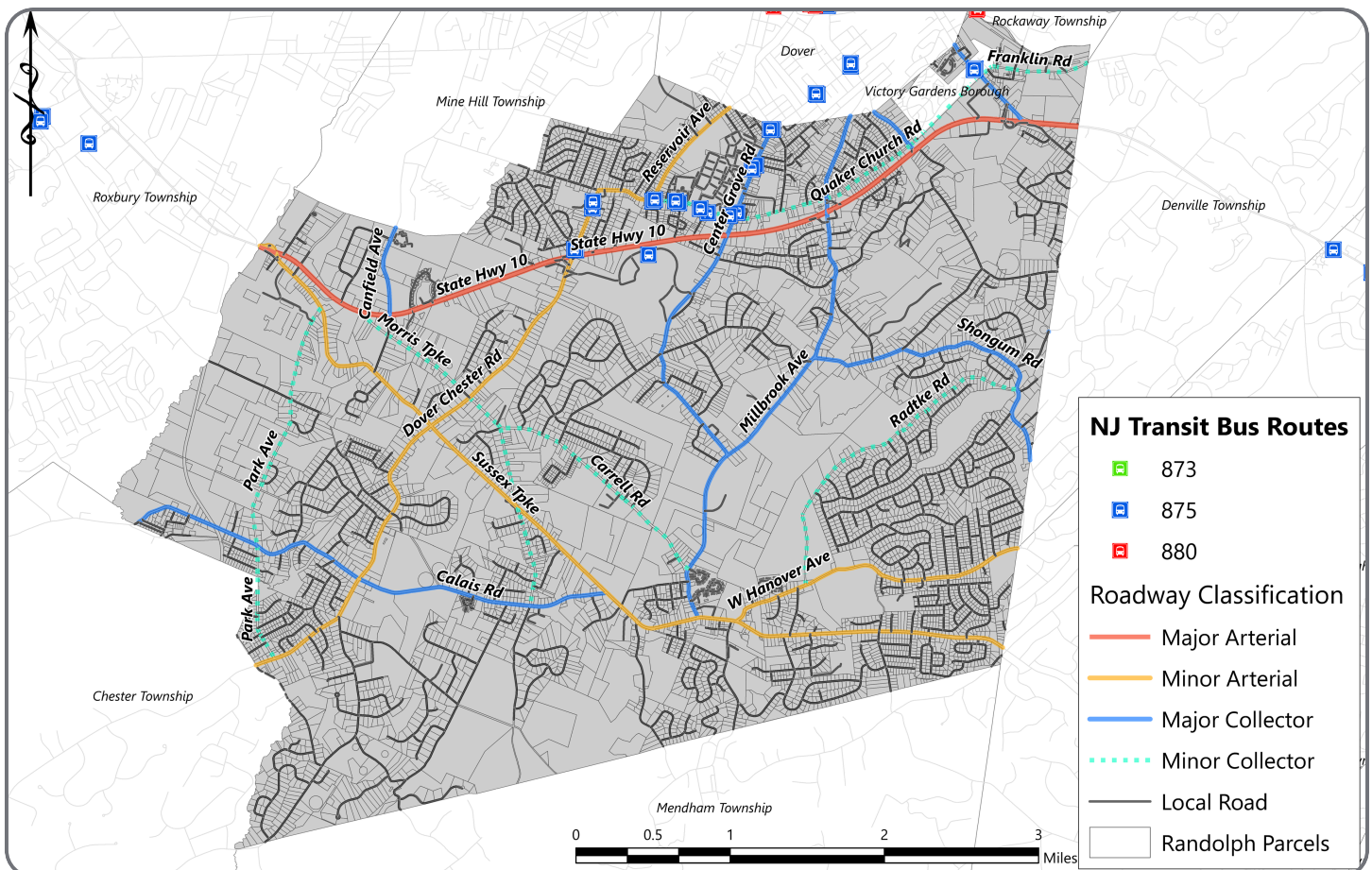
Lakeland Bus Lines, Inc. provides service between Morris and Sussex Counties and New York City, including service to the Port Authority Bus Terminal, Midtown Manhattan, and Lower Manhattan (Financial District).

Lakeland also provides local service within Morris County and between Morris and Sussex Counties. The 46, 78, and 80 buses connect Morris County to New York City. The nearest stop for peak hour service is in Denville while off-peak service is available to/from Dover where parking is available.

New Jersey Transit does not have formal plans to expand bus service to/from Randolph Township as funding is not available. It is recommended that the Township work with NJ Transit to expand services as needed in Mt. Freedom or other areas of planned residential. As the upcoming and anticipated development of

additional multi-family housing is realized, the expansion of existing bus routes must be considered for other areas of the Township. Currently, public transportation is only accessible in the northeast extent of Randolph, as shown in *Figure 2*. As noted in the 2006 Circulation Plan Element, the Mount Freedom area may require public transportation opportunities as development expands, and notes that one stop could be provided at the corner of Sussex Turnpike and Millbrook Avenue. When the area along Sussex Turnpike between Calais Road and West Hanover Avenue develops, a bus stop on either end of this corridor should be considered.

Figure 2: Map of NJ Transit Bus Routes in Randolph



RAIL SERVICE

NJ Transit's passenger rail system provides service to Hoboken and New York via station in Dover, which is the closest stop to Randolph Township citizens. The Dover station is on the Morris & Essex Line. Parking is provided at the Dover rail station for a fee. Other nearby stations include Morris Plains and Morristown, also on the Morris & Essex Line. The creation of the 875 bus route helped to facilitate timed connections with select Morris & Essex trains at Dover Station during AM peak and early afternoon for students traveling to/from the County College of Morris in Randolph.

OTHER TYPES OF PUBLIC TRANSIT

The Morris Area Paratransit System (MAPS) provides transportation for elderly and handicapped persons. Using small buses and vans, MAPS provides transportation to doctors, clinics, social services and other locations. MAPS provides transportation service upon request. Information on this service is available through Morris County. Morris County does not provide any other shuttle bus service.

The Dial-A-Ride Program, is a service administered by the Randolph Township Community Services Department. The

program provides transportation to and from medical appointments and shopping. This program is offered to permanent residents age 60 and above and disabled adults 18 and above who receive Social Security disability benefits.

Curb-to-curb transportation to local shopping centers (ShopRite or Walmart in Roxbury) is available one day a week on Mondays. Transportation to and from doctor's offices are available within a 10-mile radius from Town Hall. This service is available Monday-Thursday only between 9:00am and 3:00pm.

Sunrise of Randolph and Brightview Randolph provide transportation to their residents as required by their development approvals.

PRIVATE RIDESHARE AND SHUTTLES

Since the last Circulation Plan Element, private, app-based rideshare services, such as Uber and Lyft, have become popular alternatives to taxi-cabs, and provide an important source of rides to entertainment and nightlife, trips to the airport, and last mile transportation to and from bus or train stations.

