

ASSESSMENT of LAND USE and TRANSPORTATION

SOLUTIONS FOR THE ROUTE 413/513 CORRIDOR



Bucks County, PA



Delaware Valley Regional Planning Commission

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Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of Philadelphia, in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey. DVRPC provides technical assistance and services; conducts high priority studies that respond to the requests and demands of member state and local governments; fosters cooperation among various constituents to forge a consensus on diverse regional issues; determines and meets the needs of the private sector; and practices public outreach efforts to promote two-way communication and public awareness of regional issues and the Commission.



Our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole, while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

DVRPC is funded by a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments. The authors, however, are solely responsible for its findings and conclusions, which may not represent the official views or policies of the funding agencies.

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EXECUTIVE SUMMARY

The *Assessment of Land Use and Transportation Solutions for the Route 413/513 Corridor* is a result of the first phase of the two-year project to identify key land use and transportation issues and to propose recommendations for the boroughs of Langhorne, Langhorne Manor, Penndel, and Hulmeville and an area of Middletown Township. Participants in the study include the municipalities, the Bucks County Planning Commission, the Southeastern Pennsylvania Transportation Authority (SEPTA) and the Pennsylvania Department of Transportation (PennDOT). The purpose of the second phase will be to implement select recommendation(s) as prioritized by the affected communities and based upon the available immediate resources.

The three-mile segment of the Route 413/513 corridor through the four boroughs of Langhorne, Langhorne Manor, Penndel, and Hulmeville and parts of Middletown Township comprised the original study area. However, Business Route 1, a major commercial spine that intersects the middle of the corridor, and Main Street, which serves a relatively similar and predominate role in Hulmeville, were also included as part of the study area. Notwithstanding, these two added roadways are secondary to the discussion of the original Route 413/513 corridor.

Besides Route 413/513 and Business Route 1, a number of major highways either traverse or are located just outside the municipalities. Old Lincoln Highway and Route 1 pass through the northern portion of the study area. Outside of the study area are Interstate 95 to the west and Interstate 276 to the south. Several SEPTA bus routes make stops along Route 413/513 and Business Route 1. The Langhorne Station of the R3 West Trenton line is situated on the narrow tract of land in Middletown, between Langhorne Manor and Penndel.

The area is overwhelmingly residential in the four boroughs, where almost 50 percent of the collective land has been developed for housing. Transportation facilities rank as the second highest land use in the boroughs, with about 18 percent dedicated to this type of use. The percentage is only slightly lower when Middletown is included. Commercial use comprises 8 percent of the four boroughs and is mainly concentrated

along Business Route 1. Close to 20 percent in the four boroughs is wooded or recreational land. This proportion increases to almost 30 percent when Middletown is taken into account.

Key themes emerged from the issues and goals discussed at the Steering Committee meetings. They concern cultivating a pedestrian-friendly environment, improving roadways and public transit accommodations, balancing regional and local needs, strengthening existing commercial districts, and enhancing the aesthetic quality of the study area.

Recommendations are divided into three categories: (1) those that apply throughout the study area; (2) those that target the concerns and issues of specific sites in the study; and (3) those that pertain to zoning changes. The general recommendations addressed pedestrian-friendly streets, traffic calming, public transit, parking lots, curb cuts, commercial business facades, streetscapes and public amenities, and economic development. Among the specific sites for which recommendations were discussed were the Pennwood Library, Woods School, Langhorne Station, Route 513/Business Route 1 intersection, Route 513/Trenton/Hulme intersection, and Main/Trenton intersection.

During Fiscal Year 2004, the project will focus on implementation of selected strategies that relate to the recommendations listed in this study. Discussions among the Steering Committee and DVRPC will follow the publication of this report to determine which strategies will be undertaken during Phase II. Other suggestions developed during ensuing meetings may be pursued in tandem or in place of these strategies.

INTRODUCTION

The Assessment of Land Use and Transportation Solutions for the Route 413/513 Corridor, otherwise informally referred to as the *Route 413/513 Corridor Study*, involved the participation of representatives from the boroughs of Langhorne, Langhorne Manor, Penndel, and Hulmeville, Middletown Township, and the Bucks County Planning Commission. The Southeastern Pennsylvania Transportation Authority (SEPTA) and the Pennsylvania Department of Transportation (PennDOT) were also involved on an as-needed basis to lend their expertise on the study area and on transportation in general. This project is funded by PennDOT, with matching funds from Bucks County, and is being conducted in two phases by DVRPC over Fiscal Years 2003 and 2004. The purpose of Phase I is to identify key land use and transportation issues and to propose recommendations addressing these issues. This report represents the outcome of Phase I. The purpose of Phase II is to implement select recommendation(s), as prioritized by the affected communities and based upon the available immediate resources.

The study is organized according to the following five major sections:

Section I provides background information regarding recent and concurrent studies being conducted related to the subject area. It also includes a brief explanation of the planning process for this study.

Section II characterizes the study area with a general description, followed by an analysis of population, employment, and commuting habits, particularly public transit usage. Current land use and zoning districts of the different municipalities are then discussed in combination with their associated maps.

Section III presents a list of the key themes expressed during the Steering Committee meetings.

Section IV specifies the issues identified in the study area accompanied by their corresponding recommendations. The issues and recommendations are arranged in three different subsections: general, for the entire study area; site-specific; and zoning changes.

Section V lists implementation strategies for Phase II of this project.

Section I

Concurrent and Recent Studies

Various studies have been and are being completed by the municipalities in the study area and the Bucks County Planning Commission (BCPC). The BCPC had conducted open space plans for each of the four boroughs (1998-2001, respectively) and an assessment of density bonus provisions for cluster subdivisions in Hulmeville (2002). They will also be updating Langhorne Manor's comprehensive plan. Penndel Borough is actively pursuing a revitalization plan for its business district, funded through DVRPC's Transportation and Community Development Initiative, as well as an update of its comprehensive plan. Private consultants have been retained by the borough, and both plans are expected to be completed during calendar year 2004. Langhorne had updated its Subdivision and Land Development Ordinance in 2000 and is currently revising its zoning ordinance.

A separate DVRPC study is underway as part of the Pennsylvania Congestion Management System (CMS). A study is conducted annually to examine the traffic along a corridor and to recommend strategies to alleviate congestion. Route 413 was selected as the project corridor for Fiscal Year 2003. This corridor traverses approximately half of the Route 413/513 study area.

Another regional study, though currently on hold due to budget constraints at the time of this publication, is SEPTA's Cross County Metro project. This proposed rail service would utilize the existing Norfolk Southern Morrisville Line and operate to Trenton, through Bucks, Montgomery and Chester counties. One of the stations that has been proposed lies just outside of the study area, but within the municipal boundaries of Langhorne Borough.

Planning Process

DVRPC worked with the five municipalities and the Bucks County Planning Commission throughout the duration of Phase I of the study and will continue this process during the implementation phase. Representatives from each of these communities comprised the Steering Committee (Appendix A) that met bimonthly to discuss concerns, opportunities for improvements, and recommendations. Data was obtained from the existing land use and transportation

**Assessment of Land Use and Transportation Solutions for the
Route 413/513 Corridor**

resources available at DVRPC, the Steering Committee meetings, communication with SEPTA and PennDOT, and site visits conducted by DVRPC staff.

Coordination efforts were made between DVRPC and the consultants of the concurrent PennDel studies mentioned in the previous section to keep each other apprised of our respective studies' progress and the recommendations proposed. This information sharing and coordination will continue during Phase II of the project.

STUDY AREA DESCRIPTION

The three-mile segment of the Route 413/513 corridor through the four boroughs of Langhorne, Langhorne Manor, Penndel, and Hulmeville and parts of Middletown Township comprised the original study area. However, Business Route 1, a major commercial spine, needed to be examined in conjunction with Route 413/513 due to the disruption and impact it creates as it intersects the middle of the corridor within the study area. In addition, just as Route 413/513 functions as the predominant roadway of Langhorne, Langhorne Manor and Penndel, Main Street serves a relatively similar role in Hulmeville and was, thus, included as part of the study area. Notwithstanding, these two added roadways are somewhat ancillary, albeit relevant, to the discussion of the original Route 413/513 corridor. Map 1 illustrates the expanded study area, which totals 582 acres.

Routes 413 and 513 are sometimes referred to by their local street names. The northernmost third of the corridor is known as Pine Street, and the remaining two-thirds of the corridor in the study area is known as Bellevue Avenue. For the sake of consistency, this study will use the highway identifiers applied by PennDOT.

The four boroughs, with land areas ranging from 250 to 410 acres, compose a string of small, older communities, imbedded within the boundaries of suburban Middletown Township and almost dividing the township into two separate sections. Two equally large municipalities, Northampton to the north and Bensalem to the south, lie adjacent to the boundaries of Langhorne and Hulmeville, as well as parts of Middletown.

A number of major highways either traverse or are located just outside the municipalities. Besides Route 413/513 and Business Route 1, Old Lincoln Highway (Maple Avenue) and Route 1 pass through the northern portion of the study area. Outside of the study area are Interstate 95 to the west and Interstate 276 to the south.

Within the study area, the annual average daily traffic (AADT) along Business Route 1 as it intersects with the Route 413/513 corridor is 17,751 (2003) in both directions. This count drops to 6,309 (2003) along Route 513, south of Business Route 1. There are 10,149 (2003) vehicles along Route 413 in Langhorne,

Section 11



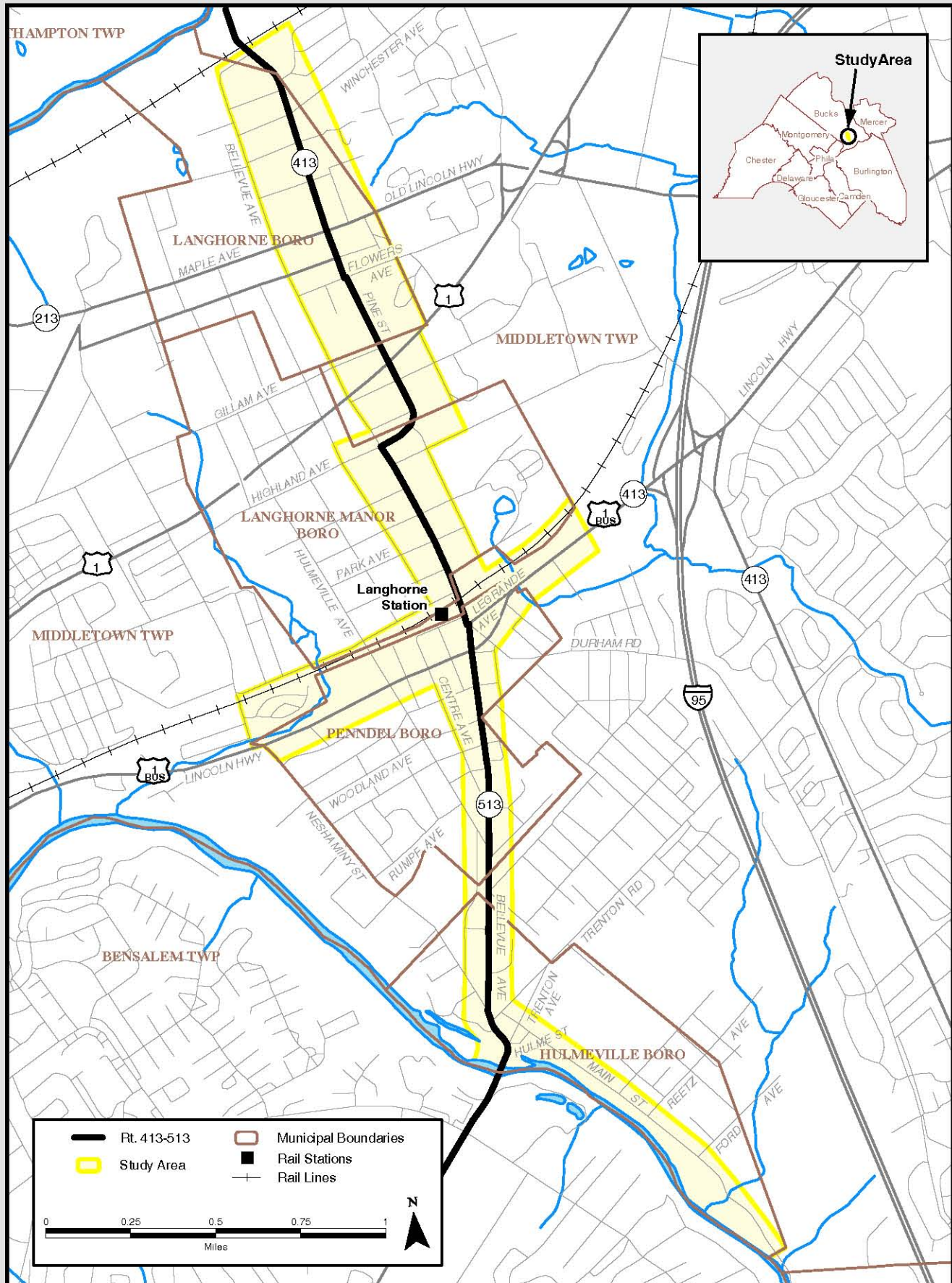
Part of the historical district of Hulmeville, the intersection of Route 513/Trenton/Hulme is typical of the convergence of regional traffic with the local community in the study area.

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Map 1: Study Area



DELAWARE VALLEY
REGIONAL PLANNING COMMISSION
SEPTEMBER 2003



just south of Route 213; however, examining a larger section of Route 413, between Highland and Maple Avenue, are 3,758 (2002) daily vehicles. In Hulmeville there are 6,509 (2001) vehicles traveling on Hulme Street, between Main and Water Street, and 7,124 (2002) along the middle of Main Street, between Reetz and Ford Avenue. AADT counts available for Langhorne Manor were limited; besides the above mentioned count for Route 413, between Highland and Maple Avenue, the most recent and relevant count lies on the boundary of the study area: Comly Avenue, just north of Langhorne Station and between Hill and North Avenue, experiences 1,697 (2002) vehicles daily.

The study area is served by several SEPTA bus routes that make stops along Route 413/513 and Business Route 1. The Langhorne Station of the R3 West Trenton line is situated on the narrow tract of land in Middletown, between Langhorne Manor and Penndel. Two Norfolk Southern rail lines, one for R3 West Trenton SEPTA Regional Rail service and the other for freight trains, run parallel to Business Route 1 at this location. As mentioned above, another rail station may be established sometime in the future if the proposed Cross County Metro rail line is implemented.

Socio-Economic Profile

Analysis of the socio-economic data for the study area needs to be examined at two levels: 1) the four boroughs and 2) Middletown Township and the four boroughs. Since only a small portion of Middletown is part of the study area and the township is four times as large as any of the individual boroughs, isolating the data for the four boroughs will illustrate a more immediate profile of the study area. However, Route 413/513 and Business Route 1 do pass through Middletown, and the corridors and township are affected by and impact the other. Therefore, data for Middletown needs to be included to gain a more complete picture of the area. Census tract information for Middletown was considered to provide a more focused analysis. However, because of the lack of forecasts for these census tracts, combined with the large area they cover, this data was omitted for the study.

