

Land Use Assumptions Report



New Hanover Township

Montgomery County, Pennsylvania

February 7, 2019

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Land Use Assumptions Report



New Hanover Township

Montgomery County, Pennsylvania

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February 7 2019

Contents

Adoption Resolution vii

Introduction ix

Chapter 1 | *Background*

Community Context 1

Existing Land Use 2

Future Land Use..... 4

Residential Development..... 7

Nonresidential Development 10

Road Network 10

DVRPC Population and Housing Forecasts 14

Employment Forecasts..... 15

Chapter 2 | *Future Growth*

Future Residential Growth 17

Future Nonresidential Growth..... 19

Conclusion 21

Appendix..... 21

List of Figures, Maps & Tables

Table 1.1		<i>Existing Land Uses by Total Acreage and by Percent of Total Land Area</i>	2
Map 1.1		<i>Existing Land Use.</i>	3
Map 1.2		<i>Future Land Use: <u>Montco 2040: A Shared Vision</u>, 2015</i>	5
Map 1.3		<i>Future Land Use: <u>Pottstown Metropolitan Regional Comprehensive Plan</u>, 2015 . .</i>	6
Table 1.2		<i>Residential Construction by Housing Type: 2008-2017</i>	7
Figure 1.1		<i>Residential Construction by Housing Type: 2008-2017</i>	7
Table 1.3		<i>Residential Units Proposed and Constructed: May 24, 2018</i>	8
Table 1.4		<i>Residential Land Developments – Proposed and Approved, as of May 24, 2018 . .</i>	8
Map 1.4		<i>Active and Pending Land Development Plans, as of May 24, 2018</i>	9
Table 1.5		<i>Nonresidential Development: 2008-2017</i>	10
Map 1.5		<i>Township Road Classification, according to Township Zoning Ordinance</i>	12
Map 1.6		<i>Township Road Classification, according to <u>Montco 2040: A Shared Vision</u></i>	13
Figure 1.2		<i>Comparison of Actual Populations Observed and 2000-2025 and 2015-2045 DVRPC Population Forecasts.</i>	14
Figure 1.3		<i>Comparison of 2000-2025 and 2015-2045 DVRPC Employment Forecasts</i>	15
Map 2.1		<i>Anticipated Residential Growth in Number of Units: 2018-2030.</i>	18
Table 2.1		<i>Nonresidential Office Square Footage Multipliers</i>	19
Table 2.2		<i>Nonresidential Square Footage Projected by County Trends in Use Type</i>	19
Map 2.2		<i>Anticipated Nonresidential Growth: 2018-2030</i>	20
Table A.1		<i>Summary of Maximum Residential Buildout</i>	22
Map A.1		<i>Developable Land: Environmental Constraints Removed, with Zoning</i>	23

Adoption Resolution

NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PENNSYLVANIA

RESOLUTION 19-04

A RESOLUTION APPROVING THE LAND USE ASSUMPTIONS REPORT SUBMITTED TO NEW HANOVER TOWNSHIP'S TRAFFIC IMPACT FEE ADVISORY COMMITTEE

WHEREAS, the Township passed Resolution 18-6, creating the Traffic Impact Fee Advisory Committee pursuant to Act 209 of 1990; and

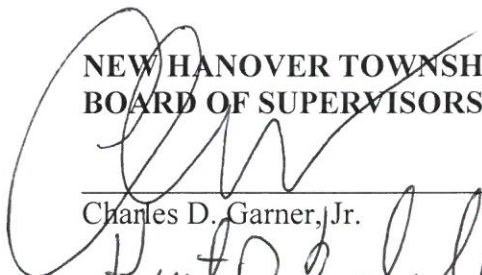
WHEREAS, the Traffic Impact Fee Advisory Committee has submitted a Land Use Assumptions Report to the Board of Supervisors for the implementation of impact fees for capital improvements; and

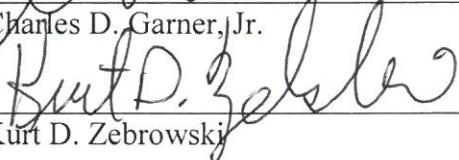
WHEREAS, the Board of Supervisors desires to take action on the Land Use Assumptions Report; and

NOW, THEREFORE, BE IT RESOLVED, the Board of Supervisors of New Hanover Township approves the Land Use Assumptions Report, dated January 15, 2019, as prepared by the Montgomery County Planning Commission for the Township's Traffic Impact Fee Advisory Committee; and this resolution is in order to comply with the requirements of the Pennsylvania Municipalities Planning Code, and in particular Section 504-A(c)(1) of the Code.

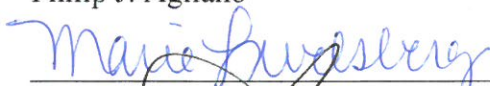
RESOLVED and **ENACTED** this 17th day of February, 2019 by the Board of Supervisors of New Hanover Township, Montgomery County, Pennsylvania, in lawful session duly assembled.

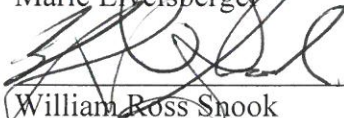
**NEW HANOVER TOWNSHIP
BOARD OF SUPERVISORS**


Charles D. Garner, Jr.


Kurt D. Zebrowski

Absent
Philip J. Agliano


Marie Livelsberger


William Ross Shook

ATTEST:


Jamie L. Gwynn, Township Manager

Resolution 19-04

Introduction

Residential and nonresidential growth in New Hanover has had an impact on the Township's roads, in terms of both roadway conditions and traffic volume. New roads, driveways and parking lots associated with this growth are built as needed to access and serve new homes or commercial properties. To help fund municipal capital improvement projects, New Hanover has taken advantage of Pennsylvania Act 209, enacted in 1990 to allow municipalities to impose a transportation impact fee (TIF). The impact fee that a municipality establishes must be justified by the findings of a transportation capital improvements plan, which is reviewed by an impact fee advisory committee. This land use assumptions report is the first of four components of a transportation capital improvements plan and provides the basis from which the other components—a roadway sufficiency analysis, the capital improvements plan itself, and the resulting transportation impact fee ordinance—are created.

In the early 1990s New Hanover completed its first Act 209 process, which was updated in 2005. In March 2018, the Township began working on another update and a new TIF Advisory Committee (TIFAC) was formed to oversee the preparation of the Land Use Assumptions Report, Roadway Sufficiency Analysis and Capital Improvements Plan. The Township's traffic engineer, McMahon Associates, and the Montgomery County Planning Commission were engaged to provide technical assistance and recommendations to the TIFAC on the ensuing Land Use Assumptions Report.

The purpose of this Report, the first of the three documents prepared in the Act 209 process, is to determine what future growth and development will occur in New Hanover Township in the next several years, which then dictates what transportation improvements will be needed in the Township due to this growth. This report uses population and employment forecasts, existing zoning regulations, an assessment of pending and approved subdivision and land development plans, recent municipal and regional planning documents, and local knowledge of developable areas and development trends in the Township.

The land use assumptions report is divided into two sections. *Chapter 1: Background* describes the general community context of the Township; the existing and future land uses and road conditions in the Township; the status of pending, approved, and recently-constructed development; and population, housing, and employment forecasts through the report's horizon year of 2030. *Chapter 2: Future Growth* describes the forecasted growth in both residential and nonresidential development, as well as the specific methodologies used to produce the forecasts.

Chapter 1 | Background

Chapter 1 outlines the background information used to develop the residential and nonresidential growth forecasts provided in Chapter 2. This chapter discusses the following:

- Community context
- Analysis of existing and future land uses
- Recent residential and nonresidential development activity
- Summary of the Township's existing road network
- Population, housing, and employment forecasts

Community Context

New Hanover Township is located in the northwestern part of Montgomery County and is a member of the Pottstown Metropolitan Regional Planning Commission (other participants include Douglass, East Coventry, Lower Pottsgrove, North Coventry, Upper Pottsgrove, and West Pottsgrove Townships and Pottstown Borough). The Township is situated roughly 30 miles northwest of Philadelphia, 20 miles east of Reading, and about 20 miles south of Allentown. The 21.7-square-mile municipality is bordered by Lower Pottsgrove, Upper Pottsgrove, Douglass, Upper Hanover, Lower Frederick, and Limerick Townships. PA Route 663 (N. Charlotte Street/Layfield Road) runs vertically through the length of the Township and connects New Hanover to the Quakertown Interchange on the PA Turnpike Northeast Extension to the north, and to the Hanover Street Interchange on US Route 422/Pottstown Expressway to the south. PA Route 73 (Big Road) bisects the municipality from east to west and connects residents to PA Routes 29 and 100, respectively. The southern tip of the Township is just a few miles north of the Sanatoga Interchange on US Route 422/Pottstown Expressway and PA Route 100, another major corridor in the area, lies just to the west of New Hanover and is easily accessible from the Township.