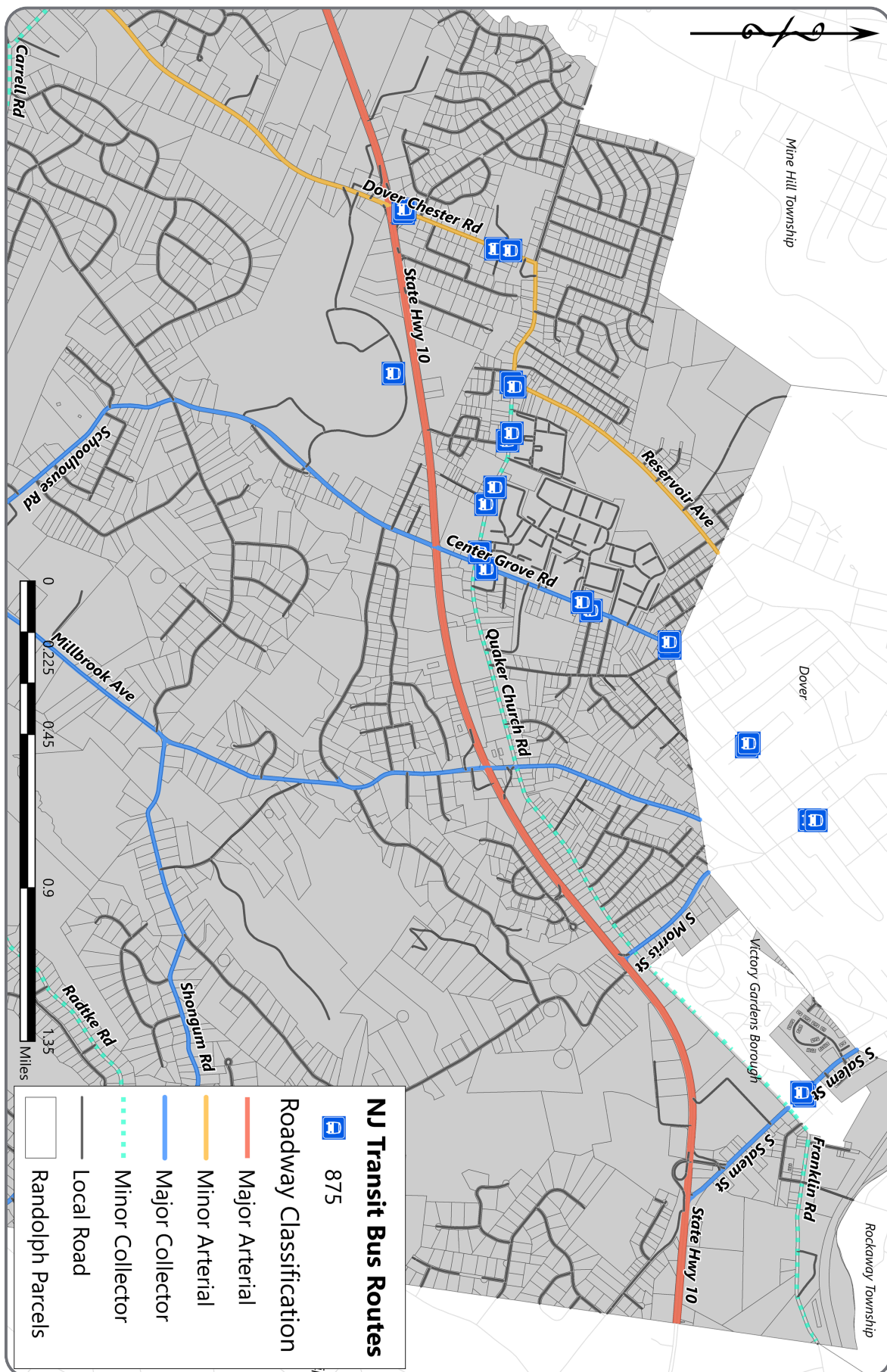


Figure 3: Zoom View of NJ Transit Bus Stops in Randolph

TRAILS & PEDESTRIAN CONNECTIONS

Randolph Township has a well planned trail network that connects several residential areas within the Township with open space, historic sites, and other places of interest. Randolph's trail system runs a 16-mile course traversing five parks, the Clyde Potts Reservoir Watershed, and 2,000 acres of pristine open space. The trails link together schools with neighborhoods and connect to Patriots' Path at Combs Hollow and Old Brookside.

The Trail Map in *Figure 4* identifies the trail network that extends throughout the Township that includes trails that have been constructed during the previous decade as well as those trails that are planned for the future. The Township's existing trail network connects to other Townships within Morris County through connection to the County's Patriots Path trail.

The COVID-19 pandemic led to trends of a larger number of people working from home, and thus the Township should continue to focus on pedestrian and biking needs to help invest in multi-modal transportation opportunities throughout the Township.

Additionally, the Township is still implementing the vision for Mount Freedom, which placed an emphasis on planning the future of this area as a pedestrian friendly and walkable place.

COUNTY TRAIL SYSTEM

The Morris County Parks Commission is continually enhancing Patriots Path, which is a network of hiking, biking, equestrian trails, and green open spaces that link several townships together with Federal, state, county, and municipal parks, watershed lands, historic sites and other points of interest across Morris County. Patriots Path's purpose is to protect and enhance the environment and aesthetic integrity of the stream valleys and uplands through which it passes, while providing opportunities for passive outdoor recreation.

The County's fifty-mile Patriots Path trail network is located throughout Morris County and is comprised of various trail surfaces including crushed stone and gravel, pavement, and exposed earth and rock. Several miles of trails lie on cinder and gravel beds of old railroad lines. The trails are used for hiking, horseback riding, cross-country skiing, biking, walking, and jogging. Similar trail surfaces and uses are found in Randolph's existing trail network.



RANDOLPH TOWNSHIP TRAILS MASTER PLAN

Completed in November of 2017, the trails master plan includes an assessment of the current trail conditions, an analysis of trail connectivity, an assessment of opportunities to expand the network by identifying specific trail segments, a maintenance plan, and recommendations for trail marking and branding of the system.

Randolph's existing trail network connects the existing open space, County, and State-owned lands within the heart of the Township with surrounding neighborhoods, which include Shongum, Ironia, and Millbrook. The watershed protection area in the southern part of the Township, which is located between Combs Hollow Road and Old Brookside Road, is also linked to the trail network. This area also connects to Calais Road in Mendham. Randolph's trails should be viewed as a work in progress as we continue to pursue easements and funding to expand the trail network. The Township funds 90% of design and construction costs through state grants and developer contributions. To date, over \$1.5 million in state grants and developer contributions have been invested in Randolph's trails.

Trail right-of-ways utilize existing road and sidewalk networks where it is feasible to do so. Using existing road and sidewalk networks allows for a more comprehensive connection to existing neighborhoods, thereby providing greater access to residential communities. Areas that use existing roadways and sidewalk networks include Dover Chester Road, Doby Road, Dolly Bridge Road, Calais Road, Beaver Dam Road, and Rickland Drive.

By way of this plan, a recommendation is made to the Trails Committee that a feasibility analysis for mapping and labeling of paved bicycle path and trail access and connectivity (not off-road/mountain biking) be undertaken.

TRAILS ADVISORY COMMITTEE RECOMMENDATIONS

The Trails Advisory Committee met on July 19, 2023, and recommended new trail segment additions. The proposed segments met two expressed goals, which were to provide additional loop trails to allow users to complete a circuit to return to their starting location; and to provide connections from neighborhoods to existing trails. The following summarizes the proposed trail segment additions to the existing Randolph trails plan and are shown in Figure 4, subject to full engineering of these sections:

1. Old Shunpike Road/Patriots' Path Connector: new trail from end of Old Shunpike Road crossing Old Brookside Road south of the current trailhead onto Township owned land to connect with existing trail.
2. Liberty Village to James Andrews Park: a new trail using trailhead easement at new development at W. Hanover Road to follow sewer right of way to connect to existing trails in James Andrews Park.
3. Gateways Apartments to Hawthorne Avenue: short connector trail over sewer right of way connecting apartment complex to Hedden Park (Morris County Facility).
4. Veterans Community Park to Guerin Drive: trail using existing right of way through preserved farmlands and township open space to connect to Dover Chester Road at Guerin Drive (potential future trail to Nina Place would provide access to rest of trail system via Tucker Avenue trailhead). Funding through the County has been applied for at the time of the drafting of this Plan and has been received.
5. Brundage Preserve to Brundage Sussex: Connector trail from south end of Brundage Preserve field to power line northeast of Brundage Sussex park to form additional loop trail.
6. Freedom Park Perimeter Trail: trail around the outside perimeter of Freedom Park to connect existing trails into a formalized loop trail.
7. Combs Hollow Connector: Connector trail between existing white trail leading to Combs Hollow trail head and existing trail heading south from Dollybridge Road trail head toward Mendham.

8. Birchwood Road to Brundage Park: trail connecting Birchwood Road neighborhood to Brundage Park connecting to existing trails behind the Brundage Park maintenance yard.

9. Mountainside Drive to Skyline Drive: Connection from end of Skyline Drive through Township owned property to existing trails on east side of Mountainside Drive. (Ties in with #11).

10. Hidden Valley Park to Bragman Road: trail parallel to Radtke Road along existing power lines to connect Blue Trail to Bragman Road through existing Township owned space.

11. Preserve Connector Trails: connector trails linking Appio Drive and Roc Etam neighborhoods through publicly held lands to existing trail between Mountainside Drive and Red Oak Lane.

12. E. Logan Road to West Morris Greenway: connector trail through Township owned open space and along existing power line to cross Park Avenue and connect with existing West Morris Greenway trail between Pleasant Hill Road and Righter Road (potential future connection to existing parking at Sherwood Court).