Table 1a: Population

| | 1990 | 2000 | 2010 | 2025 |
|-----------------|---------------|---------------|---------------|---------------|
| Langhorne | *1,361 | 1,981 | 2,070 | 1,910 |
| Langhorne Manor | 807 | 927 | 980 | 1,070 |
| Penndel | 2,703 | 2,420 | 2,400 | 2,160 |
| Hulmeville | 916 | 893 | 950 | 1,000 |
| Subtotal | 5,787 | 6,221 | 6,400 | 6,140 |
| Middletown | *43,063 | 44,141 | 47,870 | 53,980 |
| Total | 48,850 | 50,362 | 54,270 | 60,120 |
| Bucks County | 541,174 | 597,635 | 662,400 | 748,120 |

Source: U.S. Census Bureau (1990, 2000) and DVRPC (2010, 2025)

* Langhorne Borough noted that the 1990 number was undercounted, as group home residents of Woods Services in the borough were excluded from Langhorne's residential count and placed under Middletown's count.

Table 1b: Population Change (in percentages)

| | 1990-2000 | 2000-2010 | 2000-2025 |
|-----------------|------------|------------|-------------|
| Langhorne | *45.6 | 4.5 | -3.6 |
| Langhorne Manor | 14.9 | 5.7 | 15.4 |
| Penndel | -10.5 | -0.8 | -10.7 |
| Hulmeville | -2.5 | 6.4 | 12.0 |
| Subtotal | 7.5 | 2.9 | -1.3 |
| Middletown | *2.5 | 8.4 | 22.3 |
| Total | 3.1 | 7.8 | 19.4 |
| Bucks County | 10.4 | 10.8 | 25.2 |

Source: U.S. Census Bureau (1990, 2000) and DVRPC (2010, 2025)

* See footnote from Table 1a.

Note on forecasts:

In general the population forecasts for 2010 and 2025 and the employment forecasts for 2000, 2010 and 2025 were based upon a methodology established by DVRPC. Population forecasts were originally based upon DVRPC's 1997 population estimates that were derived from the 1990 Census. Adjustments were made after the release of the 2000 Census. Employment forecasts were based upon DVRPC's 1997 employment estimates, which utilized information from the Bureau of Economic Analysis as its primary data source. The 2000 employment Census was not available at the time of this study and is, thus, not included in this report. In a two-phase review process, DVRPC forecast numbers on the county level were reviewed and adjusted, as necessary, by the member governments. After the county-level forecasts were agreed upon, they serve as the control totals for the municipal forecasts, in which member governments also reviewed and adjusted these numbers accordingly. Historical data trends laid the foundation for the municipal forecasts, with modifications made to account for infrastructure availability, environmental constraints to development, local zoning policies and development proposals. Density ceilings and floors based upon municipal land use density changes experienced over a twenty-five year period and labor force constraints derived from the regional population forecasts were then incorporated into the forecast methodology. Due to a number of factors, including assumption limitations, model accuracy and unanticipated socio-

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economic events, these forecasted numbers should not be viewed in absolute terms, but rather as potential conditions of the areas' population and employment. This is especially applicable to the forecasts made on the local municipal level, as the smaller the geography and sample size, the more subject the forecasts are to inaccuracies, particularly in employment, where a much greater number of variables make the forecasts more difficult to predict.

Population in the study area's municipalities as a whole has and is forecasted to remain fairly steady (Table 1a and Table 1b). In the last decade, 1990-2000, the population in the four boroughs increased by 7.5 percent, or 434 residents. When taken into consideration the inconsistent count of Woods Services residents between 1990 and 2000, however, the change in percentage would be lower while the number of residents would be higher (see footnote under Table 1a). Combined with Middletown, the population only grew a mere 3.1 percent, or 1,512 residents. The situation is expected to be reversed in the next twenty years, when Middletown will provide the largest growth of the five municipalities. However, whether examining the population changes for the four boroughs or adding Middletown, some of these changes substantially lag behind the growth percentage of the County. In the next twenty years, the four boroughs are forecasted to lose population by 1.3 percent, while the County is forecasted to grow by 25.2 percent and Middletown by 22.3 percent.

The loss and gain of population vary greatly from one municipality to another. Middletown's growth is forecasted to climb steadily despite the small increase during 1990-2000. The population trend differs for all four of the boroughs. Langhorne is predicted to remain fairly stable; Langhorne Manor is expected to continue its 15 percent increase in population, but over a twenty-five year period rather than a ten year period; Penndel is expected to experience a 10 percent decrease as in the past ten years, but, as in Langhorne Manor, over a period that is 2.5 times longer; and Hulmeville is forecasted to gain in population after a small decrease during 1990-2000. While the overall numbers may seem minimal, the rise and drop in population can have a relatively significant impact in each of the small boroughs, where resources are limited.

Table 2a: Employment

| | 1990 | 2000 | 2010 | 2025 |
|-----------------|---------------|---------------|---------------|---------------|
| Langhorne | 920 | 930 | 920 | 930 |
| Langhorne Manor | 1,380 | 1,520 | 1,900 | 2,150 |
| Penndel | 1,040 | 1,010 | 1,040 | 1,260 |
| Hulmeville | 120 | 160 | 170 | 180 |
| Subtotal | 3,460 | 3,620 | 4,030 | 4,520 |
| Middletown | 19,480 | 25,420 | 32,110 | 35,400 |
| Total | 22,940 | 29,040 | 36,140 | 39,920 |
| Bucks County | 245,350 | 271,880 | 296,610 | 338,310 |

Source: U.S. Census Bureau (1990) and DVRPC (2000, 2010, 2025)

Table 2b: Employment Change (in percentages)

| | 1990-2000 | 2000-2010 | 2000-2025 |
|-----------------|-------------|-------------|-------------|
| Langhorne | 1.1 | -1.1 | 0.0 |
| Langhorne Manor | 10.1 | 104.3 | 41.4 |
| Penndel | -2.9 | 3.0 | 24.8 |
| Hulmeville | 33.3 | 6.3 | 12.5 |
| Subtotal | 4.6 | 11.3 | 24.9 |
| Middletown | 30.5 | 26.3 | 39.3 |
| Total | 26.6 | 24.4 | 37.5 |
| Bucks County | 10.8 | 9.1 | 24.4 |

Source: U.S. Census Bureau (1990) and DVRPC (2000, 2010, 2025)

Despite being home to a limited number of large employers and, in the case of the four boroughs, being forecasted with a slightly negative population change by 2025, the overall outlook for job growth in the study area municipalities is positive. Employment in the four boroughs grew by 4.6 percent for a total of 3,460 jobs during 1990-2000 and is forecasted to continue at a consistently increasing pace. Despite being significantly behind the County's percent increase this past decade, the growth rate of the four boroughs is expected to match the County over the next twenty years. With the addition of Middletown, the municipalities in the study area as a whole have and are figured to far exceed the County's percentage of employment change. During 2000-2025, employment is expected to grow by 37.5 percent, for a rounded total of 40,000 jobs, overshadowing the County's 24.4 percent increase.

As with the population changes, employment changes differ among the individual municipalities. Langhorne's job market is expected to remain virtually unchanged; Langhorne Manor's employment is expected to expand

substantially, particularly in the next ten years; Penndel, despite a population decrease, is predicted to increase its employment by almost 25 percent by 2025; Hulmeville is forecasted to continue its employment growth, albeit with a more subdued increase than during 1990-2000; and Middletown is anticipated to experience a 39.3 percent increase in jobs by 2025. In general, however, the absence of vacant land for additional non-residential development will continue as a constraint on major job growth in the study area.

Public Transit

As mentioned above, the study area is served by the SEPTA R3 West Trenton rail line and several bus lines, Routes 14, 127, 129 and 130 ([Map 2](#)). This, however, does not deter the majority of residents to rely on private transportation for their commute, as only 2.8 percent of commuters take public transit ([Table 3](#)). This number jumps slightly to 3.1 percent when just the four boroughs are taken into account. It is noteworthy that 5.7 percent of residents in the boroughs walk to work, compared to just 1.7 percent countywide.

Table 3: Commuting to Work 2000 (in percentages)

| | Drove Alone | Carpooled | Public Transit | Walked | Other Means | Worked at Home |
|-----------------|--------------------|------------------|-----------------------|---------------|--------------------|-----------------------|
| Langhorne | 82.3 | 5.5 | 3.4 | 4.7 | 1.5 | 2.6 |
| Langhorne Manor | 84.1 | 5.7 | 3.9 | 2.0 | 0.6 | 3.7 |
| Penndel | 70.3 | 11.4 | 3.1 | 8.8 | 1.7 | 4.7 |
| Hulmeville | 80.9 | 9.4 | 1.9 | 3.4 | 0.0 | 4.3 |
| Subtotal | 77.4 | 8.6 | 3.1 | 5.7 | 1.2 | 3.9 |
| Middletown | 85.5 | 7.7 | 2.7 | 0.9 | 0.4 | 2.6 |
| Total | 84.6 | 7.8 | 2.8 | 1.5 | 0.5 | 2.8 |
| Bucks County | 83.0 | 8.3 | 2.8 | 1.7 | 0.6 | 3.6 |

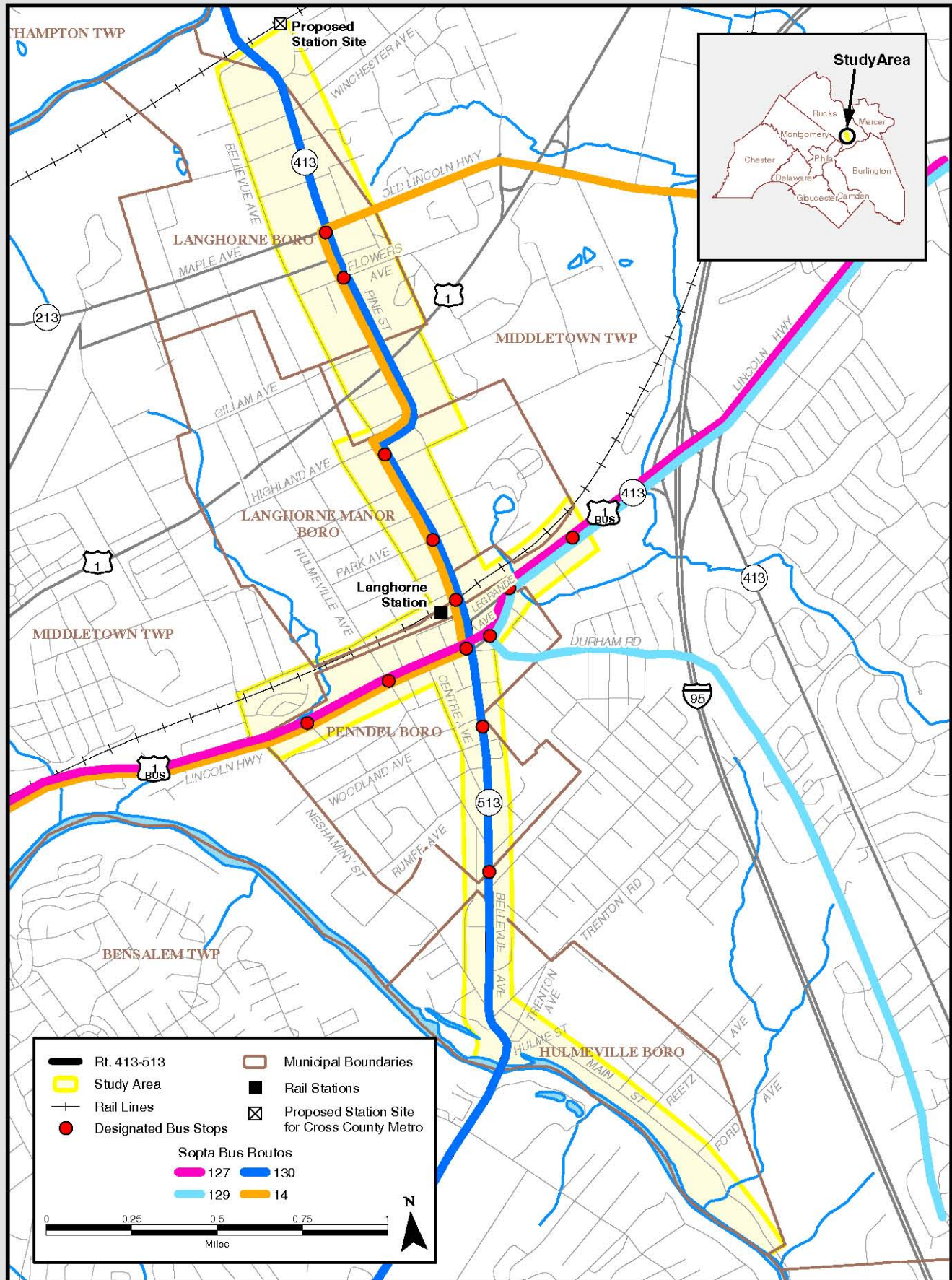
Source: U.S. Census Bureau (2000)

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Map 2: Public Transit



DELAWARE VALLEY
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Of the rail and bus service available, the R3 train receives a much higher number of riders at Langhorne Station than all of the buses stopping in the study area. The Langhorne Station is one of the more heavily utilized train stations along its route, with about 525 people boarding the train in the morning and a similar number disembarking in the evening (SEPTA Regional Rail Ridership Census, March 2001). This represents about 11 to 12 percent of the total ridership on the R3 West Trenton line. The station's parking lot provides 361 spaces for commuters, including 99 spaces that were added in 1997. Ninety-six percent of this lot is used to capacity (SEPTA Survey Data, November 2002).

The buses along all four routes stop near the Langhorne Station and the intersection of Route 413/513 and Business Route 1. As can be expected, this is where most bus passengers either board or get off within the study area. About 46 persons boarded the northbound routes of 14, 129, and 130 during the course of a day in winter 2002 (specific dates vary by route), and about 34 persons got off these routes (SEPTA Passenger Analysis). As for the same bus lines traveling south, about 22 boarded and 29 got off. Route 127 received 4 passengers and disembarked 2 on its westbound route and received 2 passengers and disembarked 0 on its eastbound route during a January day in 2002.

Land Use

Map 3 illustrates the land uses of the municipalities, and Tables 4a and 4b provide the number of acres and percentages for the various types of land use. Because aerial photographs were used in the creation of Map 3, land uses for some properties were field checked and revised based on comments from the Steering Committee. These revisions were taken into account for the four boroughs in the information contained in the tables; however, except for minuscule changes and due to technical restrictions, the numbers listed for Middletown Township and Bucks County are based upon the original land use map.

The five municipalities consist primarily of residential, transportation, and wooded land uses. The area is overwhelmingly residential in the four boroughs, where almost 50 percent of the collective land, or 579 out of a total of 1,259 acres, has been developed for housing.

Table 4a: Land Use (in acres)*

| | Residential | Manufacturing | Transportation & Parking | Communications & Utilities | Commercial | Community Services | Military | Recreational Areas | Agricultural | Mining | Wooded | Vacant | Water | Total |
|-----------------|-------------|---------------|--------------------------|----------------------------|------------|--------------------|----------|--------------------|--------------|--------|---------|--------|--------|---------|
| Langhorne | 161 | 0 | 60 | 0 | 18 | 8 | 0 | 22 | 9 | 0 | 38 | 0 | 1 | 317 |
| Langhorne Manor | 182 | 0 | 71 | 0 | 4 | 1 | 0 | 7 | 0 | 0 | 115 | 31 | 3 | 414 |
| Penndel | 130 | 0 | 55 | 0 | 67 | 8 | 0 | 5 | 0 | 0 | 11 | 0 | 0 | 276 |
| Hulmeville | 106 | 0 | 35 | 0 | 13 | 8 | 0 | 0 | 29 | 0 | 50 | 0 | 11 | 252 |
| Subtotal | 579 | 0 | 221 | 0 | 102 | 25 | 0 | 34 | 38 | 0 | 214 | 31 | 15 | 1,259 |
| Middletown | 3,616 | 118 | 2,115 | 67 | 677 | 276 | 0 | 535 | 1,003 | 28 | 3,079 | 545 | 261 | 12,320 |
| Total | 4,195 | 118 | 2,336 | 67 | 779 | 301 | 0 | 569 | 1,041 | 28 | 3,293 | 576 | 276 | 13,579 |
| Bucks County | 68,500 | 7,505 | 30,465 | 3,082 | 7,996 | 3,603 | 614 | 5,762 | 123,456 | 1,961 | 119,657 | 13,983 | 11,372 | 397,956 |

Source: DVRPC (1995,2003) – Land use numbers for the four boroughs were updated for this project; due to technical restrictions, numbers for Middletown Township and Bucks County were abstracted from the 1995 land use file.)