The first Europeans to settle in New Hanover Township sailed from Germany early in the 18th century. Thick woods were cleared to make way for acres of pasture and cropland as agriculture quickly became the center of New Hanover's economy. Despite the rapid development that occurred elsewhere in southeastern Pennsylvania during the 19th century, New Hanover remained predominantly agricultural and rural in character. By the middle of the 20th century, though, suburbanization reached the Township. Patches of farmland were transformed into residential subdivisions and more commercial development began to appear, particularly along the Township's major thoroughfares, Swamp Pike, N. Charlotte Street (Route 663), and Big Road (Route 73).

The Township's population nearly doubled between 1950 and 1960 and has increased by double-digit percentages nearly every decade since¹. Nevertheless, New Hanover's character remains primarily rural, especially within the northern half of the Township, whereas most of the significant development, both residential and nonresidential, occurs along Swamp Pike and points south.

¹ U.S. Census, Decennial Census, 1930–2010.

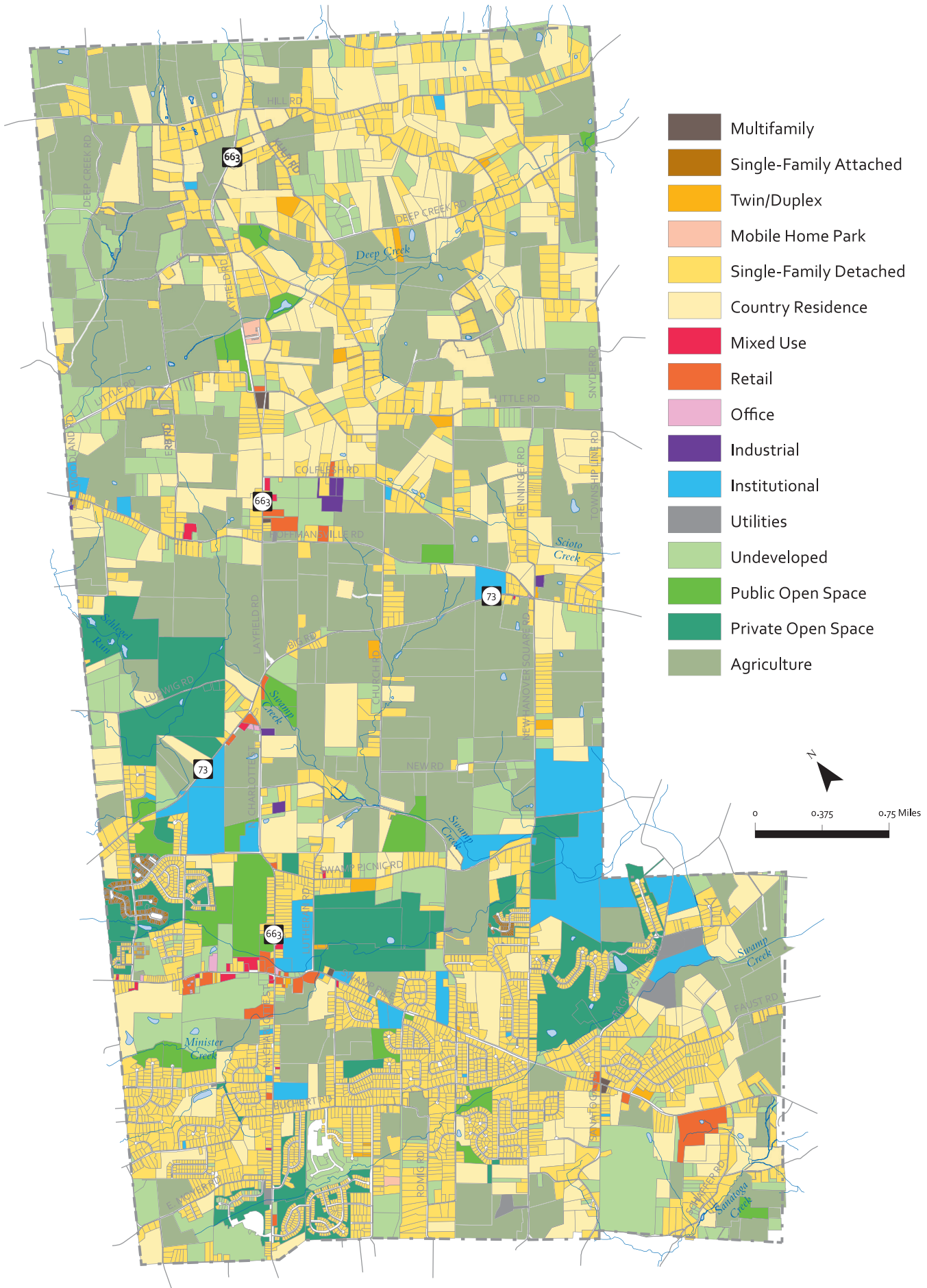
Existing Land Use

Large single-family residential subdivisions have been a driving force in the transformation of New Hanover's landscape over the past three decades. Map 1.1 shows the existing land use in the Township: the northern half of the Township remains largely rural and agricultural in character; small areas of commercial land uses are primarily situated along Swamp Pike; and suburban residential subdivisions lie at the southern end of the Township. North of the PA Route 73, large agricultural properties and larger single-family lots are the predominant land uses. Table 1.1 below illustrates each land use category in total acreage and as a percent of the total land in the Township. Agricultural uses still occupy the most amount of land in New Hanover, but the total acreage is expected to decrease as new development is added.

Table 1.1 | Existing Land Uses by Total Acreage and by Percent of Total Land Area

NEW HANOVER TOWNSHIP EXISTING LAND USE		
Land Use Description	Total Acres	% of Total Land Area
Agriculture	4,255.31	32.00%
Single-Family Detached	3,594.99	27.04%
Country Residence	2,116.39	15.92%
Undeveloped	1,160.09	8.73%
Private Open Space	824.19	6.20%
Institutional	747.28	5.62%
Public Open Space	189.01	1.42%
Mixed Use	129.68	0.98%
Retail	107.65	0.81%
Twin/Duplex	51.24	0.39%
Utility	44.57	0.34%
Single-Family Attached	28.65	0.22%
Industrial	19.36	0.15%
Office	10.63	0.08%
Mobile Home	9.71	0.07%
Multifamily	7.27	0.05%

Map 1.1 | Existing Land Use



Future Land Use

The Future Land Use of an area is determined by several factors, including local policy priorities, existing land use, available developable land, sewer capacity, and current zoning. The capacity and availability of public sewer service in the Township is a significant determinant of growth—development potential of land which lacks access to public sewer is greatly limited. Future land use patterns in New Hanover were identified in both the Montgomery County comprehensive plan, *Montco 2040: A Shared Vision*, and in the *Pottstown Metropolitan Regional Comprehensive Plan*. Map 1.2 on page 5 shows the future land use map of the Township from Montco 2040.

Community Mixed Use and Services

Local community focal points that typically have a significant retail or institutional element with surrounding residential uses. Usually located on major roads and have a suburban character.

Village Center

Traditional village areas with a mix of retail, institutional, office, and residential uses. Usually have small separate buildings located close to each other to allow people to either walk or drive from one to another.

Suburban Residential Area

Residential areas which depend on automobiles for transportation and often have extensive landscaping on individual properties. These areas will have a variety of housing types, with single-family detached homes the most prominent type.

Rural Resource Area

Consist of open land with a traditional rural appearance that includes farms, small woodlands, some low-density residential development, and rural villages.