13. Ann Street Connector: short trail from end of Ann Street to Hawthorne Ave entrance to Hedden Park.



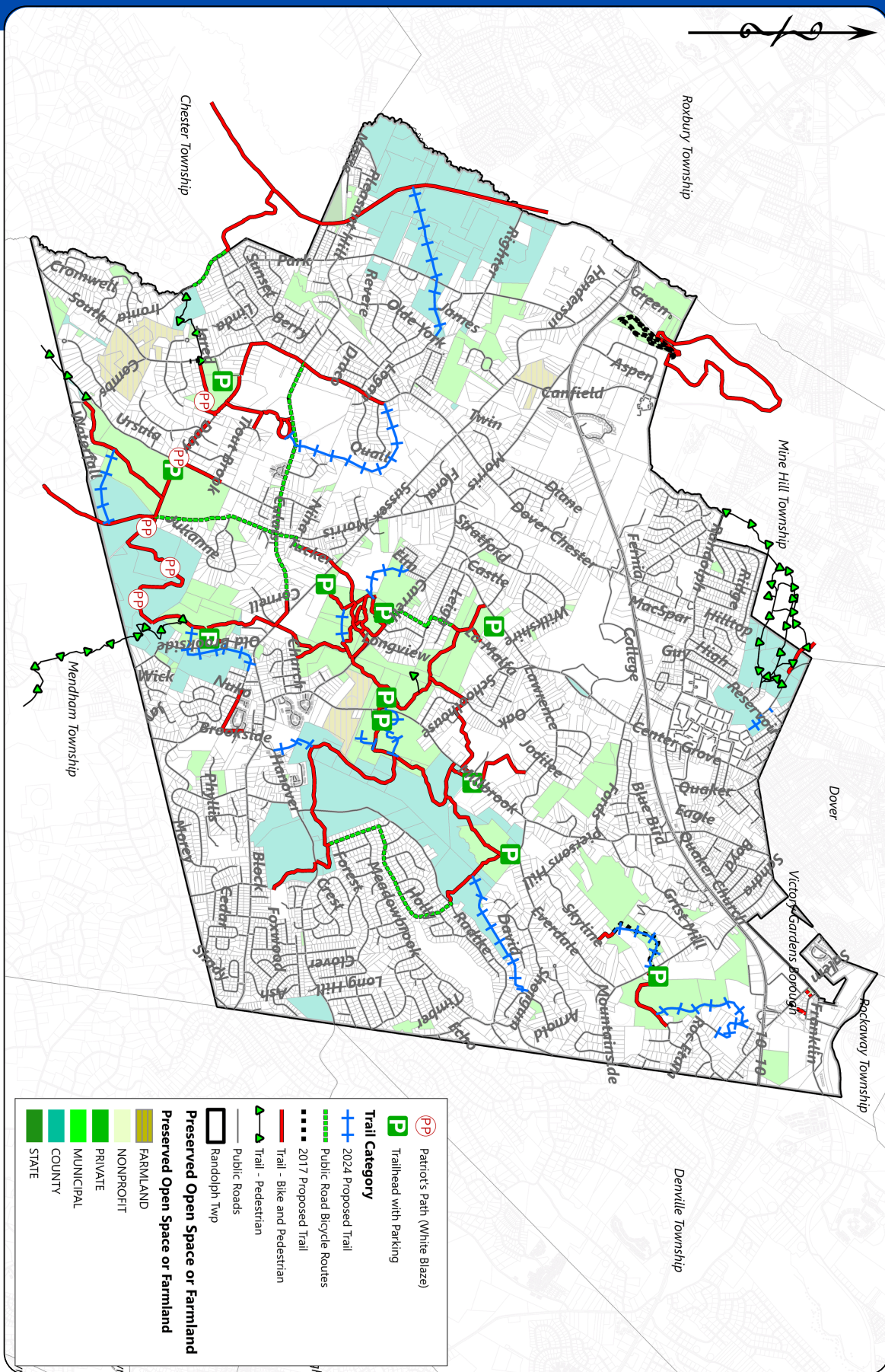


Figure 4: Trails Map

SIDEWALKS

The Township has identified a number of sidewalk segments for future extension to provide a more connected and useful network of sidewalks for pedestrians. These segments are outlined under Table 2, and depicted in the map in Figure 5. NJDOT grants allow for the Township to undertake many of these repaving and sidewalk improvement/extension projects, and should continue to be utilized. Additionally, it is recommended that the Township modify its Ordinances to require sidewalks to be a minimum of 5 feet in width, and for Township-owned sidewalks to adhere to that width, for better accessibility.

The Township also seeks to create additional pedestrian connectivity through mid-block crossings. In the past mid-block crossings have included lit signage to alert vehicular traffic. Technological enhancements throughout the years have allowed for this kind of signage to become semi-signalized through push-button access for pedestrians, which should be implemented where possible on any new mid-block crossings or re-fit on existing crossings.

**Table 2. Township of Randolph
Sidewalk Recommendations (1 of 3)**

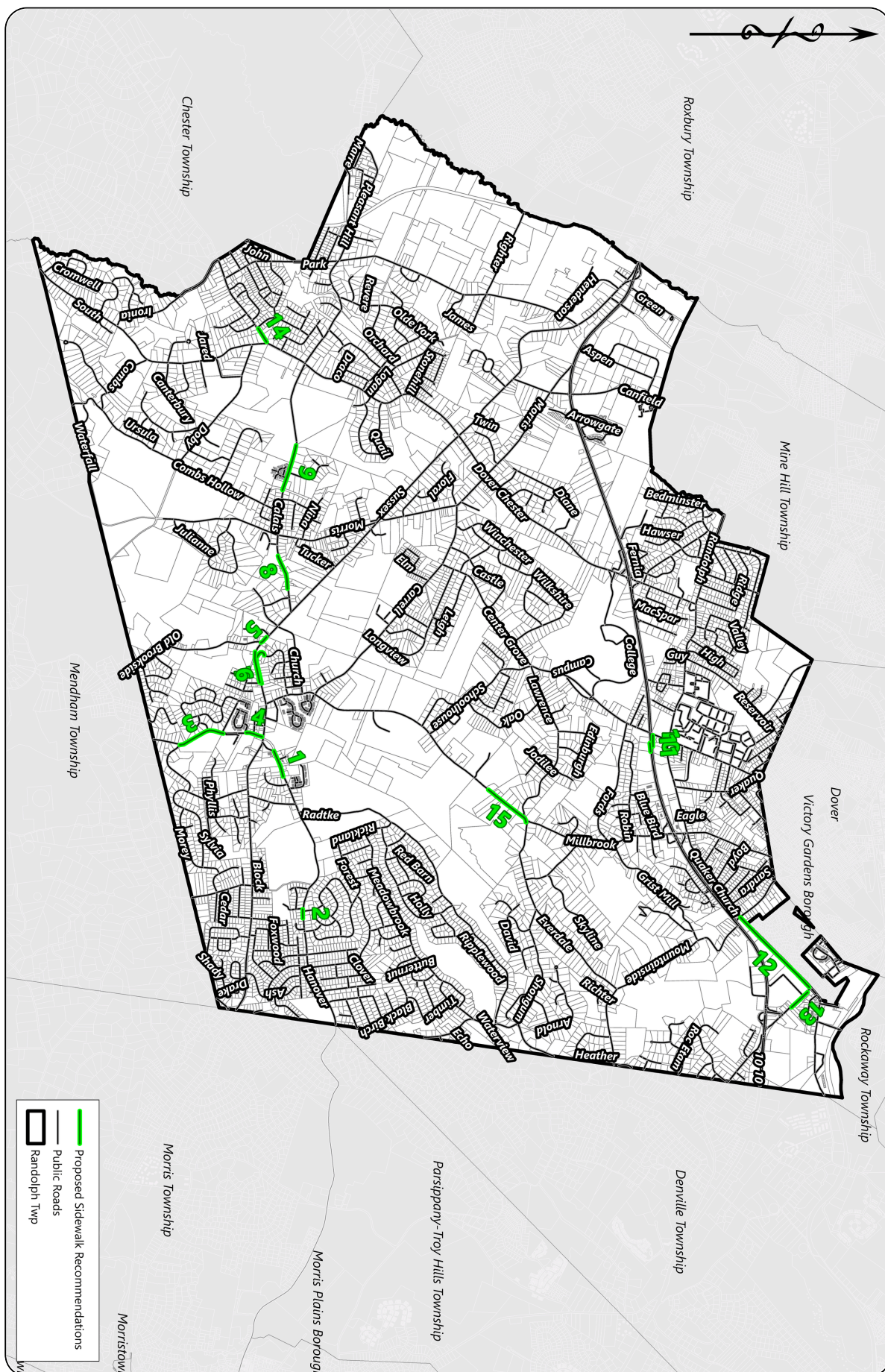
Number	Location	Recommendation	Connection Created
1	West Hanover Avenue	Install sidewalk from old roadway to Memory Lane	Sidewalk exists on both sides of W Hanover Avenue from the Sussex Tpke intersection. This proposes sidewalk on the south side of W Hanover to Memory Lane where no sidewalk exists. Sidewalk exists on the easterb side across Memory Lane, and this proposes to fill the existing gap.
2	West Hanover Avenue	Install sidewalk from Arrow Place to 126 West Hanover	There is an existing curbing and sidewalk on the southeast corner of Arrow Place and West Hanover intersection, with sidewalk continuing down Arrow Pl. on the east side. However, sidewalk stops along W. Hanover at the crosswalk across to Woltz Pkwy. No sidewalk on south side of W Hanover from Arrow Pl. to 126 W. Hanover, but existing sidewalk east of 126. This proposes to fill the existing gap.
3	Brookside Road	Install paved trail from Knights Bridge to Old Shunpike, add new crossing at Old Shunpike	Paved trail exists on the west side of Brookside Road from the intersection with Sussex Turnpike to Old Shunpike. Sidewalk exists on east side of Brookside Road to Ariel Drive. This would continue the connection south to the sidewalk into the residential neighborhood along Knights Bridge Drive.

**Table 2. Township of Randolph
Sidewalk Recommendations (2 of 3)**

Number	Location	Recommendation	Connection Created
4	Brookside Road	Install sidewalk from Albert Court to Sussex Turnpike	Sidewalk exists from Albert Court south to Old Shunpike Road along Brookside Road, no sidewalk exists north to Sussex Turnpike on either side of Brookside Road. This would connect the newer development to the Sussex Turnpike intersection.
5	Sussex Turnpike	Install sidewalk from Old Brookside Rd to 1246 Sussex	Sidewalk exists on either side of this property along the southern side of Sussex Turnpike. This proposes to fill the approximately 350 foot gap in sidewalk connection along Sussex Turnpike.
6	Sussex Turnpike	Install sidewalk from 1217 Sussex to Valley Rd	Sidewalk exists from the intersection of Millbrook Ave. and Sussex Turnpike, west to 1215 Sussex Turnpike. There is no sidewalk west from 1217 Sussex Turnpike to the Valley Road cul-de-sac bulb. This would extend the existing sidewalk and Valley Road which could get access to Sussex Turnpike via sidewalk with this improvement.
7	Sussex Turnpike	Install sidewalk from Harvey Terrace to 1240 Sussex	There is existing sidewalk from the intersection of Sussex Turnpike and Brookside Road west to Harvey Terrace. There are sidewalks further west at 1243 Sussex (Visions Credit Union). There is no sidewalk in this proposed area, and this would bridge the current gap between the existing sections.
9	Calais Road	Install sidewalk from 62 Calais Road to Veterans Community Park, add new crossing at bridge	There is existing sidewalk along the north side of Calais Road up from India Brook Lane to the Bridge. This proposes sidewalk on the southern portion of Calais to the park, with the crossing proposed at the bridge to meet the existing sidewalk across to the proposed section.
8	Calais Road	Install sidewalk from 16 Calais to Township Library	There is sidewalk to the east of 16 Calais Road to Cornell Drive and then none further west. This proposes sidewalk further west to connect Cornell Drive to the Library.