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Table 4b: Land Use (in percentages)*

| | Residential | Manufacturing | Transportation & Parking | Communications & Utilities | Commercial | Community Services | Military | Recreational Areas | Agricultural | Mining | Wooded | Vacant | Water | Total |
|--------------------|-------------|---------------|-----------------------------|-------------------------------|------------|-----------------------|------------|-----------------------|--------------|------------|-------------|------------|------------|--------------|
| Langhorne | 50.8 | 0.0 | 18.9 | 0.0 | 5.7 | 2.5 | 0.0 | 6.9 | 2.8 | 0.0 | 12.0 | 0.0 | 0.3 | 100.0 |
| Langhorne Manor | 44.0 | 0.0 | 17.1 | 0.0 | 1.0 | 0.2 | 0.0 | 1.7 | 0.0 | 0.0 | 27.8 | 7.5 | 0.7 | 100.0 |
| Penndel | 47.1 | 0.0 | 19.9 | 0.0 | 24.3 | 2.9 | 0.0 | 1.8 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 | 100.0 |
| Hulmeville | 42.1 | 0.0 | 13.9 | 0.0 | 5.2 | 3.2 | 0.0 | 0.0 | 11.5 | 0.0 | 19.8 | 0.0 | 4.4 | 100.0 |
| Subtotal | 46.0 | 0.0 | 17.6 | 0.0 | 8.1 | 2.0 | 0.0 | 2.7 | 3.0 | 0.0 | 17.0 | 2.5 | 1.2 | 100.0 |
| Middletown | 29.4 | 1.0 | 17.2 | 0.5 | 5.5 | 2.2 | 0.0 | 4.3 | 8.1 | 0.2 | 25.0 | 4.4 | 2.1 | 100.0 |
| Total | 30.9 | 0.9 | 17.2 | 0.5 | 5.7 | 2.2 | 0.0 | 4.2 | 7.7 | 0.2 | 24.3 | 4.2 | 2.0 | 100.0 |
| Bucks County | 17.2 | 1.9 | 7.7 | 0.8 | 2.0 | 0.9 | 0.2 | 1.4 | 31.0 | 0.5 | 30.1 | 3.5 | 2.9 | 100.0 |

Source: DVRPC (1995,2003) – Land use numbers for the four boroughs were updated for this project; due to technical restrictions, numbers for Middletown Township and Bucks County were abstracted from the 1995 land use file.)

Nearly 18 percent of the total land area, for both the four boroughs and the entire study area municipalities, are dedicated to parking and transportation facilities. This translates to 221 acres within the boroughs and 2,336 out of a total of 13,579 acres within all five municipalities. Commercial use comprises 8 percent, or 102 acres, of the four boroughs and is mainly concentrated along Business Route 1. There are, however, smaller clusters of businesses scattered along the Route 413/513 corridor, notably at the Pine/Maple intersection in Langhorne and the Bellevue/Trenton/Hulme/Main area in Hulmeville. The percentage is diminished to 5.7, or 779 acres, with the inclusion of Middletown.

While the majority of the land has been built out, close to 20 percent, or 247 acres, in the four boroughs is wooded or recreational land. This portion increases to almost 30 percent, or 3,860 acres, when Middletown is taken into account. The largest tracts in these categories relevant to the study area include land used by the Langhorne Spring Water District (within Langhorne Manor's boundaries, but owned by Middletown), the Philadelphia Biblical University (in Langhorne Manor and Middletown), the Woods School (in Middletown), and the Middletown Country Club (in Middletown and Langhorne). Also, the southern tip of Hulmeville and land along the Neshaminy Creek, though part of the floodplains, provide open space for the area. Notable public recreational space includes the Langhorne Heritage Farm, the Mayors' Playground in Langhorne, which is planned for renovation, the Penndel Borough Memorial Field, the Hulmeville Borough Park, and the Hulmeville Memorial Park.

Zoning

Zoning among the five municipalities ranges from the limited permitted uses of Langhorne Manor to the more categorical permitted uses of Middletown. In order to better compare the different zoning in the municipalities, a composite zoning map (Map 4) was created from the various ordinances. Table 5 lists each municipality's zoning districts with the corresponding composite zoning used for Map 4. The depiction of Middletown's zoning was restricted to the districts closest to the study area.

As reflected in the assessment of existing land use, residential districts clearly dominate the majority of the

Table 5: Composite Zoning Classifications by Municipality

| Municipality | Municipal Zoning | Composite Zoning |
|---------------------|--|--|
| Langhorne | R1 Residence R2 Residence C Commercial C1 Commercial PS Professional Service OR Open Recreation RC Retirement Community LI Light Industrial | R1 R3 C1 C2 PS OR R LI |
| Langhorne Manor | RA Residential RB Residential RC Residential I Institutional | R1 R2 R3 I |
| Penndel | R1 Low Density Residential R2 Moderate Density Residential R3 Multi-Family Residential P Professional RC Commercial – Retail SC Commercial – Service I Industrial OR Open Recreation MB Metropolitan Business | R2 R2 R3 PS C1 C2 LI OR C3 |
| Hulmeville | R1 Residential R2 Residential R3 Residential LIC Limited Industrial Conservation C Commercial I Industrial | R2 R2 R3 LI C1 LI |
| Middletown | RA3 Residence Agricultural R1 Residence R2 Residence C Commercial MI Light Manufacturing OR Open Recreation AO Apartment Office P Professional RC Retirement Community MHP Mobile Home Park MR Multi-Residential | R1 R1 R2 C1 LI OR MU PS RC R3 R3 |

Source: DVRPC (based upon the zoning of the study area municipalities) (2003)

study area, except along Business Route 1. More than any other borough, Langhorne Manor exemplifies the residential nature of the area. It is important to note, however, that, although not designated as open space or conservation, the residentially-zoned Langhorne Spring Water District, in the westernmost part of the borough, was granted an easement that prevents the land to be used for any other purpose than nature education or potable water purposes. There is no designated commercial zone in the borough, despite its adjacency to the heavily commercialized area of Business Route 1. The only commercial activity allowed in Langhorne Manor is home occupation.

The commercial zones that exist in the three other boroughs range from a couple of clusters of land in Hulmeville to a swath of land along Business Route 1 in Penndel, continuing through Middletown. An adult commercial district is hidden behind a frontage of highway commercial businesses in the northwestern corner of Penndel. Another area dedicated to highway commercial is the intersection of Route 413/Maple Avenue in Langhorne, where three gasoline stations are situated at the corners. Industrial zones can be found at several locations: near or at Business Route 1 and the railroad tracks, both the SEPTA line in Penndel and Middletown and the Norfolk Southern Morrisville line in Langhorne and Middletown; along a portion of the Neshaminy Creek in Hulmeville, in the middle of a residential area in Hulmeville; and the southern tip of Hulmeville. However, while they are consolidated as LI Limited/Light Industrial on the Composite Zoning Map, two of the three industrial areas in Hulmeville are listed as LIC Limited Industrial Conservation in the borough's ordinance, where "low-intensity uses...[are permitted] with significant natural constraints, primarily wetlands, floodplains and alluvial soils."

KEY THEMES

Key themes emerged from the issues and goals discussed at the Steering Committee meetings. The following statements summarize these points:

- A pedestrian-friendly environment needs to be cultivated to balance the existing auto-dominated landscape and to provide a foundation for revitalization of the study area.
- Transportation improvements are required for a more harmonious co-existence between regional traffic and local communities and to address the needs and safety concerns of all users.
- The commercial districts need to attract more retail businesses and reinvent or strengthen their appeal, akin to traditional “Main Street” downtowns.
- The overall aesthetic quality of the study area must be improved to provide streetscapes conducive to greater pedestrian activity and representative of the character of the local communities.

Section III



Historical structures are recognized as valuable assets in the study area. Both Langhorne and Hulmeville have designated historical districts within their boundaries.

RECOMMENDATIONS

An important aspect of the dynamic that was evident among the participants in the Steering Committee meetings is their willingness to work together. While certain recommendations are more efficiently and necessarily carried out by a single municipality, other recommendations can be better and more economically feasible when accomplished through a joint effort, especially considering the limited resources of the four boroughs. This section is divided into three parts: (1) recommendations that apply throughout the study area; (2) recommendations that target the concerns and issues of specific sites in the study area; and (3) recommendations that pertain to zoning changes.

General Recommendations

Below are recommendations that address re-occurring issues concerning the entire study area. They are organized by the different topics but are not ranked in order of importance.

A. Pedestrian-Friendly Streets: Sidewalks and Crosswalks

Issue: The study area is heavily oriented toward and influenced by automobiles. However, given that Langhorne Station and bus stops line Route 413/513 and Business Route 1 and that some residents may feel the urge to walk a reasonable distance to their destinations, street design must consider the needs of pedestrians as well as drivers. Adequate placement and design of sidewalks and crosswalks are crucial to pedestrians' mobility and safety. The easier it is for pedestrians to walk around the area, the more likely the area will see an increase in foot traffic and use of public transit with less reliance on automobiles. The visibility of an increase in foot traffic may make drivers more conscious of pedestrians and more cautious in their driving. Through Steering Committee discussions and site visits by DVRPC staff, by car and on foot, particular areas, mostly intersections, have been identified as unsafe for pedestrians. The condition or lack of sidewalks throughout the project area has also been observed as a hindrance for pedestrians.

Section IV



Consolidate street signage to widen usable sidewalk space as well as prevent clutter of signs.

Recommendations for Sidewalks: The lack, narrowness and deteriorating condition of sidewalks that plague the study area need to be addressed. In general, a continuous network of sidewalks along both sides of the roadways should be provided. The sidewalks need to not only exist, but to be comfortable for pedestrians to maneuver around in the community. The planting strips and the height of the sidewalk curbsides should be taken into consideration for the reasons of safety and aesthetics. In addition, compliance with the American Disabilities Act cannot be overlooked.

1. Repair deteriorating sidewalks, including ensuring that paved sections are properly aligned with one another.
2. Connect sidewalks that have been unnecessarily discontinued.
3. Widen sidewalks where possible to allow pedestrians to walk side-by-side and/or allow pedestrians to pass each other without having to step aside. Sidewalks in commercial districts should generally be wider than those in residential districts. A sidewalk width of 6 feet with a *minimum* planting strip width of 2 feet is recommended by PennDOT for arterial and collector streets in commercial and residential areas. A minimum sidewalk width of 7 feet may be substituted for the planting strip (*Statewide Bicycle & Pedestrian Master Plan*, April 1996). Take into account the width of the sidewalk in commercial districts that may be used for street furniture, plantings, public or commercial signage, and utility poles. Though these elements are sometimes encouraged and sometimes necessary, their presence will reduce the amount of navigable space for pedestrians.
4. Establish new sidewalks needed for the ease of mobility and safety for pedestrians.
5. Ensure that there is adequate distinction and/or buffer between sidewalks and roadways. This entails repairing deteriorating curbsides and providing an adequate height for curbsides. Decorative accents, such as planting strips, brick paving, or scored concrete sidewalks, may be used in appropriate areas. On-street parking can



Connect sidewalk pavement and require property owners to move or crop shrubbery in order to maintain a continuous clear path for pedestrians.



In the largest commercial district along Route 413/513 and close to the Langhorne Station, this sidewalk provides inadequate space for pedestrian activity.

also serve as a buffer between pedestrians and moving vehicles.

6. Widen and plant trees on planting strips where there is appropriate space. Some parts of the study area have planting strips that are less than one foot wide. Areas where such planting strips exist should be evaluated for the possibility of widening these strips while maintaining an adequate sidewalk width or eliminating these strips to widen the sidewalk (refer to Recommendation 3). If the later is chosen, the sidewalk should be clearly distinguishable from the traffic lanes.
7. Require and enforce property owners to prune their trees, bushes and other greenery so that the sidewalk space is clear for pedestrians to walk on without having to duck and step around such plantings.
8. Enforce proper removal of snow from sidewalks, including at intersections, during the winter.

Recommendations for Crosswalks: Crosswalks serve as an extension of and connection between sidewalks. They tell drivers to be aware of pedestrians and lead pedestrians to the appropriate areas to cross the street. Crosswalks at most of the major intersections and the Langhorne Station area are currently unmarked. This needs to be rectified to help ensure the safety of pedestrians.

1. Designate crosswalks at major intersections, at the Langhorne Station area, and in other appropriate areas of roadways where pedestrians are likely to cross. Crosswalks can either be marked with paint or be paved with a different material, such as brick, to distinguish them from the roadways. They can also be raised; this provides the added benefit of slowing vehicular traffic. However, be cautious not to designate too many crosswalks along the length of a street; this may desensitize drivers, who may end up ignoring the purpose of pedestrian crosswalks.
2. Repaint or repair existing crosswalks that have markings that are fading or in need of repaving.



The lack of crosswalks diminishes safety of pedestrians and driver awareness of pedestrians.

3. Install signage to warn drivers of pedestrians crossing the street, particularly near areas where pedestrians cross in the middle of the block. This type of crossing should be used sparingly.
4. Where appropriate, reduce the distance pedestrians need to walk in order to cross the street by creating curb extensions at intersections or other crosswalk areas. Marked or paved crosswalks should still be established at these locations.

Study Area Sites Where Crosswalks May Be Appropriate:

- Intersection of Route 413/Winchester in Langhorne
- Pine Watson Shopping Center area in Langhorne, including intersection at East Watson/National Avenue
- Intersection of Route 413/Maple in Langhorne (repaint existing crosswalks)
- Pennwood Library area in Langhorne (replace pedestrian crossing signs and library markers with ones that are more visible)
- Intersection of Route 413/Highland in Langhorne Manor
- Langhorne Station area: near railroad tracks and at Route 513/Durham/LeGrande/Park intersection
- Intersection of Route 513/Business Route 1 in Penndel
- Intersection of Route 513/Woodland Avenue in Penndel
- Intersection of Route 513/Neshaminy in Hulmeville
- Intersection of Route 513/Trenton/Hulme in Hulmeville
- Intersection of Main/Trenton in Hulmeville
- Intersection of Main/Hulme in Hulmeville

B. Traffic Calming

Issue: Speeding traffic is a common complaint in the study area's commercial and residential districts. The problem can be exacerbated due to the use of the major roadways for through-traffic purposes. In addition, the awareness of the problem is rightly heightened because it disturbs the safety of local residents and communities.

Recommendations: While the methods by which traffic can be encouraged to slow down are addressed for particular intersections and vicinities in the Site-Specific Recommendations and are alluded to in Pedestrian-Friendly Streets: Sidewalks & Crosswalks, the general recommendations below apply especially to the residential stretches of the study area. All traffic calming methods should be weighed against their impact on emergency response time.