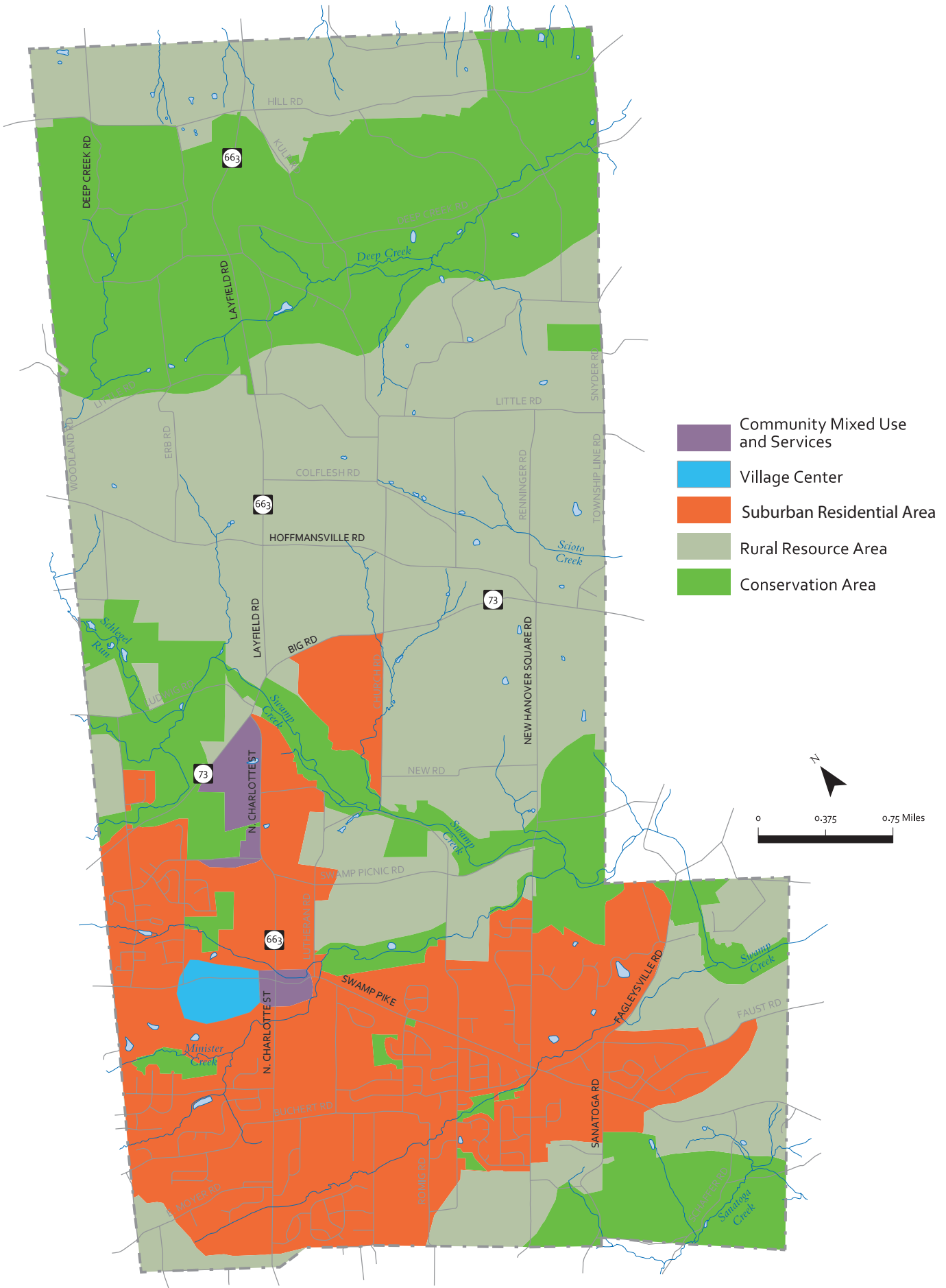
Conservation Area

Primarily consists of parks, environmentally-sensitive land, and connecting land with little, if any, development.

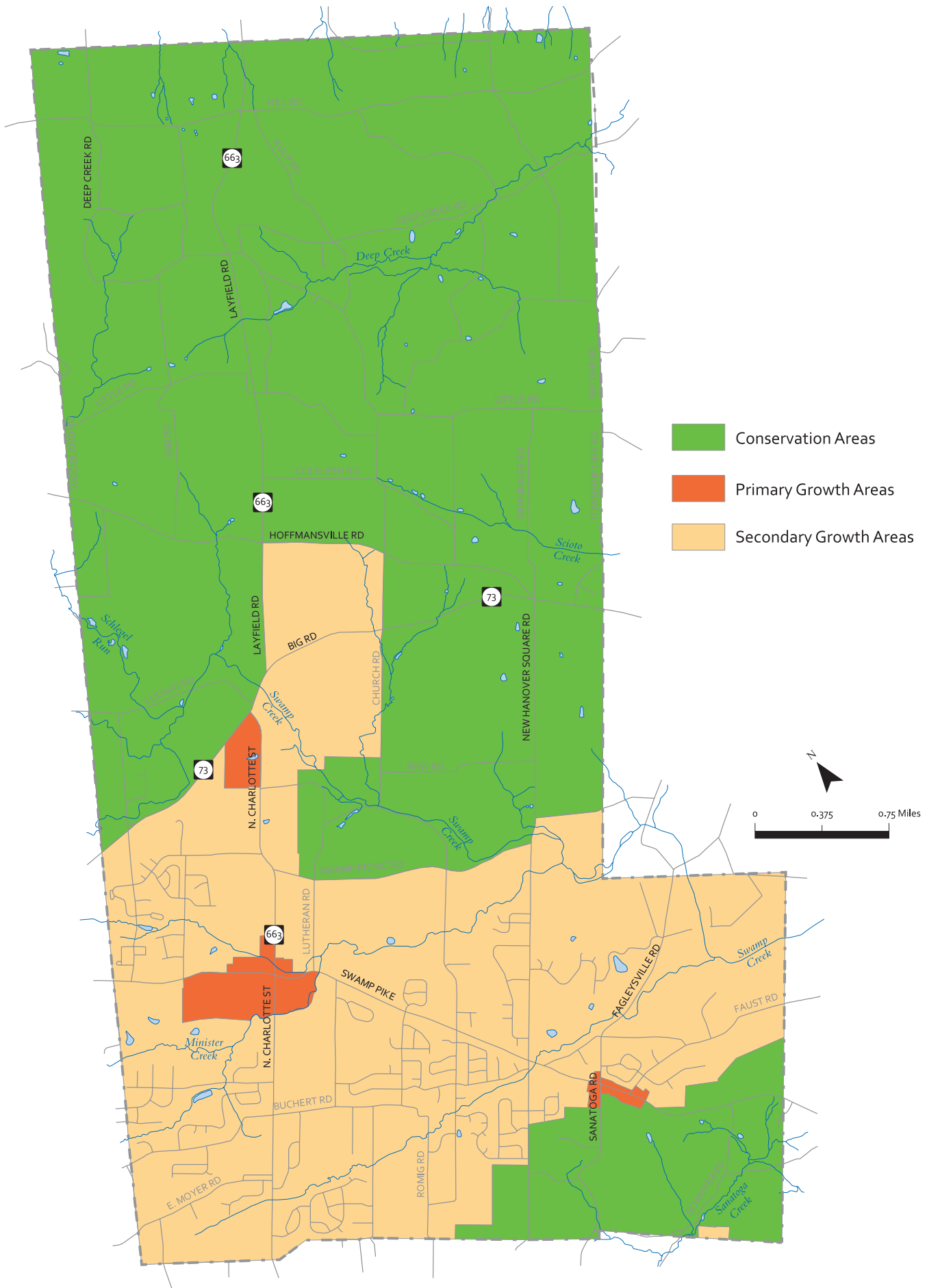
The map reflects the expectation that development will continue to be concentrated in the southern portion of the Township, thus allowing the remaining land to retain its rural character for the foreseeable future. In particular, the land indicated as Regional Mixed Use Center and Village Center, areas which contain or will accommodate increased development patterns, largely coincide with the New Hanover Township Sewer Authority service area.

The New Hanover Township Future Land Use Map from the 2015 *Pottstown Metropolitan Regional Comprehensive Plan*, shown in Map 1.3, uses slightly different future land use categories, but largely reflects the same anticipation of development concentrated in the southern half of the Township and open space and agricultural uses remaining to the north. Both maps also identify similar areas for denser growth potential in and around the Township's TC Town Center and TN Traditional Neighborhood zoning districts; it is in these areas where the proposed New Hanover Town Center will be located.

Map 1.2 | *Future Land Use: Montco 2040: A Shared Vision, 2015*



Map 1.3 | *Future Land Use: Pottstown Metropolitan Regional Comprehensive Plan, 2015*



Residential Development

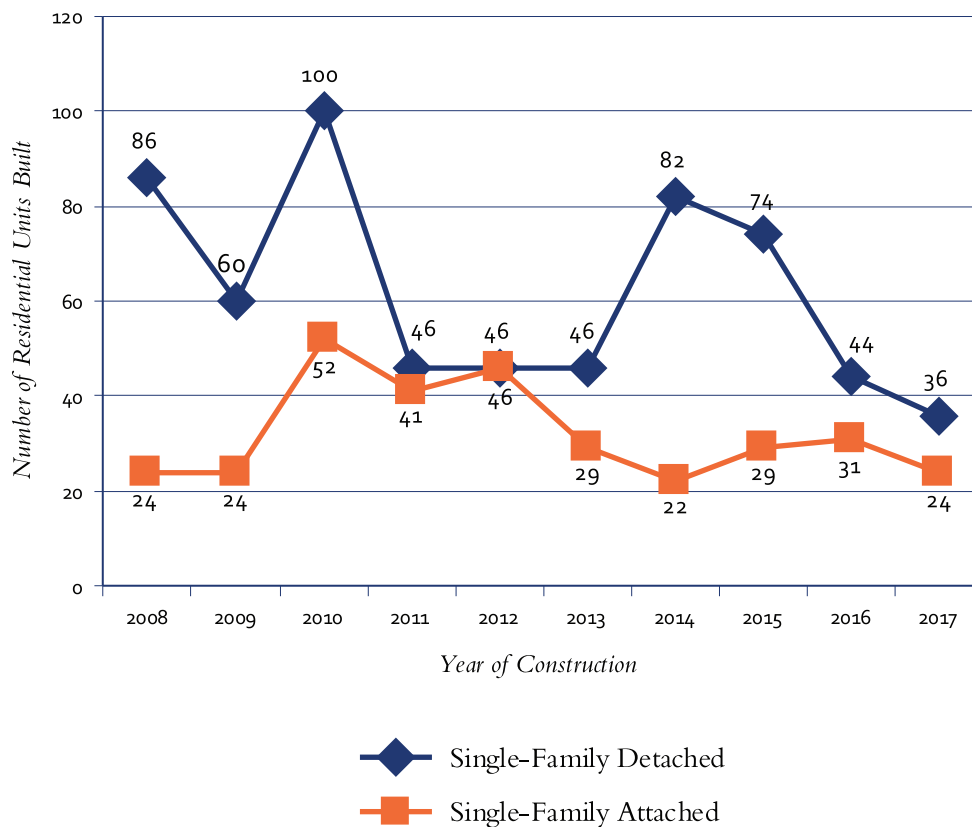
Most of the development that has occurred in New Hanover since it first saw significant population increases beginning in the 1950s has been residential. In recent decades, scattered single-family homes on fairly large lots have been joined by sizeable planned residential subdivisions which are more suburban in character; these are mostly found south of PA Route 73 and many are located adjacent to Swamp Pike.