**Table 2. Township of Randolph
Sidewalk Recommendations (3 of 3)**

Number	Location	Recommendation	Connection Created
10	Route 10	Install sidewalk from 500 Route 10 to Center Grove Rd, install sidewalk around recessed catch basin at 500 Route 10	There is existing sidewalk to the east of 500 Route 10. This proposes sidewalk from the intersection of Center Grove Road, east to 500 Route 10 to bridge the gap. There is an existing curb cut and ramp at the intersection but no connected sidewalk.
11	Route 10	Install sidewalk in front of 503 Rt. 10	There is sidewalk existing to the east and west of this property (Randolph U-Wash), but not in front of this property. This would bridge the gap of missing sidewalk.
12	Franklin Road	Install paved trail from South Morris Street to South Salem Street	Paved trail along Franklin Road to connect South Morris Street to South Salem Street
13	South Salem Street	Install/replace sidewalk from 208 South Salem Street to 232 South Salem Street	Largely replacement of existing sidewalk from 208 S Salem Street (Randolph Auto Mall). Installation of sidewalk where none exists east of 224 S Salem St (Dunkin Donuts building).
14	Dover Chester Road	Install sidewalk from Berry Lane to South Road, add new crossing at South Road	Sidewalk exists just north of Berry Lane but ends at the first driveway north (approx. 150 feet). This proposes to extend further north and provide a crossing to the existing sidewalk across South Road.
15	Millbrook Avenue	Install sidewalk on the eastern side of Millbrook Avenue from the Municipal Building to Everdale Road	New Connection from the Municipal Building (on the east side of Millbrook) to Everdale Road would connect to existing curb cut/crosswalk at Everdale intersection and the sidewalk on northside of Everdale. Previous sidewalk existed here, sidewalk exists at Apple Montessori frontage.



TRAFFIC VOLUMES

Randolph Township, like many other municipalities in New Jersey continues to experience a significant increase in housing. As noted in the 1992 Plan, Randolph's road system is affected by traffic growth from neighboring municipalities in addition to locally-generated traffic. Although it is undesirable to have a high volume of "through" traffic traveling along Township roadways, Randolph Township's geographical location does not permit otherwise.

The map in Figure 6 indicates where new housing development has been agreed upon pursuant to the Township's Third Round affordable housing obligation and subsequent Settlement Agreement. Many of the housing sites are concentrated along Route 10 eastbound, as well as in Mount Freedom along Sussex Turnpike between Hanover Avenue/Brookside Road and Millbrook Avenue.

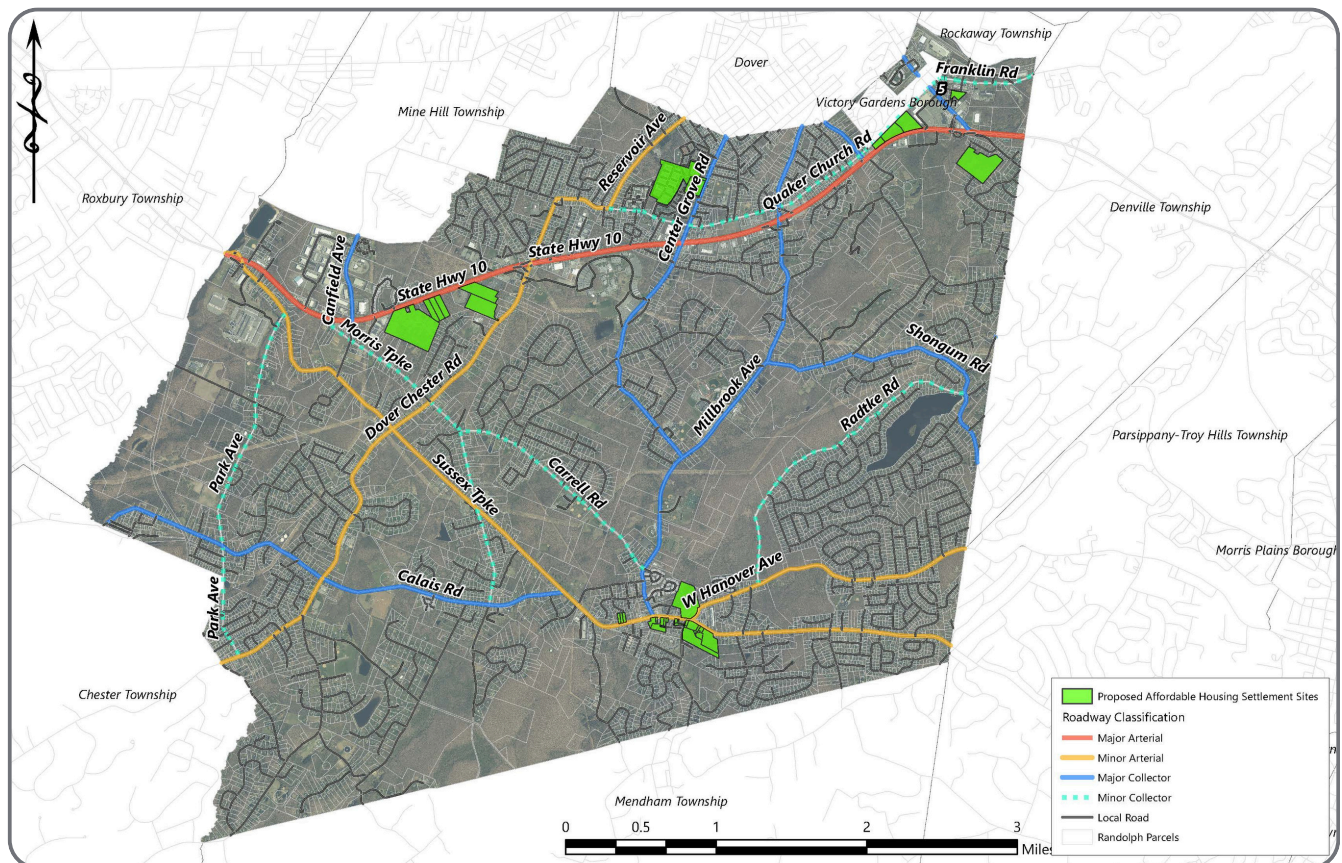


Figure 6: Housing Development Proposed in Randolph

The following discussion about Township major routes taken from the 2016 Master Plan is still relevant today and is repeated below with minor revisions.

Route 10 is the most heavily traveled roadway in the Township. Traffic volume is highly directional with heavy eastbound volume during morning peak hour and the reverse during the evening peak hour. Route 10 heavy eastbound traffic flows during morning peak hour causes vehicles to wait at more than one signal cycle length at the signalized intersections. This is the case in particular at the intersection of Route 10 with Center Grove Road.

Sussex Turnpike is the second most heavily traveled roadway in the Township, particularly the section between Millbrook Avenue and West Hanover Avenue. The traffic data suggests that this roadway is used by traffic with origins and destinations outside the Township.

Eastbound traffic flows along Sussex Turnpike are heavy during the morning peak period. Passing is virtually impossible and traffic flow becomes dense when slower vehicles or other interruptions are encountered during peak hours. This is especially evident at the Millbrook Avenue traffic signal. Improvements have been completed in conjunction with the Acme Supermarket development.

Dover-Chester Road traffic volumes are less than Sussex Turnpike but still heavy. North-south traffic traveling through the township generally uses Dover-Chester Road.

Millbrook Avenue traffic volumes are significant with the majority of Millbrook Avenue traffic having either an origin or destination within Randolph Township.

The section of **Center Grove Road** south of Route 10 experiences relatively high traffic because of the nearby access to the County College of Morris.

West Hanover Avenue traffic is a mixture of local and through traffic. An analysis of West Hanover Avenue indicates that passing is virtually impossible when traffic flow becomes dense during peak hours.

