

ACKNOWLEDGEMENTS

The West Whiteland Township Comprehensive Plan Update

Board of Supervisors, 1993-94

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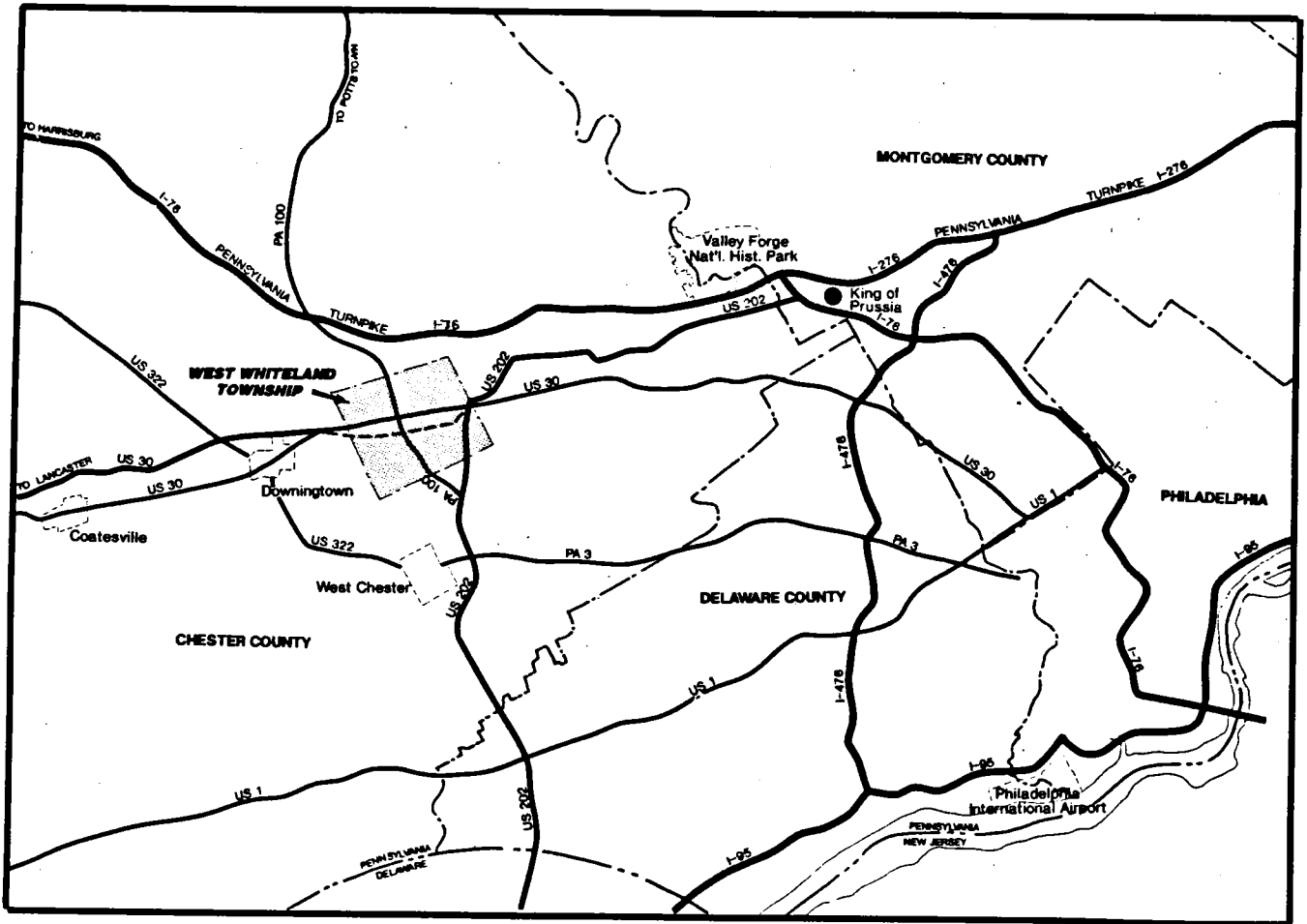
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Figure 1.1

Location of West Whiteland Township



CHAPTER 1: BACKGROUND/PLANNING PROCESS

Growth Trends and Issues

West Whiteland Township occupies approximately 13 square miles of land in central Chester County, Pennsylvania and is located some 25 miles west of the City of Philadelphia. The township is traversed by the Great Valley, which comprises a large part of the center of the township, framed by the North Valley Hills on the north and the South Valley Hills on the south.

The township is bisected east-west by U.S. Route 30 and from north-to-south by Route 100. Since its founding, West Whiteland Township has been a rich farming area, and until the 1950s the economy of the township was dominated by agricultural activities. Beginning in the 1950s however, the township began to experience rapid urban development, first as a bedroom suburb and then more recently as a major focus of industrial, office, and retail development. The commercial development, while primarily clustered around the intersection of Route 30 and Route 100, has begun to spread westward along Route 30 and northward along Route 100 in recent years.

Today only about one-fourth of the land area of the township is undeveloped. The bulk of the undeveloped land consists of the extensive property of the Church Farm School, located mostly north of Route 30 in the northeastern quadrant of the township.

In recent years, the Church Farm School lands, totalling some 1,200 acres, have been the target of several proposals for extensive urban development. A recent proposal by the developer Willard Rouse was not approved by the Township. How this large tract of land will ultimately develop remains an issue of critical importance to the township.

The township's protracted experience in considering Rouse's Churchill proposal for the Church Farm School property, along with a steady stream of proposals for additional commercial development in and around the commercial core of the township at the intersection of Route 30 and Route 100, has greatly heightened local awareness of planning and development issues and related traffic problems in recent years.

By 1992, these development issues, coupled with the decision of the Pennsylvania Department of Transportation (PennDOT) to proceed with the Exton Bypass, a limited-access highway connection through the center of the

township from Route 202 at the township's eastern end to the existing limited-access Route 30 just to the west of the township, gave rise to the Township decision to update its 1983 Comprehensive Plan.

In the early 1980s, when the last comprehensive plan was prepared, the extent of undeveloped and uncommitted land in the township was considerably greater and the focus of that plan was on orderly growth and the expansion of roadways and urban infrastructure to meet the needs of a rapidly urbanizing township. Now, with only about one-fourth of the land undeveloped, the focus of the plan needed to shift.

In recognition of the need to respond to recent events and changing concerns, the Township established a Comprehensive Plan Committee specifically to initiate and participate in an updating of the comprehensive plan. The Committee began to focus on planning issues and specific needs that should be addressed in the comprehensive plan updating process. As of mid-1993, when the comprehensive plan process formally began, the following issues and challenges were identified:

- West Whiteland has experienced sustained and rapid residential, commercial, and industrial development for over three decades, especially in the 1980s.
- Rapid growth in commercial development plus steady growth in regional traffic has seriously affected the local highway network.
- Construction of the Exton Bypass will be beneficial but will provide only partial congestion relief.
- The historic, cultural, and environmental resources of the township have been diminished and are further threatened by current and future development activity.
- The visual character and the perceived "quality of life" of the community is also threatened by current and proposed developments.
- The possible construction of a regional shopping center just outside the township could negatively influence commercial activities within the township.
- Continued rapid development will likely require major highway, infrastructure and community facilities improvements to accommodate growth.

- Denial of the Willard Rouse Churchill proposal and the current pause in development activity has created an opportunity to address long-term issues and goals at this time.
- Construction of the Exton Bypass, coupled with the 1992 Clean Air Act, creates a timely opportunity to explore ideas for reduced auto dependency in the township.
- The township contains a finite amount of undeveloped land and will reach a more-or-less "full build-out" stage in the not-too-distant future.
- The single-family detached residential character of the township, cherished by long-term residents, is being threatened by both sustained retail commercial growth and non-single-family-detached residential development.
- The focus of proposed planning activity should be on defining the special and desirable qualities of the township at full build-out:
 - creating a township-wide open space plan for conservation and recreation;
 - protecting and enhancing historic, cultural, and environmental resources;
 - preserving the scenic resources and visual character of the Chester Valley and other attractive areas within the township;
 - establishing effective growth management controls, and;
 - creating practical guidelines for development to positively affect the quality-of-life in the township.
- This may be the last opportunity for the Township to be bold and creative about the ultimate pattern of development and the visual character of the community.

The challenge to West Whiteland over the next ten to twenty years remains a significant one: How to encourage and manage suitably-located, high-quality, beneficial residential, commercial, and industrial development, while at the same time preserving and enhancing a desirable quality-of-life that can be enjoyed by the township's residents for years to come.

An updated Comprehensive Plan for the township has the potential to provide a highly-effective planning tool that will support day-to-day decisions about future development so that they may be thoroughly rational and consistent and at the same time move the township in a desirable direction in terms of open space preservation, recreation facilities development, traffic management, and fiscal balance.

A Plan that is fully responsive to the needs of the residents of the township needs to contain both long-range and short-range programs, must balance local needs and perceptions with regional requirements and perspectives, and contain its own logic and strategy for implementation. A good Plan can also serve as a "roadmap" for the Township, both in terms of informing and improving the process of reviewing and approving development plans, and in projecting a coherent and mutually agreed-upon development framework and visual image of the township. A new Comprehensive Plan should serve as an everyday working document to be referred to regularly in the review of development proposals and in the planning of long-range capital improvements.

The 1994 Comprehensive Plan Update

The purpose in preparing an updated Comprehensive Plan is fourfold. First, the data base for the township has been brought up to date. Chapter Two includes surveys of natural and cultural features, the current land-use pattern, the road system, and the systems of public services and utilities; analyses and projections of population, housing, and employment; and an examination of the rate and types of change in the township since 1982. Second, the Plan identifies the basic direction and structure recommended for the future development of the township, derived from explorations of alternative development patterns. Third, the Plan specifies the goals, policies, and individual elements that will form the basis for the development (including conservation efforts) of the township. Finally, the Plan lays forth a specific implementation strategy and program to aid the Township in achieving the goals of the Plan.

The Comprehensive Planning Process

Preparation of the Comprehensive Plan Update for West Whiteland Township was accomplished largely over a one-year period commencing in April 1993, with Public Meetings and Hearings held in the autumn of 1994. The Work

Program Schedule (Figure 1.2) outlines graphically the process that was observed, consisting of three distinct phases.

Community participation was a hallmark of the formal plan preparation process. Early on the Comprehensive Plan Committee elected to have a detailed questionnaire distributed to all township residents and businesses. The results of the questionnaire proved to be of great importance in the comprehensive planning process, as Committee members took seriously residents' and businessowners' views of their township. Questionnaire results (see Appendix 3) and continual information updates on the comprehensive planning process were published in the regular Township Newsletter. Several formal, advertised Public Information Meetings were conducted during the comprehensive planning process, with good attendance from residents and businessowners.

The first phase of the Plan preparation was primarily devoted to background data collection and the documentation of change in the township during the last twelve-or-so years. Tasks within this phase included a review of earlier planning documents and data, creating the base maps of the township for the study, an inventory of natural and cultural features and development limitations, documentation and projections of demographics and development activity, a land-use field survey, documentation of water and sewer facilities, and documentation of physical change.

Phase B incorporated three discrete tasks: An analysis of potential development capacities in the township, the setting of preliminary goals and objectives for the Plan, and an exploration of alternative development patterns, including the definition of preliminary development plan recommendations.

The third phase focused on the actual preparation of the Comprehensive Plan Update for West Whiteland Township. The Plan was prepared as preliminary drafts, reviewed by the Committee and others, and revised to final draft form. The end of Phase C encompassed the period of public reviews and hearings on the final draft of the Plan. Revisions were made based on those reviews and hearings and a camera-ready original of the Plan was prepared for printing and public distribution.

CHAPTER 2: EXISTING CONDITIONS

SECTION 1: GENERAL INTRODUCTION

The purpose of this chapter is to analyze existing conditions in West Whiteland Township. In particular, this chapter seeks to develop a clear understanding of the township's physical, demographic, social, and economic conditions, based on current circumstances and historical development. This analysis is intended to enable the township government and residents to identify potential problems, to determine future needs, and to develop necessary policies and strategies to respond more effectively to future growth.

The material in Chapter Two is based on a series of background studies produced during the planning process. The chapter consists of seven sections in addition to this introduction: Existing Land Use; Pattern of Change; Natural and Cultural Resources; Population, Housing, and Employment; Circulation; Community Facilities; and Utilities.

The Land Use section provides a description of the existing land use patterns, with implications for future development. The Pattern of Change section provides an analysis of development activity in the township since 1982. The Natural and Cultural Resources section provides a summary of environmental factors that are capable of affecting the location and intensity of future development. The Population, Housing, and Employment section reviews selected social and economic characteristics of township residents, employers, and housing development. Population, housing, and employment projections are included, as is a Holding Capacity analysis. The Circulation section assesses existing conditions with respect to traffic and circulation, while the Community Facilities and Utilities sections analyze all public services and facilities serving West Whiteland Township.