Table 1.2 and Figure 1.1 below show that between 2008 and 2017, the latest year for which data are available, a total of 942 residential units were constructed in the Township, composed of exclusively single-family detached and single-family attached homes (i.e. townhouses). Detached homes outpaced attached units each year except for 2012, which has generally been the opposite of the trend seen on the County level, where attached homes have outpaced detached homes in new construction. No multifamily units were built in the Township during this period.

Table 1.2 | Residential Construction by Housing Type: 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	SUBTOTAL	TOTAL
Single-Family Detached	86	60	100	46	46	46	82	74	44	36	620	942
Single-Family Attached	24	24	52	41	46	29	22	29	31	24	322	

Figure 1.1 | Residential Construction by Housing Type: 2008-2017



As of May 24, 2018, 21 land developments composed of 2,647 housing units are proposed and under review, are approved and have not started construction, or are currently under construction in the Township; of these, 2,518 have not yet been constructed. Map 1.4 on page 9 shows these active and approved residential subdivisions which are currently in some stage of development in the Township. Several of these proposals have not yet been approved and constructed, so the final number of units constructed could still fluctuate. The tables below provide further detail on the residential proposals in New Hanover's approval/development pipeline.

Table 1.3 | Residential Units Proposed and Constructed: May 24, 2018

# Units Proposed in Land Developments	2,643
# Units Built	126
Remaining Units in Pipeline	2,517

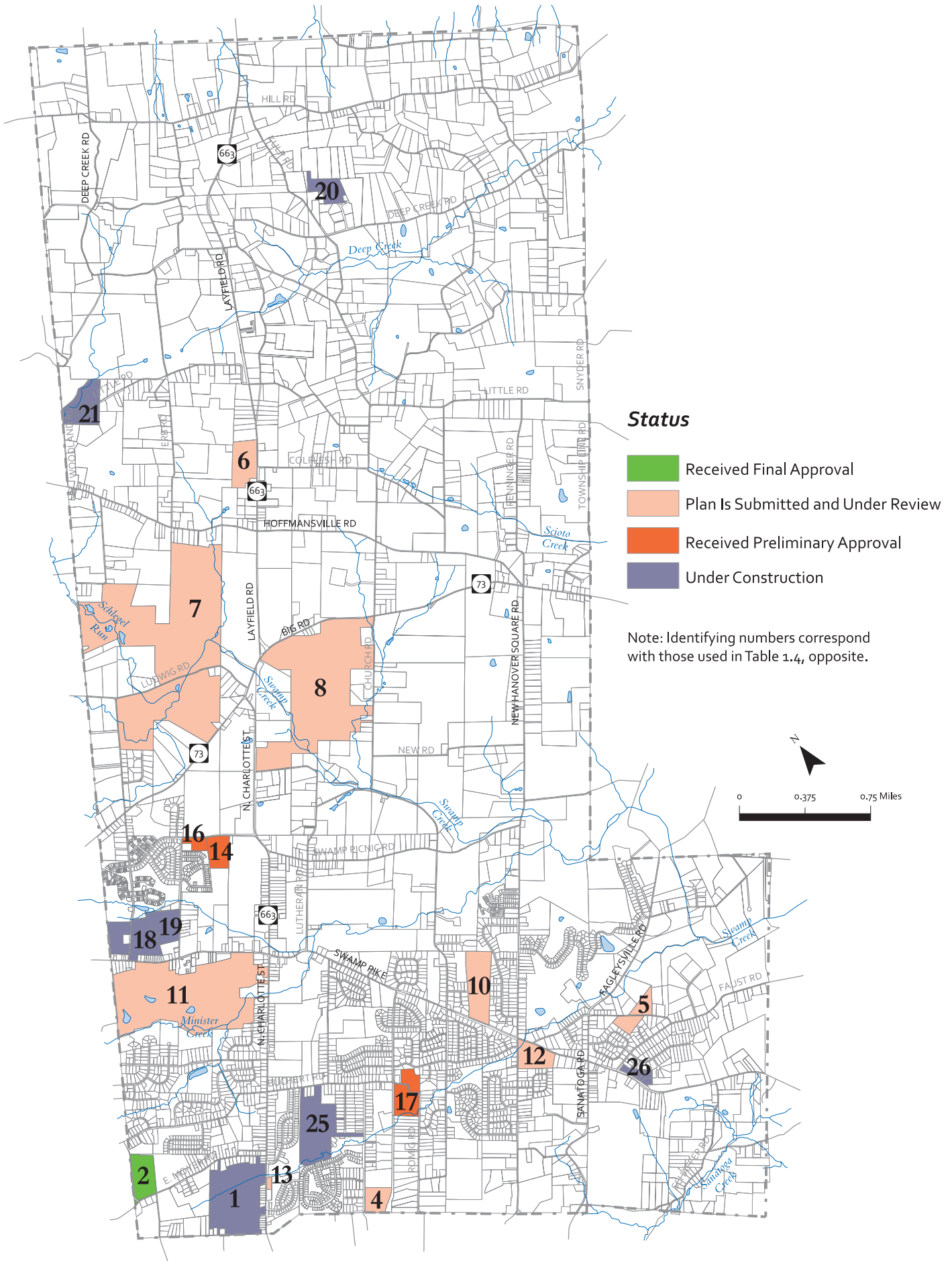
Abbreviation Key:

AC-N	Plan Is Submitted and Under Review
AC-P	Received Preliminary Approval
AC-F	Received Final Approval
AP	Under Construction

Table 1.4 | Residential Land Developments – Proposed and Approved, as of May 24, 2018

NUMBER	SUBDIVISION	STATUS	TOTAL UNITS	UNITS BUILT	UNITS LEFT TO BUILD
1	Hanover Pointe	AP	145	27	118
2	Rolling Meadows	AC-F	63	0	63
4	Westwood/Maguire	AC-N	65	0	65
5	Wagner Tract	AC-N	9	0	9
6	FDEV	AC-N	3	0	3
7	Bart Golf	AC-N	135	0	135
8	Marinari Tract	AC-N	871	0	871
10	Hanover Crossing	AC-N	79	0	79
11	New Hanover Town Center	AC-N	875	0	875
12	Farmview Acres	AC-N	15	0	15
13	Brenning Subdivision	AC-N	2	0	2
14	Trotter's Gait	AC-P	29	0	29
16	Pacer's Gait	AC-P	7	0	7
17	2481 Romig Road	AC-P	52	0	52
18	Renninger Tract	AP	115	73	42
19	Country Meadows	AP	32	23	9
20	Erdenheim	AP	12	1	11
21	Mann Tract	AP	8	1	7
25	Woodfield	AP	121	0	121
26	2557 Swamp Pike	AP	5	1	4

Map 1.4 | Active and Pending Land Development Plans, as of May 24, 2018



Nonresidential Development

The development of nonresidential uses and buildings is also factored into the overall growth forecasts of the Township; nonresidential uses generate vehicle trips from employees, customers, clients, deliveries, etc. Nonresidential growth is measured in square footage instead of the number of units, as residential growth is measured. Nonresidential growth forecasts consider nonresidential land developments in the Township's pipeline, the availability of land zoned to accommodate nonresidential development, and a "straight-line" projection using the previous 10-year period as a framework for trending out the pace of nonresidential development to year 2030.