1. Narrow the width of the roadways at problem locations through the individual or combined use of the following:
 - Curb extensions at intersections or mid-block
 - Speed humps or speed tables
 - Chicanes – alternating curb extensions along a street, forming an S-shape
 - Median islands
2. Allow for on-street parking. With cars parked along one or both sides of a street, the driving lanes will most likely need to be narrowed, and drivers passing through will tend to slow down in anticipation of other drivers pulling out of or into parking spaces, opening car doors, or crossing the street to get to and from their cars.
3. Designate bicycle lanes. Besides providing cyclists with an appropriate area to ride their “vehicles,” it reminds and cautions drivers that they are sharing the roadways with other users.
4. Dedicate resources to enforce speed limit.



Above is an example of a chicane with a parking lane. Source: <http://www.trafficcalming.org>.



A combination of speed humps and a median island forces this car to slow down in a residential area. Source: <http://www.trafficcalming.org>.

C. Public Transit: Stops & Amenities

Issue: Public transit plays one of the most crucial roles in determining the success of pedestrian accessibility. While the study area includes the SEPTA R3 rail line and several bus routes that traverse through and make stops along Route 413/513 and Business Route 1, the amenities that help make public transit ridership a more pleasant experience can be improved, especially the lack of amenities at the bus stops. The bus stops can be hard to recognize because only a small SEPTA sign on a utility pole designates each stop. No amenities are provided for bus transit riders. One reason may be due to the limited amount of space available at each of the stops. The train station does include shelter from inclement weather and parking for park-and-ride as well as an outdoor bench and newspaper vending boxes. However, if funding becomes available, the station could greatly benefit from an upgrade and possible expansion. It would also be helpful to reduce the visibility of the parking lot from the street so that it doesn't overpower the small ticket office.

Recommendations: Efforts to improve public transit stops will require the joint cooperation of municipal and SEPTA officials. While funding can determine whether improvements can be implemented, public officials should examine various options to enhance these stops in the meantime.

1. Publish a report that summarizes the options that have been examined and the reasons that they are needed at these particular stops. By being a step ahead of other communities, this can prove invaluable when funding does become available.
2. Consider the renovation and expansion of the ticket office, including the addition of a food shop or convenience store for the benefit of commuters. This will also enhance safety if the shop hours extend beyond the ticket office hours.
3. Assess the existing and potential availability of public right-of-ways and easements that can be used for the location of amenities at each of the bus stops. Consider relocating the stops that do not have enough space for



The small ticket office at the train station is set significantly back from the street, and the parking lot becomes the more noticeable element of the station.



At the bus stop across from the train station, a person stands waiting for his ride. This stop, along with most other stops in the study area, lack adequate space and provides no amenities. Additionally, the bus signage is difficult to discern.

- expansion. If this is still a barrier to providing transit amenities, consider methods to enhance visibility of these stops, such as utilizing color to distinguish the stops from the rest of the sidewalk.
4. Provide pull-in lanes for buses to stop, where feasible. Because these areas may not be utilized even when they are available due to perceived inconvenience, an alternative may be partial pull-in lanes, where buses need not fully depart from the driving lanes.
 5. Prioritize the locations that would benefit the most from the improvements and/or prioritize the amenities that would be best suited for the bus stops. This is for the purpose of making the most of partial funding, if full funding would not be possible or may not come all at once. All forms of transit stop amenities should be initially considered, including seating, lighting, some form of shelter from inclement weather, trash receptacles, newspaper vending boxes, and emergency phones. SEPTA had experimented with providing bus schedules in the mid-1980s, but found that they tend to fade with time and the routes change too frequently. A viable option may be to provide a rain-proof transparent sleeve in which schedules can be easily replaced.
 6. Consider the relocation of the ticket office and the parking for train riders. If, for logistical reasons, the ticket office cannot be moved closer to the street, determine whether or not parking can move further back so it does not dwarf the structure of the ticket office. If this is not possible or too costly, provide better landscaping for the parking lot. Consider converting the grassy space surrounding the surface lot into a park-like environment, where seating for those waiting for the bus or train would be included.

D. Parking Lots Abutting Streets

Issue: Parking lots can serve as a critical factor to the volume of patrons an establishment receives, especially in areas where dependence on public transit is not always reasonable and private vehicles are needed to transport large items bought from local business. A significant number of parking lots dot the project area. Unfortunately, the majority of these lots are poorly designed and landscaped, lack a pleasant and safe transition to their adjacent sidewalks, and add to the number of unnecessary curb cuts. Some provide more parking spaces than needed for current uses.

Recommendations: The design, location, and size of parking lots need to be re-evaluated for the existing lots in the project area in order to enhance the streetscape and circulation for drivers, including those walking to and from their cars and buildings, and pedestrians. While future additional parking lots that would abut sidewalks of major streets are not recommended, it is inevitable that the study area municipalities will have to review new applications that include this type of parking. As such proposals arise, it is recommended that the municipalities enforce high standards and possible restrictions for the good of the surrounding areas, as well as the specific properties on which the lots would be relocated.

1. Retain a traffic engineer or parking consultant to assess total parking needs in the commercial core area, including redesign of existing lots and related zoning amendments.
2. Review and revise, if needed, zoning ordinances pertaining to parking lots, including location of lots, number of parking spaces required and landscaping. The requirement of particular factors needs to be standardized, while a range of options for some of these factors should remain available. For example, landscaping and the buffer between lots and their adjacent sidewalks can be accomplished through various methods; however, the number of parking spaces allowed should be specified by each municipality's zoning ordinance in proportion to the size and type of the



Provide a better transition between the parking lot and the sidewalk. Options include plantings, low fencing or wall, or a combination of these features. Another consideration, due to the underutilization of the lot, is to reduce the lot by widening the sidewalk. The lot itself could be improved by adding additional shade trees.

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- establishment, size and specific location of the lot, and the district in which the lot is located. Current trends are to provide fewer spaces for residential and non-residential uses than in the past, particularly near transit stations.
3. Assess the options of reducing the size of underutilized lots, relocating lots to less visible parts of the properties, and encouraging shared usage among neighboring businesses and/or residents.
 4. Assess the options of providing additional parking for lots where needed. Besides extending the physical space of the existing lots, other possible solutions to add more spaces may be to reconfigure the spaces within these lots if the maximum number is not already provided, allow for on-street parking on both sides of the street where possible, and encourage shared usage among businesses and/or residents. If considering the later, explore the possibility of negotiating with property owners who do not necessarily abut the property to obtain or reserve additional parking areas. However, if public transportation is not convenient due to the schedule, shuttle services may be needed to bring those arriving by car to their intended destination.
 5. Restrict the amount of parking for new developments and review its adequacy over a period of time to determine if additional spaces are needed. This method is practiced by Penn del, where open space is substituted for the area where additional parking is not needed.
 6. Require large surface lots to include landscaping as part of the design.
 7. Minimize ingress/egress access, particularly along busy parts of the corridors. If possible, locate access along another side of the parking lot, where traffic will be lighter.
 8. Encourage maintenance of landscaping located at the perimeter and within surface lots.



Although some thought has been given to the safety of pedestrians along Route 513, due to the more residential nature of this location, “softer” buffering should be applied at all sides of the lot abutting sidewalks. A positive aspect about this lot, however, is that it utilizes the method of shared parking for more efficient use of the space.

E. Curb Cuts

Issue: Curb cuts are necessary to ingress and egress parking lots and driveways. However, particularly in auto-oriented communities, there may be too many unnecessary curb cuts, and they may be too close to intersections, creating potential hazards for drivers and pedestrians. This statement holds true for the study area.

Recommendations: Municipalities need to reduce the number of curb cuts along Route 413/513 and Business Route 1. The curb cuts take up a significant amount of the sidewalks and create more opportunities for drivers to turn into or from the roadways than are necessary or safe.



This street suffers from a combination of excessive curb cuts, inappropriate off-street parking, poor storefront facades, and an unpleasant walking environment.

1. Examine specific areas where multiple curb cuts exist or are too close to intersections and determine which need to be eliminated.
2. Close off or relocate those curb cuts that have been determined to be unnecessary and/or a potential safety hazard. Curb cuts can be closed off by resurfacing them to sidewalk level. While this would be the ideal solution, less expensive alternatives can be considered in the interim, such as placing an immovable or hard-to-move object to block access. Make sure the object enhances the aesthetics of the specific location and area, such as well-maintained plantings.
3. Revise zoning ordinance to require a maximum number of curb cuts or shared curb cuts between adjacent lots, if appropriate, consistent with road function and lot size.

F. Commercial Businesses: Facades and Signage/Lighting

Issue: Businesses in the study area generally lack a unique, pleasing identity, individually and collectively as a commercial area. While there are a couple of exceptions to this statement, namely Maple Avenue in Langhorne and the commercial district in Hulmeville, all businesses can benefit from improvements and maintenance to their storefronts.

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Recommendations: Municipalities need to enlist the efforts of private businesses to help bring vibrancy, including new customers, along the corridors and into their neighborhoods. This can be accomplished through education on good design and funding for improvements.

1. Establish guidelines that address the issues of improvements of facades, entranceways, signage, lighting, color schemes, landscaping at select locations, and maintenance. Consideration should be given to the area in which each business is located and who its primary customers are intended to be. Restoration of historic buildings or details should be strongly emphasized.
2. Review and update zoning ordinances to ensure compatibility with the guidelines (i.e., size and location of signage).
3. Provide free architectural advice for old and new businesses by retaining an architect or a municipal official with a strong architectural background. Hold workshops or provide individual consultations. (An architectural consultant could be employed part-time or on a case-by-case basis. Consideration should be given to the establishment of a joint agreement between municipalities to retain one consultant at a reduced cost.)
4. Establish a facade improvement program that provides technical and financial assistance to business owners. Agreed adherence to established design guidelines needs to be a prerequisite before approval of facade applications.

Note: It is crucial to the success of recommendations 1 and 4 to involve the expertise of an architect, at least in an advisory capacity.



The multitude of signs distract from the architectural presence of this commercial building. Work with the property owner and/or business owners to limit and consolidate their signage.



This blank wall at a prominent intersection can be improved by adding display windows or, for a less expensive alternative, repainting the exterior with a mural or tasteful design. The faux roofing should be replaced with one that is more in scale and compatible with the building. (Sometimes the removal of such elements that were added onto the facade of a building may reveal attractive architectural details that were originally intended.) Other suggestions include replacing the signage and enhancing the entranceway.

G. Streetscapes & Public Amenities

Issue: The tone and character of a street, area, and community are partially derived from the availability, type, design, and location of its public amenities. These amenities include parks, street furniture, lighting, signage, utilities, and other elements related to non-vehicular users. The majority of the study area is either lacking in or suffering from poorly planned amenities.

Recommendations: The public sector can heavily influence the amenities it provides and, thus, change the personality of its streets and community. Each municipality in the study area can create its own character or join together to create a seamless, collective presence throughout each of the project corridors. The latter option should still take into account some variations from one municipality to the next, particularly for Route 413/513. Collaboration among local, county, and state agencies will be required for changes in some of these amenities.

1. Create pocket parks in areas where vacant lots are too small for development or as part of new developments. These types of parks are best located where foot traffic is present or desired. Due to their manageable size, sometimes neighborhood groups or adjacent property owners form a sense of ownership and maintain these parks themselves.
2. Identify specific locations where street furniture, such as seating, plantings, and trash receptacles, would enhance the vitality of a street. This would be most beneficial in the districts where the primary activities are commercial and mixed use. Make sure the street furniture to be installed are durable, aesthetically pleasing, and appropriate to the scale of its surroundings.
3. Assess the effectiveness of the current street lights and make adjustments and/or additions as needed. This would entail a survey of the type and design of lighting being used, its adequacy for visibility purposes, and areas in need of new lighting. Different lighting works best for different districts. For example, the type, design, and wattage emitted from

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- pedestrian-scaled lighting may be appropriate for some neighborhood commercial districts, but not for light industrial districts.
4. Consolidate, eliminate or add public signage for the purposes of less cluttered streetscapes, improved directional information, and safety.
 5. Consider options for reducing the utility poles and lines. If the cost of relocating the utility lines underground cannot be met, examine the possibility of relocating the lines and poles behind the buildings or sharing utility lines and reducing the number of utility poles. Another idea would be replacing the existing wooden poles with ones that are narrower and provide a less visible presence.
 6. Establish bicycle lanes along the roadways of the study area, with connections to recreational facilities that may be located in other areas of the municipalities. In addition to the designation of these lanes, amenities, such as bicycle racks located in safe and convenient areas, should be provided. The provision of bicycle lanes acknowledges the use of the roadways by different types of users, encourages environmentally friendly transportation, and can aid in the problem of speeding traffic by narrowing the driving lanes and forcing drivers to slow down.

H. Economic Development

Issue: Existing businesses in the study area range from personal services to industrial trades. Most of the businesses are small, with only a few major employers, including the Woods School and the Philadelphia Biblical University. Retail customers include local residents, commuters, and destination shoppers for certain commercial establishments (i.e., auto-related businesses along Business Route 1, Cooperative Furniture and Marty's Carpets in Penndel, and antique shops in Hulmeville). However, the commercial areas could draw a larger customer base if they can present a more unified and organized approach. Not only would this draw more customers, but new businesses would most likely locate in the study area. Members of the Steering Committee expressed their desire to bring in more commercial



Designs have been approved for the renovation of this corner park in Langhorne. The plans include new amenities and landscaping for the interior and attractive fencing for the perimeter.

businesses, but not necessarily to expand their respective commercial districts.

Recommendations: Economic development is a comprehensive issue which encompasses more than just businesses, as it can directly and indirectly be influenced by and have an effect on other aspects of a community. A much more in-depth assessment, beyond the scope of this study, needs to occur in order to help ensure the success of economic development initiatives. While a Revitalization Plan is being conducted for Pennndel, it will also be beneficial for the other municipalities to review the plan after its completion, as it will have an impact on their corridors. It can also serve as a resource for the other municipalities when considering their own ideas for economic development.

The following are some recommendations to consider when creating a more comprehensive and integrated economic development strategy for the area.

1. Retain a market consultant to take an inventory of all businesses and vacant lands/properties in the area. This inventory can then be the basis for the consultant to assess what types of businesses are lacking, what businesses/areas need technical or financial assistance, and what the best uses would be for the vacant lands/properties. The inventory of vacant lands/properties can also be used as a database for businesses looking to relocate into the area.
2. Involve commercial and professional businesses, civic, trade and other community organizations, local artists, and residents in new initiatives whenever possible. The earlier they are involved, the more likely they will feel an investment and commitment to the initiative. Conducting a survey of their opinions of existing conditions and desired changes is a first step. Become or remain accessible to these people and organizations.
3. Develop an economic vision, goals, and strategy for the area.
4. Emphasize the need to attract businesses that will most likely be patronized by the



Small businesses help form a community's character besides providing shopping opportunities and tax revenue. Thus, it would strongly benefit a municipality to support these establishments through financial and technical assistance and promotion, while creating the foundation for greater pedestrian (i.e., consumer) activity.