SECTION 2: EXISTING LAND USE

The purpose of a survey of existing land use is to assess the pattern and intensity of utilization of land in West Whiteland Township. Based on this assessment, it is possible to evaluate the compatibility of existing uses, the extent of land consumption, and to predict the direction that future development can be expected to take in light of existing conditions. Finally, the survey reveals or indicates the remaining amount and the location of land available for future development.

The land use survey of West Whiteland Township inventoried the primary use of each parcel of land in the municipality, utilizing field work carried out in June of 1993. The land use survey makes it possible to assess the patterns and intensities of various land uses and, through a comparison with previous land use surveys and aerial photography, to identify the changes in land use since the West Whiteland Township Comprehensive Plan was last updated in 1982-83.

Basic Structure

Transportation has strongly influenced the land use pattern in West Whiteland Township. The township's early economy, dominated by agriculture, was strengthened by the construction of highways and railroads that facilitated the movement of agricultural goods to Philadelphia. A variety of small, local industries, including quarrying, lime burning, mining, and milling also depended heavily on easy access to markets for their success.

Most important among the early transportation routes, and the first turnpike in the new nation, was the Lancaster Turnpike, constructed in 1794. The turnpike cut a course through the center of the township and its path remains essentially unchanged today. Land along the turnpike became highly valued, and hotels, taverns, service facilities, and large farm complexes were built along its path.

In the early-to-mid nineteenth century, the railroad became a major mode of transportation of goods and people between West Whiteland Township and Philadelphia, and travel along the turnpike declined. Farms, businesses, and industry prospered in the second half of the nineteenth century and the population of the township grew. The Lancaster Turnpike, having been declared free of tolls in 1902, was designated part of the state highway system in 1911, and the use of the automobile increased pressures to sell off farmland

for residential and commercial uses along the turnpike. Nonetheless, the agricultural economy remained dominant and the rural character of West Whiteland remained fairly constant well into the 1960s.

The current land use pattern is shown on the Existing Land Use Map (Figure 2.2.2). Fifteen land use categories are illustrated, encompassing open space lands, residential areas, commercial activity, industrial uses, institutions, recreational uses, and miscellaneous uses. These categories are further subdivided to differentiate among various residential densities, commercial and industrial activities, and institutional and recreational uses. The land use pattern is described in the following subsections.

Residential Uses

According to figures from the U.S. Census of Population for 1990, the predominant residential structural type in West Whiteland Township is single-family detached, comprising 55.3% (2,712 units) of the 4,900 total housing units in the township. The greatest concentration of single-family detached dwellings occurs in the southern tier of the township, south of the Conrail/Amtrak railroad lines. Another area of concentration is the North Valley Hills area, west of Route 100, including several housing tracts that extend into Uwchlan and East Caln Townships.

During the 1980s, substantial construction of single-family attached housing occurred in the township. The number of single-family attached dwellings rose from 8.5% (269 units) in 1980 to 22.6% (1,108 units) in 1990. A similar, though less substantial increase, was seen in housing units with 10 or more units, which numbered 335 in 1980 and rose to 674 in 1990. Though these units still comprise only 13.8% of the total housing units in West Whiteland Township, it was a twofold increase in units of this type since 1980. These structures are generally concentrated in the township's southern tier.

The median year of construction for housing units in West Whiteland Township is 1976, compared with a median year of 1954 for Chester County. Nearly 40% of all housing units in the township have been constructed since 1980, 24% from 1970 to 1979, with the remainder having been built prior to 1970.

Commercial Uses

Several types of commercial use occur in West Whiteland Township and can be found in a variety of settings, including commercial strip developments, shopping centers, and planned business centers. The majority of commercial uses are located along Business Route 30 (Lincoln Highway) and Route 100 (Pottstown Pike) -- principal arterial highways that were among the earliest roads in West Whiteland Township and that carry the heaviest traffic volumes today.

The Existing Land Use Map differentiates commercial uses into Retail Commercial and Office Commercial categories. Retail Commercial includes food stores, automotive dealers, service stations, building/garden materials centers, outlets, apparel and accessory stores, eating and drinking places, hotels and other lodgings, motion picture facilities, and other miscellaneous retail uses. The Office category includes depository institutions, insurance agents, real estate agents, health services, legal services, engineering/management services, general offices, and other miscellaneous office uses.

The largest concentration of retail commercial establishments is found near the geographic center of the township at the intersection of Business Route 30 and Route 100. Exton Square Mall, West Whiteland Towne Center, and Fairfield Place anchor a variety of smaller retail commercial establishments, including restaurants, banks, and a movie theater. Festival Market, another shopping center, extends retail commercial development westward along Business Route 30.

Retail uses also occur in strip developments along West Whiteland Township's arterial highways, principally Business Route 30 and Route 100. Other retail commercial uses are dispersed throughout the township. A grouping of retail commercial uses exists at the Route 100 and Boot Road intersection.

Office commercial uses are functionally of three main types, including corporate structures, speculative office complexes, and small facilities for independent medical, financial, legal, and similar practices. Corporate office structures include the Weston Corporate Campus east of Route 202, and the Laborer's Union Training Facility at Business Route 30 and Ship Road. The speculative office structures in West Whiteland can be found in mixed business-park and light industrial developments along Business Route 30.

Industrial Uses

Both general and light industrial uses have been identified in the land use survey. The distinction reflects qualities of scale, off-site impacts or intrusiveness (in terms of visual, noise, vibration, odor, etc.), and the degree to which the use resembles an office or research facility versus a manufacturing or materials processing operation. Very little genuinely heavy industry exists in West Whiteland. However, general industrial uses reflect a more traditional interpretation of industrial use and include the Foote/Mineral battery-research facility, petroleum storage facilities, quarries, junk yards, machine shops, metal fabrication, plastic manufacturing, precious metals processing and fabricating, major automotive repair facilities, and other miscellaneous heavy manufacturing. Light industrial uses are characterized as generally less intrusive to neighboring uses, and include research facilities, printing and publishing, technology-related industries, warehousing activities, electronic components assembly operations, and a variety of other light industrial uses. The most notable concentrations of such uses occur in business parks along Business Route 30.

Recreational Uses

Recreational uses are also delineated on the Existing Land Use Map. There are generally three types of active/passive recreation uses in West Whiteland Township, as discussed in the Update to the 1983 Open Space and Recreation Plan. These recreational uses include lands: 1. publicly-owned (township); 2. quasi-publicly-owned (school district); and, 3. privately-owned, used for recreational purposes such as lands maintained by homeowners associations that are not available for use by all township residents, unless they are members of the facility or are owners of the property. The publicly-owned and -maintained recreational properties in the township comprise 71 acres, quasi-public land properties total 53 acres, and privately-owned lands represent 236 acres.

Township properties include Albert C. Miller Memorial Park, Meadowbrook Manor Park, Sunset Grove Park, Waltz Park, Banbury Park, Ivy Glen Park, Mill Valley Park, Ship Road Park, and Burke Road Nature Study Area. The major private recreational land includes the property owned by the Natural Lands Trust on Grubbs Mill Road, and those parcels owned by homeowners associations within developments such as Evian, Watch Hill, Banbury, Exton Station, and Ryerss.

Other recreational facilities of a private nature exist in the township, including lands owned by the West Chester Gun Club (33 acres), the Whitford County Club (100+ acres), and the Church Farm School (1100+ acres).

Institutional Uses

Both public and private institutional uses are widely dispersed in West Whiteland Township. The three public schools in the township are M.C. Howse Elementary, Exton Elementary, and Pierce Middle School. There are three private schools, including Saints Philip and James, Church Farm, and the Devereux School.

The most extensive institutional land holdings in the township are private, and include the Whitford County Club, the West Chester Gun Club, the Laborer's Union Training Facility, the Devereux School, and the Church Farm School (excluding agricultural lands). Churches and cemetery lands also comprise extensive private and institutional holding in the community, and include the St. Paul Episcopal Cemetery and Church, Sts. Philip and James Church, St. Mary's Chapel, Exton Baptist Church, Exton Church of Christ, and Grove United Methodist Church and Cemetery.

Transportation and Utilities

Utility land uses in the township consist of pipelines, transmission lines, rail lines, transportation facilities, and other lands owned by public utility companies. Several natural gas and petroleum products transmission lines cross the township. There are six oil transmission lines owned by the Allegheny, Atlantic, Laurel, Mobil, and Sun companies. The oil transmission lines generally traverse the township in a northwest-southeast direction. Four natural gas transmission lines, owned by the Transcontinental Gas Lines Corporation, cross the northern and eastern portion of the township.

West Whiteland is also traversed by a major electrical transmission power line. The Philadelphia Electric Company owns a 220,000-volt power line that extends from the intersection of Grubbs Mill and Grove Roads northeast to the Route 30 and Route 202 interchange.

Other properties operated by public utilities include sewage pumping stations, well sites (now owned by the Philadelphia Suburban Water Company), and the water storage facility on North Ship Road, also owned by Philadelphia Suburban Water Company.

Other Land Uses

Wooded areas are fairly widespread in West Whiteland Township, especially on lands adjacent to the Amtrak rail lines and on the north and south slopes of the Great Valley.

Water areas, in the form of streams, ponds, and retention basins are also widely dispersed, with the major water area located on the Church Farm School property.

Streets, highways, and parking lots occupy considerable land area in the central east-west corridor of the township, where the greatest amount of commercial activity exists. The Exton Bypass will add a considerable amount to that total, since the right-of-way is typically 100 to 200 feet wide.

SECTION 3: PATTERN OF CHANGE

Commercial, industrial, residential, institutional, and related development in West Whiteland Township has occurred steadily since 1982, when the last Comprehensive Plan Update took place. The Land Development, 1982-1993 map (Figure 2.3.1) illustrates that much of this development has occurred on large tracts formerly vacant or wooded. Additional development, in the form of road and bridge repairs, public utilities improvements, and public park developments, is shown on the Public Improvements, 1982-1992 map (Figure 2.3.2).

Township subdivision and land development records since 1982, along with a comparative analysis of 1980 and 1990 aerial photography and a 1993 field survey, have yielded approximations of the number of residential units and general information on retail commercial and office developments, light- and general-industrial construction, and public improvements built over the last ten to twelve years.

Light industrial and business park uses have accounted for a large proportion of recent development in the township. Several large residential developments have increased the housing stock significantly and now occupy large tracts of once-vacant land. Three large commercial developments and several smaller ones, predominantly in the township's midsection or valley area, have added approximately 850,000 square feet of retail development, occupying nearly 150 acres. Approved office uses account for an additional 300 acres of land development.

An overview of recent rezonings (see Figure 2.3.3), land developments, and public improvements in West Whiteland Township should also make note of the construction of the Route 30 (or Exton) Bypass, now slated to be opened in 1996. The Exton Bypass cuts through the center of the township alongside the Amtrak/SEPTA rail lines, with a little more than two miles of length in the township. The Bypass is the most significant public improvement in recent years and will be a major factor in the distribution of new development within the township. The anticipated arrival of this highway has served to spur development of all types in the township, particularly commercial development.

Single-family detached construction made up the greatest percentage of new residential construction in West Whiteland Township from 1970 to 1980 (71%), while single-family attached and multi-family housing made up the rest of the units, with 8.5% and 19% respectively. However, a shift occurred in

the residential construction market during the 1980s. By 1990, 22.6% of all housing units in the township were single-family attached units, 21.6% were multi-family units, and only 55% were single-family detached units.