Table 3. Morris County Traffic Count Program Summary (September 2023)
Randolph Township Roadway Network (1 of 4)

Road Name Location		Average Weekday Volume				AM Peak Hour Volume		PM Peak Hour Volume	
Road Name	Location	2013- 2015	2016- 2018	2019- 2021	2022- 2023	Volume	Peak Hour	Volume	Peak Hour
Calais Rd.	B/W Dover Chester Rd & Edgewood Terr.	5,870				531	7:00am	584	5:00pm
Center Grove Rd.	B/W College Ave & Fords Rd.		12,145			890	10:00am	928	5:00pm
Center Grove Rd.	N of Lawrence Rd.	5,912		6,276		452	8:00am	597	5:00pm
Center Grove Rd.	N of Quaker Church Rd.	8,119				529	8:00am	714	5:00pm
Center Grove Rd.	S of Van Nostrand Ave.	8,714	6,952		6,119	317	8:00am	505	4:00pm
Dover Chester Rd.	B/W Hillside Ave & CCM Driveway		13,429	7,894		663	8:00am	772	5:00pm
Dover Chester Rd.	B/W NJ 10 & Quaker Church Rd.		9,525		6,783	442	8:00am	594	4:00pm
Dover Chester Rd.	B/W Stone Hill Rd. & Sussex Tpke.	9,351	10,039		8,959	780	8:00am	777	5:00pm
Dover Chester Rd.	B/W Sussex Tpke. & Morris Tpke.	9,905		9,281		828	8:00am	-	5:00pm

Table 3. Morris County Traffic Count Program Summary (September 2023)
Randolph Township Roadway Network (2 of 4)

Road Name Location		Average Weekday Volume				AM Peak Hour Volume		PM Peak Hour Volume	
Road Name	Location	2013- 2015	2016- 2018	2019- 2021	2022- 2023	Volume	Peak Hour	Volume	Peak Hour
Dover Chester Rd.	N of Calais Rd.	9,020		6,561		480	7:00am	594	5:00pm
Dover Chester Rd.	N of Sweetwood Rd.			7,258		540	8:00am	650	4:00pm
Dover Chester Rd.	S of Calais Rd.	11,156		8,857		674	7:00am	791	5:00pm
Franklin Rd.	E of Rockaway Rd.	5,784				523	7:00am	561	5:00pm
Franklin Rd.	E of S Morris St.	7,192				456	7:00am	731	5:00pm
Millbrook Ave.	B/W Carrell Rd. & School House Rd.	11,523				848	7:00am	997	5:00pm
Millbrook Ave.	B/W Sussex Tpke. & Carrell Rd.	11,323		11,978		1,038	7:00am	1,138	5:00pm
Quaker Church Rd.	B/W Dover Chester Rd. & Reservoir Ave.	9,530		8,668		621	8:00am	887	5:00pm
Quaker Church Rd.	B/W Millbrook Ave. & S Morris St.	7,268				604	7:00am	784	5:00pm

Table 3. Morris County Traffic Count Program Summary (September 2023)
Randolph Township Roadway Network (3 of 4)

Road Name Location		Average Weekday Volume				AM Peak Hour Volume		PM Peak Hour Volume	
Road Name	Location	2013- 2015	2016- 2018	2019- 2021	2022- 2023	Volume	Peak Hour	Volume	Peak Hour
Quaker Church Rd.	B/W Quaker Ave. & Millbrook Ave.	7,732				578	8:00am	804	5:00pm
Quaker Church Rd.	W of Center Grove Rd.	8,713				720	8:00am	825	5:00pm
Reservoir Ave.	S of Ashwood Ave.		4,109		3,621	234	8:00am	330	5:00pm
S Salem St.	B/W NJ 10 and Franklin Rd.	20,581	18,829			1,407	7:00am	1,550	5:00pm
School House Rd.	B/W Millbrook Ave. & Center Grove Rd.	4,162		4,624		459	8:00am	422	4:00pm
Sussex Tpke.	B/W Dover Chester Rd. & Morris Tpke.	14,039		12,327		1,030	7:00am	1,170	5:00pm
Sussex Tpke.	B/W Millbrook Ave. & W Hanover Ave.		22,640			1,957	7:00am	2,064	5:00pm
Sussex Tpke.	B/W Morris Tpke. & Calais Rd.		11,207		12,038	1,090	7:00am	1,171	5:00pm
Sussex Tpke.	B/W NJ 10 Ramps and Park Ave.	12,369			10,607	828	8:00am	1,008	5:00pm

Table 3. Morris County Traffic Count Program Summary (September 2023)
Randolph Township Roadway Network (4 of 4)

Road Name Location		Average Weekday Volume				AM Peak Hour Volume		PM Peak Hour Volume	
Road Name	Location	2013- 2015	2016- 2018	2019- 2021	2022- 2023	Volume	Peak Hour	Volume	Peak Hour
Sussex Tpke.	B/W Nottingham Way & Dover Chester Rd.	12,968		13,468		1,069	8:00am	1,293	5:00pm
Sussex Tpke.	B/W Old Brookside Rd. & Millbrook Ave.		18,615			1,487	8:00am	1,838	5:00pm
Sussex Tpke.	E of W Hanover Ave.	12,840		11,902		1,162	8:00am	1,072	4:00pm
W Hanover Ave.	E of Radtke Rd.		9,559		8,232	749	8:00am	771	5:00pm

VEHICULAR AREAS OF CONCERN

A number of areas were identified in the 1992 Master Plan as vehicular circulation problem areas. Some of these problems have been corrected, while others have not been changed.

As noted in the 2006 Circulation Plan, the Mount Freedom Village Center Study Technical Report stated at the time that Sussex Turnpike was slated for roadway improvements by the State of New Jersey Department of Transportation to better accommodate the high volumes of east-west traveling to/from Morristown. These proposed improvements included the realigning and widening Sussex Turnpike from two lanes to four lanes through Mount Freedom from Calais Road to West Hanover Avenue. Other proposed road improvements included development of sidewalks along the southern section of Sussex Turnpike within the commercial core area of Mount Freedom.

In 2015, the following improvements were completed:

- The intersection of Sussex Turnpike and Dover-Chester Road was be widened to accommodate left turn lanes on all approaches. A new traffic signal will be installed. Pedestrian ramps that can accommodate persons with disabilities will be installed.
- At the intersection of Sussex Turnpike and Calais Road, Sussex Turnpike was be widened to allow for installation of a westbound left turn lane into Calais Road. Calais Road was be realigned to form a 90 degree intersection with Sussex Turnpike. Underground signal equipment was installed for a potential future traffic signal.
- The section of Sussex Turnpike between Harvey Terrace and West Hanover Avenue was be widened to accommodate left turn lanes at intersections.
- The traffic signal at Sussex Turnpike and Millbrook Avenue was be replaced and pedestrian ramps to accommodate persons with disabilities was be installed.
- West Hanover Avenue was realigned to intersect Sussex Turnpike directly across from Brookside Road. Approximately 800 feet of West Hanover Avenue was relocated to install this improvement.
- A new traffic signal was installed at the West Hanover Avenue, Brookside Road and Sussex Turnpike interconnection.

The Traffic Advisory Committee's (TAC) review of the 2006 Master Plan Table VI-2 and Figure VI-I, which detailed 13 different "Circulation Problem Areas", provided an update to the previous issues. Additionally, 4 new intersections were identified as areas of concern, provided as items 14-17 in Table 3. All of the vehicular areas of concern are depicted in Figure 7, with numbers 1-13 from the 2006 Circulation Plan Element and number 14-17 as newly identified areas of concern as provided by the TAC.

As noted in the Morris County Corridor Study, the existing signalized intersection of Sussex Turnpike (CR 617)/West Hanover Avenue (CR 650) - and more specifically, the southbound West Hanover right-turn movement - is operating at a LOS F during the PM Peak Hour, and will worsen as the proposed developments are built and become occupied in the Mt. Freedom area. Additionally, the existing signalized intersection at Sussex Turnpike (CR 617)/Millbrook Avenue (CR 670) will have noticeable operational delays during the full-build conditions as a result of additional traffic and "activation" of the driveway approach. These intersections should continue to be examined as additional applications are heard before the Planning Board.