- residents of the communities versus businesses that draw most of their customers from other parts of the region, especially those employing a limited amount of people.
5. Provide technical and financial assistance for business expansion, business relocation into the area, new businesses, and physical improvements made to buildings. Besides commercial buildings, the latter includes exterior improvements to residential buildings, as visitors will also form opinions about the community based upon the physical appearance of its housing stock. Financial assistance can be in the form of a grant or loan; it can also be in the form of tax incentives rather than direct funding of a project.
 6. Actively promote the municipalities' assets by highlighting and showing linkages between the area's historical aspects, cultural amenities, recreational facilities, hospitable businesses, and public transit stops. This effort can be applied toward prospective residents, businesses, and visitors. One method is to put together a set of information packages, including a colorful, easy-to-read map, that would be easily distributable. It may be worthwhile to seek assistance from and/or collaboration with the local historical societies, the Bucks County Department of Parks and Recreation, and the Bucks County Conference and Visitors Bureau.
 7. Assist businesses and organizations in developing a collaborative list of tours of historical buildings and districts (Langhorne and Hulmeville), neighborhood landmarks and institutions, and interesting factories (i.e., Langhorne Carpet Factory) to attract visitors as well as educate residents on their own community. This list may be of independently operated tours, whereby individuals participate on their own, or perhaps be a part of other larger tour packages around Bucks County. As with Recommendation 6, it may be worthwhile to seek assistance from and/or collaboration with the local historical societies, the Bucks County Department of Parks and Recreation, and the Bucks County Conference and Visitors Bureau.

8. Establish continuous physical linkages to the different assets of the communities, including installing directional markers, possibly with a consistent theme and design, at appropriate locations.
9. Determine whether or not there is enough interest by business owners to form a business improvement district (BID) and assist them with its formation. This may be a BID comprised of businesses along the entire study area or several BIDs in different sections of the study area. The latter option might not be as feasible or worthwhile for areas with only a small cluster of businesses, such as those in Hulmeville. In this case, they may want to partner with the most adjacent BID. Creation of a BID could also be a means to use the Transportation Partnership Act, working with PennDOT, which could generate additional funding to advance defined transportation improvements in the area.
10. Maintain a clean appearance/streetscape. Make sure the sidewalks/roadways are basically litter-free, trash is routinely and frequently emptied, and street furniture is well maintained. This may be the responsibility of a BID as well as the municipalities.

Site-Specific Recommendations

Please refer to Maps 5-8 for the site-specific issues and recommendations discussed below.

A. Route 413/Winchester Intersection

Issues: This is a four-way intersection with a traffic light south of the Norfolk Southern Morrisville rail line. The roadway narrows under the trestle and contributes to a back-up in traffic during rush hour. It is mainly a residential area, with the Attleboro Retirement & Health Care Center located on the southeastern corner and wooded land and the Neshaminy Creek running further north of the intersection. A rail station has been proposed for SEPTA's Cross County Metro, utilizing the existing rail line, to the west of Route 413.

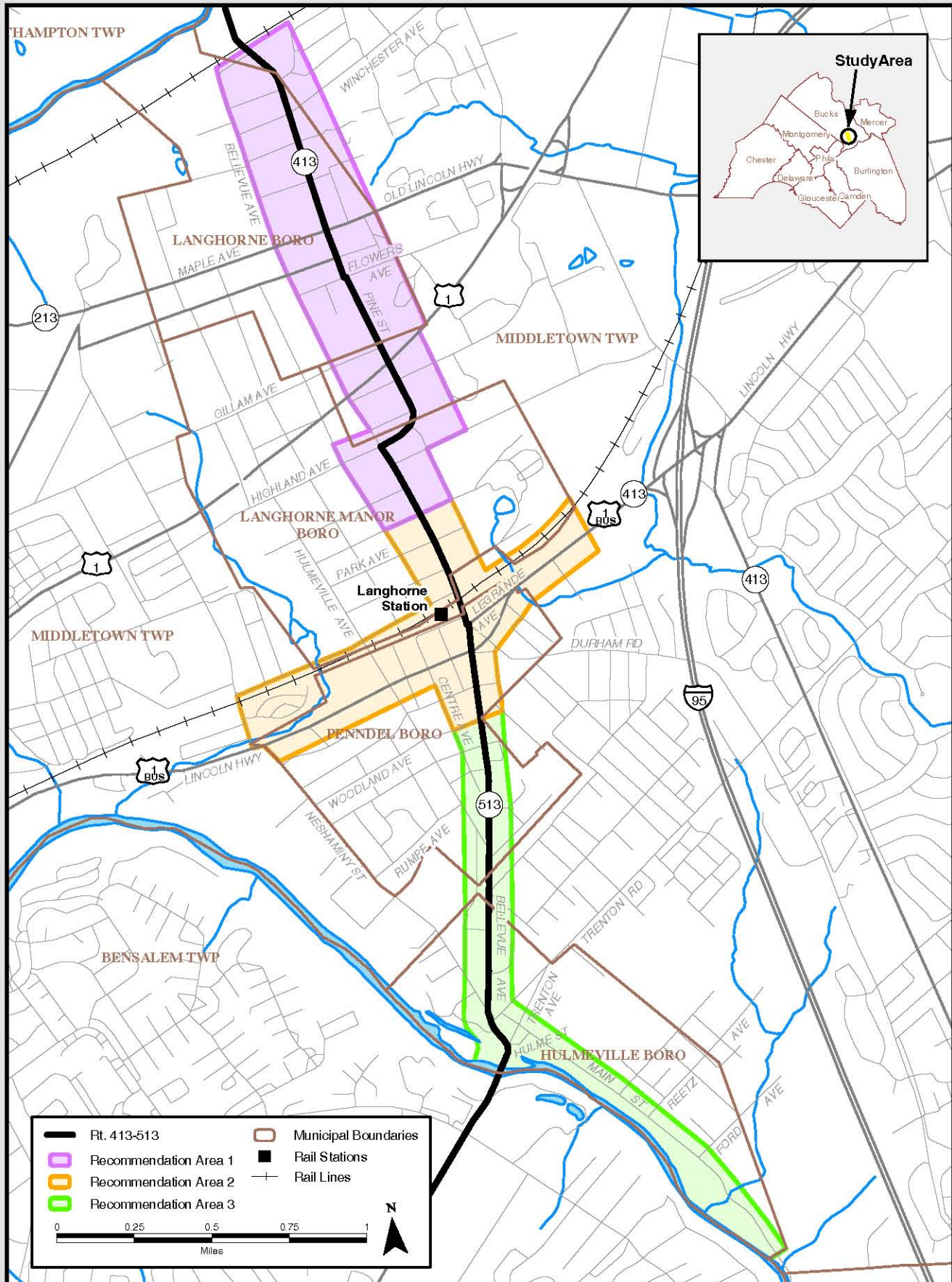
Though sidewalks exist, except along the eastern side of the corridor north of the intersection, conditions of the sidewalks are not particularly user-friendly for pedestrians. Sidewalk improvements are needed for easier movability, safety, and linkages to Langhorne's commercial district, the Langhorne Heritage Farm which includes a walking trail, and the potential rail station. In addition, a Natural Resource Inventory is being conducted at Langhorne's northern boundary, with a designated Superfund site just south of this area. As the borough is not looking for commercial development at this site, recreational use may be a possible alternative.

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Map 5: Recommendation Areas



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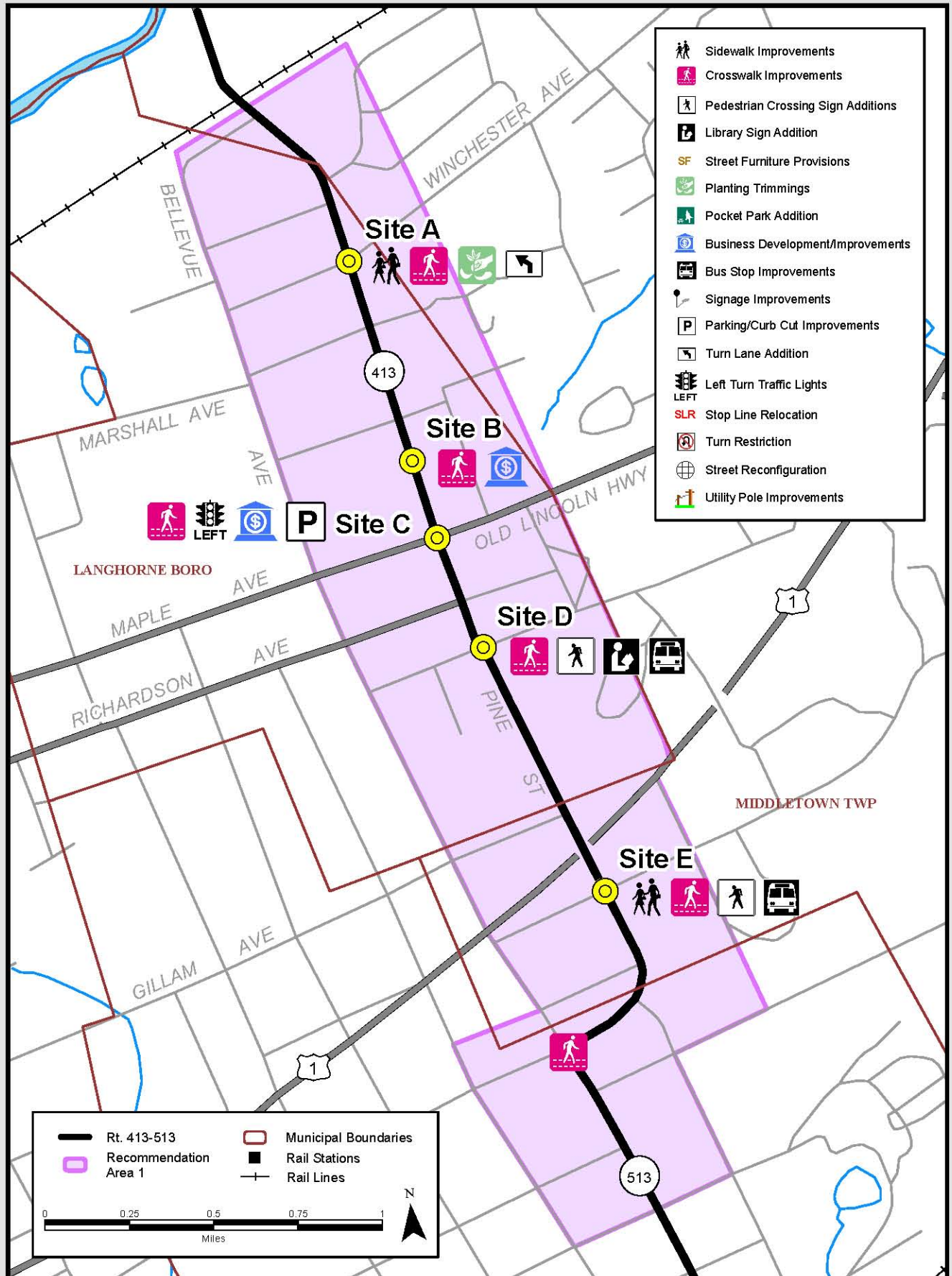


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Map 6: Recommendation Area 1



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The Route 413/Winchester intersection could benefit from the addition of turn lanes, wider and new sidewalks, marked crosswalks, and better maintenance of greenery by private property owners.

Recommendations:

1. Provide the following turn lanes at the intersection: a right turn lane onto Winchester Avenue West from Route 413 South and a left turn lane onto Route 413 South from Winchester Avenue East. This will require a readjustment in the existing divider lines and a widening of the road surface. Easements will most likely be needed.
2. Improve sidewalk conditions on both sides of Route 413. Due to the open green space fronting Route 413 on the Attleboro Retirement & Health Care Center property, there is an opportunity to move the sidewalk further away from the roadway and create a planting strip to serve as a buffer between pedestrians and moving traffic. The curbside will need to be repaired whether or not a planting strip is created. The existing sidewalk on the west side of the corridor is very narrow and is further restricted by the overgrowth of shrubbery and trees. Residential property owners need to be strongly encouraged to trim their plantings to provide an unobtrusive pedestrian pathway.
3. Extend sidewalk north of Winchester Avenue. It may be advantageous to wait until the decision is made regarding the location of a nearby train station for the Cross County Metro. Consideration should be given to reaching a mutually beneficial plan between Langhorne, Middletown, and SEPTA whereby costs may be shared and a pathway can be established between the extended sidewalk and the train station.
4. Establish marked crosswalks at the intersection to provide designated pathways between sidewalks.

B. Pine Watson Shopping Center Vicinity

Issues: The Pine Watson Shopping Center provides a wide variety of neighborhood eateries, retailers, and personal services. These types of businesses are beneficial and needed for any community, and, through informal site visits, the center overall seems to experience a healthy stream of patronage. However, while certain businesses are succeeding, others are not as prosperous. Whatever may be the reasons for closing, the fact that there are two storefronts unoccupied during this study indicates that the shopping center and location need to be made more desirable for prospective businesses. Besides economic incentives, physical improvements can be made to further enhance the shopping experience and better integrate the center with its neighbors. As it exists now, the center disrupts the flow of the tighter surrounding physical space, as it is set back from the sidewalk with a large parking lot in front.

Recommendations:

1. Given the right timing and circumstances, work with the property owner to redesign the shopping center through one of the following methods:
 - Relocate the center at or near the Route 413 property line and provide parking to the rear of the property to reestablish a more compatible yet greater presence within the community. Businesses should provide entrances along Route 413 so pedestrian activity can be visible. Drivers can also be accommodated by providing additional access from the back of the center or providing pathways from the parking lot to the front entrances. The goal is to extend the small town “main street” ambiance that is displayed on Maple Avenue, west of Route 413, around the corner to the rest of Langhorne’s commercial district. (Refer to Illustrations 1a-2b of a revitalized Langhorne Station area for ideas for the Pine Watson Shopping Center.)



The Pine Watson Shopping Center is geared toward patrons who drive, despite its location within a small borough, its immediacy to Maple Avenue, a commercial area reminiscent of a traditional Main Street, its “mom and pop” stores that make up the majority of businesses in the plaza, and its proximity to public transit.

- Enhance the aesthetics of the parking lot so the parked automobiles will be less visible from the street. Repeat the existing tree plantings along the rest of the lot and create a visual barrier between the edge of the parking lot and the sidewalk, such as with a combination of a low wooden fence and colorful flowers.
2. Establish crosswalks between the shopping center and the other side of the street.

C. Route 413/213 Intersection

Issues: This busy intersection serves as a major crossroad in Langhorne Borough and experiences similar conflicts between driver-oriented uses and pedestrian-oriented uses as other commercial districts in the study area. However, these two different uses are visually more distinctive, presenting a patchwork of “strip mall” and neighborhood center layouts. Three gas stations and a municipal park, anticipated for renovations, occupy the four corners of the intersection; the Pine Watson Shopping Center lies just north, and a number of small businesses and civic buildings line the first block of Maple Avenue, just west of the intersection. This section of Maple Avenue and the municipal park provide pedestrian-friendly spaces but their flow is disrupted by the adjacent vehicular traffic and auto-related businesses. Drivers also deal with their own problems of congestion at this intersection during peak hours.

Recommendations:

1. Install crosswalk lights at all four corners of the intersection for the safety of pedestrians.
2. Install left-turn signals at remaining approaches that currently do not have such lights to better facilitate vehicular traffic flow.
3. Repaint faded crosswalk markings or pave crosswalks with stamped colored concrete or brick to connect and extend the existing decorative paving used at all four corners and along the nearby sidewalks, including the commercial area of Maple Avenue.



Repaint crosswalk markings or pave crosswalks at this busy intersection.