Single-Family Detached Construction, 1982-1993

Single-family detached residential development occurred in a fairly widely dispersed pattern, with construction in three of the township's four quadrants. (No residential development occurred in the township's northeast quadrant.) Included in the township's single-family detached residential construction over the period are the following developments:

	<u>Units</u>
Morstein Estates Subdivision	16
Wright's Hill Subdivision	5
Hesselbacher Subdivision on Pine Needle Drive	2
George Roberts Subdivision	5
Brittany Woods	23
Watch Hill Subdivision	40
Patriots Grove Subdivision	7
Formica Subdivision on Burgoyne Road	3
Gene Bickert Subdivision	2
Stonegate Subdivision	6
Peck Subdivision	2
Wroten Subdivision on Spackman	2
Whiteland Chase	20
Grove Hill II	15
Ryerss Subdivision	60
Ebner Subdivision	2
Doran Subdivision	2
Whiteland Woods on Huffman Drive	2
Faye McCall Subdivision on Kirkland Ave.	2
Woods at Brookfield	8
Kistler Subdivision	2
Beaumont Subdivision	16
Peter Smith Subdivision on Grove Ave. and Polo Run	2
Swartley Subdivision on Grove Ave. and Polo Run	2
Meredith Subdivision	2
Chan Subdivision	2
Melson Subdivision	2
Hope Subdivision	2
Scot's Grove	14

Singleton Subdivision	1
Tapestry Circle	31

Single-Family Attached Construction, 1982-1993

	<u>Units</u>
Woodlands PRD	100
Lynetree PRD	93
Exton Station	700
Gustafson Farms (Evian)	100
Linden Court Subdivision	10
Cambridge Chase LD	35
Fox Run	60

Multi-Family Construction, 1982-1993

	<u>Units</u>
Thomas Meeting Subdivision	291
Chandler PRD (Chadwell)	240

Commercial Development

Retail

Retail and office development over the period occurred most predominantly along Business Route 30 and Route 100. Three large retail developments were built, as were several smaller retail establishments that are highly visible from the township's main thoroughfares. Retail development over the last ten to twelve years is summarized below:

Whitford Auto Repair -- addition at Clover Mill site
Hess Gas Station -- Route 30
Frank's Nursery -- 17,000 sf retail
Roach Brothers LD -- Route 30 - expansion
Days Inn Development Plan -- 21,400 sf retail hotel & restaurant
Fairfield Place LD -- 305,000 sf retail
Mobil Oil LD -- Boot Road and Route 100
Whiteland Towne Center -- 350,000 sf retail

Ultra Lube LD -- 2500 sf retail
Exton Autoservice Center -- 14,600 sf retail
Festival at Oaklands -- 140,000 sf retail, + 46,000 sf retail
Knapp Car Wash -- 3,300 sf retail
Pep Boys -- 18,000 sf retail service
Ship Village LD -- 10,000 sf retail
Reilly Oil (Amoco) -- 3,000 sf retail
Blockbuster Video LD -- 5,500 sf retail
Texaco Land Development
Whiteland Holding Company LD, Vittle House Restaurant (now East Side Mario's)

Office

Between 200,000 and 250,000 square feet of office development was built in the township from 1982 to 1993. Proposed but as-yet unbuilt projects include the million-square-foot Glen Loch II development.

Exton Commons -- 106,000 sf office
Commons at Lincoln Center -- 45,000 sf office
Exton Prof. Center -- 30,000 sf office
Grimmet -- 5,000 sf office
Glen Loch II -- 1.1 million sf office (1 million unbuilt)

Industrial Development

As has been the trend over the last two decades, light industrial uses -- including instrument and light assembly, warehousing and distribution, and laboratory and research -- have frequently been combined with office-type uses in mixed-use light industrial/business parks and mixed-use structures. More traditional forms of industrial development have occurred in the township, but they have been limited. Listed below are the industrial developments that have occurred in West Whiteland since 1982:

Clover Mill Business Park -- Lots 1, 12, 10, 9, 11, 8, 13
Valley Creek Industrial Center -- Lots 1-3, 8, 10
Whiteland Business Park -- 1,000,000 sf office/industrial
Lots 1, 2, 4, 6-10, 12-29, 31-40, 44
Laborer's District Council -- 64,000 sf
Exton Materials
Exton Business Center -- Lots 9-15

Oaklands Subdivision -- 1.2 million sf office/industrial
Lots 5, 33, 38, 40, 41, 44, 46-48, 14-20, 63
Roy F. Weston -- building #5
Suburban Propane
International Envelope -- 150,000 sf industrial
Vincent Colona -- Clover Mill Road

Institutional

Institutional development has accounted for only a small portion of the development in the township since 1982. New construction at local schools and churches has been limited, with additions to the Church Farm School, Exton Elementary School, the Devereux School, Sts. Philip and James Church, and the Exton Baptist Church. Developments over the period include the following:

Church Farm School -- additions to dorms and gym
Sts. Philip & James rectory, convent and church buildings
Exton Baptist Church -- addition
Exton Elementary School -- addition
Devereux School Land Development

Pending and Proposed Development

Pending and proposed development includes the balance of construction for projects already begun, approved-but-unbuilt developments, and prospective developments. A summary of these various types of potential future projects follows:

TABLE 2.3.1
PENDING AND PROPOSED DEVELOPMENT

Development Name	Status	Land Use	Proposed Size at Buildout	Built as of January 1994	Remaining to be Built
1 Evian	UC	Mixed Residential	31 S.F.	31 D.U.	0 D.U.
2 Watch Hill		Single Family Residential	282 T.H.	100 D.U.	182 D.U.
3 Commons At Lincoln Center	UC	Office Condos	109 D.U.	40 D.U.	69 D.U.
4 Chaddwell	UC	Low-Rise Apartments	90,000 sf	45,000 sf	45,000 sf
5 Fox Run	UC	Town Houses	324 D.U.	240 D.U.	84 D.U.
6 Cambridge Chase	UC	Town Houses	81 D.U.	60 D.U.	21 D.U.
7 Oaklands Corporate Center	UC	Office Park	35 D.U.	30 D.U.	5 D.U.
8 Clover Mill Business Park	UC	Business Park	2,500,000 sf	1,250,000 sf	1,250,000 sf
9 Foot Mineral	R	Retail	450,000 sf	300,000 sf	150,000 sf
10 Greentree Vilalge	UD	Mixed Residential	500,0-00 sf	0 sf	500,000 sf
	UC		180 S.F.	0 D.U.	180 D.U.
11 Indian King PRD	UC	Single Family Residential	296 T.H.	0 D.U.	296 D.U.
12 Whiteland Chase	UC	Single Family Residential	75 D.U.	57 D.U.	18 D.U.
13 Beaumont Subdivision	A	Single Family Residential	20 D.U.	6 D.U.	14 D.U.
14 Homebuilders Convenience	A	Retail	16 D.U.	0 D.U.	16 D.U.
15 Gordon Lewis Convenience	A	Retail	11,000 sf	0 sf	11,000 sf
16 Evesham Village	A	Single Family Residential	12,000 sf	0 sf	12,000 sf
17 Bonnie Blink/Exton Station	UC	Town Houses	10 D.U.	0 D.U.	10 D.U.
18 Ryers Infirmary	UC	Single Family Clusters	878 D.U.	700 D.U.	178 D.U.
19 Aldergate	PS	Single Family Residential	192 D.U.	15 D.U.	177 D.U.
20 Glen Loch Office Park	A	Office Park	21 D.U.	0 D.U.	21 D.U.
21 Fairview (Goat Hill)	A	Town Houses	1,100,000 sf	900,000 sf	1,010,000 sf
22 Whitford Station	UC	Single Family Residential	31 D.U.	0 D.U.	31 D.U.
23 Exton Corporate Campus	A	Office Building/Industrial	15 D.U.	12 D.U.	3 D.U.
24 Exton Station Commercial	A	Retail	500,000 sf	0 sf	500,000 sf
25 The Knoll		Single Family Residential	23,000 sf	0 sf	23,000 sf
26 Waltz Subdivision	A	Single Family Residential	9 D.U.	9 D.U.	0 D.U.
27 Grimmet	A	Office/Industrial	41 D.U.	0 D.U.	41 D.U.
28 Exton Square Mall	UD	Retail	200,000 sf	0 sf	200,000 sf
29 Waterloo Gardens	R	Retail	1,200,000 sf	600,000 sf	600,000 sf
30 Church Farm School	PS	Office, Single Family Residential	120,000 sf	0 sf	120,000 sf
			1,500,000 sf	0 sf	1,500,000 sf
31 Home Depot	PS	Retail	240 D.U.	0 D.U.	240 D.U.
32 Jefferson Development	PS	Single Family Residential	110,000 sf	0 sf	110,000 sf
33 Oaklands Restaurants	PS	Retail	24 D.U.	0 D.U.	24 D.U.
			N.A.	N.A.	N.A.

STATUS CODES

UC- under construction
A- approved plan
PS- plan submitted
R- rezoning requested
UD- under discussion
NA- information unavailable

SECTION 4: NATURAL AND CULTURAL RESOURCES

The natural characteristics of the landscape in West Whiteland Township have been an important factor in determining its historical pattern of development. Areas of significant physical constraint -- floodplains, wetlands, steep slopes, woodlands, and carbonate geology -- have generally been less likely to be subject to development. These natural determinants continue to be constraints to development.

As part of the examination of existing conditions in West Whiteland Township, an inventory and analysis of various environmental factors was made. These factors, which include natural features and characteristics as well as some man-made elements of the environment, are critical components in any consideration of future alternatives for growth and development.

Some of these factors may impose constraints on development while others suggest opportunities for development. It is possible for an environmental factor to represent both an opportunity and a constraint.

Several analysis maps have been prepared that delineate these resources, including the following:

- Hydrology
- Slopes
- Woodlands and Farmland
- Historic and Scenic Resources
- Composite Constraints

This series of interrelated, interpretive maps permits the identification of areas requiring preservation, areas requiring conservation, and areas available for development within the township. Areas requiring preservation include streams, floodplains, and other lands that are generally undevelopable due to physical characteristics or statutory regulations. Areas in need of conservation include fragile environmental areas such as wetlands, steep slopes, woodlands, farmlands, significant wildlife habitat, historic sites, and scenic features. These valuable resources should be protected or conserved due to the environmentally- and economically-sensitive nature of these areas and to their importance to the township.

For areas not requiring special efforts toward preservation or conservation, there remain other relevant factors that make lands more or less suitable for development. These factors include the availability of water and sewer service, soil capacity, existing roads, and other issues.

Finally, a synthesis of these natural and cultural features was made and mapped, reflecting the relative suitability of all undeveloped portions of West Whiteland Township for future development.

Hydrology

The Hydrology Map, Figure 2.4.1, delineates the significant water resources of the township. Most land in West Whiteland (7,859 acres, or 95%) falls within the Valley Creek watershed, which is a sub-basin of the Brandywine Creek basin. Broad Run carries water from the southwestern portion of the township to Valley Creek. Chester and Ridley Creeks carry a small portion of water from the southeast corner of the township.

In addition to streams, surface water is impounded in a few scattered ponds, some of which are used for agriculture and/or stormwater management. The largest pond is on the Church Farm School property and drains into a tributary of Valley Creek.

Floodplains

Other hydrologic characteristics are important in delineating suitable areas for future development. Of major concern are flood zones adjacent to bodies of water, hydric soils, and wetlands. These areas are environmentally-sensitive and can present serious physical limitations for development. Development in floodplains is hazardous to life and property, not only within the proposed development itself but also in existing developed areas that may be subjected to unexpected changes in stream channel location or in flood heights and velocities. Figure 2.4.1 shows the One-Hundred-Year Floodplain in West Whiteland Township as defined by the Federal Emergency Management Agency (FEMA) under the National Flood Insurance Program.

Floodplain soils are generally found adjacent to the stream network. These soils historically have been eroded, transported, and deposited by floodwater and generally indicate an area susceptible to flooding. Other flood-prone areas are shown on the Flood Hazard Boundary Map of West Whiteland Township, as published by FEMA.

Wetlands

Wetlands are among our most valuable resource areas because they control flooding, improve water quality, and support a wide variety of animal and plant species. Wetlands are characterized generally by a high water table, poor drainage, and some degree of surface ponding during the year. Most hydric soils qualify as wetlands if they support predominantly hydrophytic vegetation. These areas are delineated on the Hydrology Map (Figure 2.4.1). Wetlands are regulated by the U.S. Army Corps of Engineers and the Pennsylvania Department of Environmental Resources (DER). Essentially, no development activity may occur in a wetland area without a permit. The permit process requires an investigation of development alternatives. Mitigation may be required if development is to proceed; creation of "new" wetlands may be required to replace those disturbed or destroyed by development activity (see Figure 2.4.1).

Although no comprehensive inventory of wetlands in West Whiteland Township currently exists, the National Wetlands Inventory (NWI), completed in 1981-1982, identifies wetland areas in the township based on aerial photographs.

According to the NWI, there are three types of wetlands in the township. They are: 1. Lacustrine (Church Farm School Pond); 2. Palustrine (swamps and small ponds); and, 3. Riverine (perennial or intermittent creeks or streams).

Geology and Soils

Soils maps provide information on flooding, hydric soils, and seasonal high water table areas. A hydric soil is one that in its undrained condition is flooded, ponded, or saturated long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation. Hydric soils generally have a seasonal high water table. Soils information is published by the U.S. Department of Agriculture, Soil Conservation Service, in the Chester and Delaware Counties Soil Survey.

