

Chapter 4

Land Use Plan

This Chapter provides an overview and analysis of the current existing land use patterns in the Borough, a brief summary of environmental and historic resource information relevant to land use planning, and a future land use plan. An analysis of existing land use patterns in the Borough is a crucial part of the Comprehensive Plan since understanding the present conditions provides the Borough with information needed to formulate land use policies and recommendations that maintain Borough character.

Through mapping and analyzing existing land use, it is possible to identify land use conflicts, infill opportunities, and fair-share housing issues. This information is critical to identifying future land use, and also important in planning for community facilities, circulation, and historic resource preservation and reuse.

Based on the analysis of existing land use patterns (in this Chapter), detailed planning topic analyses (contained in Chapters 5 to 13), and Borough policies (Chapter 2), this Chapter 4 provides a future land use plan for the Borough, which includes Map 4-1 showing existing land uses, Map 4-2 designating future land uses, and land use planning recommendations. Land use planning recommendations are broad-based, targeting an overview of the entire Borough. However, in addition to these broad-based land use planning recommendations, there are more specific recommendations related to land use (plus other planning topics) found in the 18 individual neighborhood planning areas (Chapter 5), as well as the topical planning Chapters 6 to 13.

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EXISTING LAND USE INVENTORY

General Land Use Patterns and Descriptions

Development that occurred between the 1976 and 1999 Comprehensive Plans left the Borough nearly “built-out” with little undeveloped land remaining, while further development that has occurred since the 1999 Comprehensive Plan has left the Borough essentially entirely “built out” with only a few scattered smaller undeveloped lots remaining, several of which are constrained.

There are five distinct existing land use areas/patterns in Malvern Borough, as follows:

- ⇒ King Street commercial corridor, rail line, and mixed use “Olde Towne” (northeastern and central eastern area);
- ⇒ Large scale institutional lands, open lands, and parklands (southern third);
- ⇒ Single-family residential (western central area);
- ⇒ Large scale multi-family residential (western area); and
- ⇒ Industrial (northwest area).

Malvern has a small town, diverse land use character containing a variety of uses, densities, and development patterns. The core development pattern is urban in nature with higher and medium densities in the northeastern and central eastern areas. Radiating out from this core, more suburbanized medium and some lower density development has occurred. Except for the King Street corridor and the industrial area, the developed portion of the Borough remains primarily residential. There have historically been greater densities and mixing of uses in “Olde Towne Malvern”, than in the rest of the Borough. Single-family attached and older single-family detached homes are the predominant housing types throughout “Olde Towne Malvern”. “Olde Towne Malvern” contains the commercial area for the Borough along King Street which includes smaller scale commercial businesses oriented to local needs as well as a few larger scale businesses which cater to the nearby region.

The northwestern sector of the Borough contains a concentrated area of industrial uses north of the railroad. The area south of the railroad and west of Warren Avenue contains larger older single family housing along Monument Avenue and newer suburban cul-de-sac developments around West King Street. There is a significant portion of institutional land in the Borough, which makes up approximately the southern 1/3 of the Borough. These institutional areas are largely open and contribute to the Borough through both visual appeal and preservation of natural resources and open lands. Significant park and recreational lands also exist in the southern portion of the Borough. Together, institutional lands and parks/recreational/HOA (Home Owner Association) lands make up nearly 50 percent of land in the Borough.

Map 4-1 and Table 4-1 illustrate a snapshot and provide a general idea of land use patterns. . Through land use is a relative constant in a borough setting, it does change and this Plan capture existing land use as it was in December 2010 as its fixed point in time for purposes of Plan inventory and analysis. The Borough conducted a similar existing land use inventory (1976 and 1998) as part of the last two Borough Comprehensive Plans. It should be noted that once completed, the East King Street mixed use Redevelopment will noticeably change numbers in this table, specifically adding more acreage to the multi-family, commercial, and mixed-use categories.

Table 4-1: EXISTING LAND USE INVENTORY, DEC. 2010

Existing Land Use Category	Acres	% Of Total
Residential (total):	262.8	32.4
Single-family detached	178.1	22.0
Multi-family	56.9	7.0
Two-family	27.5	3.4
Mobile Home	0.3	0.03
Institutional	235.2	29.0
Parks/Recreation/HOA	125.4	15.5
Road Right-of-ways (ROW)*	73.0	9.0
Industrial	27.7	3.4
Commercial	27.9	3.4
Vacant Land	21.9	2.7
Rail Line ROW	22.8	2.8
Mixed Use	9.8	1.2
Utility ROW	4.5	0.6
TOTAL	811	100

Source: Chester County Planning Commission, December 2010

* ROW Total includes all roadways and ‘paper’ roadways

The existing land use inventories demonstrate that the Borough has a stable and well established land use pattern. Since 1976, Malvern has continued to experience development but the land use pattern has remained consistent; with compatible long-established types of uses being built near one another, Malvern has not experienced drastic land use change. As expected, in both 1976 and

1998 there was considerably greater vacant land than in 2010. Since the 1998 inventory, some larger vacant lands in the northwest of the Borough (industrial section) remain vacant while others have been developed with commercial and industrial uses. Between the 1976 and 1998 inventories, larger vacant lands in the northwestern area, north of King Street, were developed with multi-family development and single-family homes. That development was compatible with the already existing multi-family housing south of West King Street and single family housing to the east along West King Street. During that time, many infill sites were also developed throughout "Olde Towne Malvern". As of 2010, some vacant land within the Borough remains scattered about the neighborhoods and could be potential infill development.

With the exception of infill sites and a few larger sites north of the railroad in the northwest, the Borough is essentially built-out with little remaining developable land. Although there are considerable institutional lands in the Borough, which are largely open land, for the purposes of this Plan these lands are considered to be in institutional use. Future options for these lands, should their development occur, will be considered in the land use plan section of this Chapter.

Specifically, since 1998, 100 lots have been developed (not including approved but yet to be developed subdivisions). Most notably of the newest developments is the Village at Pennwyck, which includes 12 single family detached dwelling lots in the Borough located in the southwestern portion on land adjacent to the Paoli Massacre Site and Willistown. This development also includes open space in the Borough and in neighboring Willistown Township, while the development has motor access from Willistown and pedestrian access from the Borough. This 100 lot figure also includes Malvern Hills II and Malvern Woods, both which were built less recently but after the 1998 existing land use inventory was drafted. The majority (86 lots) of the 100 lots developed (or redeveloped) since 1998 were developed as single family residential, while other uses or reuses since 1998 include multi-family residential and commercial uses. As a comparison, between 1990 and 1998, 98 lots were developed (not including approved but yet to be developed subdivisions); 65 of which were townhouses and two-family houses. Most notably, those included larger vacant lands in the northeastern portion, now developed as Malvern Hills I, and in the southwestern portion, now the Tidewater community. In 1998, an additional 70 single family lots had been approved and/or were under construction which accounts for, the then future and now (as of 2011) developed, Malvern Hills II, Malvern Woods, and Pennwyck residential developments. Those developments fully completed after 1998 resulted in the development of the remaining larger vacant residentially zoned lands in the northeastern section of the Borough (with the development of Malvern Hills II and Malvern Woods), and in the southwestern portion with Pennwyck.

This Plan recognizes that, although the Borough land use pattern is well established and there is little remaining developable land, redevelopment and land use change will continue. As the Borough continues to evolve and grow to meet future demands, land use changes will continue to occur on smaller vacant sites and through changes in use on currently developed lands, for example through conversions, adaptive re-uses, and other redevelopment activities.

Existing Land Use Categories

Residential Land Uses

Residential land uses make up nearly 1/3 (262.8 acres) of total land in the Borough. These residential uses comprise 4 categories of housing types. The predominant dwelling type in the Borough is single family-detached residential making up 22% of total Borough land area and about 2/3's of the total land in residential use. The land devoted to two-family residential, which includes twins and duplexes, equals about 3%. Multi-family housing, which is characterized as housing with

3 or more dwelling units including townhouses, condos, and apartments, accounts for 7% of total land. Lastly, mobile homes account for very little land (0.03%) in the Borough.

Between 1976 and 1998, residential development accounted for the greatest growth of any land use. That increase can be attributed to new developments which occurred on the remaining larger vacant sites throughout the Borough. Since 1998, 86 new single family detached residences have been constructed, and there are currently an additional 7 single-family detached dwellings (Malvern Heights) under construction or approved for construction. New residential uses have also included: 1 two-family residential use, 5 townhouses, 7 condominiums, and 1 clubhouse/rental office in an existing apartment complex. This variety in housing types reflects and reinforces the historical diversity of housing in Malvern. The newer single-family developments have generally been developed using a more suburban pattern with cul-de-sacs, however Malvern Hills I and II and the Village at Pennwyck have also employed the cluster design option. A proposed mixed use development, the East King Street Redevelopment Project, has 190 multi-family units planned.

While the Borough contains a variety of housing types, there are distinct areas where certain patterns of housing types are concentrated, as follows:

- A concentration of older larger **single family detached housing** is found along Monument Avenue, while a concentration of mid-20th century single family detached housing, in a suburban loop road and cul-de-sac development pattern, is located around the West King Street area, and newer (1990s) single family housing, built largely using a clustered suburban development pattern, is located in the extreme northern parts of the Borough. Single family detached homes on larger suburban parcels are along eastern Paoli Pike in the southeastern section of the Borough, however public sewer lines do not extend into this area, which in part, necessitates the need for larger lot sizes.
- **Large multi-family housing complexes** are found in the westernmost part of the Borough.
- A **mixture of housing types** (single family detached, two family twins and duplexes, multi-family townhomes and apartments, and mixed use residential and commercial) at higher densities is found in the “Olde Towne Malvern” sections of the Borough, including the King Street corridor.