New Hanover has seen much more modest nonresidential development than residential over the past ten years with only five additions from 2008 through 2017, shown in Table 1.5 below. Most of the nonresidential development in New Hanover is located along one of the Township's four primary road corridors: PA Route 663, PA Route 73, Swamp Pike, and Hoffmansville Road. Swamp Pike near the intersection of Route 663/N. Charlotte Street in particular has been a focal point for nonresidential development. The Hanover Court Shopping Center sits just to the west of the intersection at 1885 Swamp Pike, and the Park Suites professional office building (1831 Swamp Pike), which was built in the last ten years, is about one-quarter of a mile further west on Swamp Pike. These are the only multi-unit nonresidential developments in the Township; the remaining nonresidential uses largely occupy standalone buildings. The total areas dedicated to existing nonresidential land uses is provided in Table 1.1 on page 2.

Table 1.5 | Nonresidential Development: 2008-2017

NONRESIDENTIAL DEVELOPMENT NAME	TOTAL SQUARE FOOTAGE PROPOSED	TOTAL SQUARE FOOTAGE BUILT
Landis Riding Academy	2,992	2,992
Kulp Car Rentals	4,800	4,800
North Charlotte Street Property – Saras Partnership	8,520	8,520
1831 Swamp Pike (professional offices)	16,000	16,000
Haltzman Office Center (Swamp Pike @ Dotterer Road)	14,400	14,400
TOTAL	46,712	46,712

Road Network

The Township's road network consists of four major corridors: PA Route 663, PA Route 73, Swamp Pike, and Hoffmansville Road. No transit service currently reaches New Hanover, however there have been discussions in the past of extending bus service to the Township through either SEPTA or PART (Pottstown Area Rapid Transit) to connect with Pottstown and other regional destinations.

New Hanover's Zoning Ordinance provides a road hierarchy with design standards for each. Section 27-1918 of the Zoning Ordinance notes that the Township's street hierarchy for new residential streets is related to average daily traffic (ADT) levels, lot frontage and the need for on-street parking. The street classifications are:

- **Rural arterial highways**, which connect major centers of activity and moves vehicles through the

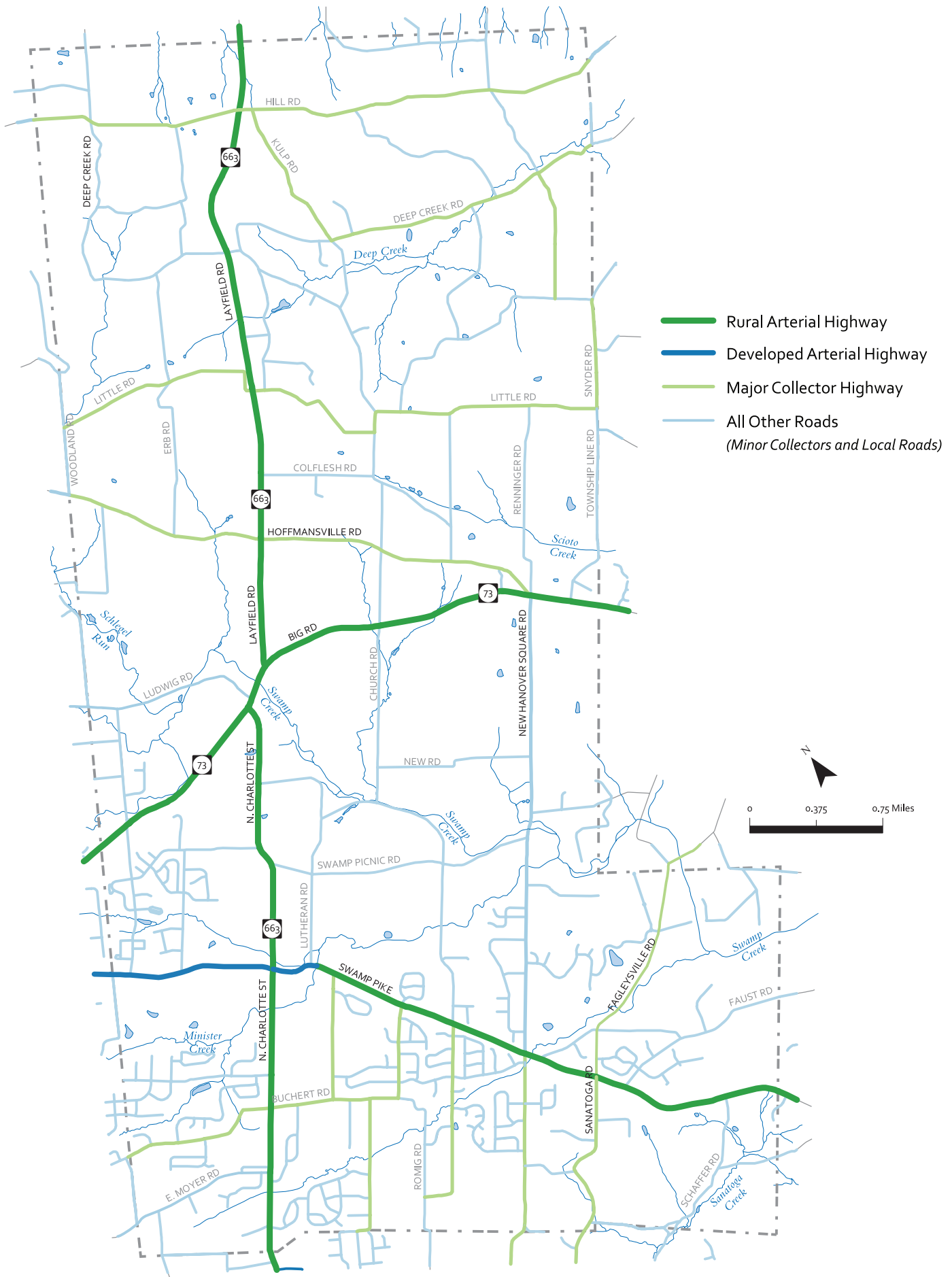
municipality. Rural arterial highways include PA Route 663, PA Route 73, and Swamp Pike from the Minister Creek crossing south to the municipal boundary with Limerick Township.

- **Developed arterial highways**, whose primary functions are to connect major centers of activity, move higher volumes of traffic through the municipality, and to provide access to multiple properties. The only developed arterial highway in the Township is Swamp Pike from the Douglass Township municipal boundary south to the Minister Creek crossing.
- **Major collector highways**, which provide links between the arterial highways, minor collector roads, and local streets. These include:
 - Deep Creek Road from Kulp Road to the Upper Frederick Township municipal boundary;
 - Kulp Road from Hill Road to Deep Creek Road
 - Henning Road from Deep Creek Road to Finn Road;
 - Township Line Road from Finn Road to Little Road;
 - Romig Road from Swamp Pike to Buchert Road;
 - Leidy Road;
 - Little Road;
 - Hill Road;
 - Hoffmansville Road;
 - New Hanover Square Road;
 - Buchert Road;
 - Rhoades Road;
 - Rosenberry Road; and
 - Sanatoga Road.
- **Minor collector roads**, which serve similar functions as major collector roads in that they provide connections among arterial highways, collectors, local roads, residential neighborhoods and nonresidential areas. Traffic volumes are lower than on higher classification roads. Minor collector roads should be designed to provide traffic flow with minor interruptions. Minor collectors are all other roads shown on the Zoning Map, and minor collector roads within subdivisions and land developments designed as such.
- **Local roads or streets**, which are all other roadways not of a higher classification, including Moore Road, except private roads.
- **Private roads**, which are privately-owned access roads, including but not limited to Hildbeidel Road and Jays Lane.