The general soil areas in a locality are called soil associations. Each association contains a few major and several minor soils in a distinctive pattern. The three major soil associations present in West Whiteland Township are: 1. Glenelg-Manor-Chester Association; 2. Hagerstown-Conestoga-Guthrie Association; and, 3. Edgemont Association.

The Glenelg-Manor-Chester Association consists of shallow to deep, silty, and channery soils on grayish-brown schist and gneiss. The principal soils on uplands in this association are the Glenelg, Manor, Chester, Worsham, and Glenville soils. The Glenelg and Chester soils have a surface layer of dark-brown silt loam and a subsoil of a strong-brown, light silty clay loam or silt loam. The Manor soil, developed from similar parent material, is shallow to partly weathered schist. The Worsham and Glenville soils occur in low-lying areas and in stream headwaters. The less extensive soils in the Glenelg-Manor-Chester association are the Congaree, Chewacla, and Wehadkee soils.

Soils of the Hagerstown-Conestoga-Guthrie Association are the deep, silty soils of the Chester Valley. Most soils of this association are gently sloping and are fairly well suited to crops. They also make choice sites for new development. Being limestone derived, these soils, especially the Conestoga series, delineate the township's most important aquifer.

The Edgemont Association is found in the North Valley Hills area adjacent to Chester Valley. The soils in this association are, for the most part, gently to moderately sloping and are moderately deep and well-drained. The majority of land in the association is wooded, but some has been cleared for agricultural use.

All soils within these associations have been analyzed with respect to their suitability for residential, commercial, industrial, or other development. The characteristics of the soil in any given location are, in themselves, prime determinants of what that land is best suited for under what conditions. When these same soil characteristics are analyzed in conjunction with the related features of a site -- slope, vegetation, geology, etc. -- an even more complete picture emerges of what would be appropriate uses.

The main characteristics considered are soil depth, degree of slope, internal drainage freedom from flooding, type of parent material, and stoniness. The Glenelg, Manor, Chester, Hagerstown, Conestoga, and Edgemont and Brandywine soils have no significant limitations for building sites.

The Guthrie series consists of deep, poorly drained soils on limestone or calcareous schist. The Glenville series are on low-lying areas in the uplands and around stream headwaters. The water table is high in both of these soils during most of the year. The Lawrence series, though better drained than the Guthrie soils, are poorly drained. The Worsham soils are waterlogged most of the year. The Undside, Melvin, Congaree, and Wehadkee series are subject to flooding and unsuitable for development.

Carbonate District

West Whiteland Township's Carbonate Area District Map (see Figure 2.4.1) delineates areas underlain by carbonate geologic formations. The soils in this area developed largely from limestone, calciferous schist, and marble. As a result of limestone's propensity to dissolve when exposed to water, carbonate formations carry with them a number of potential liabilities that demand special procedures and meticulous site analysis if they are to be avoided. Prime among these hazards is a susceptibility to sinkholes, fissures, and solution channels, with a consequent threat to the stability of structures and paved areas. Any disturbance of natural conditions at a given site causes an increase in subsoil erosion and sink activity. A more pervasive danger from this condition is the prospect of widespread groundwater pollution; where the soil mantle is thin and underground channels and caverns permeate the geologic structure, pollutants can reach the water table readily and become broadly dispersed, with little likelihood for self-purification.

The Township has established Carbonate Area District regulations as guidelines for new development in these areas to protect carbonate formations from unnecessary or excessive disturbance.

Topography

Gently rolling terrain with slope gradients rarely exceeding 8% prevails over a great portion of West Whiteland Township, especially its midsection. Areas of steep slopes are most prevalent in the southern half of the township where streams that feed into Valley Creek have eroded deep channels. Steep slopes also occur in the northern ridge line and in the southwest corner of the township along Broad Run and its tributaries (see Figure 2.4.2).

Elevations above mean sea level range from approximately 275 feet along Valley Creek at the eastern edge of the township to 660 feet at the northeast corner of the township. Generally, lands slope in a southwesterly direction, with streams draining into Brandywine Creek to the west.

Vegetation and Wildlife

Dense hardwood forests once covered West Whiteland Township, but land clearance in the Great Valley and on the southern upland for commercial purposes, farming, and other development has eliminated much of this virgin woodlands. Today, the remaining woodlands consist mostly of second and

third growth stands dominated by deciduous hardwoods such as oak, beech, and tulip poplar. The wetter areas include maple, elm, ash, and hickory. These woodland areas extend in two east-west bands along the slopes of the North and South Valley Hills.

The Church Farm School property constitutes the greatest amount of farmland in the township. Smaller farmland parcels are also located in the Great Valley. Farmlands and woodlands are illustrated in Figure 2.4.3.

Many species of plants and animals may be found in the township's three main habitats: 1. open field or pasture; 2. forest, often comprising steep and/or stony soils; and, 3. wetlands, including streams, springs, ponds, and meadows. Although some species have adapted to more than one habitat, other flora and fauna have adapted to very specific needs and conditions, and are critically dependent upon particular habitat types. Although man-made features are generally considered disruptive to natural habitats, some, such as farm fields, pasture, hedgrows, and treelines, offer important food and cover sources.

Historic and Cultural Resources

West Whiteland Township, like other areas of southeastern Pennsylvania, has a long history of human occupation and use. The prehistoric history of the township is characterized by successive periods of Native American occupation, primarily as an upland location for seasonal hunting, with small, short-term seasonal settlement sites. In addition, the township is said to have been the traditional location of a major prehistoric village. A number of significant archeological sites have been documented in the township, including small settlement sites.

West Whiteland Township was settled by European colonists in the early eighteenth century. Over the nearly three centuries of its historical development, the township has experienced several significant periods of change. The settlement period was characterized by prominent landholdings of largely self-sufficient farmsteads. During the eighteenth century, wheat was the principal commodity of exchange. During the nineteenth century, farms generally became smaller and more intensive, as a change to dairy farming occurred, influenced by the development of the railroads. The late-nineteenth and early-twentieth centuries saw a trend toward the growth of gentleman farms, as farm sizes again generally increased and farm ownership was often by wealthy Philadelphia families.

The township's development was, and continues to be, strongly influenced by the character of the natural landscape. Most significant perhaps is the limestone valley, providing rich and tillable agricultural soils and easy access for the major east-west roadways over which the westward expansion of Pennsylvania moved. The limestone valley also provided important resources such as building stone, sand, and lime. Quarries and lime kilns developed on many of the eighteenth- and nineteenth-century farm properties. The steep, wooded slopes of the valley were important as woodlots throughout the eighteenth and nineteenth centuries. West Whiteland's historically-significant east-west and north-south regional road network is still clearly evident today.

Since World War Two, and especially over the past twenty-five years, the rapid suburbanization of the township has resulted in the most dramatic change in the character and use of the landscape since the settlement period. For the most part, suburbanization has meant the wholesale loss of the agricultural landscape that evolved in West Whiteland over the past three centuries. This change has resulted in the loss of historic landscape features, built historic resources such as houses, outbuildings, roads, and other site features, and prehistoric archeological resources.

Beginning with the Chester County Historic Sites Survey in the late 1970s, West Whiteland has systematically surveyed its extant eighteenth- and nineteenth-century structures throughout the township (see Figure 2.4.4 and Appendix 4). These are often visually obscured by later and more intensive development.

The most clear manifestation of earlier settlement in this area generally is the road pattern, consisting of historic pike routes and connecting inter-community roads. Crossroad villages that sprung up at various intersections of these roads sometimes survive in modified form to the present time, with historic structures often greatly altered or even demolished and replaced with newer buildings.

The historic landscape and its component elements -- including roads, fields, buildings, hedgerows and bridges -- is discernible in the northeastern part of the community, which has not been blanketed with twentieth-century roads and residential-lotting grids as in the rest of the township. In the less-developed quadrant of the township several nineteenth-century dwellings survive and are more clearly understood in the context of a historic landscape.

Between 1979 and 1981, many historic resources were documented in West Whiteland and properties of historic significance were submitted for inclusion

on the National Register of Historic Places. The Township's Zoning Ordinance recognizes Classes I, II, and III Historic Resources, which are identified on Figure 2.4.4. Two National Register Historic Districts have been identified as well, one at the intersection of Boot and Grove Roads, the other consisting of a group of buildings at the Church Farm School.

Composite Constraints

The preceding natural and cultural resource information was combined and synthesized to illustrate the relative level of development constraints affecting various areas of West Whiteland Township (Figure 2.4.5). Areas with very severe constraints are generally precluded from future development due to flooding, while steep slopes and hydric soils pose severe constraints for most development. These areas may be most suitable for farming, recreational use, and wildlife habitat. Areas having a high seasonal high water table, woodlands, or historic sites have moderate constraints for development. The balance of the township has only slight development limitations.

SECTION 5: POPULATION, HOUSING, AND EMPLOYMENT

Population Trends and Forecasts

Population forecasts are considered an essential part of planning for future growth because they can be translated into approximations of the future need for housing, community facilities, and other development. Many factors are taken into account in making population forecasts, but these factors are constantly subject to change. The longer the time period of the forecast and the smaller the present population, the less reliable the forecasts may turn out. For instance, forecasts for individual municipalities are less valid than are those for larger regions or for the entire nation; five-year forecasts usually are more valid than those of fifteen or twenty-years. Additionally, forecasts are more tenuous when past trends have been based on a relatively abundant supply of developable land, while future forecasts are constrained by the development capacity of a finite geographical area.

Recent population trends for West Whiteland Township, Chester County, the City of Philadelphia (Philadelphia County), and the Philadelphia Standard Metropolitan Statistical Area (SMSA) are compared in tables and figures that follow. The Philadelphia SMSA includes the Pennsylvania counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia, and the New Jersey counties of Burlington, Camden, and Gloucester.

The population forecasts for West Whiteland Township and for Chester County were prepared by the Delaware Valley Regional Planning Commission (DVRPC) in close coordination with the Chester County Planning Commission, state and federal agency representatives, and a panel of regional economists from the private sector. The forecasts make reasonable assumptions about the future based on knowledge of past and current conditions, and expectations about future trends or conditions. "Forecasts", such as those presented here, are different from "projections" which is another expression used to describe future growth. Projections are generally mathematical expressions of past trends extended into the future. The forecasts prepared by DVRPC begin as projections, but are then modified to reflect changes in past trends that could be expected to occur in the future.

DVRPC uses a cohort-component method to develop population forecasts for Chester County and for other counties in the Delaware Valley Region. First, the population is projected forward using current birth, death, and migration rates. To do this, DVRPC disaggregates the 1990 Census of Population into

five-year age groups of males and females. Then age-specific death rates are applied to each group and age-specific birth rates are applied to females between the ages of 15 and 44. As the population ages forward in five-year increments, births and deaths are calculated to determine the natural increase. These factors are then modified for each county based on changing trends, assumptions about future conditions, and considerations such as land available for development, infrastructure changes, and market, social, and political forces. The resulting of the process is called a forecast.

Table 2.5.1 shows population trends and projections for West Whiteland and surrounding municipalities, Chester County, Philadelphia SMSA, and Pennsylvania. Population growth in the 1940s and 1950s occurred in all municipalities, and although growth continued in the 1960s, 1970s, and 1980s, it occurred at a much slower rate. Based on DVRPC population forecasts to 2020, this growth trend is expected to continue for West Whiteland Township and Chester County. This relationship can be seen in Table 2.5.2 as a percentage increase for each decade. There was a 34.3% positive change in population for West Whiteland Township between 1970 and 1980, and a 29% increase between 1980 and 1990. This trend of increasing population at a declining rate of growth is expected to continue with a 23% increase projected between 1990 and 2000, a 9% increase between 2000 and 2010, and an even smaller 3% increase in population between 2010 and 2020. A similar trend can be seen for Chester County and for other municipalities within the county.

Although population growth in West Whiteland between 1980 and 1990 was not as fast as for some municipalities in the county, particularly Uwchlan, East Goshen, and East Bradford, West Whiteland's growth has been more rapid than that for Chester County. West Whiteland's share of county population has grown from 0.7% in 1920 to 3.3% in 1990, and is expected to grow slightly to 3.6% in the year 2000, remaining nearly the same through 2020.

The total population of West Whiteland is projected to rise over the planning period and the characteristics of the population will continue to evolve. Between 1970 and 1980 the median age of township residents rose from 24.8 to 28.5 years. Between 1980 and 1990, the median age rose to 32.2 years, slightly lower than the median age for Chester County residents of 33.8 years. The preschool population rose 51.7 %, while the school-age population decreased by 15 %. The senior citizen population aged 65 to 75 increased 88% and seniors aged 75 and over increased two-fold by 106% (Table 2.5.3).