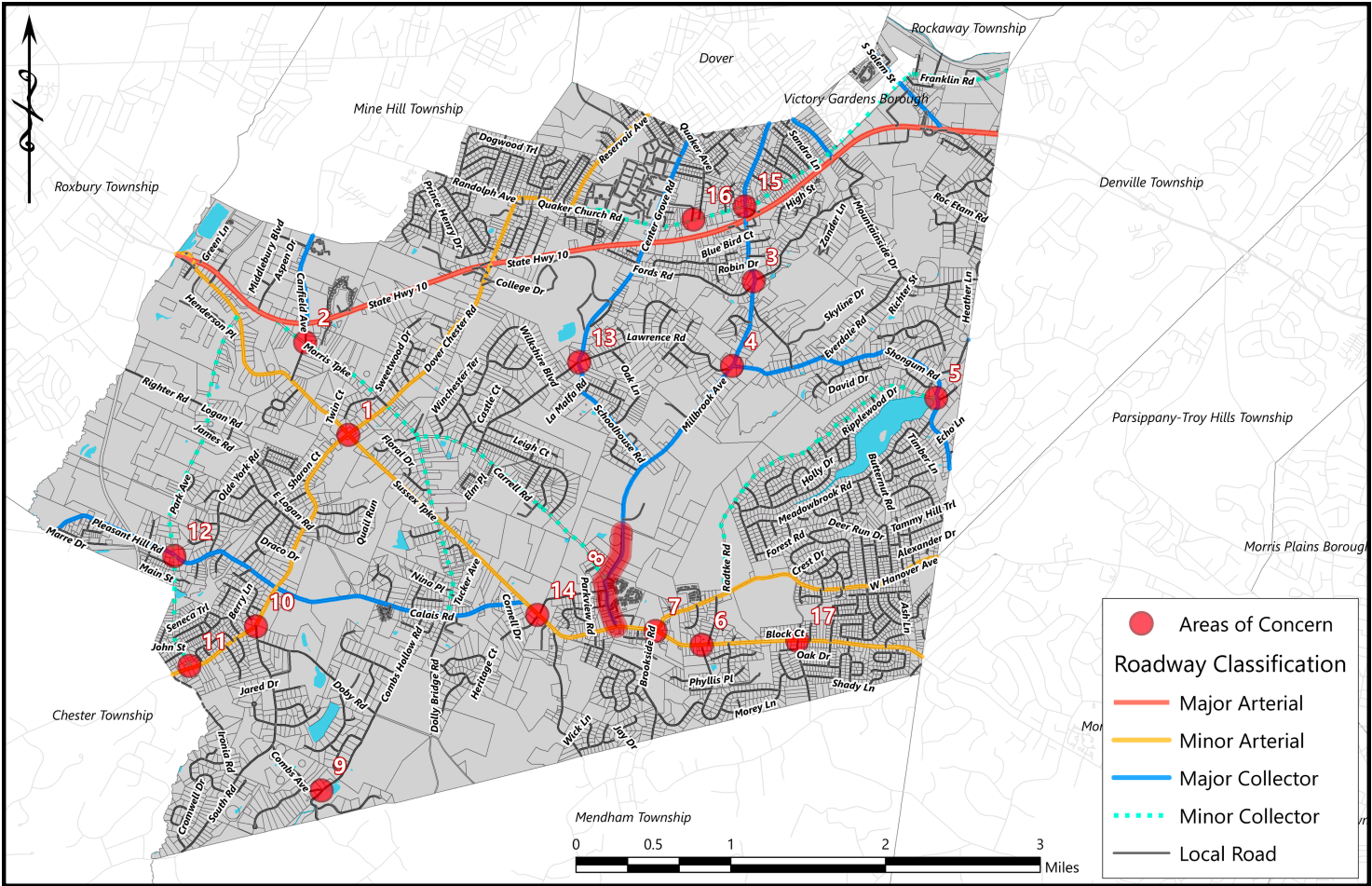


Figure 7: Vehicular Areas of Concern

**Table 4. Problem Areas Identified in 2006 Circulation Element
and 2024 Updated Areas of Concern (AOC)**

Map Ref #	Areas of Concern (AOC)	Description of Issue	Recommendation or Status
<i>Previously Identified in 2006 Circulation Element</i>			
Resolved			
1	Sussex Tpke. & Dover Chester Rd.	Steep Grade, Limited Sight Distance	Resolved: Roadway realigned
5	Shongum Rd. & Radtke Rd.	Dangerous Reverse Curve	Resolved: Flashing Lights on Existing Signs
12	Park Ave. & Mt. Pleasant	Limited Sight Distance	Resolved: Blinker Light Installed
Ongoing			
2	Morris Tpke. & Canfield Ave.	Limited Sight Distance	Ongoing: Keep Vegetation Trimmed, Minimum 2x per year
4	Millbrook Ave./Shongum & Lawrence Rds.	Limited Sight Distance	Ongoing: Keep Vegetation Trimmed, Minimum 2x per year
7	Sussex Tpke. & W. Hanover/Old Brookside Rd.	Difficult Alignment	Ongoing: Straightened Alignment, Traffic Problems Still Exist
9	Combs Hollow & Combs Ave.	Difficult Alignment	Ongoing: Keep Vegetation Trimmed, Minimum 2x per year
13	Center Grove Rd. & Lawrence Rd.	Limited Sight Distance	Ongoing: Remove structures existing in sight lines
Not Resolved			
3	Millbrook Ave./Gristmill & Ford Rds.	Limited Sight Distance	Not resolved: Requires more attention
6	Sussex Tpke. & Musiker Rd.	Limited Sight Distance	Not resolved: Improve sight lines
8	Millbrook Ave. between Sussex Tpke. & Knothe's Farm	Difficult Alignment	Not resolved: Consider speed limit reduction
10	Dover Chester Rd. & South Rd.	Limited Sight Distance	Not resolved: Contact the County to recommend LTO onto South Rd.
11	Dover Chester Rd. & Park Ave.	Limited Sight Distance	Not resolved: Options Limited for Mitigation
New Areas of Concern (AOC) Identified			
14	Church Rd. & Sussex Tpke.	Problem Making Left Turn	Potentially limited to RTO during peak travel hours
15	Quaker Church Rd. & Millbrook Ave.	Dangerous Intersection	Island put in eastbound on Quaker Church, beacon installed
16	Quaker Church Rd. at Fernbrook School entrance	Limited Sight Distance	AOC identified, no mitigation
17	Sussex Tpke. & Washington Valley Rd.	Limited Sight Distance	AOC identified, no mitigation