Commercial/Mixed Use Land Uses

Commercial uses in the Borough comprise about 3% (27.9 acres) of total land. Mixed commercial/residential uses in the Borough comprise about 1% (9.8 acres) of total land. Commercial uses and mixed uses are primarily located in the King Street corridor in the central eastern portion of the Borough. Commercial uses in the Borough are mainly small scale, individual retail, service, and office uses with some mixing of second floor residential use. This type of development pattern represents the traditional main street area. There are also a couple of mixed uses along Warren Avenue near King Street and a few other scattered individual commercial uses and mixed uses in the Borough. There are some larger scale ‘newer’ commercial uses along King Street including one strip mall west of Warren Avenue and the Malvern Design Center east of Bridge Street. There are a variety of business uses available which help service the needs of Borough residents as well as cater to the surrounding region.

The newest development, which was in the preliminary planning phase as of spring 2011, is located at the east end of King Street. The East King Street Redevelopment project has taken several underutilized parcels and has proposed a mix of uses (retail, office, and residential) as well as 330 parking spaces. The East King Street Redevelopment project will assist in revitalization efforts in the Borough and further provide business corridor growth, an increase in customer base to support businesses, multi-family residential development, and an increase to the tax base.

As there inherently is limited land area in a small town setting, it is expected that not all types of commercial and mixed uses can occur. Thus, larger scale commercial use, such as auto dealership, more naturally occur in the surrounding region. The number of commercial uses, however, currently (2011) in Malvern is slightly greater than in either the 1976 and 1998 Borough existing land use inventories. This can in part be attributed to the Borough's extensive revitalization effort along King Street during the past decade which has entailed streetscape improvements, such as street trees, new sidewalks, and lighting, among other enhancements. As of 2011, there are several vacant structures in the business district. There are also commercial uses scattered within the residential areas of the Borough which further helps to booster the Borough as a place for employment and commercial activity.

Industrial Land Uses

Industrial uses make up about 3% (27.7 acres) of total land, and are concentrated within an area west of North Warren Avenue and north of the railroad. In both the 1976 and 1999 Plans, industrial uses took up approximately the same land area and were concentrated in the same location as currently. There are some smaller scale industrial uses along the north side of King Street, however most of lots are proposed as of 2011 as part of the East King Street mixed (commercial/residential) use redevelopment project. The location, amount, and intensity of industrial use has changed little in Malvern since the last (1999) Comprehensive Plan. Industry in the Borough consists of light industrial uses, such as warehousing and processing. There are some manufacturing uses and no heavy industrial uses within the Borough. The types of industrial uses in the Borough would likely change in the future if the Malin Road extension is realized.

Institutional Land Uses

Institutional uses, which include mostly private institutions, comprise a significant land area in Malvern, 29% (235.2) acres of total land. This can be attributed to the two large institutions encompassing the southern portion of the Borough: Malvern Preparatory School and the St. Joseph-in-the-Hills retreat property. These two large uses in the south contribute visual appeal of open lands and serve as a buffer between the developed areas of the Borough and the rural areas to the south in Willistown and the lower density residential uses in Malvern along Paoli Pike. This large amount of concentrated open land in institutional use is unusual for a Borough. Other institutional uses in the Borough include: churches, schools, and Borough properties.

Since the 1999 Comprehensive Plan, the 44-acre tract, north of the Malvern Prep School tract, was acquired from Malvern Prep for use as a public resource due to its revolutionary war historical significance (see Chapter 8). This land was the site of the Paoli Massacre and is preserved as passive recreation for historical interpretation and open space, and thus categorized as Park/Recreation/HOA.

Parks/Recreation/HOA

This land use category includes parks, recreational areas, and HOA properties. It accounts for 15.5% (125.4 acres) of total land. The largest tracts of land in the category are the Paoli Memorial Association Grounds, including the Parade Grounds used for passive recreation and Memorial Park, used for active recreation, the Paoli Battlefield Site, used for passive recreation and historical interpretation, and Randolph Woods (former Ruthland Avenue tract), used for passive recreation. There are three Borough-owned neighborhood parks: Quann Park, Burke Park, and Rubino Park, plus the Borough run basketball court on Old Lincoln Highway; all are used for active recreation. (See Table 11-2 for recreational facilities and amenities per park)

Rights-of-Way

This category consists of road rights-of-way, the railroad right-of-way, and utility rights-of-way, and includes about 12% (100.3 acres) of land in the Borough. Road rights-of-way (both built and paper roads) take up 9% (73 acres) of lands, the rail line comprises about 3% (22.8 acres) of total land and, other than the current expansion of the commuter parking lot, this acreage has not changed since 1998. Utility rights-of-way comprise very little land in the Borough.

Vacant Land

The Borough contains few remaining vacant lands, most of which are smaller scattered lots. In total, about 3% (21.9 acres) of total land is vacant. This percentage has decreased since 1998, and likewise decreased from 1976 to 1998, due primarily to an increase of residential development on the larger vacant lots as well as to the development of smaller infill lots.

As of 2011, the largest remaining vacant parcel in the Borough is located to the west of the industrial area in the northern section of the Borough. This parcel contains environmental constraints of steep slopes, dense woodlands, and an impaired stream as well as the potential to be part of a sensitive habitat/biodiversity corridor; if ever developed, these sensitive resources would need to be considered. A few other larger vacant parcels exist in the industrial area, and a larger vacant parcel remains in a residential area in the northeastern section of the Borough.

There are a few small vacant possible “infill” lots scattered throughout the Borough. Infill development on these lots would have minimal effect on the character of a neighborhood or the Borough overall. Redevelopment of existing larger underutilized lots or combining smaller existing lots for redevelopment, however, could impact the character of a neighborhood. For any larger scale infill development or redevelopment activities, sensitivity to existing Borough and neighborhood character in development design should be an up-front consideration.

Zoning Analysis

The zoning and subdivision and land development ordinances are the primary land use regulatory documents in the Borough. The newest full zoning ordinance update was adopted in 2003 and amended through April 2009, while the subdivision ordinance was updated in 2006. The purpose of this discussion is to provide an overview of the zoning ordinance and to conduct a basic analysis of problems or issues being experienced. The zoning ordinance contains regulations which govern land use, densities, setbacks, and other requirements. The subdivision ordinance outlines procedural and design requirements for subdivision and land development proposals. Because relatively few new land developments are expected in the future, this section will focus on an analysis of zoning rather than the subdivision and land development ordinance.

The zoning ordinance contains: 8 residential districts, 4 commercial districts, 4 institutional districts, 2 industrial districts, and a public open space and conservation district. The ordinance also contains Flood Hazard and Steep Slope Overlay Districts. To give a generalized idea of the types of uses and densities permitted by zoning, the uses and area/bulk requirements of each district are summarized in Table 4-2 below.

Types of zoning districts and uses correspond with the existing land use patterns in the Borough. Borough zoning districts in comparison with general existing land uses and general issues for consideration are discussed below. Specific zoning issues are analyzed in more detail within the Neighborhood Planning Areas discussion in Chapter 5.

Residential Zoning

Areas zoned as R-1 are located in the southeastern corner of the Borough. The principal land use in R-1 is single-family detached residential with large setbacks and the lowest residential densities in the Borough. The existing residential uses in north and south “Olde Towne” generally coincide with the residential zoning district designations in scale and use. These zones allow shallower “urban neighborhood” setbacks and a variety of housing types, reflecting the existing housing diversity and permitting it to continue. There are a few existing commercial and institutional uses scattered within these districts, which generally are not permitted uses and thus operate as legal non-conforming uses. The R-6 and R-7 districts coincide with the location of existing multi-family dwellings, which are permitted by special exception. The R-3a, R-3b, and R-4 zoning reflect the primary existing land use of single-family and two-family dwellings, as do the R-5 and R-6 districts.

Cluster residential development is permitted by conditional use within the I-2 district; this allows flexibility in development pattern to enable the continuation of the small town development pattern while also enabling open space conservation in this area of the Borough where cohesive areas of significant woodlands and other sensitive environmental resources still remain.

Institutional Zoning

The large scale institutional areas in the southern portion of the Borough are zoned I-1 and I-2 which permit larger scale institutional uses as well as other compatible uses (see residential zoning above also). The two other institutional districts (I-3 and I-4) correspond to the location of existing smaller scale institutional uses. Borough Hall is included in the I-4 district.

Commercial Zoning

All four commercial districts in the Borough are located in the King Street commercial corridor and provide for a variety and mixing of uses, lot sizes, and area/bulk requirements, all having a general development scale that maintains the pedestrian-oriented small town character. While the C-2 and C-3 districts allow smaller scale uses, the C-1 and C-4 districts permit larger lot sizes and wider frontage requirements that are not as pedestrian-oriented, but allow for commercial uses of a larger scale; larger lots are generally not compatible with the small scale of a “Main Street” business area, however they do provide for additional and broader commercial opportunities for Borough residents and, if properly designed, can be compatible with the small town streetscape and pattern. For example, the 2009 C-4 zoning amendment allows for a multi-use development that provides an urban scale/pattern with retail and parking on the ground level with multi-family residential above and is compatible with transit-oriented development and its proximity to the rail line/station. All four commercial zoning districts include “Olde Towne Malvern” design standards.