Table 2.5.4 provides six alternative population projections for West Whiteland

Township. Alternative 1 records the forecasts provided by DVRPC. Alternative 2 uses the 1990 population of the township and projects that figure using the growth rate of the township between 1980 and 1990 (29%). The population for 2013 of 22,433 may be considered somewhat high because the growth rate is actually expected to decline. Alternative 3 uses a more conservative growth rate than that used for Alternative 2. In this example, the growth rate of three townships exhibiting past growth rates similar to those now being experienced by West Whiteland was used. The resulting population in 2013 of 16,556 is very close to the one forecasted by DVRPC. Alternative 4 is similar, using a growth rate of 24%, the average rate for all municipalities adjoining West Whiteland Township. As expected, the population of 20,444 for 2013 is nearly as high as the projected population for the same year in Alternative 2.

Alternative 5 projects the population using the projected growth rate for Chester County between 1990 and 2020. Alternative 6 shows that the West Whiteland Township portion of the Chester County population has grown steadily, and is projected to increase at a rate of 0.3% per decade. The resulting population for 2013 is projected to be 18,727, roughly 4% of the projected population of Chester County.

Alternative 1 has been used as the "most likely" forecast for the purposes of estimating the number of housing units to be constructed over the planning period (see below).

Housing Trends and Forecasts

There were 3,158 housing units in West Whiteland Township in 1980 and 4,900 in 1990, an increase of 1,742 units (55.2 %). Occupied housing units totalled 4,601, with 70.6 % owner-occupied and 16.6 % renter-occupied. There were 299 vacant housing units, for a vacancy rate of 6.1 %.

Table 2.5.5 shows the distribution of structure types for West Whiteland Township in 1980 and 1990. The largest increase occurred in single-family attached dwellings, which rose nearly 312% between 1980 and 1990. Multi-family housing made a marginal gain while mobile homes and other forms of housing remained fairly constant. However, single-family detached dwellings still make up the highest percentage of housing in West Whiteland Township.

An estimate of the number of housing units to be constructed over the planning period has been formulated in Table 2.5.6. The estimate is based on a 2013 population of 16,724, an occupancy level of 2.5 persons per

household, and other assumed factors. A total of 1,650 housing units would be constructed, for an average of 82 units per year.

Alternative land area requirements for this new housing are given in Table 2.5.7. Assumptions were made concerning the mix of housing types and development densities, but the number of housing units to be constructed is constant at 1,650. Alternative B postulates that future residential development in West Whiteland Township will occur at roughly the same distribution of structural types as existed in 1980. Under this alternative, 70% of all new units are assumed to be built as single-family detached dwellings at an average density of 2 dwelling units per acre, 10% of all new units are single-family attached (twins, townhouses, multiplexes) at an average density of 6 dwelling units per acre, and 20% of all new units are multi-family housing (garden apartments, mid- and high-rise apartments) at an average density of 12 dwelling units per acre. Approximately 881 acres of land would be needed for construction under Alternative B.

Alternative D assumes that future development would occur with roughly the same structural type distribution as was constructed between 1980 and 1990. This distribution would require 549 acres of land, considerably less than projected in Alternative B, because a smaller percentage of the total number of new units is projected to be single-family detached.

Multi-family housing in Alternatives A, B, C and D is fairly constant at 20%. Alternatives E and F show a smaller distribution of multi-family housing and a very large portion of development (90%) in the single-family detached category. Although the percentage of single-family development is the same in both cases, 90%, Alternative F postulates 1-acre lots for single-family detached housing, differing from the 1/2-acre lots used in Alternatives A through E. This analysis of land area requirements illustrates that new residential construction in West Whiteland Township can consume varying amounts of available land. It is probably realistic to assume that new residential development over the next twenty-or-so years will require about 550 to 850 acres of land.

Employment Trends and Forecasts

Employment trends and forecasts are important in planning for future growth. While population forecasts and housing data can be translated into approximations of the future need for housing units and land for new housing construction, employment forecasts for a given locale may be converted into estimates of potential demand for land for new commercial and industrial

establishments. Both kinds of forecasts may give clues as to the future need for varying kinds of community facilities and services.

Unfortunately, employment data for smaller geographic areas are not as readily available as population data. While the U.S. Department of Commerce, Bureau of the Census conducts a Census of Business every five years, it does not cover all economic sectors and the data it reports are riddled with gaps because of the disclosure rules under which it operates. A more complete accounting of employment patterns has recently become available from the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce, but the county is the smallest unit for which those data are available. The Pennsylvania Department of Labor receives highly-detailed employer and employee information in the course of administering an unemployment insurance fund, but the agency will not release information for municipalities with populations under 25,000.

Employment forecasts have been completed by the Delaware Valley Regional Planning Commission (DVRPC). DVRPC forecasts are based on the previously-mentioned BEA data and were reviewed with a panel of economists from the Delaware Valley region. However, forecasting future employment is more difficult than population due to many factors influencing employment at the national, regional and local levels. Unlike population changes, which generally tend to be more gradual and relatively predictable, employment forecasts may vary widely due to broad forces such as foreign trade, world economics, politics, military conflicts, national monetary policies, demographic trends, and social forces. Local factors such as labor force availability, land prices, transportation networks, and local political climate also play an important role in determining employment levels. Sources of current employment data often vary. At the federal level, the Bureau of Labor Statistics (BLS), the Bureau of Economic Analyses (BEA), and the Bureau of Census all provide data on current employment; however, the methods and sources of the data vary among different agencies, producing different sets of results.

Data from DVRPC indicate that 14,960 people were employed in West Whiteland Township in 1990. These employment levels are similar to those reported by H. A. Berkheimer, the Township's earned-income tax collector.

Employment forecasts for West Whiteland Township are indicated on Table 2.5.8. Based on DVRPC figures, employment in West Whiteland Township would reach 17,895 in the year 2000, 22,685 by 2010 and 27,687 by 2020. Figures provided by H. A. Berkheimer indicate that the employment population for 1990 was 13,135, somewhat lower than the level reported by

DVRPC. In two alternatives, the growth rate for Chester County employment and that projected by DVRPC for the township employment have been applied to the two base figures in order to obtain projections to the year 2020. For example, a county employment growth rate of 9.4% between 1980 and 1990 was applied to the H. A. Berkheimer estimate of 13,135 employed in 1990 to yield a total of 14,369 for the year 2000. All of the projections, however, may be considered conservative based on employment figures reported by H. A. Berkheimer for West Whiteland Township of 14,934 for 1991 and 18,095 for 1992. Based on this rate of growth, the employment population for West Whiteland could be much higher by 2020 than is projected by DVRPC.

Land Area Requirements for New Commercial and Industrial Development

Alternative employment forecasts for the planning period are translated into commercial and industrial land area requirements in Table 2.5.9. Certain assumptions have been made with respect to the kinds of new jobs likely to be created and the number of jobs per acre associated with various uses.

The distribution of jobs by general employment sector as represented in Table 2.5.10 is based on the Chester County employment forecasts by sector prepared by DVRPC and adjusted to reflect local conditions in West Whiteland Township. The distribution of jobs in the last two rows of Table 2.5.10 was projected for the year 2020, and was used to prepare Tables 2.5.9 and 2.5.11.

The distribution of jobs by employment sector and the number of jobs per acre by sector remain constant in Table 2.5.9. In Table 2.5.11, however, the distribution of jobs by employment sector is changed to provide a land development alternative favoring a greater percentage of office employment. In both tables, the number of jobs for each alternative varies from 500 to 3,000 new jobs in order to provide an estimate of the amount of land development that could occur. The total acreage required for new commercial and industrial development ranges widely, reflecting the wide variation in potential new jobs by 2020 from Tables 2.5.9 and 2.5.11.

Figure 2.5.1

*WEST WHITELAND
POPULATION PROFILE
1920-2020*

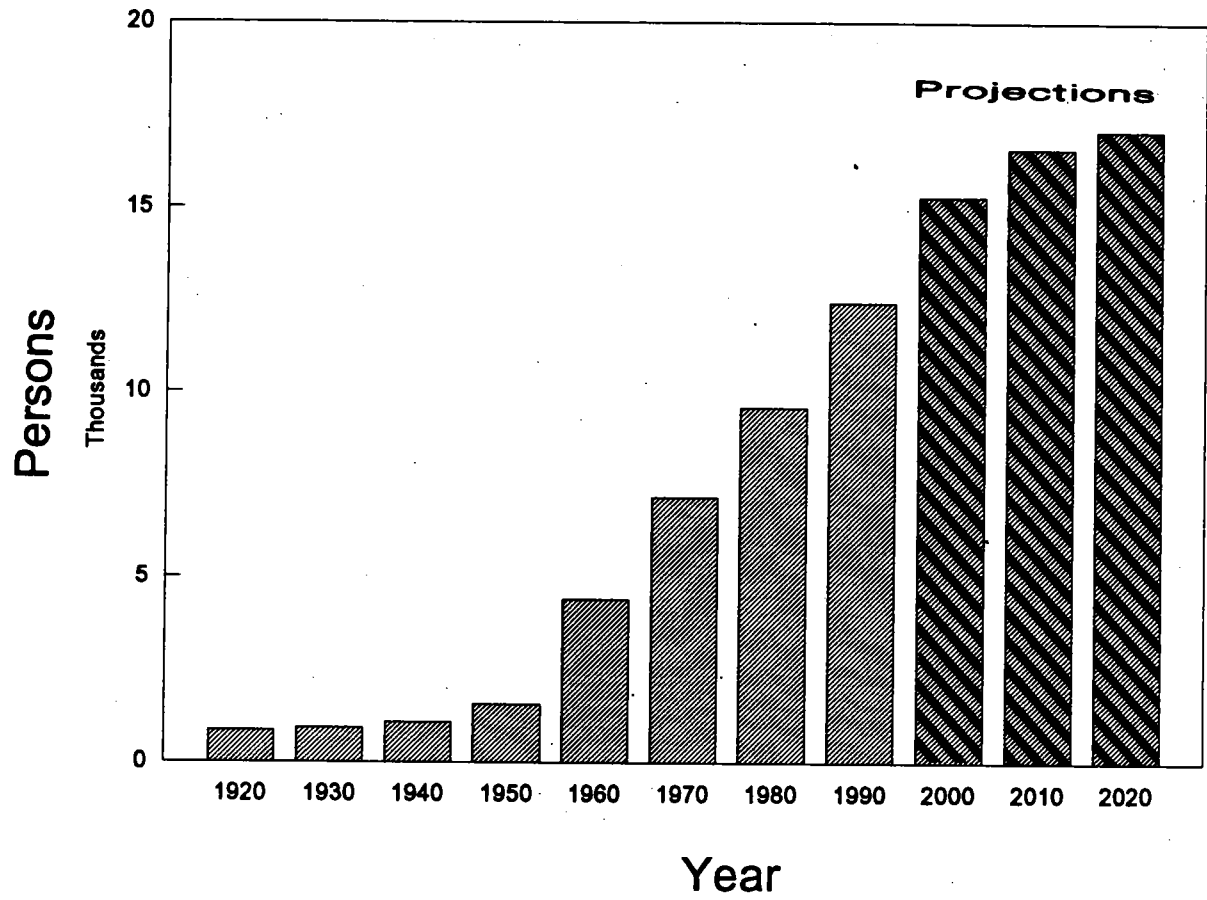


TABLE 2.5.1

*WEST WHITELAND TOWNSHIP
AND NEARBY MUNICIPALITIES
POPULATION TRENDS AND
FORECASTS, 1920 - 2020*

MUNICIPALITY	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020
West Whiteland	859	928	1,078	1,573	4,412	7,149	9,581	12,403	15,270	16,580	17,060
Charlestown	584	720	726	854	1,931	3,528	2,779	2,754	2,990	3,190	3,410
East Bradford	803	906	1,033	1,187	1,713	3,260	3,217	6,440	9,670	11,770	12,850
East Caln	306	297	315	403	758	1,739	2,193	2,619	3,190	3,540	3,680
East Goshen	679	739	867	1,039	1,694	5,138	10,001	15,138	16,390	16,710	16,950
East Whiteland	1,235	1,334	1,290	1,740	5,078	7,242	8,554	8,398	9,780	10,180	10,490
Uwchlan	459	502	5,999	761	995	5,413	8,362	12,999	15,780	16,210	16,470
West Chester Bor.	11,717	12,325	13,289	15,168	15,705	19,301	17,435	18,041	18,120	18,270	18,340
West Goshen	1,249	1,958	2,546	3,542	8,214	12,858	15,952	18,082	19,350	19,450	19,550
Chester County	115,120	126,629	135,626	159,141	210,608	278,311	316,180	376,396	425,800	460,200	489,300
Philadelphia SMSA	2,137,000	3,137,000	3,200,000	3,671,000	4,397,000	4,818,000	4,696,245	4,856,881	5,087,827	5,250,326	5,362,373
Pennsylvania	8,720,000	9,631,000	9,900,000	1,049,800	11,319,000	11,800,000	11,824,000	11,881,643			