APPENDIX



Figure 1: Map of Road Classifications

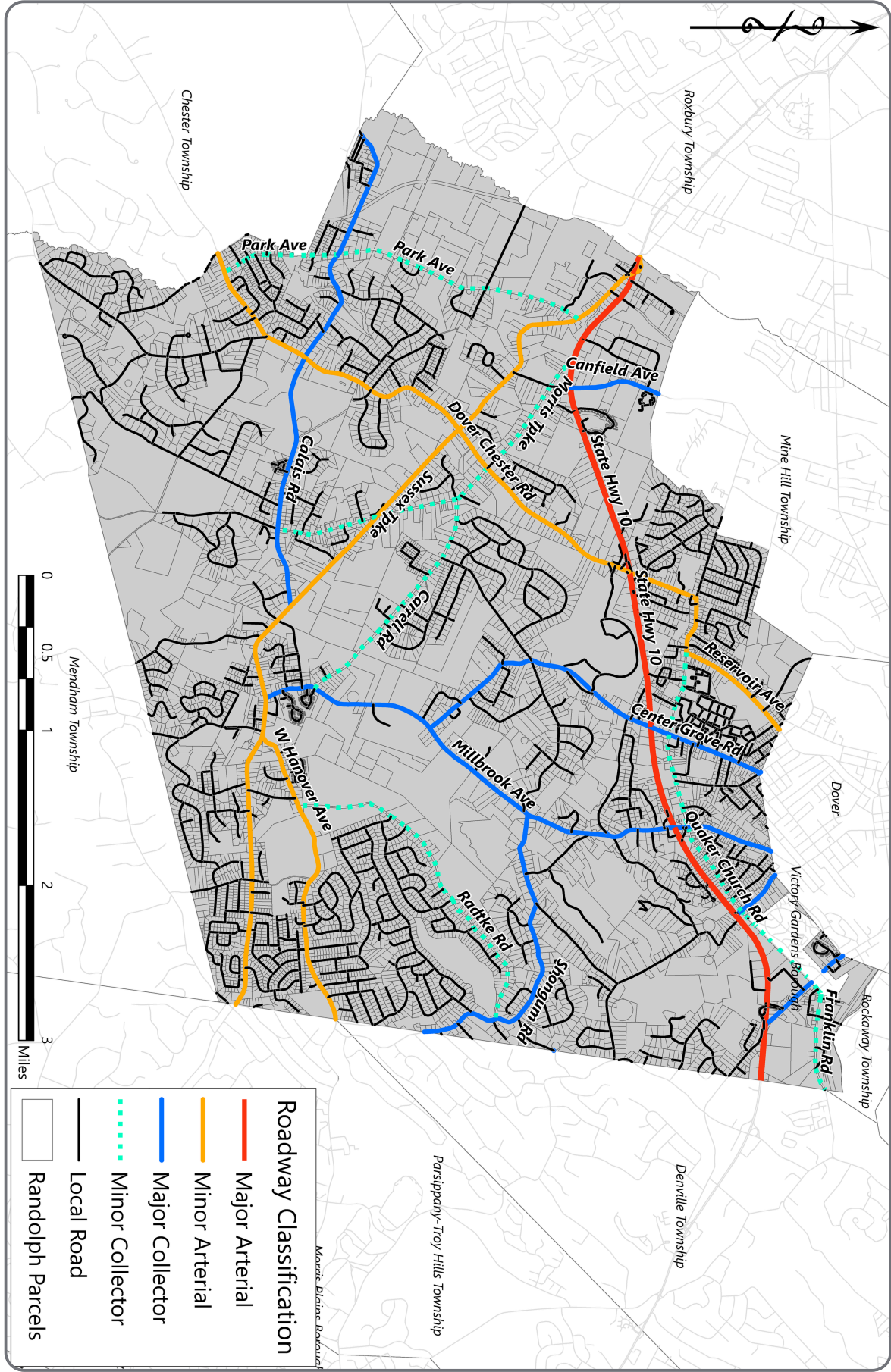


Figure 2: Map of NJ Transit Bus Routes in Randolph

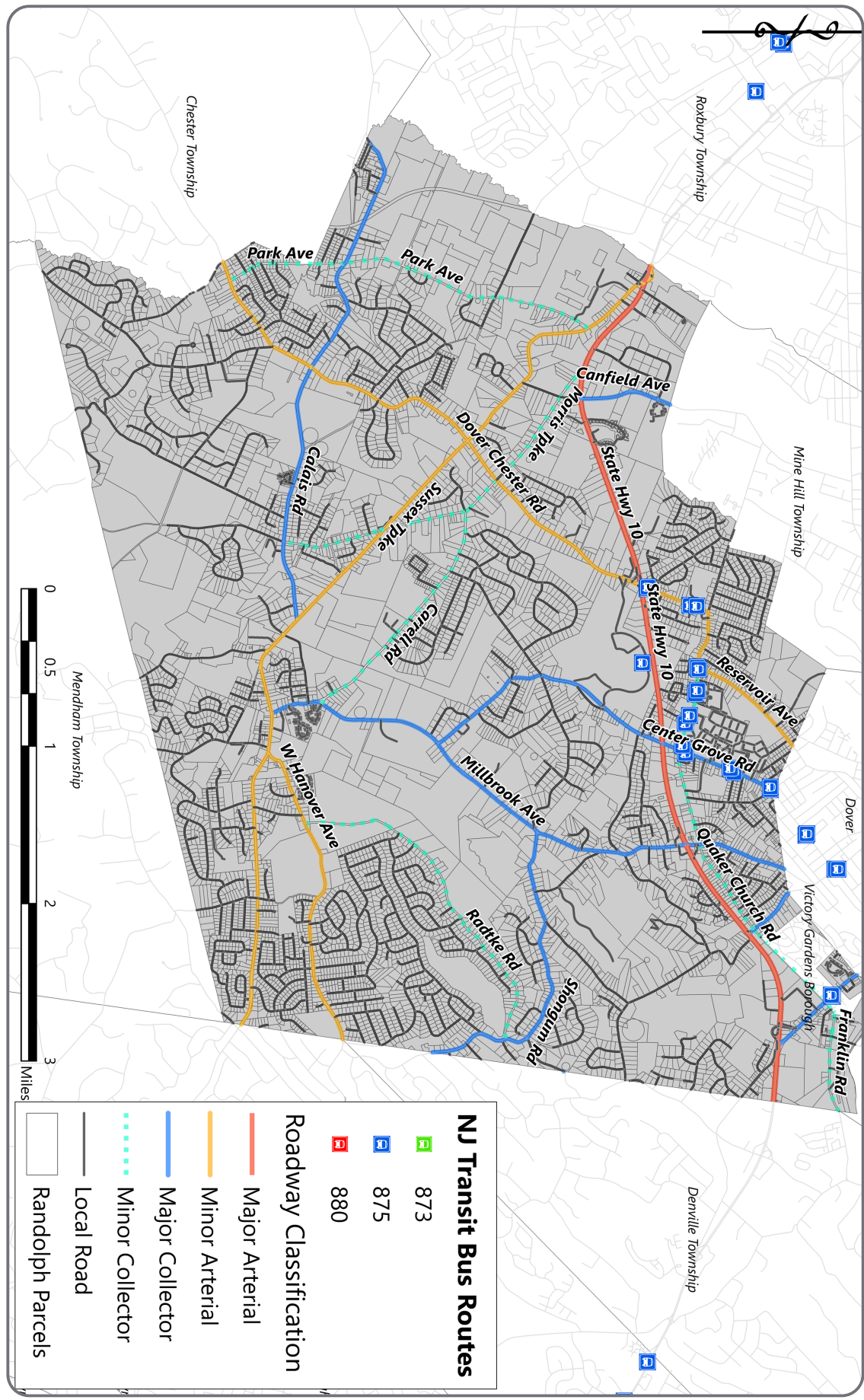


Figure 3: Zoom View of NJ Transit Bus Stops in Randolph

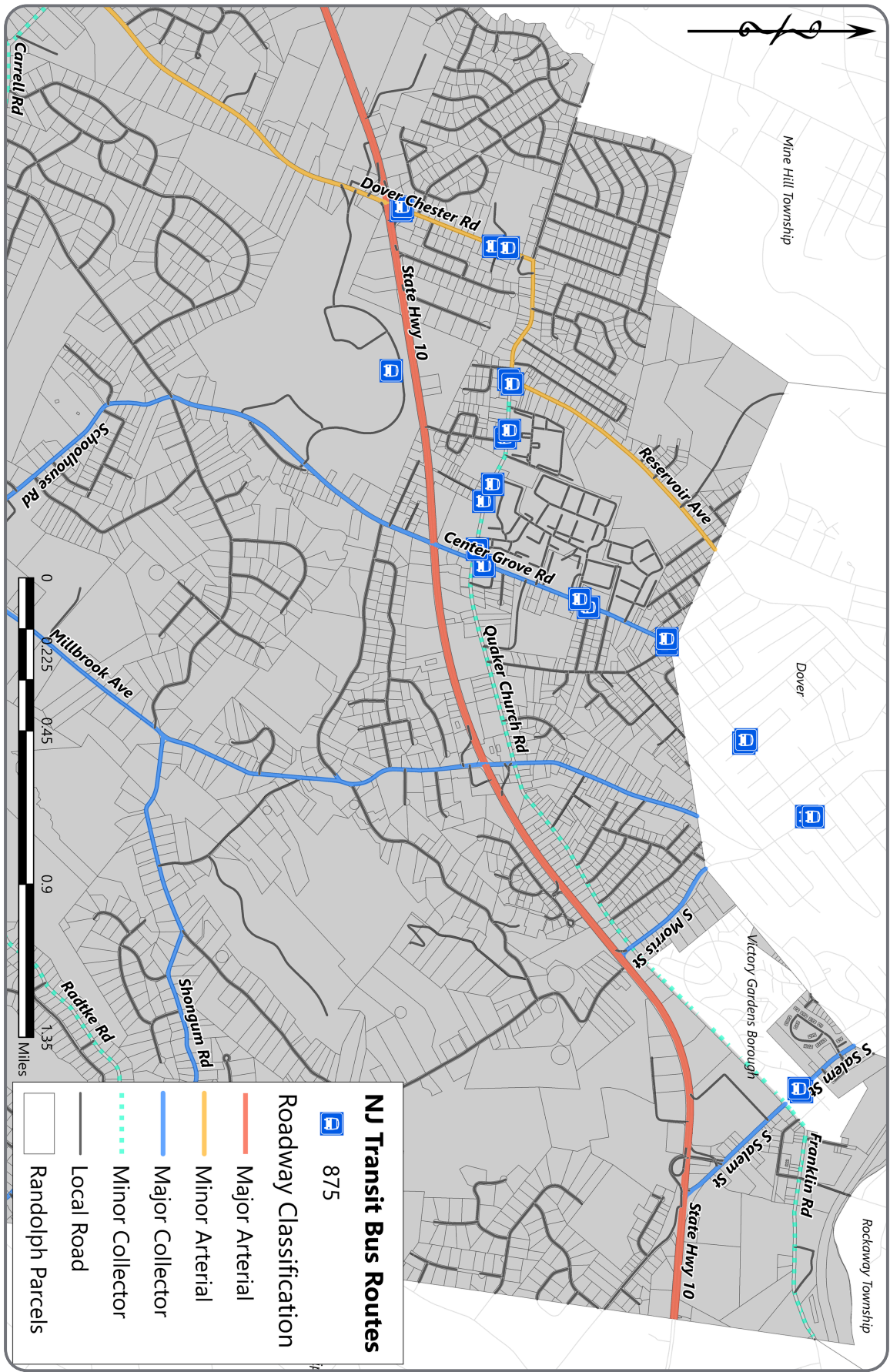


Figure 4: Trails Map

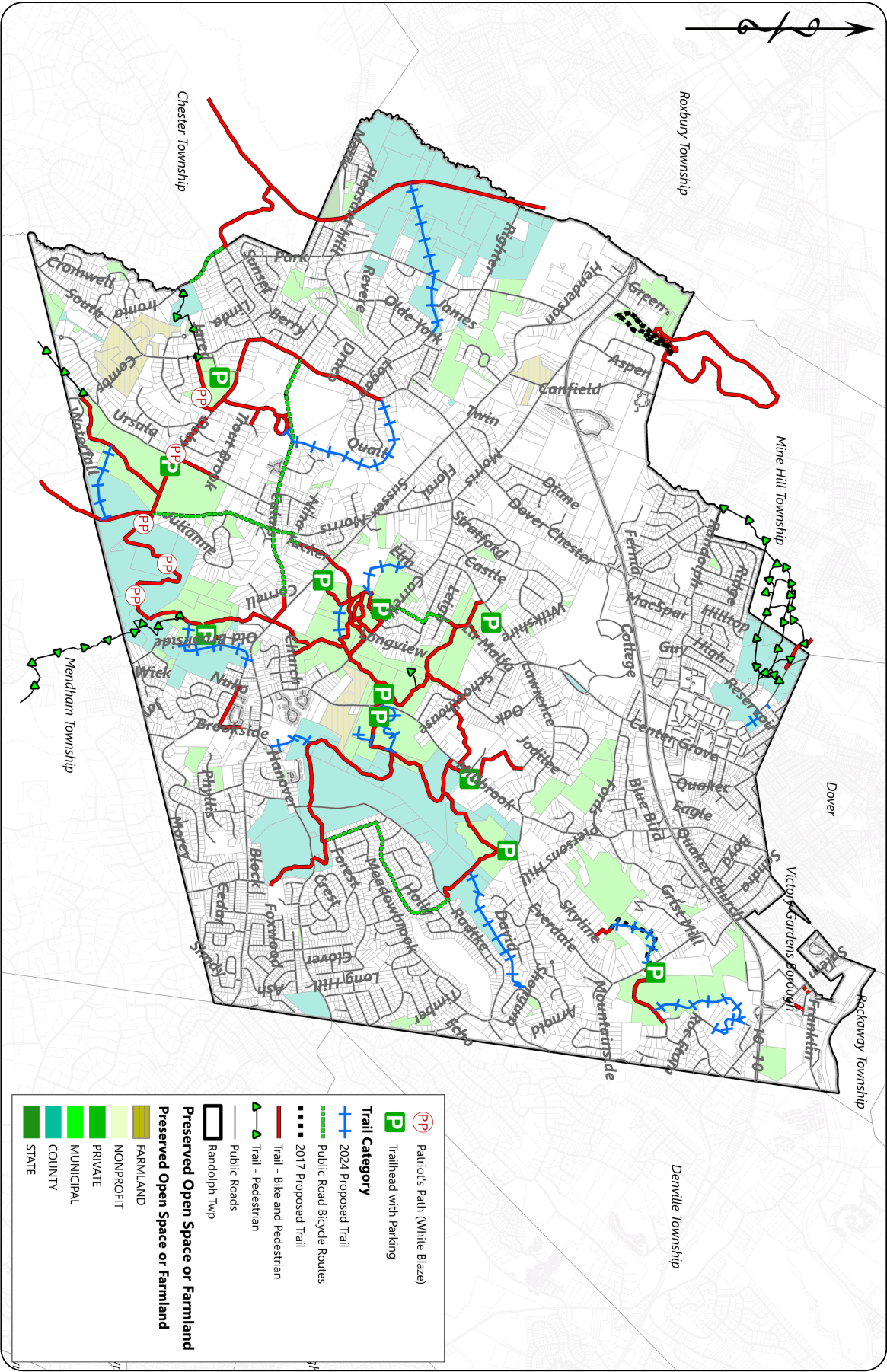


Figure 5: Sidewalks Map