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4. Encourage more independent retail businesses along Maple Avenue that would draw more pedestrian activity.
5. Assist in establishing agreements between various property owners to provide shared parking for park visitors, retail shoppers, office clients and other people who may wish to park-and-walk in the area. Possible lots to consider may include the nearby lots for the Pennwood Library, the elementary school and the Pine Watson Shopping Center.

D. Pennwood Library Vicinity

Issues: Several issues related to pedestrian safety and access concern this area where the Pennwood Library is situated. Four major factors contribute to the dangerous nature of this intersection: the wide street crossings; the inadequate signage warning northbound drivers of the library and possible pedestrians; the speeding traffic; and the location of the library, which is set back on its corner property and oriented only to the southbound traffic. Another gathering place, a church, is located across Flowers Avenue from the library, heightening the need to address these issues. Furthermore, the nearby bus stops, as with all others along the corridor, lack any amenities for those waiting for their rides. Given the adjacent uses and space availability, better accommodations for public transit riders should be provided if funding becomes available.

Recommendations:

1. Replace the faded library signage along both directions of Route 413 with clearer signage located in unobstructed areas. The notification of a library can serve as a safety precaution, letting drivers know that they will be coming into a community setting where there will be potential activity and people. This is especially crucial for northbound drivers where the library is not visible until they are passing it.
2. Install new pedestrian crossing signage along both directions of Route 413. While one exists along the southbound direction of the



The visibility of Pennwood Library is limited to one direction of traffic as it is set far back from the street and only oriented toward southbound traffic along Route 413.

corridor, it is too small to adequately warn drivers and needs to be replaced.

3. Determine whether the area would be eligible for a pedestrian crossing signal.
4. Establish marked or paved crosswalks at the intersection.
5. Create pull-in lanes for the buses that would extend parts of the sidewalks further out into the existing driving lanes, reducing the distance pedestrians will need to walk when crossing the street. This will also help to slow down traffic as people tend to drive more cautiously along narrower lanes.
6. Provide amenities, such as benches and shelters, at the bus stops in front of the library and across the street.
7. Better enforce the 35 m.p.h. speed limit.

E. Woods School Vicinity

Issues: The Woods School is located just off Route 413, north of the bend at the Langhorne Manor/Middletown border and south of the overpass crossing Route 1. Some employees of the school rely on the buses that stop along the study corridor, where it is intersected by Woods Drive. There are no bus stop signs at that location, but SEPTA has a flag-stop policy in the suburbs whereby drivers are allowed to stop for passengers at their own discretion. While this is a considerate convenience for these employees, it also poses a safety hazard given the lack of pedestrian accommodations in that particular vicinity. Street shoulders substitute for sidewalks, and no marked crosswalk exists. Furthermore, the limited sight distance due to the bend in the road driving northward and the shift in elevation driving southward prevents drivers from discerning the presence of pedestrians in advance. The speeding traffic adds to the potentially dangerous nature of this section of Route 413.

Recommendations:

1. Establish marked crosswalks for pedestrians walking to and from the school.
2. Install pedestrian crossing signs in both directions of the corridor. This may be done

- in tandem with the pedestrian crossing signs for the Pennwood Library area.
3. Establish a designated area for pedestrians to walk along this section of the corridor. This will most likely require a reduction in the widths of the driving lanes.
 4. Work with SEPTA to officially designate bus stops at this location where passengers are already regularly let off and picked up. This will result in signage for the bus stops and will alert drivers to other users of the corridor. Another alternative would be to eliminate the flag-stop policy for this particular location and require riders to utilize the bus stops at the Pennwood Library. This stop is currently being used by some of the school employees.
 5. Better enforce the 35 m.p.h. speed limit.

F. Langhorne Station (SEPTA) Vicinity

Issues: The study corridor is blessed with a train stop along the R3 West Trenton line. Unfortunately, the adjacent area has not taken full advantage of this valuable asset. The current dominant land uses are a poorly designed strip mall with a large underutilized parking lot fronting the corner of Route 413 and Legrande and industrial uses south of the train station and along Legrande Avenue. While viable industrial businesses should remain in operation, other types of uses would be better suited for land adjacent to a train stop. Pedestrian-friendliness and commuter- and neighborhood-oriented businesses, as strongly acknowledged by the Steering Committee, are sorely needed in order to revitalize the area. In addition, the bus stops should be made more prominent and upgraded with amenities befitting a public transit node. As described in the Public Transit: Stops and Amenities section under General Recommendations, the train station could also benefit from some improvements. The back-up of traffic from the north and south direction of Route 413 that results from passenger pick-up by buses that do not pull over to the curb and from train crossings needs addressing as well.

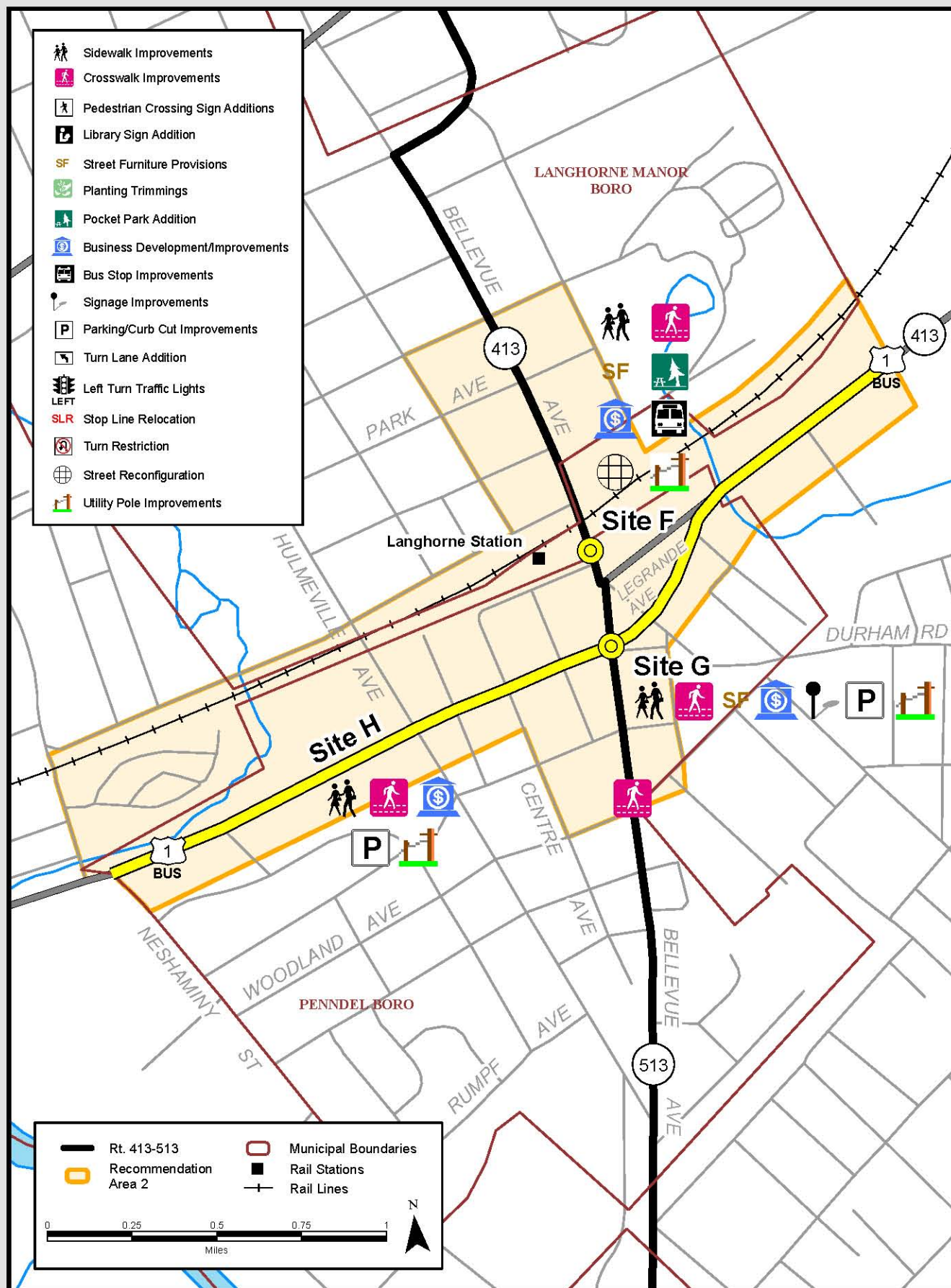
Recommendations: DVRPC suggests that the previously mentioned Revitalization Plan for

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Map 7: Recommendation Area 2



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Penndel be reviewed in conjunction with the following recommendations, as many of them will be addressed in greater detail by the latter report. Although each set of recommendations may not necessarily exactly mirror one another, coordination and a general sense of agreement have been established between DVRPC and the private consultant for the Revitalization Plan.

1. Conduct a market study to reevaluate the types of uses, including housing, that would be most appropriate for the area, taking advantage of its public transit service. While new businesses are needed, some of the existing businesses, such as the post office and eateries, may still be germane for the location. To carry out the vision and plan resulting from the market study, the following actions may be needed: zoning amendments; collaboration with existing property owners to enact changes to the physical structures or types of use/tenants leasing space; assistance with relocation of incompatible businesses through incentives; and/or municipal purchase of private land. A last resort may be the use of eminent domain, or the taking of private property that poses a serious nuisance or compromise public safety. Due to its controversial and labor-intensive nature, careful consideration and strong reasoning should be employed before implementing this type of action. It may also require the assistance of the Bucks County Redevelopment Authority.
2. Consider reconfiguring the area's physical space to create a distinct sense of a community that includes not only local residents but commuters and possibly destination shoppers. A glaring opportunity for improvement is the shopping center. Instead of the small businesses being upstaged by the parking lot and the noticeably mediocre architecture of the plaza, greater thought should be given to the orientation and footprint location of the storefronts, the architectural design of the buildings, the aesthetic enhancement and placement of the parking lot, and the overall impact of the property as it relates to the



Illustration 1a: North Toward Langhorne Station (Before)

Photo: Brown & Keener Urban Design



Illustration 1b: North Toward Langhorne Station (After)

This photo simulation demonstrates a viable alternative for the Langhorne Station vicinity. Density is created by the addition of two-story buildings that line up to the sidewalks; activity is generated through these shopping options, pedestrian-friendly streets, sidewalks, lighting and transit stops; traffic is better circulated with the reconfiguration of the intersection in the foreground and partial pull-in lanes for buses; and the overall aesthetic quality of the area is enhanced by color and landscaping. Notice that parking is still available and that the original plaza is a part of the revamped commercial district, but with some retrofitted elements, which is shown more clearly in the following set of illustrations. Apartments can be another option for the second floor of the new buildings.

Photo Simulation: Brown & Keener Urban Design



Illustration 2a: South of Langhorne Station (Before)

Photo: Brown & Keener Urban Design



Illustration 2b: South of Langhorne Station (After)

Above is a different view of the Langhorne Station area proposed in [Illustration 1b](#). By providing a mixture of shops and services that are beneficial to commuters and other residents within an easily accessible, pedestrian-friendly, and aesthetically pleasing environment, the Langhorne Station area is poised to become an example of revitalization along the Route 413/513 corridor.

Photo Simulation: Brown & Keener Urban Design



Circulation at Route 413/Durham/Legrande can be problematic due to the intersection's configuration. The wide expanse of roadway, along with the various patterns of traffic, can also become a dangerous situation for pedestrians needing to cross the street.

Langhorne Station area. Illustrations 1a-2b (before and after) depict a possible alternative, where the businesses and buildings are relocated to the front edge of the property and become the focal points. Parking can be provided behind the buildings and on the streets. (Also refer to Commercial Businesses: Facades and Signage/Lighting under General Recommendations.)

3. Consider reconfiguring the area's physical space to provide better connectivity for pedestrian activity. This may include the reshaping of blocks, the elimination or relocation of streets, the redirection of traffic, and/or the addition of "stop" and "yield" signs. A prime candidate for such changes is the intersection of Route 413/Durham/Legrande, where a multiple convergence of traffic can produce a confusing scenario for both drivers and pedestrians. Depending on a driver's or pedestrian's point of reference, visibility of other cars and pedestrians may be limited and who has the right-of-way may not be clear. In addition, the huge gaps between sidewalks for pedestrians crossing between the corner of Route 413/Durham Road and Legrande Avenue and between the corner of Route 413/Legrande and the other side of Route 413 further enhances the hazards presented by this intersection. Besides the Revitalization Plan, DVRPC's Congestion Management System study provides recommendations for this intersection.
4. Establish designated crosswalks at intersections and between the public transit stops and businesses.
5. Provide an adequate sidewalk width to allow pedestrians to walk side by side.
6. Introduce dimensionality and color to the area to create a sense of arrival for public transit users and drivers. This can be accomplished through paved crosswalks or brick sidewalks, building architecture, storefront signage, banners, and street furniture.
7. Improve the existing bus stops to encourage greater ridership. As suggested under the general recommendations, the improvements to the bus stop located on the west side of Route 413 can be integrated with potential

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- enhancement of the open space surrounding the train station parking lot. Although space availability is limited at the current bus stop on the east side of Route 413, the opportunity to redesign and provide a more comfortable waiting area for transit riders should be seized if the property will be reconfigured (Illustrations 1b and 2b). For an immediate remedy or should the adjacent property not be redesigned, the bus stop could be enhanced using certain quick and inexpensive methods, such as providing some color by tastefully painting the sidewalk or utility pole on which the bus stop sign is hung.
8. Improve the existing bus stops to provide better traffic circulation. Because cars tend to back-up on both the commercial side in Penn del and the residential side of Langhorne Manor when the buses stop for passengers, the creation of areas for buses to pull over when picking up or dropping off passengers should be considered. This may require the relocation of the bus stop on the east side of Route 413. However, if the shopping plaza is reconfigured, then the pull-over lane for the bus should be integrated with the new design.
 9. Provide improvements along Park Avenue, including its eastern end that intersects with Route 413. Although it is recommended to relocate the industrial uses to another location, if that is not possible, the street should be repaved, and a designated crosswalk should be established from one side of Park Avenue to the other in order to continue the pedestrian connectivity described above. Increasing the corner radii of the street may assist with the flow of traffic by allowing easier truck access and, thus, preventing back-ups in traffic while trucks are turning into or from Park Avenue. Options to consider would be restricting Park Avenue to one direction or closing off access from the east end. Another outlet may be substituted at a less congested area. In addition, a new drainage system needs to be examined and installed to take care of the current storm water problem. This is especially critical



Trucks turn into Park Avenue, a relatively narrow roadway considering the industrial uses it accommodates, impacting traffic and creating potential safety hazards.



Traffic is backed up as drivers wait for the freight train to pass.

considering the street's location and the desire to make the area more pedestrian-friendly.

10. Relocate the utility poles underground or behind the buildings. Other options worth considering are to explore the possibility of consolidating some of the utility lines and replace the wooden poles with something more aesthetically pleasing. (Refer to Streetscapes & Public Amenities under General Recommendations.)

G. Route 513/Business Route 1 Intersection

Issues: The local commercial establishments of Route 413/513 and the regional commercial establishments of Business Route 1 converge at this junction, as both are equally represented at the four corners of the intersection. While businesses in these two different markets can co-exist harmoniously, the significantly larger presence of the auto- and home-related shops seem to visually overpower the local stores and professional offices in the area, creating an off-balance environment where the sense of arriving in a community is lost. This is further complicated by other prevailing elements that clutter the landscape and discourage pedestrian activity. The dominance of automobiles is evidenced by the vehicular congestion and back-ups sometimes generated when drivers have to wait to make left-hand turns. The apparent auto-oriented nature of the area is also visible through the multitude of curb cuts and minimal sidewalk provisions. All of these elements as well as the aesthetic quality of the area work counter to the goal of a pedestrian-friendly environment.