Industrial

The location, type, scale, and density of existing industrial uses generally corresponds to the LI and LI-1 industrial zoning districts.

Table 4-2: BOROUGH ZONING, 2003 (as amended through April 2009)

ZONING DISTRICT	USES PERMITTED BY RIGHT	MIN. LOT SIZE
R-1 Residential	Forestry Single Family Detached Dwelling	N/A 1 acre
R-2 Residential	Forestry Single Family Detached Dwelling	N/A 15,000 sq.ft.
R-3a Residential	Forestry Single Family Detached Dwelling Two-Family Duplex Two-Family Semi-Duplex	N/A 12,000 sq.ft. 10,000 sq.ft. per dwelling 10,000 sq.ft. per dwelling
R-3b Residential	Forestry Single Family Detached Dwelling Two-Family Duplex Two-Family Semi-Duplex	N/A 10,000 sq.ft. 10,000 sq.ft. per family 10,000 sq.ft. per family
R-4 Residential	Forestry Single Family Detached Dwelling Two-Family Duplex Two-Family Semi-Detached	N/A 7,000 sq.ft. 7,000 sq.ft. per dwelling 7,000 sq.ft. per dwelling
R-5 Residential	Forestry Single Family Detached Dwelling Two-Family Duplex Two-Family Semi-Detached	N/A 4,250 sq.ft. 4,250 sq.ft. per dwelling 4,250 sq.ft. per dwelling
R-6 Residential	Forestry Single Family Detached Dwelling Two-Family Duplex Two-Family Semi-Duplex	N/A 5,000 sq.ft. 5,000 sq.ft. per dwelling 5,000 sq.ft. per dwelling
R-7 Residential	Forestry Single Family Detached Dwelling Two-Family Duplex Two-Family Semi-Detached	N/A 5,000 sq.ft. 5,000 sq.ft. per dwelling 5,000 sq.ft.
C-1 Commercial	Variety of retail, office, and service uses Multi-Shop Retail	12,000 sq.ft. 1 acre
C-2 Adaptive Reuse Commercial	Variety of retail, office, and service uses	4,000 sq.ft.
C-3 Town Center Commercial	Variety of retail, office, and service uses	3,000 sq.ft.
C-4 High Intensity Commercial	Variety of retail, office, and service uses Multi-Shop Retail, Movie Theater, or Hotel/Motel Multi-Use Development	4,000 sq.ft. 1 acre 2 acres
I-1 Institutional	Adult Housing/Care Facility Use Commercial Communication Antennae attached to structure Forestry Planned Campus Developmt (Educational and/or Religious)	30,000 sq.ft. N/A N/A 20 acres
I-2 Institutional	Adult Housing/Care Facility Use Commercial Communication Antennae attached to structure Forestry Planned Campus Developmt (Educational and/or Religious) Institutional Home	30,000 sq.ft. N/A N/A 20 acres 1 acre
I-3 Institutional	Commercial Communication Antennae attached to structure Fire Station Forestry Municipal Use	N/A 1acre N/A 1acre
I-4 Institutional	Commercial Communication Antennae attached to structure Forestry Library Municipal Uses Police Station Single Family Detached Dwelling Two-Family Duplex Two-Family Semi-Detached	N/A N/A 10,000 sq.ft. 10,000 sq.ft. 10,000 sq.ft. 9,000 sq.ft. per dwelling 9,000 sq.ft. per dwelling 9,000 sq.ft. per dwelling
LI Limited Industrial	Variety of office, warehouse, commercial, manufacturing	1 acre
LI-1 Limited Industrial	Variety of office, warehouse, commercial, manufacturing Mobile Home Park	1 acre 3 acres
POSC Public Open Space and Conservation	Forestry Passive Recreation Use	N/A 10,000 sq.ft.

In Table 4-2 above only uses-by-right are included. Zoning districts may also permit special exception uses, conditional uses, and accessory uses which for purposes of brevity in this Chapter are not displayed in the table. The Borough zoning ordinance should be consulted for more information about the specific uses permitted per zoning district.

Nonconforming Lots/Land Uses and Infill Opportunities

Nonconformities occur when existing lot sizes, setbacks, or other lot configurations are smaller than the minimum requirements of the zoning district. Nonconformities also occur when existing land uses are different than those allowed in the zoning district. Nonconformities can lead to problems for property owners such as meeting minimum setback or maximum lot coverage requirements when constructing building additions.

Infill opportunities can occur when existing parcels are large enough to be further subdivided based on minimum lot size and other bulk requirements in zoning. Infill opportunities can also occur when there is a vacant lot or an underutilized or abandoned already developed site in an established and otherwise developed neighborhood. Infill development can be a useful tool in a borough as a way to complete or “fill-in” the traditional small town development pattern while maintaining a neighborhood’s character and enhancing neighborhood value through the use of underutilized sites.

When the 1999 Comprehensive Plan and subsequent 2003 zoning ordinance updates were drafted, one of the primary focuses of both projects was to study the level of nonconformities between existing land uses and zoning requirements. Specifically, an extensive analysis was undertaken during both projects to determine the amount of nonconformity between existing built land uses, lot sizes, and setbacks as compared to zoning requirements in place at that time. The significance of that analysis was that it found there were considerable existing lot sizes and setbacks which did not conform to the minimum requirements in zoning. These nonconformities may have resulted, in large part, from zoning being adopted after the construction of much of the building stock in the Borough had already occurred. This phenomenon is not unusual for a borough where a large amount of the buildings are older, and preceded zoning. The 1999 Comprehensive Plan generally outlined the results of this analysis in the land use plan and neighborhood planning areas, while the 2003 zoning ordinance update addressed remedying and reducing the level of nonconformities at the time. Reducing nonconformities in lot size, land uses, and/or setbacks can enhance the possibility of infill development to occur. This is because reducing the level of nonconformities allows a property to more easily meet minimum zoning requirements. Any remaining nonconformities in the Borough have been summarized by planning area in Chapter 5.

Environmental and Historic Resource Summary

The following provides a summary of information in other chapters of this Comprehensive Plan regarding important environmental and historic resources. These resources are a factor for consideration when undertaking land use planning decisions in the Borough.

- **Water Resources** – The entire Borough falls within headwater areas for two watersheds. The northern portion of the Borough drains into Little Valley Creek which flows into the Valley Creek, while the southern portion of the Borough drains into three tributaries of the Crum Creek. There are some wetland, floodplain, and floodprone areas in the southern part of the Borough along the tributaries of the Crum Creek; however these areas contain larger scale, lower density institutional uses so the direct impact of immediately adjacent land use on these water resources and vice versa is relatively minimal and/or can be or has been mitigated by the

property owners. There is a geologic fracture which transverses the southern portion of the Malvern Prep and St. Joseph Retreat properties. Geologic fractures are important since they are indicators of underground water supplies. Up until relatively recently, (prior to the Borough contracting with Aqua PA), municipal wells, which the Borough relied upon for its water supply, were located within the vicinity of this fracture. The West Branch of Warren Run and the East Branch of the Crum Creek are both designated as “impaired streams” by PADEP. Warren Run, in the north central part of the Borough, has not been given a designation but field visits for this Comprehensive Plan update witnessed trash and dumped material along this steeply banked stream suggesting it might also be impaired or a candidate for being considered impaired in the near future. All stream banks have some level of erosion evident from high stormwater flows, and thus some level of sedimentation in the streams. The Valley Creek Watershed, which includes West Branch Warren Run and Warren Run, has a PA state designation of “Exceptional Value Water”, while the Crum Creek Watershed in Malvern Borough, including East Branch Crum Creek, Massacre Run, and Ruth Run, has been designated as having “High Quality Water”. (also see Chapter 12 and Map 12-3)

- **Land Resources** – Malvern contains areas of steep slopes (15-20%) and very steep slopes (over 20%) in the southern and northern third of the Borough with the majority concentrated in the northern part. Randolph Woods, Malvern Prep, St. Joseph Retreat, and the Tidewater residential community contain scattered steep/very steep slopes mostly along streams. There are large concentrations of very steep slopes on lands north of Crestside Way, along the rail line corridor, encircling the industrial area (along streams, northern Borough border, and North Warren Avenue), and encasing the northern part of Old Lincoln Highway; due to these constraints the latter two areas were largely developed only within the past 10 years. Class 1, 2, and 3 prime agricultural soils underlie most of the southern portion of the Borough and the northernmost portions. In terms of land use planning, development on steep slopes can lead to serious problems of erosion and sedimentation. Prime agricultural soils are excellent for development and are generally considered a secondary resource in a borough/urban setting. The Borough is mostly underlain by solid geologic formations that provide good foundational stability and are usually moderately easy to excavate. However, the geologic fracture that transverses the southern portion of the Borough, which was formerly the source of well water for the Borough, still is significant as an indicator of underground water supplies. (also see Chapter 12 and Map 12-1).
- **Biotic Resources** – There are wooded areas greater than five acres located in the northern part of the Borough generally coinciding with the areas of very steep slopes, on the Paoli Battlefield Site, and significant wooded areas and areas of locally important vegetation on the majority of the St Joseph Retreat property and Randolph Woods. Important are the dense woodlands on these latter two sites. Massacre Run in the southwestern area of the Borough has an unforested portion which can lead to direct run-off and pollutants in the stream, however Malvern Prep has planted trees along this stream to begin the reforestation process of the riparian buffer. At this point, the other streams in the Borough remain forested which helps control sedimentation, erosion, and run-off of pollutants into the stream. In the southeast and along the northern border of the Borough, there is potential for a sensitive habitat/biodiversity corridor based on the County’s open space plan *Linking Landscapes*. (also see Chapter 12 and Map 12-2)
- **Historic and Cultural Resources** – The Borough has completed a Historic Resource Atlas (2008), as an update to the Chester County Historic Sites Survey for Malvern Borough (1979-1982). The Historic Resource Atlas is a general inventory of historic resources (also see Chapter 8). The Borough contains one resource listed on the National Register of Historic Places, the Paoli Battlefield, a Revolutionary War site, and commemorative ground of the Paoli Memorial Association. Scenic roads in Malvern include Monument Avenue and much of