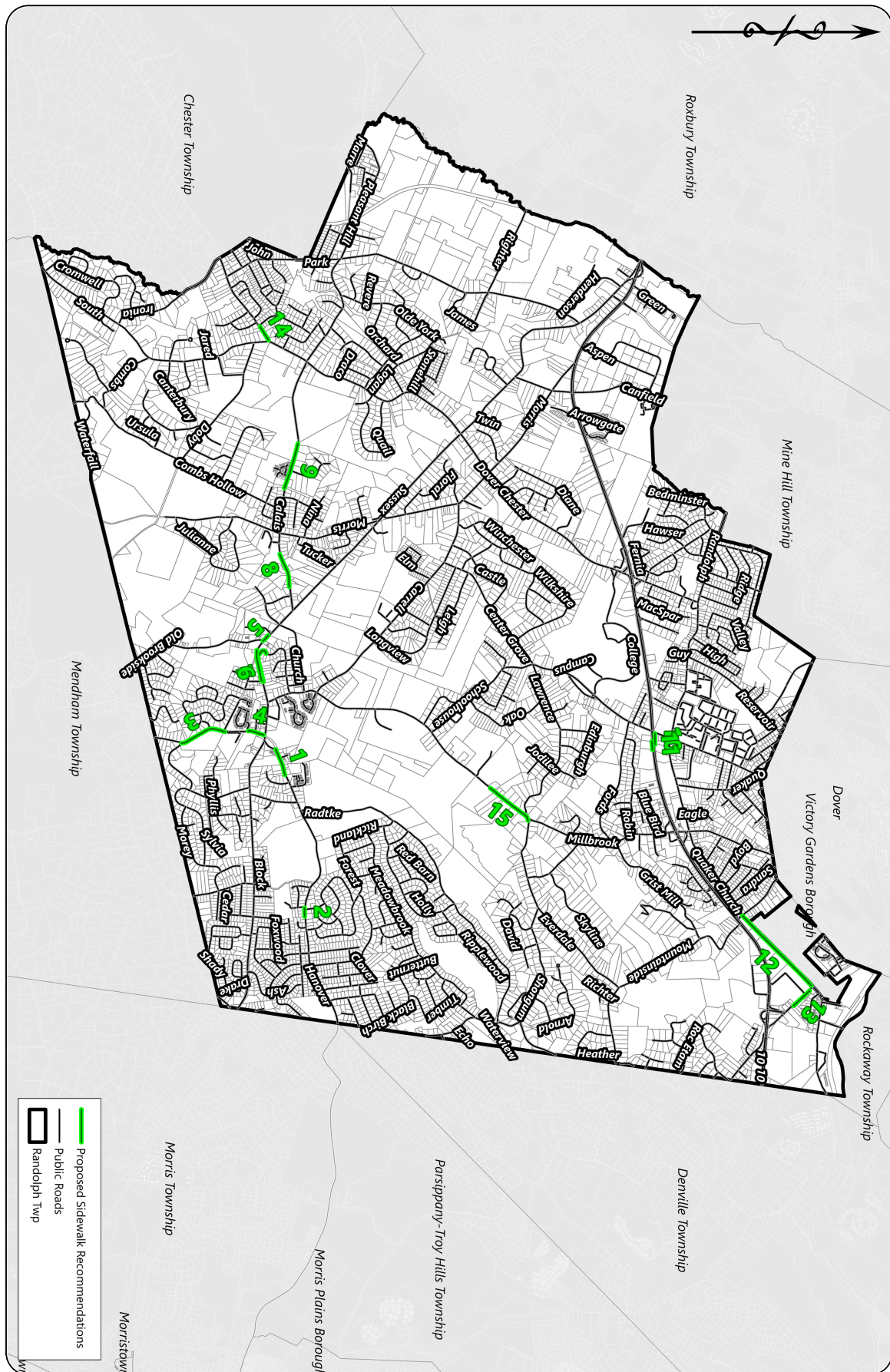
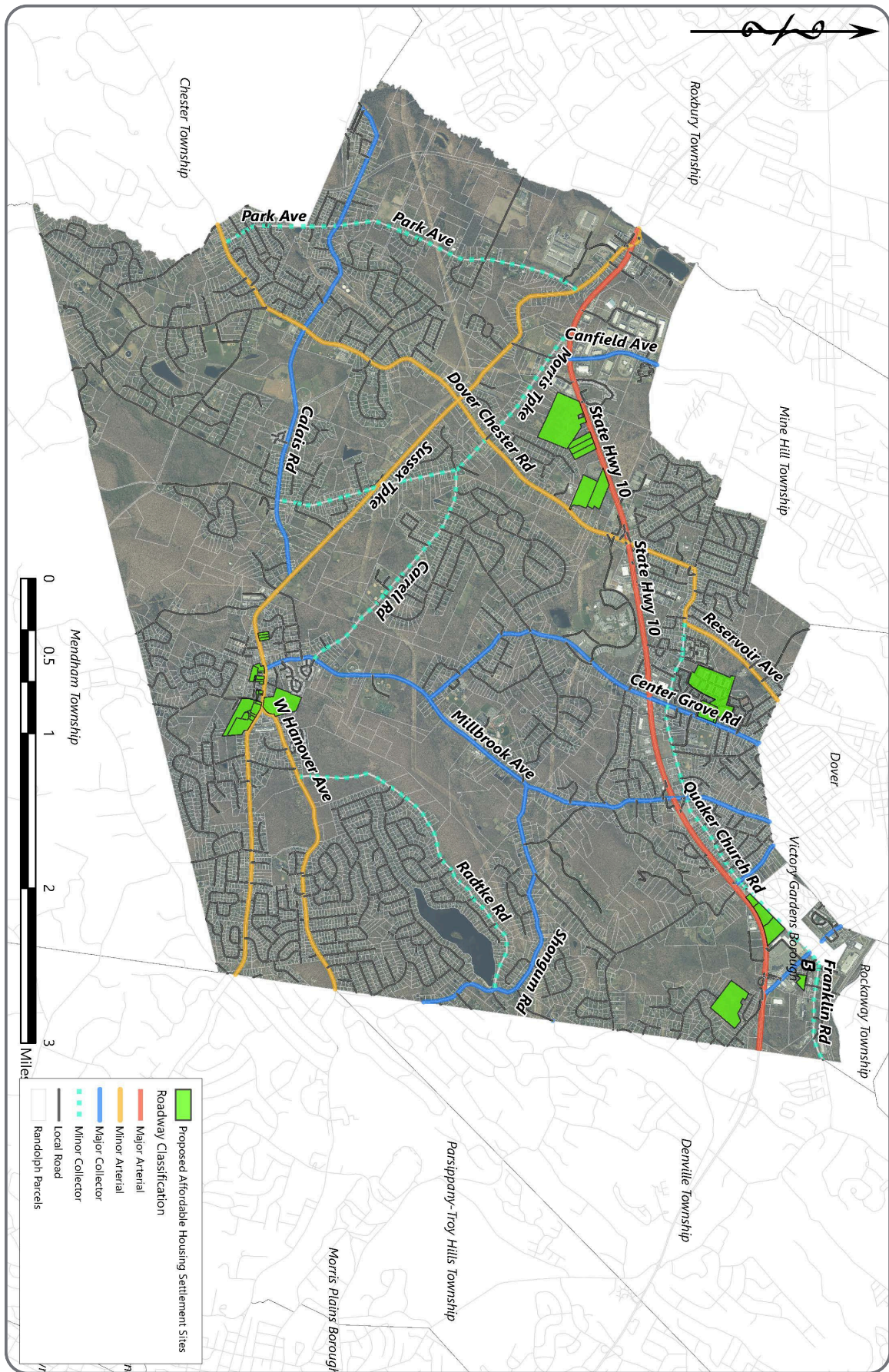


Figure 6: Housing Development Proposed in Randolph



Areas of Concern

Roadway Classification

- Major Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local Road

Scale: 0, 0.5, 1, 2, 3 Miles

Surrounding Townships: Rockaway, Victory Gardens Borough, Denville, Parsippany-Troy Hills, Morris Plains Borough, Mendham