Recommendations:

1. Address the safety concern at the intersection. Left-turn signals are not recommended by PennDOT due to the additional back-up that would result without available turn lanes. As such, and assuming the width of the roadways remain the same, other indirect measures may be employed. Drivers need to be reminded that they are sharing the use of the space with residents and other pedestrians by assertively



More intensely than anywhere in the study area, the Route 513/Business Route 1 intersection represents the crossroads of regional and local traffic and businesses.



Although short in length, Brook Avenue creates a wide swath of road surface as it intersects with Business Route 1. The driving lane can be tightened without obstructing the existing truck access.

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- establishing and highlighting the elements that create a walkable community. These elements include street furniture, banners, crosswalks, and neighborhood-oriented businesses.
2. Without compromising the usage of Brook Avenue by truck drivers, tighten its unusually wide intersection at Business Route 1 by installing curb extensions at the corners. Brook Avenue itself can be narrowed by continuing the curb extension into a wider sidewalk or providing parking along one side of the street. Visually break up the vastness of the road surface by delineating the parking spaces with paint.
 3. Work with and provide incentives to the corner businesses either to move their storefronts to or near the property lines that abut the sidewalks or provide better screening of their parking lots. While there is room for improvement, Penndel Pizza demonstrates a concerted effort to reduce the visibility of their fenced-in parking by locating it to one side and a neighbor-friendliness by providing outdoor seating fronting Business Route 1.
 4. Work with businesses to eliminate unnecessary curb cuts.
 5. Encourage more businesses that serve walk-in customers, such as retail and restaurants.
 6. Encourage business owners to improve their facades and signage, including those located just south of Business Route 1. Although these particular buildings have a neighborly feel, distinguished signage, added colors, and awnings can greatly revamp its homogenous look.
 7. Provide street furniture, including pedestrian lighting, and repave or install accented sidewalks. The blocks just south of Business Route 1 already have just enough sidewalk space to accommodate street furniture; they can also be improved by the use of a second material, such as brick paving.
 8. Consolidate public signs to prevent clutter and obstruction of sidewalks and streetscapes.
 9. Eliminate the metered parking space closest to the intersection on the east side of Route



This group of businesses just south of the Route 513/Business Route 1 intersection, while located in one of the more attractive buildings in the area, could improve its appeal by adding some color and installing distinctive commercial signage.

513, just south of Business Route 1. This spot interferes with cars queuing up to turn right.

10. Relocate the utility poles underground or behind the buildings. Other options worth considering are to explore the possibility of consolidating some of the utility lines and replace the wooden poles with something more aesthetically pleasing. (Refer to Streetscapes & Public Amenities under General Recommendations.)

H. Business Route 1

Issues: Business Route 1 is seemingly disconnected from the communities it passes through as most of the highway included in the study area serves a driving clientele and, despite its commercial nature, pedestrian provisions are considerably lacking. Indeed, a majority of the businesses east of Route 413/513 are auto-related. A few residences are situated along Business Route 1, west of Route 413/513. In order to reach the goal of a commercial area that better serves the nearby residents while continuing to attract drive-by and destination customers, many issues need to be addressed, including, the most obvious issue, the types of businesses located on the highway. Furthermore, in order to attain the goal of a pedestrian-friendly environment, certain amenities need to be provided.

Recommendations:

1. Evaluate the desired future uses of the highway and assess the potential for change through phases. PennDel's Revitalization Plan is expected to address this issue for most of Business Route 1 included as part of the study area in this report.
2. Review and update the zoning ordinances and enforce where needed for the sake of safety and improvement in the appearance of the streetscape.
3. Encourage and provide incentives to bring retail businesses in the sections closer to Route 413/513. Be sure they would also be accessible to pedestrians as well as drivers

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- by providing a pleasant walking experience through wide and safe sidewalks.
4. Provide financial assistance and/or tax incentives for pre-approved improvements made to properties. (Also refer to Commercial Businesses: Facades and Signage/Lighting under General Recommendations.)
 5. Work with property owners to eliminate unnecessary curb cuts.
 6. Consider purchasing land from private owners or using the power of eminent domain to effect desired use for the good of the community. This would be applicable to properties identified as key to the revitalization of the area and in which all efforts to work with the owners for improvements to be made have been exhausted and unsuccessful. As mentioned under the Langhorne Station (SEPTA) Vicinity recommendations, eminent domain should be looked upon as a last resort due to its controversial and labor-intensive nature. Careful consideration and strong reasoning need to be employed before implementing this type of action. It may also require the assistance of the Bucks County Redevelopment Authority.
 7. Provide adequate sidewalks along the highway and establish marked crosswalks at traffic-lighted intersections. Provisions may be needed at certain sections of the highway that are decidedly unsafe for pedestrians. This may entail the restriction of pedestrians to one side of the highway.
 8. Work with SEPTA to improve the bus stops along the highway. Given that currently there are absolutely no amenities provided at these bus stops, including appropriate sidewalk space at most stops, those waiting for buses or disembarking from buses at these locations are in increased potential danger of being struck by oncoming traffic.
 9. Relocate the utility poles underground or behind the buildings. Other options worth considering are to explore the possibility of consolidating some of the utility lines and replace the wooden poles with something more aesthetically pleasing. (Refer to



Auto-related businesses dominate the Business Route 1 streetscape, east of Route 513.



A few multifamily homes, west of Route 513, are located among the highway-oriented establishments of Business Route 1.

Streetscapes & Public Amenities under
General Recommendations.)

I. Hulmeville Clock Vicinity

Issues: This Y-shaped intersection can be quite confusing if one is not familiar with the permitted traffic regulations and people's driving habits at this location. Driving northward on Route 513, one encounters a stop sign that may or may not be directed at the driver, dependent upon which direction the driver wishes to proceed. Although another sign notifies those continuing right that they need not adhere to the stop sign, it is not easily readable given the location (after a curve in the road) and its uncommon usage. This creates some pause by both drivers proceeding right or turning left, and, thus, contributes to some confusion by other drivers at the other corners of the intersection. In sum, understanding who has the right-of-way is problematic when cars, in any of the directions, arrive at the intersection at or around the same time.

Recommendations:

1. Provide right- and left-hand turn lanes with arrows marked on the roadway for those driving northward on Route 513. This will also notify southbound drivers of the potential direction of the northbound driver. Another option, perhaps used in conjunction with the marked turn lanes, would be to require drivers turning either right or left to stop.
2. Install signage prohibiting southbound drivers from Route 513 from making the 45 degree turn onto Neshaminy Street; likewise, prohibit southbound drivers from Neshaminy Street from making the 45 degree turn onto Route 513 North. Drivers currently make potentially dangerous turns to negotiate this intersection. Other more accommodating alternatives would be to either decrease the sharpness of the turn by modifying the southern tip of the park configuration or consider the extension of an existing street close to this intersection that would provide a direct connection between Route 513 and Neshaminy Street.



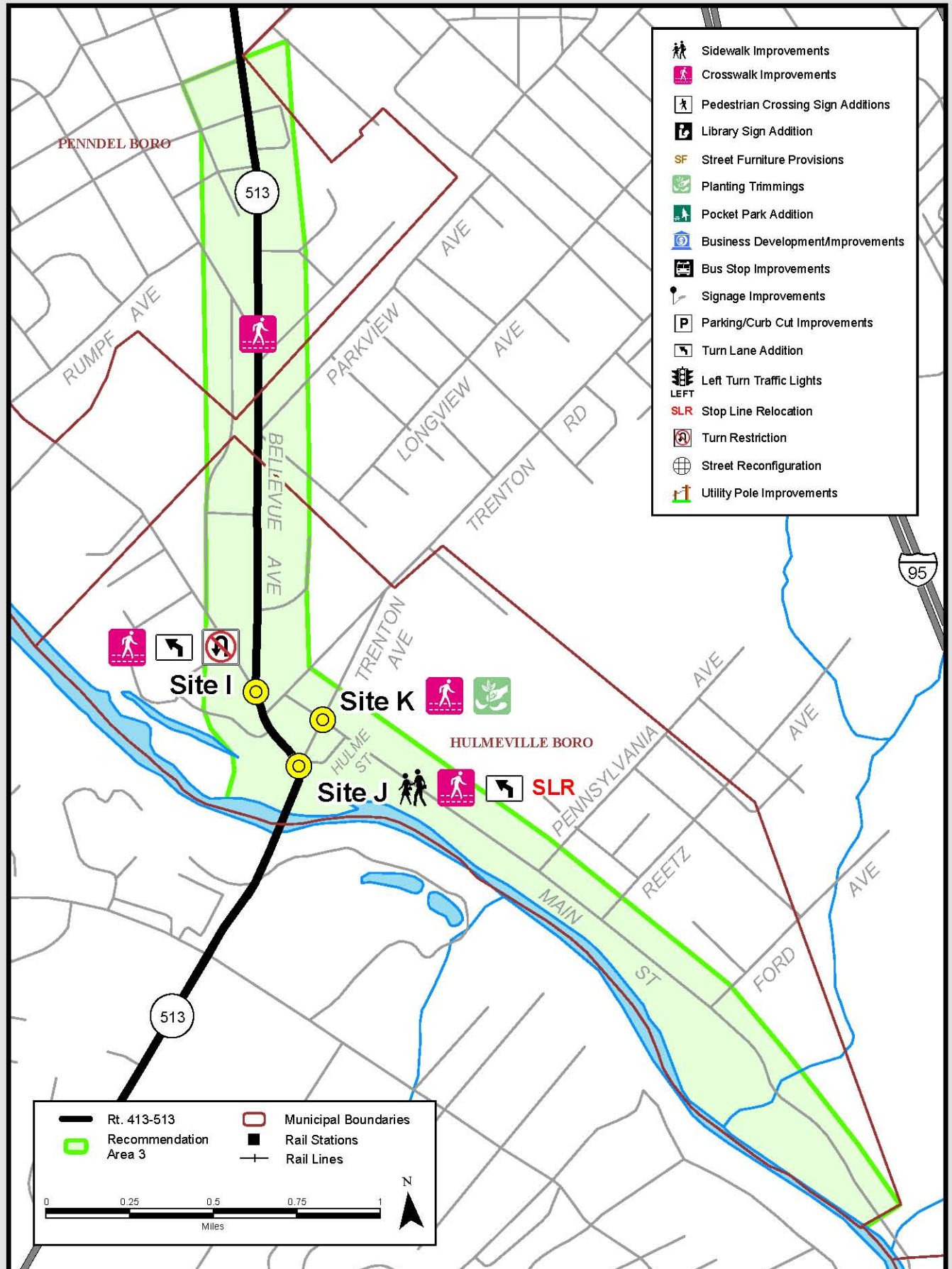
The Hulmeville Clock area can be puzzling to navigate when cars converge from the various points of the Route 513/Neshaminy intersection.

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Map 8: Recommendation Area 3



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3. Given the pocket park at the intersection and the nearby commercial businesses, crosswalks should be provided to create physical pedestrian linkages between leisure activities, such as recreation and shopping.

J. Route 513/Trenton/Hulme Intersection

Issues: Local and regional traffic converge at this intersection, including the southbound traffic over the bridge into Bensalem on Route 513 during rush hour. As at other junctures in the study area, congestion, visibility, and limited pedestrian accommodations are issues in need of attention.

Recommendations:

1. Reexamine the need for and possibility of separate turn lanes to alleviate traffic back-ups.
2. Move the stop line along Route 513 South further back so that drivers from Trenton Avenue turning right toward Route 513 North will have more space to maneuver around the sharp turn, thus preventing potential accidents.
3. Consider extending the sidewalk around the corner of Hulme and Trenton, continuing along Trenton Avenue. This will require a curb extension and the clearance and leveling of the existing slope. Narrowing the roadway may be beneficial to slowing down the speed of passing cars.
4. Establish crosswalks at this intersection.

K. Main/Trenton Intersection

Issues: Speeding is a problem at this intersection, which lies within and adjacent to Hulmeville's commercial district. Though a traffic light requested by the Borough was deemed to be unnecessary, other means can be implemented to encourage drivers to slow down.

Recommendations:

1. Determine the appropriateness of establishing raised crosswalks or a raised intersection at this location. According to



Cars sometimes have difficulty staying in lane when making the tight right-hand turn. An easy solution may be to move the stop line back for cars waiting at a red light along Route 513 South, so there will be less of a chance of an accident.

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Pennsylvania's Traffic Calming Handbook, raised crosswalks have a significant effect on speed reduction, while raised intersections have a moderate effect. When either method is combined with textured surfaces and/or curb extensions, its effectiveness is enhanced.

2. Consider the use of stop signs if raised crosswalks and raised intersections are not feasible.
3. Trim the plantings along the Trenton Avenue side of the three-story commercial property to provide better visibility for drivers along Main Street looking to make a right- or left-handed turn.

Zoning Recommendations

Despite most of the study area already having been developed, deliberate changes in land use can still occur gradually over time if zoning changes are enacted to provide a framework for future development. The following are some recommended zoning changes intended to strengthen and diversify the study area's economic base, amenities, and community identity:

- Consolidate Langhorne's two commercial districts or revise the C-1 Commercial District (C2 Highway/Auto-Oriented Commercial in Composite Zoning Map) to encourage future commercial businesses and services to be more in step with the personality of the surrounding community and to provide a diversity of consumer goods to the public. While gasoline stations are important services to offer both local and regional drivers, the existence of three stations overwhelms perhaps the most significant intersection of the small borough in terms of defining the character of Langhorne to its residents and visitors. Zoning should be revised in order to mirror the purpose and intent of the adjacent C Commercial District (C1 Neighborhood/Regional Commercial in Composite Zoning Map) to "encourage pedestrian traffic; and, to preserve the historical character of the District." This being said, while most of the businesses along Maple Avenue in this district demonstrate worthy examples in keeping with this



This intersection in Hulmeville poses speeding problems for the local community. Residential and commercial uses lie across from each other, and the sidewalks are either narrow or non-existent.

statement, the Pine Watson Shopping Center along Route 413, despite technically being part of the C Commercial District, follows the “automobile-related” objective of Langhorne’s C-1 Commercial District in that its design is geared toward drivers rather than pedestrian traffic. Existing zoning prohibits a shopping center from being “erected within one hundred (100) feet of a street line or within fifty (50) feet of a property line. [Also,] no parking, loading, or service area [can] be located less than thirty (30) feet from any property line.” Zoning should be amended to require certain development criteria, such as setbacks and parking, which would produce commercial and mixed-use structures similar to those along Maple Avenue, rather than providing zoning that supports the establishment of a strip mall to the detriment of Langhorne’s community character.