Warren Avenue. Scenic vistas are seen from Randolph Woods and the Paoli Battlefield Site and Paoli Memorial Association Grounds. The Borough has a Historical Commission which promotes identification and preservation of historic resources in the Borough. The Borough's downtown commercial area along King Street is considered to be a locally important historic area, which should be taken into account and enhanced upon during revitalization efforts. Starting in 2010, a team of trained archeologists began (and continue to as of 2011) studying the site of the Revolutionary War Paoli Massacre, whose lands have remain unchanged since 1777, the time of the battle. There is a white historical marker on the Paoli Memorial Association Grounds, near the Tidewater development, which notes the site of a former house. (also see Chapter 8)

LAND USE PLANNING IMPLICATIONS

- As of 2011, Malvern's land use pattern is well established. There is currently little remaining vacant land in the Borough. Vacant land that does exist is generally found on smaller parcels. Infill development on existing underused parcels as well as conversions and adaptive re-use are other areas where future development and redevelopment can take place. Presently, there remain some potential infill sites.
- Malvern Borough contains a series of established neighborhoods and areas. The Borough desires to maintain the character of these neighborhoods which together form the character of the Borough.
- The Borough contains a diversity of housing types. This diversity is important in maintaining the Borough's character. The Borough wishes to maintain this diversity into the future.
- There are commercial uses which serve both local residents and the larger region. The Borough has undertaken an extensive revitalization of the King Street corridor completing by 2009 many of the related recommendations in both the 1999 Comprehensive Plan and the 2002 Revitalization Plan, so in 2009, the Borough adopted an update to the 2002 Revitalization Plan.. Through that update as well as this recent Comprehensive Plan update, the Borough is continuing revitalization efforts. Appropriate zoning can have a positive effect on Borough revitalization and the King Street corridor in permitting a variety of complementary uses in a harmonious development scale/pattern that maintains and enhances the Borough character; an example of this can be found in the 2009 zoning changes to the C-4 district for the proposed East King Street Redevelopment project.
- The proposed mixed commercial and multi-family residential use in the East King Street Redevelopment project will have a substantial impact on land use and character along King Street and will provide a positive impact on the east end and eastern entrance to the Borough's commercial district.
- There is a significant amount of institutional land in Malvern which is largely concentrated in the southern portion of the Borough. This land provides a naturalistic gateway for the Borough on its southern entrance and it is unique for a borough to include such a large amount of open institutional lands.

FUTURE LAND USE PATTERNS AND PLANNING RECOMMENDATIONS

This Land Use Plan provides the long range vision for desired future land use patterns in the Borough over the next 10 years, and designates areas for various land uses and development patterns. In contrast to the plan chapters following, which provide *specific* recommendations for individual Borough neighborhoods (Chapter 5) and planning topics (Chapters 6-13), this Chapter identifies *generalized* Borough-wide land use policy and recommendations.

Recommendations presented in this Chapter focus on future land use concerns while taking into account an examination of the following:

- ✓ Existing land uses, development patterns, and physical character;
- ✓ Borough goals and objectives pertaining to land use;
- ✓ Circulation patterns and the capacity of the transportation network;
- ✓ Location of sensitive resources including natural, historic, and cultural;
- ✓ Goals and policies of the previous 1999 Borough Comprehensive Plan, the previous 1992 Borough Open Space and Recreation Plan, and the current Revitalization Plan.

This Future Land Use Plan links together the other planning elements of this Comprehensive Plan. Combined with these other elements, this Future Land Use Plan forms the Borough policy which serves as the basis for local land use regulatory and non-regulatory actions.

Malvern has a small town, diverse land use character containing a variety of uses, densities, and development patterns. This Plan aims to maintain the Borough's existing character while allowing development and redevelopment to occur in a manner consistent with that character.

The Future Land Use Plan recognizes that while the Borough land use pattern is well established and there is very little remaining undeveloped land, development and changes in land use will continue in the future. As the Borough continues to evolve and grow to meet future demands and needs of its residents and rail line and business corridor, land use change could occur on smaller vacant sites and through changes in use on currently developed lands, e.g. through conversions, adaptive re-uses, and other redevelopment activities. Map 4-2 identifies the general boundaries of future land use categories, while Table 4-3 displays categories by their approximate acreage.

Table 4-3: FUTURE LAND USE (BASE) CATEGORIES

Land Use Category	Acres	% of Total
Residential:		
Olde Towne High Density Residential	11.9	1.5
Olde Towne Medium Density Residential	37.1	4.6
Olde Towne Low Density Residential	28.6	3.5
Traditional Medium Density Residential	65.0	8.0
Traditional Low Density Residential	23.7	2.9
Suburban High Density Residential	25.7	3.2
Suburban Medium Density Residential	78.4	9.7
Suburban Low Density Residential	24.5	3.0
Multi-Family Residential	61.4	7.6
Town Center	38.0	4.7
Institutional	230.5	28.4
Industrial	70.1	8.6
Resource Protection/ Recreation/ Open Space	115.9	14.3
TOTAL	810.8	100

Source: Chester County Planning Commission, 2011

Future land use boundaries do not necessarily coincide exactly with Neighborhood Planning Area boundaries (delineated in Chapter 5/Map 5-1) because the future land use boundaries reflect and focus on future land use concerns and decisions, while the Neighborhood Planning Area boundaries are based on a variety of cohesive neighborhood characteristics with the Neighborhood Planning Areas essentially providing micro-detailed comprehensive plans for each neighborhood. However, this Future Land Use Plan is consistent with the recommendations found in the neighborhood planning area sections.

Since the overall Borough planning goal is to retain existing Borough character into the future, future land use categories reflect existing land uses and Borough character, and are described in more detail as follows.

OLDE TOWNE RESIDENTIAL NEIGHBORHOODS

The residential neighborhoods in the Olde Towne portion of the Borough are the Borough's oldest neighborhoods. They are designed in a traditional pattern, with a grid system of relatively narrow streets, a network of sidewalks, street trees, and small building lots with minimal setbacks from the street and between houses. There are three types of Olde Towne Residential Neighborhoods, which are outlined in more detail below. Residential uses in these areas are primarily a mix of single-family detached and two-family residences, with a few older homes converted to multi-family units. There are also a few non-residential uses, primarily churches, dotted among the residential streets. It is the development pattern in these neighborhoods that gives the Borough its small town character. The intent of the Olde Towne Residential Neighborhood designations is to reflect and continue the existing pattern of development that is critical to maintaining the character of the Borough and ensure that any future development in these areas conform to the pattern of the existing neighborhoods. This land use grouping contains established residential neighborhoods. The primary objective is to reflect the character of those existing neighborhoods through maintaining compatible densities, land use types, and design standards.

Olde Towne High Density Residential (OTHDR) (11.9 acres, 1.5%)

The Olde Towne High Density Residential future land use designation encompasses a small several block area in the core of Olde Towne and is located south of the King Street (commercial) corridor and to the north of East First Avenue. The land use pattern in the OTHDR is characterized by higher residential densities and predominately two-family residential uses with a mix of single-family detached and multi-family dwellings. The majority of lots range in size from around 3,000 sq.ft. to 5,000 sq.ft. This is a developed, well established neighborhood, which lies within the R-5 zoning district. The intent of this category is to maintain the identity and character of the higher density Olde Towne section of Malvern through retaining the existing development pattern and similar densities, land uses, and design to that which presently exists. Shallow setbacks and narrow lot sizes are consistent with the existing development in this area. This category is within the Olde Towne South Neighborhood Planning Area.

Olde Towne Medium Density Residential (OTMDR) (37.1 acres, 4.6%)

Land areas within this category are within both the northern and southern sections of Olde Towne Malvern. This land use pattern predominately comprises the older, primarily residential neighborhoods in Malvern. These neighborhoods are composed of a mix of residential housing types including single-family attached and detached, two-family, and multi-family housing, as well as a few non-residential uses. This land use pattern reflects established residential neighborhoods with a grid development pattern of narrow roads and houses set close to the road and each other.

Within this land use designation, lots range in size from around 2,500 sq.ft. to 42,000 sq.ft, with many of the lots within the 3,000 sq. ft. to 14,000 sq.ft. range. The mean lot size is about 9,000 sq.ft. This category falls mostly within the R-4 and R-6 zoning districts. A few lots in the northern part of this category fall within the R-3b zoning district. Shallow setbacks and narrow lot widths are appropriate in this category. This area has developed in the traditional mixed residential land use pattern that contributes to Olde Towne's distinct identity. The intent of this land use category is to maintain the identity and development pattern of Olde Towne through a compatible land use pattern, densities, design, and continuing the roadway grid development pattern. This category coincides with the Olde Towne North and falls within the Olde Towne South Neighborhood Planning Areas.