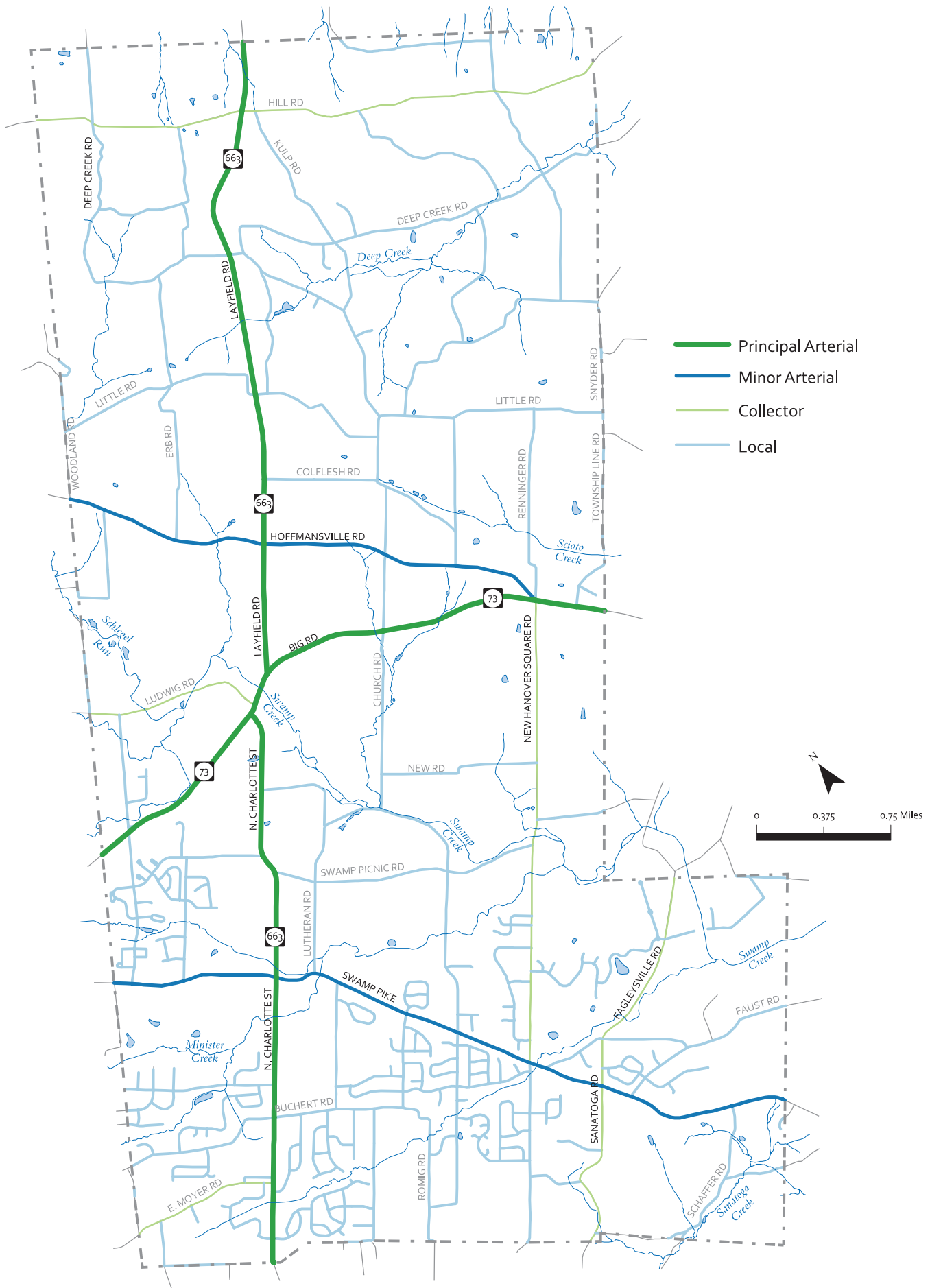
The Township's own road classification categories differ from the functional classification system shown in *Montco 2040*. The county comprehensive plan references the hierarchical system maintained by the Federal Highway Administration (FHWA) and PennDOT, which categorizes roads according to function and service characteristics. Descriptions of the road classifications found in New Hanover are also provided below.

- **Arterial roads** are either “**principal**” or “**minor**” and provide greater mobility for longer trips, but offer more accessibility than expressways.
- **Collector roads** channel traffic to or from high classification roads.
- **Local roads** make up the bottom tier of the system and represent the majority of roads in the county. They include all residential side streets.

Map 1.5 | Township Road Classification, according to Township Zoning Ordinance



Map 1.6 | *Township Road Classification, according to Montco 2040: A Shared Vision*



DVRPC Population and Housing Forecasts

To aid in estimating residential growth in the Township, population forecasts are used. Typically, the Delaware Valley Regional Planning Commission's (DVRPC) population forecasts are used to anticipate how many housing units will be needed to accommodate the rise in population. The most recent forecasts use 2010 U.S. Census data and 2015 Census Population Estimates as the base and project population totals, in five-year increments through the year 2045. New Hanover's population forecast from the DVRPC's previous forecasts (years 2000–2025) and for the current forecast (years 2015–2045) are shown in Figure 1.2 below. The increase in the population estimated in the later forecast indicates that the Township is expected to grow faster than it was anticipated to grow in previous forecasts. The latest DVRPC forecasts anticipate the Township's population to be 15,829 people by 2030.

However, as will be discussed in Chapter 2, it was determined that using DVRPC's population forecasts alone would be insufficient. The Township TIFAC concluded that a forecasted 2030 population would need to be further refined to account for local conditions, the previous development patterns, and the development outlook in the Township. The need for this has been borne out by the observed population growth in the Township since 2005, in which actual growth has significantly outpaced the DVRPC forecasts for that time period. The TIFAC believes that the growth figures shown in Chapter 2 represent a more realistic expectation of the future development within the Township.

Figure 1.2 | Comparison of Actual Populations Observed and 2000–2025 and 2015–2045 DVRPC Population Forecasts



Employment Forecasts

DVRPC also regularly produces employment forecasts. Similar to the population forecast chart above, the graphic below illustrates the DVRPC’s employment forecasts for years 2000–2025 and for their most recent forecast, years 2015–2045. As was the case with the population forecasts presented above, the DVRPC determined that employment would grow more quickly in New Hanover than was previously anticipated. The latest DVRPC forecasts anticipate the Township’s employment to be 2,290 people by 2030. The figures for the beginning years of each of the 2000–2025 and the 2015–2045 forecasts represent the actual employment estimate for those years.

Figure 1.3 | Comparison of 2000-2025 and 2015-2045 DVRPC Employment Forecasts



Chapter 2 | *Future Growth*

This chapter analyzes the forecasted residential and nonresidential growth in New Hanover Township to the horizon year of 2030, representing approximately 12 years of growth. Analyzing the type of growth expected is necessary in order to calculate the traffic impact fees associated with anticipated transportation capital improvements. Residential growth is considered in terms of number of units, or dwellings, while nonresidential growth is measured by the amount of commercial square footage which could be built. Due to a number of circumstances, such as the limited number of past development trends from which to extrapolate future growth, as well as the constrained land supply for such uses, this Report has not attempted to forecast any significant industrial, institutional or municipal development.

Future Residential Growth

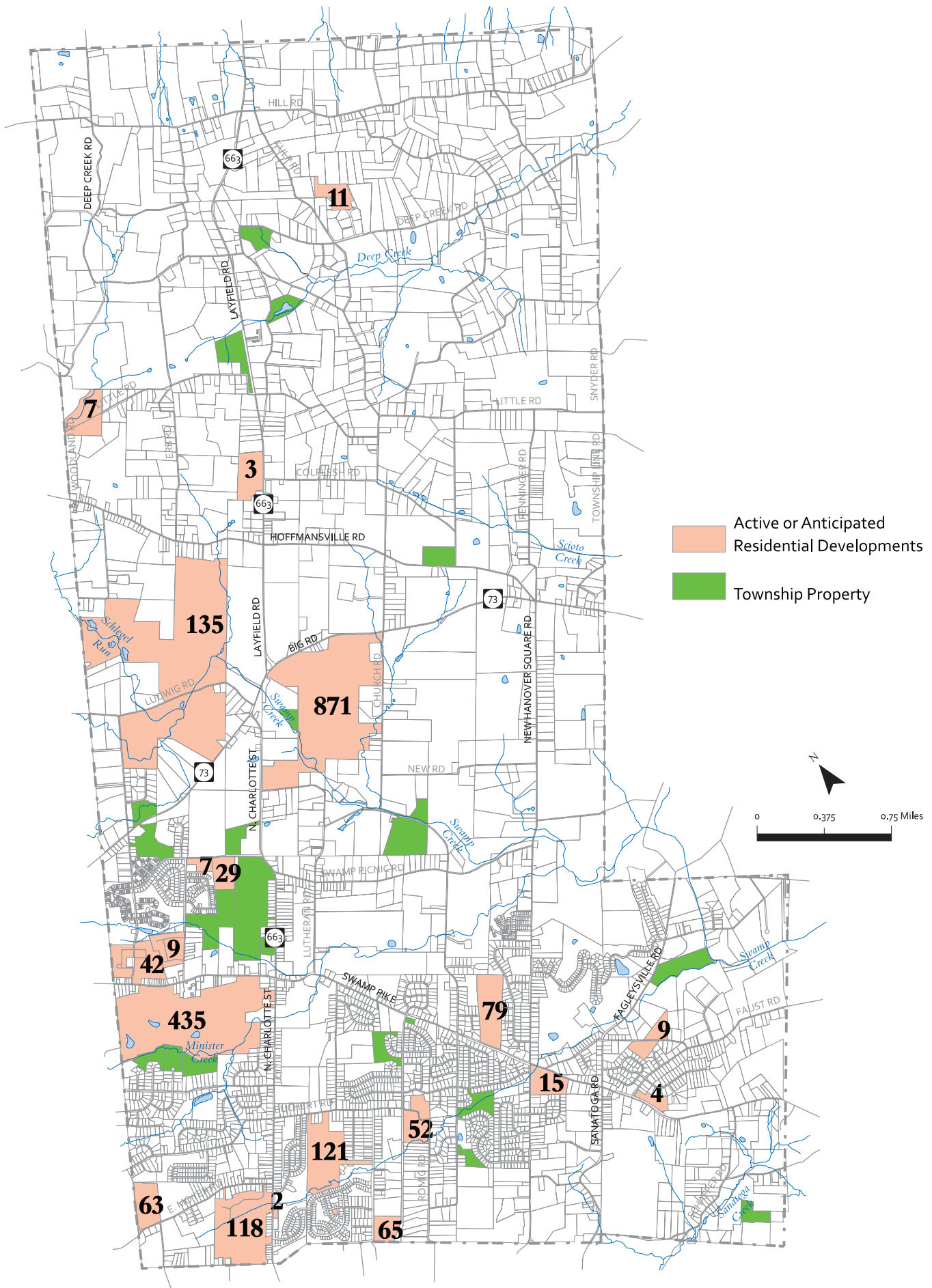
Methodology for Residential Growth Forecasts