- Create a Transit-Oriented Development (TOD) Overlay District within approximately a quarter mile of the Langhorne Station in Penndel. While parts of the area are already zoned commercial and residential, a TOD Overlay District will purposely focus future developments to take better advantage of the transit service available in the area. As stated in DVRPC’s brochure, *Municipal Implementation Tool #1: Transit-Oriented Development* (August 2002), TODs can offer a multitude of transportation, environmental, economic, and quality of life benefits. These benefits include an increase in transit ridership, reduction in the use of automobiles and individual costs associated with maintaining private vehicles, improvement in air quality, savings in tax dollars by more efficiently utilizing existing infrastructure, an increase in local tax revenues by supporting infill and redevelopment, strengthening the sense of community and the identity of the corridor, and creation of continuous activity in the area. Building upon some of the existing businesses, in order for a TOD district to succeed, a greater density of development convenient to transit riders and pedestrians needs to be established, such as retail, restaurants, personal services, entertainment and cultural institutions, and multifamily housing. Among the uses that do not foster greater pedestrian activity and therefore are

**Assessment of Land Use and Transportation Solutions for the
Route 413/513 Corridor**

not beneficial to TOD districts are big box retailers, auto repair shops, warehousing, and large manufacturers. This means that some of the current industrial uses in the area will need to be relocated. Further discussion on the establishment of this type of mixed-use development is expected to be included in Pennndel's Revitalization Plan.

- The portions of Business Route 1 that lie outside of the recommended TOD Overlay District would benefit from changing certain as-of-right uses to conditional uses to help municipalities, namely Pennndel and Middletown, to exercise greater control over future development along this highway. Automobile businesses would be a prime candidate for this regulation change. This type of use would still be allowed along Business Route 1, but under stricter, but reasonable, design as well as safety restrictions, which may include the consideration and compatibility with recent planning studies and community goals. Another portion of the highway that should be considered for similar change is the adult commercial zone in Pennndel. If enough support is given to such uses, a possible compromise would be to change the zone to commercial, with adult-related businesses allowed under conditional use standards.
- If a TOD Overlay District is created in Pennndel, it is recommended that Langhorne Manor consider broadening the scope of its current regulations for businesses located on residential properties. Although there are no commercial districts within the borough, home occupations are allowed as-of-right and accessory offices are permitted by special exception. Due to its proximity to the Langhorne Station and the location of the Philadelphia Biblical University within its borders, the borough may take better advantage of potential consumer activity from transit riders, students, and educational staff, thus generating some economic revenues, by permitting a wider variety of commercial businesses and services and a larger percentage of each property to be dedicated to these types of uses. To retain the residential character of the borough, commercial uses should be limited to less than 50 percent of the ground floor. This will still significantly expand current



Just north of the train station and heavy commercial and commuter traffic lies the residential tranquility of Langhorne Manor.

regulations, which only allow for 25 percent of the ground floor area or 200 square feet, whichever is less, to be used for commercial businesses. These “live/work” properties can be contained within a two- or three-block radius of the train station and perhaps across the street from the university via an overlay district, special exception, or change in the as-of-right zoning.

- The parcels situated in the northwest corner of the Route 513/Trenton/Hulme intersection should be rezoned from R-1 Residential (R2 Medium Density Residential in the Composite Zoning Map) to neighborhood/regional commercial. Commercial activity already exists at this corner, and, given the traffic that converges at this intersection, the parcels are more conducive to commercial purposes than residential dwellings. It may be worthwhile to extend the two existing commercial zones so that they connect with one another and lay the foundation for future businesses, providing an expanded and linked commercial district. This will not create an overload of commercial businesses in Hulmeville since only a few parcels in total will be affected, helping to preserve the hamlet-like environment of the borough while providing a slight boost in its economic development. Furthermore, commercial zoning in Hulmeville allows for single-family residential and duplexes, which would retain the as-of-right status of the homes that currently exists, although the dimensional requirements would be different.
- Rezone significant open space properties, such as the Langhorne Spring Water District, to officially preserve their value as community assets. Although these properties are not within the outlined study area, they provide linkage opportunities that would enhance the quality of life in the municipalities and may create indirect economic benefits. Further descriptions of these parcels are provided in the open space planning reports produced by the Bucks County Planning Commission.



It is recommended that the commercial zones in Hulmeville be extended to include a limited amount of parcels that are currently designated as residential, but not necessarily used for such purpose.

IMPLEMENTATION STRATEGIES

During Fiscal Year 2004, the project moves into an implementation phase based upon the recommendations from this study, the immediate resources available, and the desired direction of the Steering Committee. While not all can be carried out during Fiscal Year 2004, the implementation strategies listed below relate to the study recommendations and can be used as a guide for short-term and long-term actions.

- Update individual comprehensive plans to provide each municipality with a vision and guide to future development. As stated earlier, Langhorne Manor and Penndel already have plan updates underway for their comprehensive plans. Consideration should also be given to updating the joint *Four Boroughs Comprehensive Plan* published in 1975.
- Revise current zoning ordinances and maps in order to better effect an environment that considers the balance between pedestrians and drivers, residents and commuters, and businesses and other uses (recreational, cultural, residential).
- Establish design guidelines for future development, taking into account the historic preservation of building rehabilitations and the historical nature of surrounding structures. While guidelines can be beneficial for residential properties, there is a more pressing need for design guidelines for commercial businesses in the study area.
- Conduct an in-depth revitalization plan, which includes a residential and business market study, for each municipality. This may require retaining a consultant. As mentioned previously, a consultant was retained to conduct a revitalization plan of Penndel's commercial district.
- Assess potential partnerships with other public agencies and private organizations and institutions committed to community development to carry out the goals of the study area.

Section V

- Apply for funding to implement the community development and transportation-related activities mentioned above through programs administered by local and state agencies. Some funding programs look more favorably to joint applications submitted by two or more municipalities. DVRPC will identify funding sources during Fiscal Year 2003 for which municipalities may subsequently pursue.

Discussions between the Steering Committee and DVRPC will follow this report to determine which of the above strategies will be undertaken during Phase II of this project. Other suggestions developed during ensuing meetings may be pursued in tandem or in place of these strategies.

APPENDIX A

STEERING COMMITTEE MEMBERS

| | | |
|----------------------|---------------------------------------|----------------------------------|
| Lynn Bush | Executive Director | Bucks County Planning Commission |
| Richard Brahler | Transportation Planner | Bucks County Planning Commission |
| Chris Blaydon | Mayor | Langhorne Borough |
| Kathy Horwatt | Councilwoman | Langhorne Borough |
| Maryann Barnes | Councilwoman | Langhorne Manor Borough |
| Frank Farmer | Councilman | Langhorne Manor Borough |
| Arlene Harms | Councilwoman | Penndel Borough |
| Barbara Heffelfinger | Councilwoman | Penndel Borough |
| Ward McMasters | Councilman | Penndel Borough |
| Ray Johnson | Councilman | Hulmeville Borough |
| Ferd Reetz | Vice Chair, Planning | Hulmeville Borough |
| John Burke | Manager | Middletown Township |
| Richard Bickel | Deputy Director, Regional Planning | DVRPC |
| Mary Ng | Regional Planner | DVRPC |

**Assessment of Land Use and Transportation Solutions for the
Route 413/513 Corridor**

Title: Assessment of Land Use and Transportation Solutions for the Route 413/513 Corridor

Publication No.: 04014

Date Published: February 2004

Geographic Area Covered: Langhorne, Langhorne Manor, Penndel, and Hulmeville boroughs, and Middletown Township in Bucks County

Key Words: Land use, transportation, revitalization, redevelopment, pedestrian provisions, streetscape, zoning, implementation strategies, multi-municipal planning

Abstract: The purpose of this study was to identify key land use and transportation issues and to propose associated recommendations for the Route 413/513 corridor, along with Business Route 1 and Main Street in Hulmeville, as it affects the four boroughs of Langhorne, Langhorne Manor, Penndel, and Hulmeville and a small portion of the township of Middletown. Recommendations address the issues of creating a pedestrian-friendly environment, improving roadways and public transit accommodations, balancing regional and local needs, strengthening existing commercial districts, and enhancing the aesthetic quality of the study area. This report completes Phase I of a two Fiscal Year project. It will be followed by an implementation phase related to the study recommendations.

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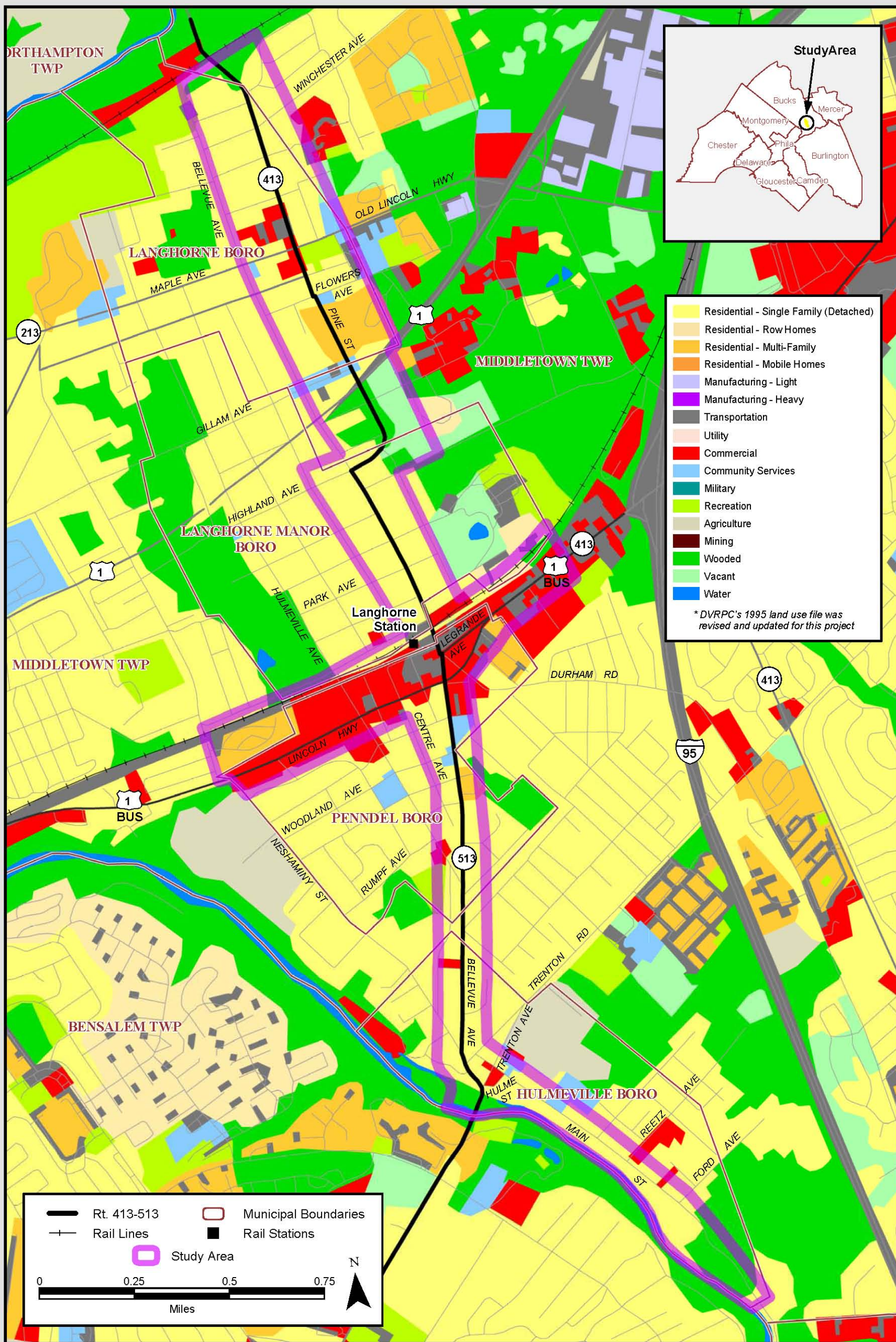
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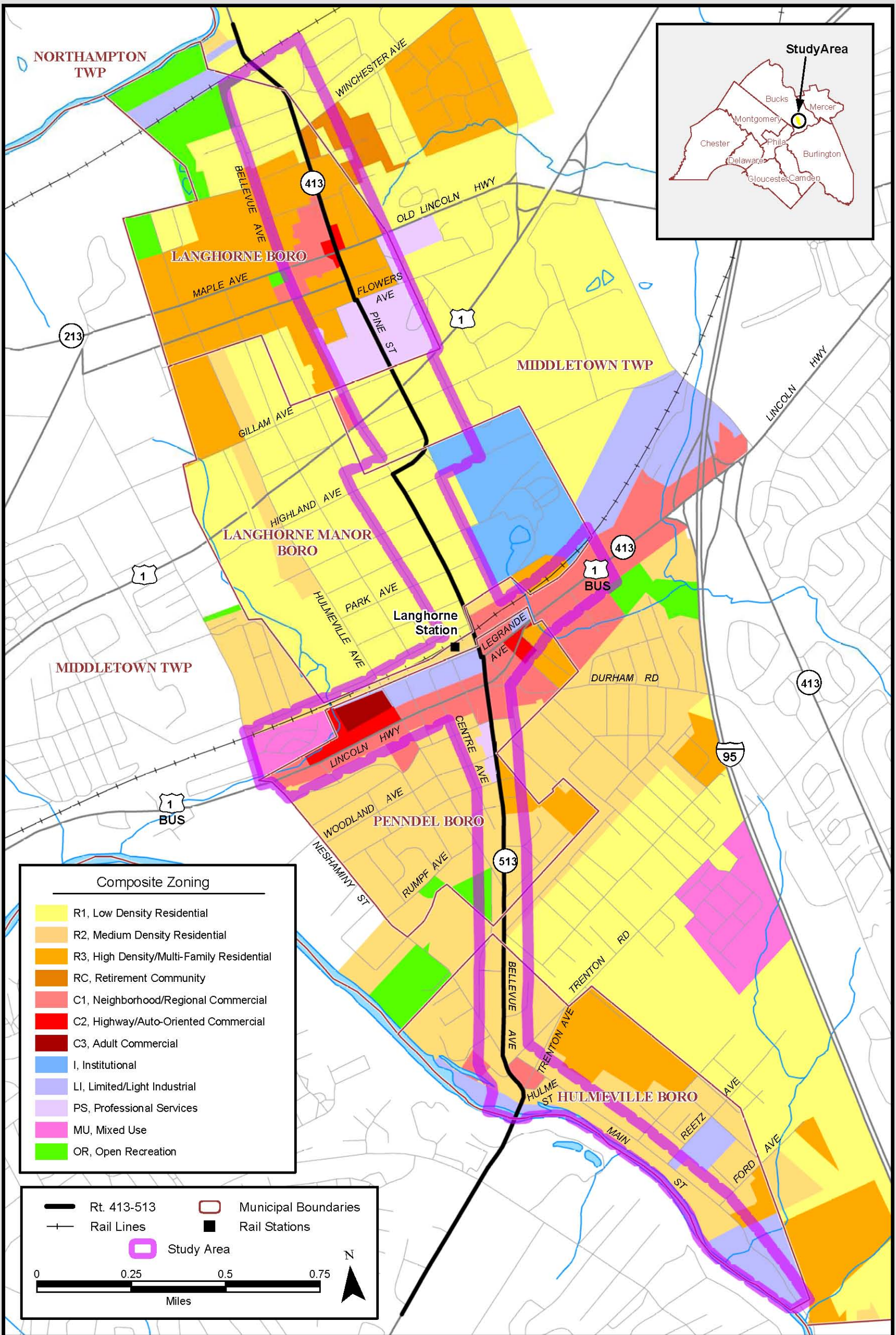
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ROUTE 413 / 513 CORRIDOR STUDY **Map 3: Land Use 1995***



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ROUTE 413 / 513 CORRIDOR STUDY

Map 4: Composite Zoning



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SEPTEMBER 2003