Source: Delaware Valley Regional Planning Commission, Population Forecasts
U.S. Bureau of the Census, Decennial Censuses of Population

TABLE 2.5.2

*WEST WHITELAND TOWNSHIP
AND NEARBY MUNICIPALITIES
POPULATION CHANGE,
1970-2020*

MUNICIPALITY	1970-1980		1980-1990		1990-2000		2000-2010		2010-2020		1990-2020	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
West Whiteland	2,432	34	2,822	29	2,867	23	1,310	9	480	3	4,657	38
Charlestown	-749	-21	-25	-1	240	9	200	7	220	7	656	24
East Bradford	443	1	3,223	100	3,230	50	2,100	22	1,080	9	6,410	99
East Cain	454	26	4,266	19	571	22	350	11	140	4	1,061	40
East Goshen	3,094	24	5,137	51	1,252	8	320	2	240	1	1,812	12
East Whiteland	1,312	18	-156	-2	1,382	16	4,400	4	310	3	2,092	25
Uwchlan	2,949	54	4,637	55	2,781	21	430	3	260	2	34,471	26
West Chester Bor.	-1866	-10	606	3	79	<1	150	1	70	<1	299	2
West Goshen	3,094	24	2,130	13	1,268	7	100	1	100	1	1,468	8
Chester County	37,869	14	60,216	19	49,404	13	49,404	8	29,100	6	112,904	30

Source: Delaware Valley Regional Planning Commission, Population Forecasts
U.S. Bureau of the Census, Decennial Censuses of Population

TABLE 2.5.3

*WEST WHITELAND TOWNSHIP
POPULATION BY AGE GROUPS,
1960-1990*

Age Groups	1960		1970		1980		1990	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
0 - 4	644	14.6	758	10.6	639	6.7	970	7.8
5 - 17	1,222*	27.7	2,674*	37.4	2,410	25.2	2,098	15.9
18 - 24	238**	5.4	272**	3.8	1,093	11.4	1,102	8.9
25 - 44	1,429	32.0	2,238	31.3	3,232	33.7	5,051	40.7
45 - 64	631	14.3	922	12.9	1,756	18.3	2,304	19.0
65 - 74	150	3.4	114	1.6	328	3.4	618	5.0
75 +	84	1.9	57	0.8	126	1.4	260	2.1
TOTALS	4,412	99.3***	7,149	98.4***	9,581	100	12,403	100

Source: U.S. Bureau of the Census, Decennial Censuses of Population

Note: * Population in 5-19 Age Group from 1983 Comprehensive Plan
 ** Population in 20-24 Age Group from 1983 Comprehensive Plan
 *** Numbers do not add up to 100% due to rounding.

TABLE 2.5.4

*WEST WHITELAND TOWNSHIP
ALTERNATIVE POPULATION PROJECTIONS*

ALTERNATIVES	1990	2000	2010	2013	2020	1990-2013	
						Number	%
1. DVRPC Forecasts	12,403	15,270	16,580	16,724	17,060	4,321	34.8
2. Township Growth Rate, 1980-1990 (29%)	12,403	15,999	20,638	22,433	26,623	10,030	82
3. Three-Township Growth Rate (13.3%) Tredyffrin, Newtown, Middletown	12,403	14,052	15,921	16,556	18,038	4,153	33.5
4. All Adjoining Municipalities (24%)	12,403	15,380	19,071	20,444	23,648	8,041	64.8
5. Projected County Growth Rate for 1990-2020 (30%)	12,403	16,123	20,959	22,846	27,246	10,443	84.2
6. West Whiteland Township Proportion of County Population	12,403 (3.3%)	15,328 (3.6%)	17,947 (3.9%)	18,727 (4.0%)	20,550 (4.2%)	6,324	51

TABLE 2.5.5

*WEST WHITELAND TOWNSHIP
RESIDENTIAL CONSTRUCTION
TRENDS, 1980-1990*

	1980		1990		1980-1990	
	Number	Percentage	Number	Percentage	Number	Percentage
Single-Family Detached	2,248	71.2	2,712	55.3	464	20.6
Single-Family Attached	269	8.5	1,108	22.6	839	311.9
Multi-Family	607	19.0	1,030	21.6	423	59.0
Mobile Home & Other	34	1.1	50	1.0	16	47.1
Total Housing Units	3,158	100	4,900	100	1,742	55.2

Source: U.S. Bureau of the Census, Decennial Censuses of Population

TABLE 2.5.6

*WEST WHITELAND
TOWNSHIP -- HOUSING
UNITS TO BE CONSTRUCTED*

	2010	2013	2020
Forecast Population (DVRPC)	16,580	16,724	17,060
Population in Households (97%)	16,082	16,222	16,548
Persons per Household	2.5	2.5	2.5
Occupied Housing Units	6,433	6,489	6,619
Vacant Units (4%)	268	271	275
Total Housing Units Required	6,701	6,760	6,895
Existing Stock, Year-round Housing Units, 1990	4,900	4,900	4,900
Net Additions to Housing Stock, 1990 to ____	1,801	1,860	1,995
Replacement of Existing Stock (3%)	54	55	60
Conversions (1%)	-18	-18	-20
Total Housing Units to be Constructed, 1990 to ____	1,837	1,897	2,035
Total Housing Units to be Constructed, 1993 to ____	1,561	1,650	1,729

Source: Norman Day Associates

Note: *2013 Figures were interpolated from 2010 & 2020 population forecasts.

TABLE 2.5.7

*WEST WHITELAND TOWNSHIP
ALTERNATIVE LAND AREA REQUIREMENTS
FOR NEW RESIDENTIAL CONSTRUCTION
1990 - 2013*

Alternatives	A				B				C			
	Percent	Number	Units/Acre	Acreage Needed	Percent	Number	Units/Acre	Acreage Needed	Percent	Number	Units/Acre	Acreage Needed
Single-Family Detached	80	1,320	2	660	70	1,155	2	825	45	742	2	371
Single-Family Attached	5	82	6	14	10	165	6	28	30	495	6	82
Multi-Family	15	248	12	21	20	330	12	28	25	413	12	34
Totals	100	1,650		695	100	1,650		881	100	1,650		487

Alternatives	D				E				F			
	Percent	Number	Units/Acre	Acreage Needed	Percent	Number	Units/Acre	Acreage Needed	Percent	Number	Units/Acre	Acreage Needed
Single-Family Detached	55	907	2	453	90	1,485	2	743	90	1,485	1	1,485
Single-Family Attached	25	412	6	68	5	83	6	14	5	83	6	14
Multi-Family	20	330	12	28	5	83	12	7	5	83	12	7
Totals	100	1,650		549	100	1,650		764	100	1,650		1,506

TABLE 2.5.8

*WEST WHITELAND TOWNSHIP ALTERNATIVE
EMPLOYMENT TRENDS & PROJECTIONS*

	1990	2000	2010	2013	2020
1. West Whiteland Twp. (DVRPC)	14,960	17,985	22,685	24,186	27,687
2. West Whiteland Twp. (DVRPC) County Growth Rate	14,960	16,366	18,264	18,927	20,474
3. West Whiteland Twp. (H. A. Berkheimer) (DVRPC Growth Rate)	13,135	15,790	19,916	21,230	24,297
4. West Whiteland Twp. (H. A. Berkheimer) County Growth Rate	13,135	14,369	16,036	16,618	17,977
5. Chester County	200,221	219,110	244,538	253,393	274,053

Sources: U.S. Bureau of the Census, Decennial Censuses of Population
Delaware Valley Regional Planning Commission
Norman Day Associates

TABLE 2.5.9

*WEST WHITELAND TOWNSHIP
ALTERNATIVE LAND AREA REQUIREMENTS
FOR NEW COMMERCIAL & INDUSTRIAL
CONSTRUCTION, 1990 - 2020*

Land Use	3,000 New Jobs				5,000 New Jobs			
	Percent	Number	Jobs/Acre	Acreage Needed	Percent	Number	Jobs/Acre	Acreage Needed
Office	31	930	40	23	31	1,550	40	39
Retail	41	1,230	10	123	41	2,050	10	205
Industrial	28	840	20	42	28	1,400	20	70
Totals	100	3,000		188	100	5,000		314

Land Use	7,500 New Jobs				10,000 New Jobs			
	Percent	Number	Jobs/Acre	Acreage Needed	Percent	Number	Jobs/Acre	Acreage Needed
Office	31	2,325	40	58	31	3,100	40	78
Retail	41	3,075	10	308	41	4,100	10	410
Industrial	28	2,100	20	105	28	2,800	20	140
Totals	100	7,500		471	100	10,000		628

TABLE 2.5.10

*WEST WHITELAND TOWNSHIP
ESTIMATED JOBS BY GENERAL SECTOR*

	Percent Employment by Sector		
	Office	Retail	Industrial
1990 Chester County	31	34	35
1990 West Whiteland Township	30	40	30
2020 Chester County	32	35	33
2020 West Whiteland Township	31	41	28
2020 West Whiteland Township (Emphasis on Office)	40	35	25

Source: Delaware Valley Regional Planning Commission.
Chester County employment forecasts by sector, as interpreted
by NDA.

TABLE 2.5.11

*WEST WHITELAND TOWNSHIP
 ALTERNATIVE LAND AREA REQUIREMENTS
 FOR NEW COMMERCIAL & INDUSTRIAL
 CONSTRUCTION, WITH AN EMPHASIS
 IN THE OFFICE SECTOR, 1990 - 2020*

Land Use	3,000 New Jobs				5,000 New Jobs			
	Percent	Number	Jobs/Acre	Acreage Needed	Percent	Number	Jobs/Acre	Acreage Needed
Office	40	1,200	40	30	40	2,000	40	50
Retail	35	1,050	10	105	35	1,750	10	175
Industrial	25	750	20	38	25	1,250	20	63
Totals	100	3,000		173	100	5,000		288

Land Use	7,500 New Jobs				10,000 New Jobs			
	Percent	Number	Jobs/Acre	Acreage Needed	Percent	Number	Jobs/Acre	Acreage Needed
Office	40	3,000	40	75	40	4,000	40	100
Retail	35	2,625	10	263	35	3,500	10	350
Industrial	25	1,875	20	94	25	2,500	20	125
Totals	100	7,500		432	100	10,000		575

Holding Capacity

The preceding analysis of population and employment trends and projections is intended, in part, to provide some rough estimates of the demand for land for new residential, commercial, and industrial uses over the planning period. These estimates of demand for land may be compared to the supply or "holding capacity" of vacant or otherwise easily-developable parcels in the community.

A Holding Capacity map has been prepared (Figure 2.5.2), indicating "developable" and "redevelopable" lands. These were determined based primarily on the survey of existing land use. Other factors taken into account include: Land constrained for development on account of the presence of floodplains or steep slopes; areas deemed not developable on account of deed restrictions; and areas containing approved or pending development, as yet unbuilt.

"Developable" land refers to areas generally unencumbered by existing development, whereas, "redevelopable" land indicates areas deemed generally susceptible to changes in use.

There are about 2,000 to 2,500 total acres of land available for new development, about 90% (1,800 to 2,300 acres) of which are "developable" lands and 10% of which are "redevelopable." This potential supply of land for new development compares to the ranges of estimated total land area required to accommodate additional population and jobs, 1993 to 2013, of between 680 and 2100 acres.

In general, then, it appears that the supply of land available for future development can accommodate the range of projected demands for land for new residential, commercial, and industrial development to the year 2013.

The significance of the comparison of demand and supply of land is simply to demonstrate that projected new development may be accommodated without major efforts to redevelop existing areas of residences, businesses, and industries. The record of development in West Whiteland Township from 1982 to 1993 shows, however, that redevelopment of land already in some form of residential, commercial, or industrial use was a factor over the period (see Figure 2.3.1). Similarly, recent development trends in more highly-developed municipalities near Philadelphia suggest that the notion of an "ultimate build-out" of the community, beyond which new development will be severely curtailed because there will not be any more room for new construction, is illusory. Land development in West Whiteland is likely to

continue to be largely demand-generated, with the development of mostly presently-vacant land over the planning period gradually being substituted by redevelopment of mostly already-in-use lands as the community continues to mature beyond 2013.