Olde Towne Low Density Residential (OTLDR) (28.6 acres, 3.5%)

The Olde Towne Low Density Residential land use designation is located in the northernmost portion of Olde Towne Malvern and centers along Old Lincoln Highway. This designation comprises the lower density areas in the older, largely residential section of Malvern, with the development pattern oriented around the Old Lincoln Highway corridor. This area is characterized by a varying size and shape lots, a variety of housing types, as well as several non-residential uses, a few vacant lots wooded lots one of which is larger and highly (naturally) constrained. The mean lot size is around 19,500 sq.ft. with lots ranging in size from around 4,500 sq.ft. to 91,500 sq.ft. This category falls entirely in the R-3b zoning district. The intent of this land use designation is to reflect the existing pattern, and specifically, to continue the mixing of residential uses with non-residential uses interspersed along Old Lincoln Highway. This category coincides with the Old Lincoln Neighborhood Planning Area.

TRADITIONAL RESIDENTIAL NEIGHBORHOODS

Traditional residential neighborhoods are those areas that developed after the Olde Towne area with predominately single-family detached homes. These neighborhoods are less compact than the development in the Olde Towne area, but continue the traditional neighborhood development pattern that gives the Borough its small town character. While building lots and setbacks from the road and between houses are larger than in Olde Towne, development in these areas still maintains the grid pattern of streets, contains some sidewalks and street trees, and lot sizes and setbacks are still consistent with a traditional neighborhood development pattern. The intent of these designations is to acknowledge the pattern of development that is critical to maintaining the character of the Borough and ensure that any future development in these areas conform to the pattern of the existing neighborhoods. This land use grouping contains established residential neighborhoods. The primary objective is to reflect the character of those existing neighborhoods through maintaining compatible densities, land use types, and design standards.

Traditional Medium Density Residential (TMDR) (65 acres, 8%)

The Traditional Medium Density Residential land use designation represents areas in Malvern which are developed, stable neighborhoods with predominately single-family housing on lots of average size for the Borough. This category includes land areas in the western central portion of the Borough. The average lot size in this designation is around 16,300 sq.ft., which is comparable to the overall average single-family lot size in the Borough of about 16,500 sq.ft. The traditional grid development pattern is dominant in most of this land use category. The majority of land within this category is zoned R-3a and R-3b; a few lots in the western part of the category are zoned R-2. Some mixing of uses is found along North Warren Avenue, primarily in the form of different residential housing types and mixed commercial/residential uses in a single building. The

Traditional Medium Density Residential category lies within the Highland Avenue and Monument Avenue Neighborhood Planning Areas.

Traditional Low Density Residential (TLDR) (23.7 acres, 2.9%)

The Traditional Low Density Residential land use category consists of several blocks located in the western part of the Borough, north of Monument Avenue and east of Sugartown Road. The land use pattern is characterized by single-family detached houses, a traditional grid street pattern, and lot sizes larger than the Borough average. The average lot size within this category is around 25,000 sq.ft. with lots sizes ranging from about 9,000 sq.ft. to 78,000 sq.ft. This area is a developed, well established neighborhood, which lies within the R-2 zoning district. The Traditional Low Density Residential category is intended to retain the existing development pattern of this residential neighborhood in terms of maintaining similar densities, land uses, and design to what currently exists. The Traditional Low Density Residential is within the Highland Avenue Neighborhood Planning Area.

SUBURBAN RESIDENTIAL NEIGHBORHOODS

The three suburban residential designations discussed below acknowledge the areas of suburban style neighborhoods that have been built in Malvern since the 1950s with most of these areas having been built over the past 10 years. While most neighborhoods in the Borough are older and were built using in a more traditional small town design pattern, several more recent developments have been designed with curvilinear streets, cul-de-sacs, and relatively larger lots with deeper setbacks than the more traditional neighborhoods. This Comprehensive Plan, and the existing Zoning and Subdivision and Land Development Ordinances, require and encourage new or infill development to return to the traditional neighborhood development pattern that gives the Borough its character. Nonetheless, there are stable neighborhoods within the Borough that have developed in a suburban pattern that are not likely to change significantly during the time horizon of this Plan. These suburban residential land use designations acknowledge the existing suburban characteristics of these areas of the Borough. Since most of the Borough's multi-family development is relatively new and built in a largely suburban pattern, the multi-family housing designation is included in this "suburban neighborhood" category. This land use grouping contains established residential neighborhoods. The primary objective is to reflect the character of those existing neighborhoods by maintaining compatible densities, land use types, and design standards.

Suburban High Density Residential (SHDR) (25.7 acres, 3.2%)

The Suburban High Density Residential land use category consists of the area along Nolan and Karen Drives and the west side of Griffith Avenue in the western portion of the Borough, as well as the Valley View Road development in the northeastern part of the Borough. Lands in this category were generally developed in the 1950s and 1960s, and have cul-de-sac and loop road suburban development patterns. This category displays a housing development that is newer, relatively speaking, and suburban in comparison with nearby neighborhoods characterized as having notably older housing stock and grid road pattern. This category comprises developed, well established neighborhoods. The western portion of this category reflects similar land uses and suburban development patterns as the Suburban Medium Density category, but at an overall higher density. The majority of lots range in size from around 7,000 sq.ft. to 14,000 sq.ft. The means lot size is around 10,500 sq.ft. Current zoning is R-3b and R-4. The Valley View Road neighborhood portion of this category is a development of small twin homes, with the vast majority of lots ranging in size from 3,800 sq.ft. to 7,000 sq.ft., with a mean lot size around 5,600 sq.ft. Current zoning is R-5. The objective of this land use category is to maintain the character of these

residential neighborhoods. The Suburban High Density Residential lies with the King Street Residential West and Valley View Road Neighborhood Planning Areas.

Suburban Medium Density Residential(SMDR) (78.4 acres, 9.7%)

Land areas falling within this category generally correspond to the areas in the Borough that have experienced recent (predominately single-family detached residential) housing developments over approximately the past 15 years. Residential development in this land use designation has suburban development patterns in terms of curvilinear roads and cul-de-sac street layout. This category includes cluster single-family detached residential developments (Malvern Hills I and Malvern Hills II), a suburban cul-de-sac single family detached housing development (Malvern Woods), and a hillside development of twins (along Daisey Lane) in the northern part of the Borough. Also included in this category are the housing developments in the vicinity of Crestside Way and Goshorn Drive in the western part of the Borough and a cluster single-family detached residential development (Village of Pennwyck along Remington Lane) in the southwestern portion of the Borough. The Village at Pennwyck serves as a transition between the single-family residential developments to the west in Willistown and the institutional lands to the east in Malvern.

Areas within this land use category fall mostly within the R-3b zoning district and are developed either using the base zoning (12,000 sq.ft. minimum lot size) or cluster option (8,000 sq.ft. minimum lot size). The Village at Pennwyck is within the R-2 zoning district. Lots within this category general conform to zoning.

Due to relative overall newness of the development within this category, its objective is to continue to reflect existing zoning and subdivision regulations in terms of density, land use, and development pattern. Land areas within this category are expected to remain as residential neighborhoods with predominately single-family detached housing. The Suburban Medium Density Residential is within four Neighborhood Planning Areas – Tidewater/Remington, King Street Residential West, Malvern Hills, and Malvern Woods,

Suburban Low Density Residential(SLDR) (24.5 acres, 3%)

The Suburban Low Density Residential designation coincides with the residential area along Paoli Pike in the southeastern corner of the Borough adjacent to Willistown Township. The land use pattern is the most suburban in nature in the Borough with the largest residential parcels, deepest setbacks, flag lots, and the lowest density housing in the Borough. Lots range from around 3,500 sq. ft. to 104,500 sq. ft. with an average lot size of around 60,000 sq. ft. This neighborhood is developed with primarily single-family detached houses, and in reasonable conformity with the existing R-1 zoning. Public sewer lines do not extend to this area and are not anticipated. This area serves as a transition between the Borough and Willistown Township, displaying a land use pattern compatible to neighboring residential areas in Willistown. The intent of this category is to maintain the character of this area as low density single family residential serving as a transition area. This area corresponds to the Paoli Pike Residential Neighborhood Planning Area.

Multi-Family Residential(MFR) (61.4 acres, 7.6%)

The Multi-Family Residential designation includes those areas of the Borough developed with large scale multi-family housing developments. These areas are concentrated in the western portion of the Borough and along King Street. There are also several single-family lots contiguous to these multi-family developments that are included in this land use designation. These lots contain established housing units and are anticipated to remain as single-family detached residential use for the time horizon of this plan. Areas within this category fall mostly within the R-7 zoning district.

The large scale and self-contained design of the multi-family residential developments in this category, particularly those in the western part of the Borough, somewhat isolates them from the rest of the Borough in terms of character, land use pattern, and access. In spite of this pattern, this type of development has a definitive and needed place in the Borough contributing to housing options available to residents. These developments are relatively new, dating from the 1970s to 1990s, and land use is expected to remain as multi-family residential. The land area designated in this category lies within the Tidewater/Remington, King Street Corridor, and Landmark/Raintree Neighborhood Planning Areas.