As was stated in Chapter 1, past findings and observations of population growth in the Township have necessitated a more nuanced calculation of residential growth beyond those forecasts produced by DVRPC. Considering the current development and construction trends in the Township, the availability of land, and other local conditions, the Township TIFAC has determined that a blended methodology is most appropriate. The TIFAC first considered the land developments in the approval and construction pipeline in the Township (illustrated in Table 1.4: Residential Land Developments, above), then considered the likelihood of whether certain large developments could be completed by the horizon year of 2030, and finally weighed the likelihood of other possible developments. Specifically, the TIFAC acknowledged that the New Hanover Town Center development, one of the largest proposals in the Township, may develop approximately half of its proposed 875 units (or 435 units) by the year 2030. To yield an estimated population from these new housing units, the Township's average household size of 2.88 people was multiplied by the number of anticipated dwelling units.

Growth Forecasts

Based on the above methodology, the TIFAC forecasts that the Township will generate **2,077** more dwellings by the year 2030, which would yield an additional **5,982** new residents. The additional 2,077 residential dwelling units forecasted represents approximately 30% of the Township's total remaining residential development capacity, or "maximum buildout," of 6,968 additional units (see Appendix below for the maximum buildout calculation method). Map 2.1 below denotes where and how many additional dwelling units are anticipated to be developed and built.

Map 2.1 | *Anticipated Residential Growth in Number of Units: 2018-2030*



Future Nonresidential Growth

Methodology for Nonresidential Growth Forecasts

The TIFAC identified two main methods for forecasting nonresidential (commercial) growth: (1) using a straight-line extrapolation based upon the rate of growth over the previous 10-year period, and (2) extrapolating commercial development by the DVRPC’s employment forecasts for the Township, in essence determining how much new nonresidential space would be needed to satisfy the projected increase in employees over the next 12 years. Each method would also be tempered by analyzing the growth trends of specific subtypes of commercial in the area, as well as the availability of land and the development projects which might be in various stages of approval in the Township. Based upon the land currently available for strictly commercial development, and based upon the commercial development currently in the process of approvals in the Township, the TIFAC determined that using Method #2 produced the most likely outcome, while also adjusting for local factors. A total of 270 new employees are forecasted within the Township.

To determine the amount of nonresidential square footage needed to accommodate the expected rise in employees in the Township, accepted “square footage per employee” values that developments have been shown to generate were used. For office uses, the square footage per employee values for “Office under 100,000 sq. ft.” from the San Diego Association of Governments (SANDAG) and “General Office – Suburbs” from the Institute of Transportation Engineers (ITE) were used and averaged together to generate an office square-footage per employee multiplier to use in New Hanover. For general commercial/retail uses, the square footage per employee multiplier from SANDAG’s “community retail” use was adopted for New Hanover, at 383 sq. ft. per employee.

To use the two multipliers we developed for office and general commercial/retail square-footage, assumptions were made of how many of the 270 new employees are expected to be office employees and how many would be general commercial/retail employees. To determine the breakdown of general commercial/retail and office uses, respectively, the TIFAC chose the 75% general commercial/retail and 25% office breakdown which has been observed in construction in the County overall during the years 2008–2017.

Table 2.1 | **Nonresidential Office Square Footage Multipliers**

SANDAG “Office under 100,000 sq. ft.”	228 sq. ft./employee
ITE “General Office – Suburbs”	304 sq. ft./employee
Average Office Space needed (<i>applied to New Hanover</i>)	266 sq. ft./employee

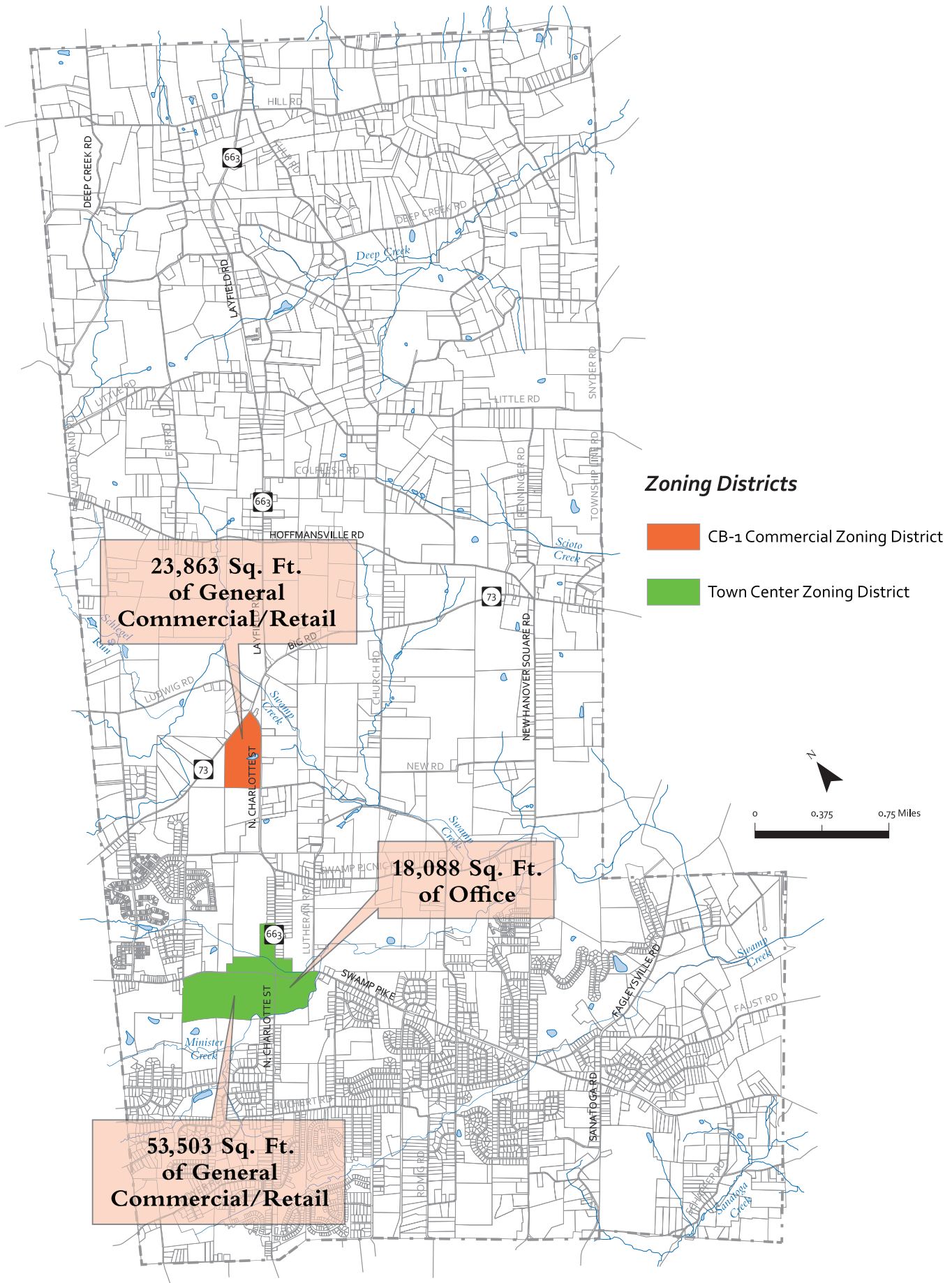
Growth Forecasts

From the above methodology, the TIFAC forecasts that growth in the Township will result in **95,454 sq. ft.** total nonresidential space by 2030, which would consist of 18,088 sq. ft. of office space and 77,366 sq. ft. of general commercial/retail space, as illustrated in Table 2.2 below. Acknowledging the likelihood that the New Hanover Town Center development proposal in the Town Center Zoning District will deliver at least some of its nonresidential space by 2030, and also acknowledging the development potential of the CB-1 Commercial District, the TIFAC determined that the nonresidential development would be distributed in the Township as illustrated in Map 2.2 on the next page.