SECTION 6: CIRCULATION

The existing transportation system has a direct influence on the location and intensity of development. Historically, the establishment of transportation routes and facilities have been important in the growth of West Whiteland Township; most notably in the Chester Valley, along Routes 30 and 100. The transportation network is one of the primary determinants in the location of residential, commercial, and industrial areas. Conversely, the development of the township has, to a lesser degree, influenced the location of transportation improvements.

This circulation analysis provides a description of the basic road network and public transportation system for West Whiteland Township. The jurisdictional and functional classifications of the various segments of the road network, traffic demands on major roads, and planned improvements are of particular concern. The circulation analysis focuses on those streets and highways that are now, or may be in the future, providing for continuity of travel within and through the township, as opposed to neighborhood streets that have the primary purpose of providing access to homes.

Jurisdictional Classification

Road Jurisdictional Classifications are indicated on Figure 2.6.1 and represent traffic routes on two levels, state highways and township roads. Several traffic routes are controlled and maintained by the Pennsylvania Department of Transportation (PennDOT). U.S. Business Route 30 provides access to Philadelphia and to Coatesville. U.S. Route 30 (Exton Bypass) will provide a convenient link between Route 202 and the Downingtown-Coatesville Bypass. PA Route 100 (Route 100) is the principal north-south route through the township, with direct access from Exton to West Chester and to Exit 23 of the Pennsylvania Turnpike (I-76). Route 29, Phoenixville Pike, crosses the southeast corner of the township and links U.S. Route 322, the West Chester Bypass, to Business Route 30.

Other state highways provide important intra-township transportation links. Grove and Whitford Roads cross the western portion of the township from north to south. Ship Road, located in the eastern portion of the township, provides a similar north-south connection. Boot and King Roads provide east-west connections in the southern half of the township. Grubbs Mill Road connects Grove Road to Sunset Hollow Road in West Goshen Township. With the exception of a few private roads, all other roads in the township are under the jurisdiction of the municipality.

Functional Classification

Road systems are comprised of a hierarchy of highways and streets that perform different functions. The major classifications are expressway, arterial, collector, and local roads. Expressways are limited-access highways designed to move large volumes of through traffic at high speeds. At each succeeding level in the hierarchy, traffic volumes and speeds decrease, average trip lengths become shorter, and there is increased access to abutting properties.

Three limited-access highways move traffic through the township or just to its borders. The Downingtown-Coatesville Bypass is a limited-access expressway that moves high volume, high speed, through traffic, with the easternmost interchange just beyond the West Whiteland border in East Caln Township. The Route 202 limited-access expressway, running from King of Prussia to south of West Chester, crosses the southeastern portion of the township. An interchange with Business Route 30 is located on the West Whiteland line with East Whiteland Township. The Route 100 Spur, in the south-central portion of West Whiteland, is another limited-access highway, bringing traffic from Route 202 to the Exton Crossroads area. One of the purposes of the new Exton Bypass is to link these three routes so as to avoid the traffic generation and convergence problems associated with the Exton Crossroads. The Bypass is expected to relieve some of the traffic congestion at the Crossroads.

The township's principal arterials, Route 100 and Business Route 30, carry high volumes of traffic and intersect at the center of the township (Exton Crossroads). Arterial roads, which are designed to accommodate somewhat lower levels of traffic than expressways, provide an inner loop of traffic circulation in the township. Swedesford Road, Waterloo Boulevard, and Phoenixville Pike are the only arterials in the township. Burke, Grove, and Whitford Roads are all collector roads, and provide alternate north-south access to Route 100. Shoen Road, another collector road, provides a connection in the northwest quadrant of the township between Whitford Road and Route 100. Other collector roads include Boot and King Roads, and Ship Road. All other roads in the township are considered local roads (Figure 2.6.1).

Business Route 30, also known as the Lincoln Highway, currently serves as the major east-west route through the township. In this role, it serves a very high percentage of through traffic volumes. In addition to this regional importance, it also serves much of the remainder of the highway network feeding into it, as well as provides local access to retail and office uses

situated along it. The corridor consists of a combination of two and four lane sections with left turn lanes at the key intersections and major traffic generator access drives.

Route 100, also known as Pottstown Pike, is the major north-south route through the township. This road has a role of regional and local importance similar to that of Lincoln Highway, except that Route 100 is primarily a controlled-access road, with a center median for most of its length in the township. The corridor consists of a four lane cross-section with either left turn lanes or jughandles at key intersections.

Both Swedesford Road/Waterloo Boulevard and Whitford Road are primarily two lane corridors, with very few intersections served by left turn lanes. Both corridors serve a mix of local and through traffic. The Swedesford Road/Waterloo Boulevard corridor is used by many drivers as a means of bypassing more congested conditions along U.S. Business Route 30, which has then contributed to congested conditions at the intersection with Pottstown Pike. The importance of Whitford Road is underscored by the fact that the closest link between Lincoln Highway and King Road is located nearly two miles away to the west and nearly one mile away to the east.

Traffic Volumes

Average annual traffic volumes for 1982 and 1987 are shown in Figure 2.6.1. The highest volumes measured were on the township's principal arterials, Business Route 30 and Route 100. Arterials and collectors frequently carried high volumes of traffic, though considerably less than the principal arterials.

Comparison of traffic volumes at key intersections between 1987 and 1991 indicates that significant increases occurred in just four years. At the Exton Crossroads, increases ranged from nearly 2% in the morning peak to 7% in the evening peak. Volumes at the Whitford Road and Business Route 30 intersection showed a 13% decrease for morning peak hours while evening volumes showed a 9% increase. Virtually no increase was recorded at the intersection of Route 100 and Shoen Road during the morning peak hour, however, nearly an 18% increase in volume was experienced during the evening peak. Generally, the 1991 traffic volumes along Business Route 30 and Route 100, when compared to the volumes along the same routes in 1987, were found to be approximately 16% higher, a growth factor of about 4% per year.

Peak hour traffic volumes for 1993 a.m., p.m., and Saturday are indicated in

Appendix 2 of the Plan. A review of these data indicates that volumes during the p.m. peak hour currently exceed volumes during either of the other two peak periods.

Exton Bypass

The completion of the Exton Bypass through West Whiteland Township in 1996 will have significant impacts on traffic flow patterns in the township. A "Quick Response System II" computer model was used to model the existing traffic patterns in the area. The Exton Bypass was then added to the model and traffic volumes within the township were developed assuming the Bypass were completed today. Figures in Appendix 2 indicate existing traffic volumes in the area with and without the Exton Bypass for the weekday a.m. and p.m. peak hours and Saturday peak hour, respectively.

Public Transportation

Transit service within West Whiteland Township is limited, but is provided by the Southeastern Pennsylvania Transportation Authority (SEPTA), Amtrak, and Krapf Coaches, Inc.

Bus service to the area is provided by SEPTA's Route 92, which operates between the King of Prussia Plaza and West Chester via the Exton Square Mall and Chesterbrook, Paoli, Malvern, and Immaculata College. This route makes connections with both SEPTA regional rail and Amtrak at Exton Station, as well as SEPTA's Bus Route 104 and Krapf's local service to West Chester and Coatesville.

SEPTA's R-5 regional rail line operates between Doylestown and Downingtown via Philadelphia, with stops at both Whitford and Exton Stations within the township. Peak hour service in each direction is approximately half-hourly, and off-peak service is provided hourly or every two hours, depending on the period and the direction of travel. Parking availability is not plentiful at either station and serves as a limiting factor on ridership expansion in the local area.

Amtrak stops only at the Exton Station within the township. This service is part of a regional line that runs between Philadelphia and Harrisburg, stopping twice each morning and twice each afternoon at the Exton Station.

Krapf Coaches, Inc. primarily provides charter bus service. However, the

company has a daily route that begins in West Chester and travels north on Route 100 to the Exton Square Mall. Service continues from the Mall west on U.S. Route 30 to Coatesville. Buses run hourly on this route from 6 a.m. to 6 p.m. on weekdays and from 8 a.m. to 4 p.m. on Saturdays. There is no service on Sundays.

Taxicab service is provided by several taxicab companies located outside of West Whiteland Township. The Rainbow Cab Company provides taxi service from locations in West Whiteland destined for West Chester; the company does not provide service within West Whiteland Township. The Downingtown Taxi Company provides a similar service between Downingtown and West Whiteland. The Berwyn-Paoli Cab Company, however, does provide service within the township.

The Chester County Human Services Department operates a Paratransit service for residents of Chester County. Transportation can be scheduled twenty-four hours in advance by calling the Office of Paratransit at 269-4415. A nominal fee of 25 cents is charged for "essential" trips to elderly riders registered with the Office of Aging. Riders on medical assistance are able to charge the ride on their medical card for rides to medical-related appointments. Other members of the general public can use the service as well for full-fare rates.

SECTION 7: COMMUNITY FACILITIES

This section describes various community facilities and services that are available to the residents of West Whiteland Township. Topics discussed include educational facilities, parks and recreation, and public safety. The administrative offices for West Whiteland Township are located in the Township Building on Pottstown Pike (Route 100).

Education

The public school system in West Whiteland Township is administered by the West Chester Area School District. Exton Elementary School, at the intersection of Bartlett Avenue and New Street; M.C. Howse Elementary School, on Boot Road near Spring Lane; and a portion of Pierce Middle School, on Burke Road at the township line, are located in West Whiteland Township. They are three of the fifteen facilities operated by the West Chester School District.

Public school enrollment records indicate a steady decline between 1975 and 1985. Since that time, enrollment has increased at approximately 2.4% per year (as of 1992). The total district enrollment at the end of the 1992-1993 school year was 10,156 students, comprised of 5,103 students at the school district's ten elementary schools, 2,237 students at three middle schools (grades 6 to 8), and 2,816 students at two high schools.

As of September 30, 1993, there were 341 students at Exton Elementary, 582 at M.C. Howse, and 725 at Pierce Middle Schools.

Projections prepared by the school district estimate school enrollment for 1997 at 11,151 students, an increase of 9.6% (977 students) from 1992, or about 2% per year (Table 2.7.1).

Three private schools are located in West Whiteland Township. Saints Phillip and James School, located at the intersection of Ship Road and Business Route 30, teaches children in grades K to 8. The current enrollment is 565 students. The Church Farm School (CFS) is located on east Business Route 30 near the township line. Enrollment for grades 7 to 12 is about 170, with all of the students also boarding at the school. The Devereux School, located at the intersection of Boot Road and Kirkland Avenue, has boarding facilities and special education programs for the mentally retarded. In addition to elementary, middle, and high schools in West Whiteland, there are approximately five kindergarten/nursery schools and daycare facilities.

Parks and Recreation

Recreation facilities are found at municipal parks, school grounds, and private clubs. West Whiteland Township operates nine public park and recreation areas, totalling approximately 90 acres. Four of these areas provide "passive" recreation opportunities on 48 acres. Baseball and multi-purpose playing fields, basketball, tennis and volleyball courts, and other play apparatus can be found on the Township's other five parks. In addition, there are private recreation areas in the township, including the Whitford Country Club and facilities on the Church Farm School campus. Existing park and recreation area profiles are given in Table 2.7.2.

Police Protection

The West Whiteland Township police department is headquartered at the Township Building at 202 North Pottstown Pike. The operation employs nineteen people, including one police chief, one captain, four sergeants, two investigators, eleven patrol officers, and two clerical workers. Equipment includes one motor carrier safety van, one chief car, one captain car, one criminal investigator car, and ten patrol units. A typical shift utilizes two patrol officers and one sergeant.

A single emergency telephone number (692-5100) was used by the public to summon police, fire, or ambulance personnel. Calls were received by a County dispatcher, who then notified the appropriate emergency service agency. As of January, 1994 a "911" emergency calling system became operational.

Fire Prevention and Ambulance Service

Fire protection in West Whiteland Township is provided by the West Whiteland Fire Company, located at 227 Crest Avenue. There are 55 to 60 active members of the company, all of whom are volunteers. Six pieces of equipment are available, including two 1,500 gallons-per-minute pumpers, one 7,000-gallon tanker truck, one rescue truck, one fire police van and the chief's car. One full crew of five is always on-call during the day.

Ambulance service is provided by three different groups, none of which have stations in West Whiteland Township.

The Uwchlan Ambulance Corps, located on Welsh Pool Road in Lionville, provides emergency service generally for areas north of the Exton Bypass in West Whiteland Township. The Corps has about 50 active members and three ambulances dispatched by the Chester County dispatchers.

The East Whiteland Volunteer Fire Association provides ambulance services and generally serves the eastern portion of West Whiteland Township from the township line to Ship Road. The station is located at 170 Plainbrook Road and is manned by one paid driver/ EMT during the day. There are thirteen ambulance personnel available for calls, with additional members of the fire company cross-trained in emergency medical procedures. The Association has one ambulance and one rescue truck in addition to other fire fighting equipment.