NON-RESIDENTIAL AREAS

Although Malvern is a primarily residential community, the Borough also contains a vibrant commercial and industrial business community and other non-residential institutional uses that are equally important to the character of the community. This land use grouping contains the established commercial and industrial areas in the Borough. The primary objective of this grouping is to continue to reflect the character of those areas through maintaining compatible densities, land use types, and design standards.

Town Center (TC) (38 acres, 4.7%)

The Town Center land use designation is located along King Street in the eastern portion of the Borough. This area comprises the central business district for the Borough, which provides for various types of commercial uses for Borough residents. Town Center is the focus for commercial uses in Malvern, and contains a mix of commercial and residential uses. This category also contains the Malvern train station/parking and the eastern portions of the rail line/right-of-way. The median lot size is about 10,000 sq.ft., excluding the train station and parking and railroad right-of-way lots. The majority of lots range in size from around 2,500 sq.ft. to 13,000 sq.ft. Though, there are lots that go to around 52,200 sq.ft. in size, several of which are fall within the East King Street Redevelopment plan. Lands within this category are mostly zoned as commercial/mixed use C-1, C-2, C-3, and C-4 zoning districts. The train station property, parking, and the railroad right of way are zoned LI.

The intent of this category is to maintain a concentrated traditional small town commercial center, which contains predominately smaller scale commercial uses catering to the needs of Borough residents as well as some larger scale uses. The “pedestrian friendly” environment and traditional “Main Street” character of this area should be continued, even as uses change and new development is proposed. Permitted uses within this category should continue to be a mix of commercial retail, office, service, and upper floor residential uses with specific scale of development and density as recommended in the discussion of the King Street Corridor Neighborhood Planning Area.

Industrial (IND) (70.1 acres, 8.6%)

The Industrial land use designation encompasses an area in the northern portion of the Borough along North Warren Avenue and the eastern portion of the SEPTA rail line. The eastern portion of this category primarily contains parcels which are currently occupied by industrial uses. This area is zoned as Limited Industrial (LI) and LI1. The western portion of this category contains an undeveloped parcel that is largely environmentally constrained, which is zoned LI1. The mean lot size of developed commercial and industrial lots, not inclusive of the rail line right-of-way) in this category is 62,000 sq.ft. All lots, including vacant lots, range in size from 8,500 sq.ft. to nearly 10 acres. The objective of this category is to provide an area in the Borough for continued industrial uses. As well, this area could potentially also allow for larger scale commercial office

developments, and could provide for a mixing of uses in the southern portion near the train station. Undeveloped portions of this category allow for an extension of industrial uses or for the development of mobile homes. This category is buffered and somewhat isolated from the rest of the Borough. This category coincides with the Industrial and Open Land North Neighborhood Planning Areas.

Transit-Oriented Development Overlay (TOD) (19 acres net*, 2.3%)

*does not include the rail line proper; 22 acres total including the rail line)

As part of the 2010 Malin Road Extension Feasibility Study, a TOD overlay scenario in the vicinity of the train station and industrial area (around Pennsylvania Avenue and King Street) was developed. A TOD involves creating compact, walkable areas/communities centered around train lines/stations, for the purpose of enabling a high degree of access without total dependence on a car for mobility. In essence the entire Borough is a large TOD.

This future land use category is an overlay, meaning that it lies overtop of the other base land use categories discussed in this Chapter, providing additional recommended potential land uses and land use scenarios. Specifically, a TOD provides for an even greater intermixing of uses on a micro-level in the immediate vicinity of the Malvern train station. Presently, there are largely commercial and mixed commercial/residential uses surrounding and to the immediate south of the train station, while to the immediate north there are primarily industrial uses. This overlay includes parts of the King Street Corridor and Industrial Neighborhood Planning Areas. A map displaying a conceptual TOD boundary is found in the Malin Road Extension Study, Figure 22, and is included at the end of this Chapter. The approximate 18 acre area of this overlay includes Residential/Retail, Residential/Flex, Office/Flex, and Green areas shown/labeled in Figure 22 legend, plus the north and south train station parking lots, but does not include the railroad right-of-way.

Institutional (INST) (230.5 acres, 28.4%)

The Institutional land use category corresponds to areas of the Borough with existing institutional uses. This designation includes the large institutional parcels in the southern portion of the Borough (Malvern Prep and St. Joseph's Retreat), as well as scattered smaller scale institutional uses (churches and schools) in the vicinity of South Warren Avenue and Channing Avenue. This category is slightly expanded from the 1999 Comprehensive Plan to encompass the institutional area north of Roberts Lane.

There is a smattering of small scale, institutional uses dispersed throughout the Borough, as displayed in the Existing Land Use Map, that fall outside this category as they serve as integral parts of the character and mixed nature of the neighborhoods in which they are located. The large institutional uses in the southern portion of the Borough are zoned as I-1, which allows for larger scale institutional uses, and I-2, which permits larger scale institutional uses plus clustered single family residential development. Other areas in this category are mostly zoned for smaller scale institutional uses in I-4.

Institutional uses currently account for a sizeable portion of the land area in Malvern, and the primary objective of this designation is to provide for continuation of both small and large scale institutional opportunities in the Borough. Development of the large institutional lands in the southern section of the Borough is not expected during the life of this Plan. While the discussion of these large institutional parcels (see Planning Areas 2 and 3) includes recommendations for appropriate land uses should the existing institutions ever sell the parcels, the Borough's clear policy and intent is to work with the existing institutions to maintain current (or similar) institutional uses and character of these sites. These areas serve as a southern gateway to the Borough, and retaining the existing open space character of these areas is a priority of the Borough. The

Institutional category falls within Malvern Retreat, Malvern Prep, Olde Towne South, and a very part of Monument Avenue Neighborhood Planning Areas.

Resource Protection, Recreation, and Open Space Areas (RP) (115.9 acres, 14.3%)

The intent of this land use designation is to provide park, recreational, and open space areas in the Borough for the enjoyment and use by Borough residents, and to protect areas that contain sensitive natural or cultural resources. This land use category encompasses existing recreational, open space, and environmentally or culturally important areas. Specifically, areas in this category include Paoli Memorial Association Grounds, the Paoli Battlefield Site, Rubino Park, Quann Park, Burke Park, and Randolph Woods. There is a limited number of existing, small scale, park and open space uses dispersed throughout the Borough (such as Rubino Park and HOA open space lands), as displayed in the Existing Land Use Map, which fall outside of this category due to their small size and that they serve as integral parts of the neighborhoods in which they are located. Areas in the category are mostly zoned as POSC with smaller portions zoned as R-3b, I-3, and I-4.

Its intent is to maintain existing parks and open space areas for recreational and open space uses. The Borough-owned parcel, off Crestside Way, contains a Borough sewage pumping station and has significant environmental constraints; it is suggested to remain as an area of passive open space. Also, a potential greenway linkage could be considered to connect Randolph Woods with the Paoli Battlefield Site, the two largest resource protection areas within the Borough. This category lies mostly within Paoli Battlefield and Memorial Park and Randolph Woods Neighborhood Planning Areas, with smaller parts of this category also within Old Towne South, Monument Avenue, and King Street Residential West Neighborhood Planning Areas.

FROM MALIN ROAD EXTENSION FEASIBILITY STUDY (DECEMBER 2010)

Transit-Oriented Development (TOD) Considerations

In addition to the aforementioned future conditions analyses, a separate review of potential Transit-Oriented Development (TOD) was completed. Glackin Thomas Panzak identified a potential TOD scenario, whereby TOD occurred along Pennsylvania Avenue and King Street, just to the west of Warren Avenue and adjacent to the Malvern Train Station. Subsequently, McMahon Associates, Inc. reviewed the traffic implications of such a development on the new roadway extensions, as well as their connection points to the adjacent road network.

Potential TOD Development Scenario

In the process of updating the Borough's Comprehensive Plan, the task force group working on the update suggested that any changes to access and circulation in the vicinity of the Malvern train station be considered in the context of potential future land use patterns at this locale. Through the comprehensive plan update process, the Borough is moving forward with changes in their vision of future land use that would encourage a mix of complementary land uses at higher densities in this area, in accordance with transit-oriented development principles. The Borough thought it would be useful to first understand some of the practical design implications that might influence the form of TOD development, based on dimensional factors, proximity to other land uses, and existing and future access in the area surrounding the train station. Glackin Thomas Panzak prepared a conceptual future land use plan for the areas on both sides (north and south) of the railroad right-of-way, to the west of Warren Avenue. This conceptual plan was developed without any engineering data, and simply intends to show how different land uses could be integrated, where they might be located, and at what density each use might be developed.

Figure 22 depicts one possible TOD scenario, with a mix of multi-family attached residential units, office, office/industrial flex space, and retail uses. Development intensity was estimated based on mix of vertically – integrated uses configured within assumed building prototypes. This scenario also envisions the redevelopment of specified already-developed areas, assuming that landowners might choose to realize higher densities on their properties in the future if zoning were changed to permit such forms of development. The following uses are shown on Figure 22, at development intensities estimated as ranges of density:

- Residential (multi-family): 350 to 400 dwelling units
- Office: 8,000 to 9,000 square feet of gross floor area
- Office/Flex (warehouse or industrial): 45,000 to 90,000 square feet
- Retail: 35,000 to 45,000 square feet

TOD Traffic Implications

McMahon Associates utilized this potential development mix as part of a separate future traffic analysis, in order to better understand potential access and circulation considerations, and to estimate traffic volumes on existing and proposed roads in the area.