Table 2.2 | **Nonresidential Square Footage Projected by County Trends in Use Type**

2030 EMPLOYMENT = 2,290 (INCREASE OF 270 EMPLOYEES)			
25% Office	68	x 266 sq. ft. per employee	= 18,088 sq. ft. of office space
75% General Commercial/Retail	202	x 383 sq. ft. per employee	= 77,366 sq. ft. of general commercial/retail space
			= 95,454 sq. ft. total nonresidential space by 2030

Map 2.2 | Anticipated Nonresidential Growth: 2018-2030



Conclusion

New Hanover will still be expected to incur significant residential growth through the year 2030, which will largely be concentrated in the growth areas in the central and southern portions of the Township. The New Hanover Town Center, once constructed, will contain a significant proportion of new residential development in the Township. Single-family detached units will be the primary driver of residential trips originating in the Township.

Nonresidential growth is anticipated to largely consist of infill projects, with the capacity to accommodate larger nonresidential projects which still may be in the works. The major nonresidential development associated with the New Hanover Town Center will likely not be fully constructed by the end of the horizon year of this Report, but it will likely represent the largest commercial development that the Township has seen in decades.

Appendix

Maximum Residential Buildout

The maximum residential buildout was calculated for the Township at final buildout, in which all parcels in the Township are presumed to be fully developed according to the current zoning ordinance. Final buildout of all parcels in the Township is projected to occur long after the year 2030. To determine the maximum residential buildout potential of the Township, the following calculation method was used:

1. **Inventory of developable parcels.** All of the potentially developable parcels in the Township were identified (see Map A.1 on page 22). This list formed the foundation for the buildout.
2. **Identification and removal of environmentally sensitive areas.** In addition to specific zoning district standards, the presence of certain environmental features also controls development. Local ordinances regulate, or even prohibit, development on these areas where disturbances could have significant negative impacts.

The following features were mapped and then removed from the potentially developable areas in the Township:

- Steep slopes of 25% or greater
 - 100-year floodplain (as revised by FEMA in 2016)
 - 100' buffer from the centerline of primary streams
 - 75' buffer from the centerline of all other streams
 - Water bodies (ponds)
3. **Removal of area for roads and infrastructure.** Ten percent (10%) of the remaining lot area was subtracted from each developable parcel to account for land that would be covered by roads, right-of-way and related infrastructure, and therefore would also be considered undevelopable.
 4. **Developable area calculations.** The size of the remaining developable areas was calculated for all parcels in each of New Hanover's residential zoning districts—R-2, R-2M, R-5, R-15, R-25, TN and TC. No significant developable areas were present in the RV district, so that district was eliminated from the analysis.
 5. **Buildout calculations.** To determine the maximum number of additional units that could fit onto each developable parcel in residential districts, the remaining developable area was divided by the minimum lot size area for B1-Detached Dwellings as cited in the zoning code for the R-2 and R2M Districts.

For the R-5 District, because all the developable parcels are owned by a single owner, who has pending application under the B11-Retirement Village use for 871 units, this figure was used for the buildout for that district.

For the R-15 and R-25 Districts, calculations were done for both B1-Detached Dwelling and B2-Performance Standard Development uses, where Performance Standard Developments are permitted by-right. For B1-

Detached Dwelling uses, we assumed that all parcels in these two districts would have access to water and sewer service. For B2-Performance Standard Development uses, while a mix of residential types is permitted, calculations were done only for off-center detached dwellings, as these appear to be the most popular dwelling type used when a Performance Standard Development is proposed in the Township. Calculations also included the subtraction of 50% of the minimum required open space area (-17.5% and -20% for the R-15 and R-25 districts, respectively). For ease of calculation, only 50% of the open space requirement was subtracted from the developable lot size because environmental constraint areas had already been subtracted, and environmental constraint areas can be included in open space.

Due to the complexity and variety of development scenarios which are possible, and due to the fact that almost all land in these districts have pending applications submitted for them, the TC and TN zoning districts were combined, and the units proposed in these applications were used for their respective buildout figures.

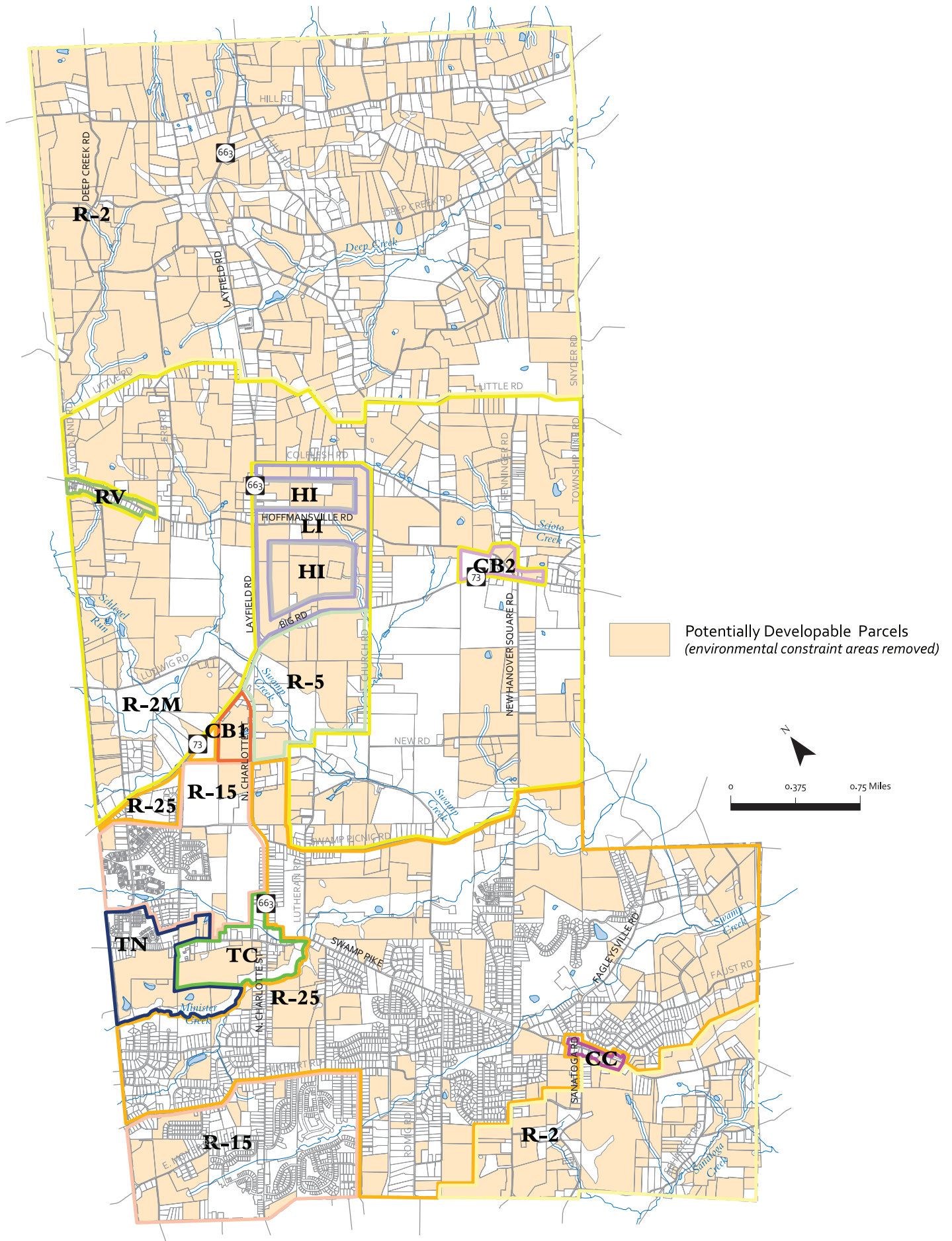
A summary of the buildout findings is provided below, which concludes that 6,968 new units could be created from new development in the Township from developable parcels:

Table A.1 | Summary of Maximum Residential Buildout

ZONING DISTRICT	DEVELOPMENT TYPE	REMAINING & ELIGIBLE DEVELOPABLE PARCELS	TOTAL INCREASE OF NEW UNITS	TOTAL UNITS POSSIBLE POST-DEVELOPMENT
R-2	B1-Detached Dwelling	209	925	1,134
R-2M	B1-Detached Dwelling	133	576	709
R-5	B11-Retirement Village	12	871	883
R-15*	B1-Detached Dwelling	9	111	120
	B2-Performance Standard Development Units	8	541	549
R-25*	B1-Detached Dwelling	78	1,130	1,208
	B2-Performance Standard Development Units	19	1,909	1,928
TC + TN			905	905
TOTAL			6,968	7,436

** For the R-15 and the R-25 Zoning Districts, developable lots over the minimum eligible tract size to implement the B2-Performance Standard Development (10 acres and 20 acres, respectively) were calculated using that development type; all other tracts in those districts calculated the maximum units using the conventional development type of B1-Detached Dwelling.*

Map A.1 | *Developable Land: Environmental Constraints Removed, with Zoning*





New Hanover Township

2943 North Charlotte Street

Gilbertsville PA 19525-9718

P: 610.323.1008 | F: 610.323.5173

www.newhanover-pa.org