The traffic associated with the potential TOD build-out indicates that the proposed roadway extensions can accommodate the increased traffic. Furthermore, no additional intersection capacity improvements are expected at the Pennsylvania Avenue/Warren Avenue, Lancaster Avenue/Malin Road, and PA Route 352/Three Tun Road intersections, beyond those previously identified as being needed with the roadway extensions, to accommodate the additional TOD traffic. However, implementation of the TOD plan without the proposed roadway extensions will add to traffic congestion throughout the study area. Table 6 summarizes the impacts of the TOD development under the no-build (no extensions) and the future build conditions (Scenarios 1 and 2) at key intersections within the area. As shown, without the roadway extensions, traffic conditions will worsen at key intersections and require improvements (if feasible) to offset impacts of the potential TOD development. Alternatively, the Malin Road extension, as well as the Three Tun Road extension, will reduce the impacts of the TOD development on surrounding roadways including along Warren Avenue and Old Lancaster Road and potentially other neighborhood streets, which is a goal of this project. TOD densities beyond those noted above and analyzed in this study will need to be closely reviewed to determine impacts to the surrounding roadway network and particularly at the Lancaster Avenue/Malin Road intersection with respect to queuing conditions between Lancaster Avenue and the railroad underpass.

In summary, the evaluation of future transportation conditions reveals that the benefits of the roadway extensions, as follows:

- Traffic volumes along roadways within the study area will generally decreased with the roadway extensions. However, potential traffic increases to Malin Road, between PA Route 401 and Lancaster Avenue, should be addressed due to the residential properties fronting portions of this roadway segment.
- The roadway extensions will better accommodate truck and bus traffic destined to/from the industrial areas near Warren Avenue and the Malvern Train Station, as well as divert this type of traffic from residential and village streets not designed to accommodate these larger vehicle types, by providing a more convenient route.
- Intersection improvements at those intersections that provide access to the roadway extensions (i.e., Lancaster Avenue/Malin Road, Pennsylvania Avenue/Warren Avenue, and PA Route 352/Three Tun Road) will be necessary, as previously described, but these improvements are relatively minor intersection improvements compared to the scope of improvements needed throughout the overall study area to relieve existing and future traffic congestion.
- Traffic operations within the study will benefit from the potential new road linkages by removing traffic from congested roadways. Reductions in overall intersection delay (including decreases of as much as nearly 40%) may be experienced in the study area. Some improvements such as turning lanes at intersections may be needed to accommodate turning movements associated with diverted traffic patterns resulting from the new roadways.
- The new roadway extensions will support additional development in the industrial areas along Warren Avenue and near the Malvern train station, including potential TOD scenarios being considered by the Borough, by improving access and providing additional traffic capacity.

Map 4-1 Existing Land Use Malvern Borough Comprehensive Plan

This map was digitally compiled for internal maintenance and developmental use by the County of Chester, Pennsylvania to provide an index of parcels and for other reference purposes. Parcel lines do not represent actual field surveys of premises. County of Chester, Pennsylvania makes no claims as to the completeness, accuracy or content of any data contained herein, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred, with respect to the information or data furnished herein.

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Map Features

Existing Land Use

- Commercial
- Institutional
- Industrial
- Parks/Recreation/HOA
- Rail Line
- Paper ROW
- Utility ROW
- Mixed Use
- Single Family
- Two Family
- Multi Family
- Mobile Home
- Vacant Land

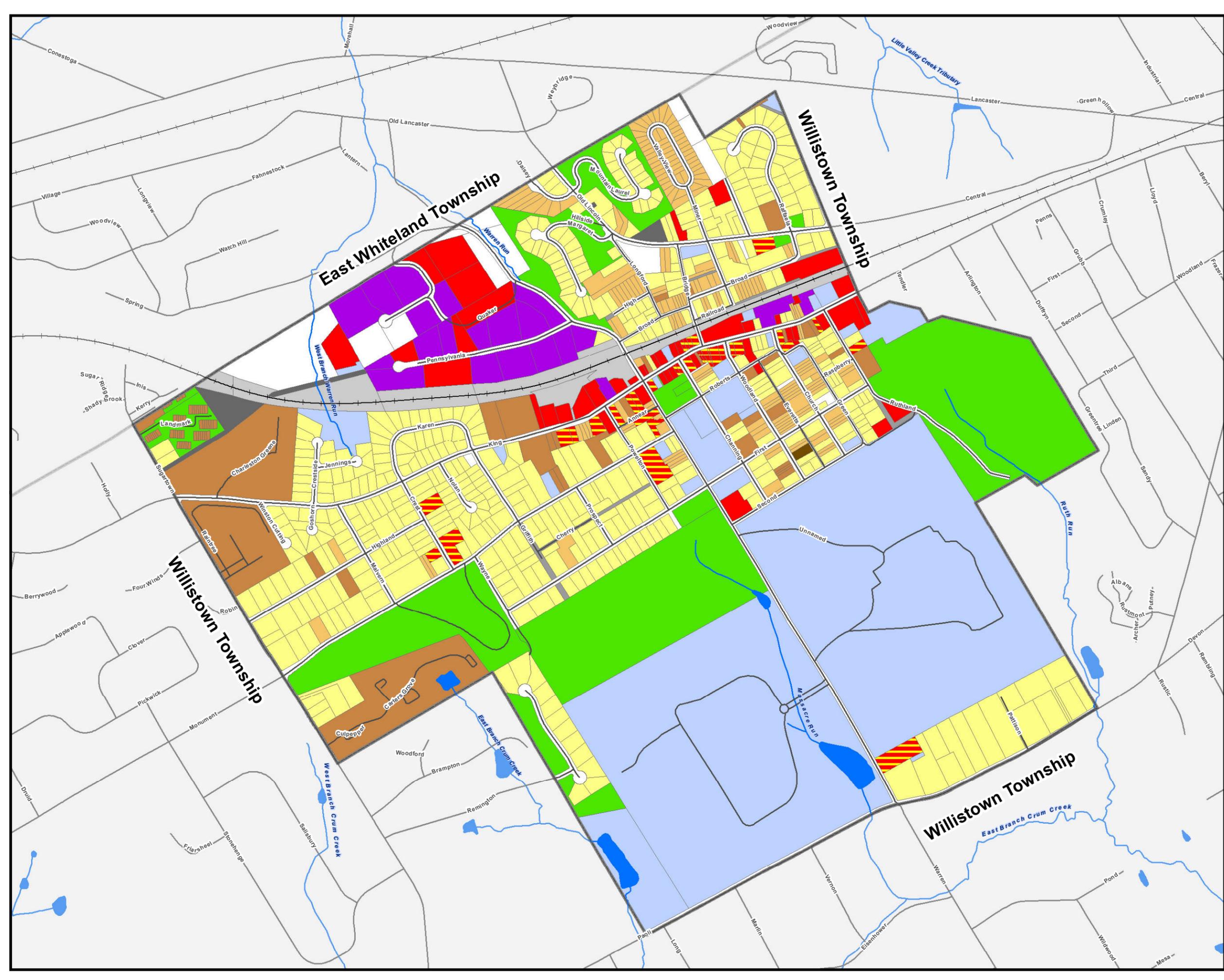
Base Features

- Roads
- Railroad
- Streams
- Ponds



December 2010

Data Source: Existing Land Use- Chester County DCIS/GIS, 2010;
Municipal Borders, Railroads, Streams- Chester County
Bureau of Land Records, 1997/2006; Roads- Chester County
DCIS/GIS, 2000/2006 as amended.



Map 4-2 Future Land Use Malvern Borough Comprehensive Plan

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Map Features

Residential

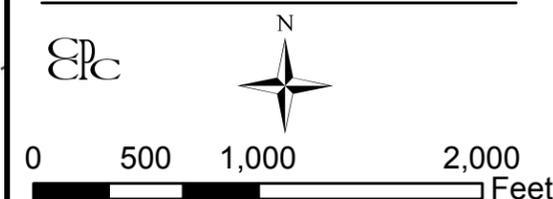
-  OTHDR: Olde Towne High Density Residential
-  OTMDR: Olde Towne Medium Density Residential
-  OTLDR: Olde Towne Low Density Residential
-  TMDR: Traditional Medium Density Residential
-  TLDR: Traditional Low Density Residential
-  SHDR: Suburban High Density Residential
-  SMDR: Suburban Medium Density Residential
-  SLDR: Suburban Low Density Residential
-  MFR: Multi-Family Residential

Non-Residential

-  TC: Town Center
-  IND: Industrial
-  INST: Institutional
-  RP: Resource Protection, Open Space, & Recreation
-  Greenway Linkage
-  TOD: Transit Oriented Development Overlay

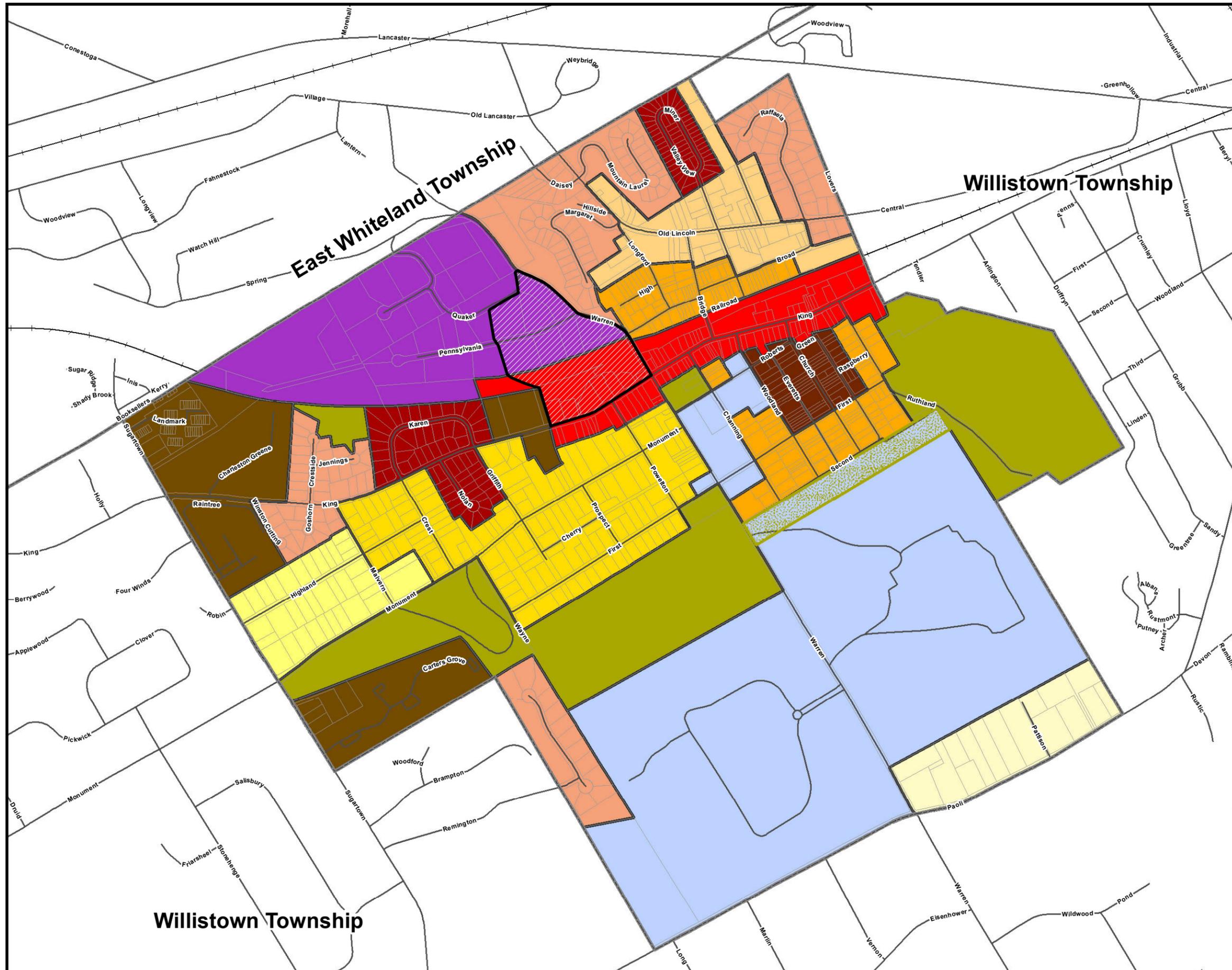
Base Features

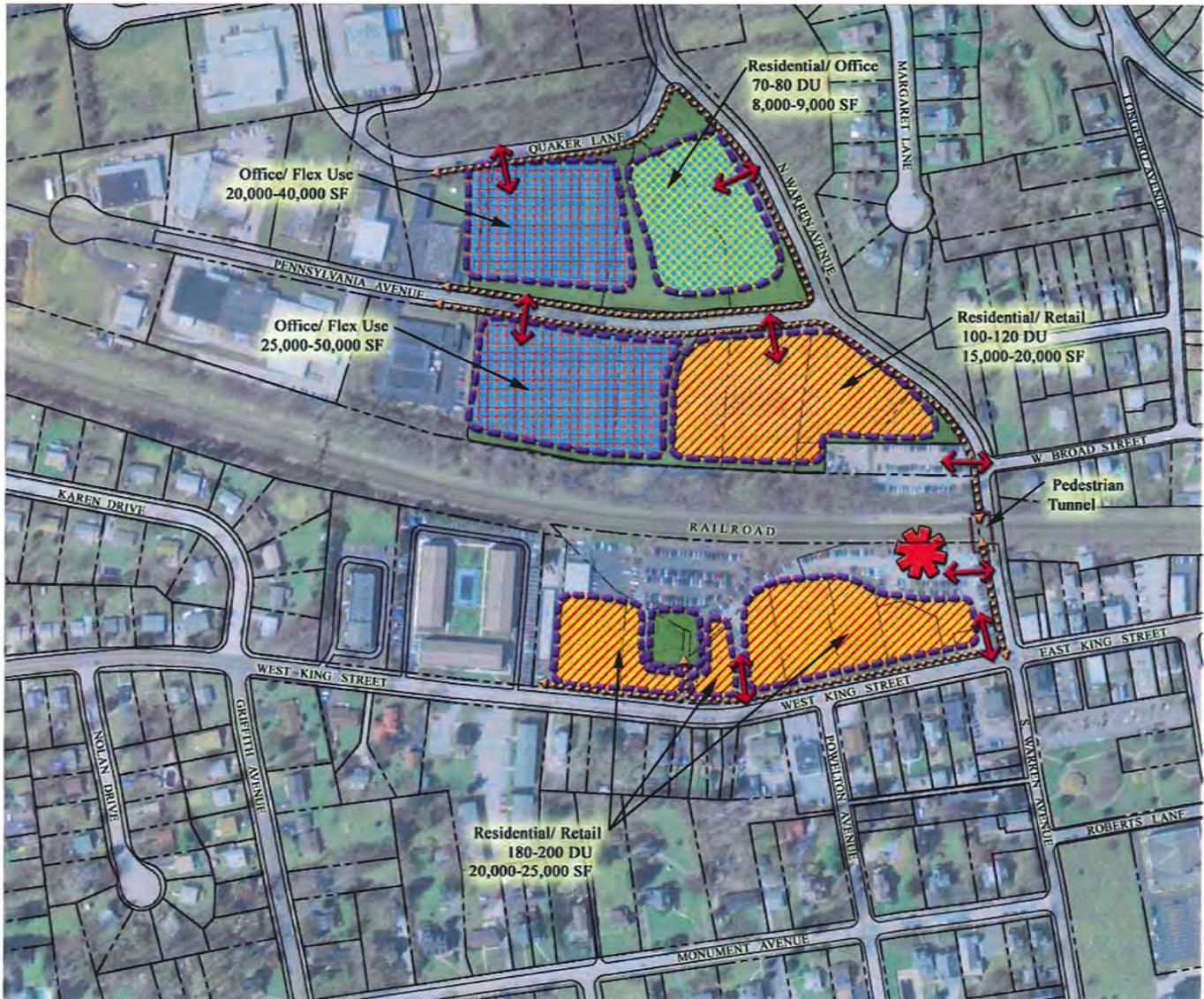
-  Municipalities
-  Parcels
-  Roads
-  Railroad



December 2011

Data Source: CCPC and Malvern Borough, 2011.





TOTAL: Potential Yield

RESIDENTIAL:	350-400 DU
OFFICE:	8,000-9,000 SF
OFFICE/FLEX USE:	45,000-90,000 SF
RETAIL:	35,000-45,000 SF

* Off-street parking is accommodated on-site in a combination of surface and structured parking facilities.

- LEGEND:**
- RESIDENTIAL/ RETAIL
 - RESIDENTIAL/ OFFICE
 - OFFICE/ FLEX USE
 - GREEN AREAS
 - ACCESS POINTS
 - PEDESTRIAN CIRCULATION
 - MALVERN TRAIN STATION



Table 6 | Delay and Level-of-Service Comparison with Transit-Oriented Development

Intersection		2023 No Build Conditions						Scenario 1 Malin Road Extension				Scenario 2 Malin Road & Three Tun Road Extension					
		Type	AM		PM		Type	AM		PM		Type	AM		PM		
			Delay (s)	LOS	Delay (s)	LOS		Delay (s)	LOS	Delay (s)	LOS		Delay (s)	LOS	Delay (s)	LOS	
North/South	East/West																
1	PA Route 352	Lancaster Avenue	Signalized	926.4	F	448.5	F	Signalized	912.1	F	452.6	F	Signalized	468.6	F	260.3	F
3	Malin Road	Lancaster Avenue	Signalized	65.9	E	98.5	F	Signalized	32.5	C	34.5	C	Signalized	39.7	C	34.8	C
6	Old Lincoln Highway	Lancaster Avenue	Signalized	165.0	F	140.7	F	Signalized	118.6	F	111.3	F	Signalized	118.6	F	111.3	F
7	Old Lincoln Highway	Old Lancaster Road	Signalized ¹	125.2	F	127.2	F	Signalized ¹	51.5	D	55.7	E	Signalized ¹	51.5	D	55.7	E
10	Warren Avenue	Pennsylvania Avenue	Unsignalized	1.8	A	2.2	A	Signalized	14.9	B	16.6	C	Signalized	21.2	B	32.1	C
11	Warren Avenue	King Street	Signalized	150.9	F	96.3	F	Signalized	50.0	D	28.5	C	Signalized	66.1	E	35.7	D

1 - With improvements.