The Good Fellowship Ambulance Club provides basic life support ambulance services for the southern portions of West Whiteland Township from their station at 600 Montgomery Avenue in West Chester. Four full-time employees provide service during the day, while the night hours are staffed by volunteers from the club's 170 members. The Club maintains six ambulances, one training vehicle, and one supervisor's vehicle.

Other Community Facilities

A branch of the Chester County Library is located in West Whiteland Township on the eastern side of the Exton Square Mall. The Exton post office, located on the western side of the Mall, serves the entire 19341 zip code that covers most of the township. The southern part of the township (most of the area south of the railroad corridor) is served by the West Chester post office (zip code 19380), while small areas of the northwest corner of the township and west-central portion of the township are served by the Downingtown (zip code 19335) post office.

There are six churches in the township and two cemeteries. Other community facilities are shown in Figure 2.7.1.

Table 2.7.1

WEST CHESTER AREA SCHOOL DISTRICT
PUPIL ENROLLMENTS 1983 - 1993
PROJECTIONS 1994 - 1997

YEAR	SPECIAL ED	KINDERGARTEN	GRADES 1-5	GRADES 6-8	GRADES 9-12	TOTAL
1983	256	647	3,042	2,158	3,102	9,205
1984	265	678	3,013	2,009	3,132	9,097
1985	296	632	3,126	1,919	3,022	8,995
1986	333	752	3,247	1,888	2,981	9,201
1987	130	771	3,461	1,943	3,029	9,334
1988	329	795	3,673	1,951	2,678	9,426
1989	114	870	3,804	2,018	2,817	9,623
1990	99	806	3,977	2,080	2,792	9,754
1991	98	813	4,075	2,116	2,732	9,834
1992	90	863	4,159	2,214	2,848	10,174
1993	78	882	4,360	2,333	2,844	10,497
1994	Not reported	864	4,356	2,431	2,868	10,609
1995	Not reported	860	4,375	2,513	3,005	10,843
1996	Not reported	813	4,425	2,541	3,115	10,984
1997	Not reported	831	4,398	2,579	3,253	11,151

* Enrollment records are from September end-of-month reports.

Table 2.7.2

**WEST WHITELAND TOWNSHIP
EXISTING PARK & RECREATION AREA PROFILES**

Park / Recreation Area	Location	Size / Ownership	Facilities
Banbury Park	West of Old Pottstown Pike	2 Acres (Township-owned)	Play apparatus, basketball court, 2 picnic tables, pavilion, park sign and trash can.
Burke Road Nature Area	Between Burke and Grove Roads	23.9 Acres (Township-owned)	Natural area, woodlands, trails, pavilion, 2 picnic tables, 1 grill, 2 trash receptacles, parking & sign
Grove Park	Intersection of Samuel Road and Southern Drive	1.3 Acres (Township-owned)	Footbridge, drainage swale, pull-off parking, pavilion, volleyball & other play apparatuses. Handicapped accessible.
Ivy Glen Park	Gypsic Lane and Twin Oaks	0.5 Acres (Township-owned)	Natural area with drainage basin.
Meadowbrook Manor Park	South of Swedesford Road	5 Acres (HOA owned, Twp-leased)	2 little league baseball fields, 2 volleyball courts, 2 tennis courts, play apparatuses, basketball backboard, 2 bleachers, 3 benches, 4 picnic tables, 6 trash receptacles, flagpole, parking & sign.
Mill Valley Park	South of Amstel Way	3 Acres (Township-owned)	Natural area w/pond, 6 benches
Ship Road Park	East of Ship Road	14.2 Acres (Township-owned) 13.8 Acres (Township-leased)	2 little league baseball fields, field house and concession stand, restrooms, 1 volleyball court, 1 basketball backboard, play apparatus, 4 picnic tables, 2 benches, 7 bleachers, 4 trash receptacles, water fountain, parking area and sign
Albert C. Miller Park	Intersection of Waterloo Blvd. and Miller Way	20.7 Acres (Township-owned) 8.5 acres are outside of wetlands	Gazebo, comfort facilities, parking, 3 tennis courts, basketball court, volleyball court, pavilion, tot lot, multi-purpose field. Handicapped accessible.
Waltz Park	West of Old Pottstown Pike	5.7 Acres	UNDER REDEVELOPMENT. Formerly, had 2 baseball fields, field house/concession stand, 6 bleachers, 2 picnic tables, 2 trash cans, flagpole, park sign and portable toilet.

SECTION 8: UTILITIES

Sewer System

West Whiteland Township owns and operates all public sewage collection and conveyance facilities in the township (Figure 2.8.1). Most of the wastewater collected by the public sewer system is conveyed to the Downingtown Regional Water Pollution Control Center in Downingtown Borough, a facility of the Downingtown Area Regional Authority (DARA), a multi-municipality organization of which West Whiteland Township is a member. This facility provides secondary level treatment to wastewater prior to discharge into the East Branch of the Brandywine Creek.

The majority of the sewage generated in the southwestern portion of the township, known as the Broad Run Service Area, flows through a gravity interceptor to the Grubbs Mill Pumping Station in West Goshen Township. From here, the sewage is pumped to the West Goshen sewerage system for treatment. Sewage generated in the Boot Road basin of the township is transferred to the Broad Run Service Area by the Route 100 Pumping Station; from there the sewage flows to the Grubbs Mill Pumping Station for conveyance to the West Goshen treatment facility.

West Whiteland's wastewater flow to the West Goshen facility is limited by intermunicipal agreement to 420,000 gallons per day. The remainder of the sewage generated within West Whiteland Township's Broad Run and Boot Road service basins is conveyed to the Downingtown Regional Water Pollution Control Center for treatment via the Broad Run Pumping Station and finally the Clover Mill Pumping Station.

The majority of development in West Whiteland is connected to the public sewage system. Collection of sewage occurs principally in eight-inch-diameter pipes. Through a system of successively larger-diameter feeders, all sewage destined for the Downingtown plant is eventually conveyed to a forty-two-inch diameter gravity sewer main that runs westward adjacent to Valley Creek. This gravity line terminates at the township's western boundary at the Clover Mill Pump Station. From here, the sewage is pumped through an eighteen-inch force main to the forty-two-inch West Whiteland interceptor in East Caln Township, where it is conveyed to the Downingtown plant for treatment and disposal.

As of 1990, West Whiteland Township conveyed an average of 925,000

gallons per day to the Downingtown plant, about twenty percent of the plant's total daily flow and actually less than the township's 1984 flows of 997,000 gallons per day. (West Whiteland's flows to the Downingtown plant decreased in 1987 with diversion of flow to the West Goshen Treatment plant.)

Treatment capacity at the Downingtown plant remains a critical issue in this rapidly-developing part of the region. Distribution of the costs of treatment plant expansion is a very sensitive issue for the municipalities using the plant. A particularly sensitive issue for West Whiteland Township is the capacity of its Clover Mill Pumping Station -- steady development in the township and corresponding increases in the township's flows to this station could necessitate a major expansion of the facility by West Whiteland Township.

Water Supply

At the time of the preparation of the last West Whiteland Comprehensive Plan, the township was served by a patchwork of water companies, ranging from the Township's own Municipal Authority to the franchise-holding, privately-owned Great Valley Water Company. Since then a consolidation of suppliers occurred, with Philadelphia Suburban Water Company (PSW) buying out Great Valley Water Company and, quite recently, taking over the system of the West Whiteland Municipal Authority.

The central water supply system for the township is illustrated in Figure 2.8.2. There are several wells in the township, but the distribution network is integrated with the PSW system to the north and to the south of the township. PSW operates a very large, mostly-integrated regional system that utilizes numerous surface water and groundwater sources. Local customers may typically receive water from a variety of sources within the system at various times of the day, month, or year.

PSW has announced their intention over the next few years to fully integrate the distribution network serving West Whiteland Township with their Chester County and Delaware County system largely supplied from their treatment plant on the Schuylkill River at Phoenixville.

Figure 2.8.2 reveals that the West Whiteland Township central water system is really two separate networks, one south of the main railroad corridor, and another to the north. Not connected to the central system at all are residential areas north and south of Boot Road, west of Grove Road and Grove Avenue; industrial areas in the Clover Mill Road, South Whitford Road, and

Commerce Drive area; and the mostly-vacant Church Farm School properties.

A prominent feature of the North Valley Hills is the 1,000,000-gallon elevated water storage tank at Ship Road and Valley Hill Road.

CHAPTER THREE: GROWTH MANAGEMENT PLAN

SECTION 1: GENERAL INTRODUCTION

The Growth Management Plan is intended as a guide for future growth and land development in West Whiteland Township. Several months of background research and analysis, monthly meetings of the Comprehensive Plan Steering Committee, resident and business surveys, and public information meetings described in Chapter One, form the basis for the Plan. It reflects not only a comprehensive set of goals and policies for development, but also attempts to embody shared community wants and aspirations.

The Growth Management Plan is composed of several elements pertaining to land use, circulation, housing, community facilities, utilities, conservation and recreation, and environmental protection. Prior to discussion of the elements, Section 2 presents a summary of goals and objectives on which the Plan has been structured. The remainder of the chapter develops the components of the recommended development pattern for West Whiteland Township.

The Growth Management Plan represents a guide to be followed by the Township and by private developers in order to address important issues and problems related to the township's overall development. Many of these problems and issues are interrelated, so that effective resolution of one cannot take place without simultaneous efforts to resolve others.

An especially significant aspect of the Growth Management Plan is the close coordination and mutual-reliance between the Land Use Plan (Section 3) and Circulation Plan (Section 4). The character of the land use concepts outlined in Section 3 is closely tied to the circumstances and potentials of the existing transportation network, and the recommended circulation improvements respond to and advance the framework for development embodied in the Land Use Plan.

Other mandatory planning processes, such as state requirements for municipalities to complete and update Act 537 sewage facilities plans, are fundamental in the presentation of the various elements of the Growth Management Plan.

The Growth Management Plan is focused on the location, character, and timing of future development. In particular, the Plan proposes that future development be directed to locations and in a manner that allows the phasing-in of specific transportation and water and sewer service systems

improvements. The emphasis on the incremental processes of development is also a primary concern of the Plan with reference to natural resource protection and open space for conservation and recreation.

The Growth Management Plan provides opportunities for a variety of kinds of development to occur into the future. Under Pennsylvania statutory law, the right of approval for subdivision and land development is (with limited exceptions) exercised by municipalities, such as West Whiteland Township. Under Pennsylvania case law, all municipalities must provide land development opportunities for all reasonable uses. The only alternative to providing a wide variety of growth opportunities in each municipality would be through joint municipal planning and zoning provisions of the Municipalities Planning Code, where several municipalities could band together, produce joint ordinances, and limit growth to a few locations within the joint-area. The Growth Management Plan for West Whiteland Township must be mindful of the central role of municipalities in approving and providing for growth.

SECTION 2: GOALS, OBJECTIVES AND POLICIES

A. Development Pattern

Goal: To achieve an overall development pattern that is responsive to the needs of the residents of the township and that addresses local requirements and perceptions in light of the realities of regional trends.

Objective: To maintain and improve existing districts and neighborhoods so as to ensure their continuing suitability for residential, commercial, industrial, recreational, and institutional use and their attractiveness for infill development.

Objective: To accommodate current, impending and prospective commercial and residential land uses in a manner that controls potentially detrimental effects on other areas of the township.

Objective: To conserve remaining open space areas of the township.

Policies:

- 1) The Township shall establish a Town Center area at the intersection of Business Route 30 and Route 100 as a location for the greatest concentration and mix of land uses in the community.
- 2) The Township shall encourage planned, physically-integrated multiple-use facilities in the Town Center area that are easily accessible from regional highways and that maximize opportunities for pedestrian movement and patronage of multiple facilities and opportunities for mass transit.
- 3) The Township shall promote infill development through the adoption and implementation of the Comprehensive Plan.
- 4) The Township shall severely limit the amount, intensity, and character of any commercial uses outside of the Town Center area.

- 5) The Township shall enact development regulations to ensure compatibility between adjacent land uses and to effect transition zones between potentially incompatible uses.
- 6) The Township shall promote the establishment of a permanent open space network throughout the community and the creation of new parklands along the network.

B. Economic Base

Goal: To maintain a stable, diverse economic base and broad range of job opportunities for township residents.

Objective: To provide appropriate sites for industry, offices, retail sales, and services in the community.

Policies:

- 1) The Township shall direct higher intensity office and retail commercial uses to locations within the Town Center area.
- 2) The Township shall promote the development of environmentally-safe manufacturing and other industrial operations in the industrial area of the township and in accordance with the aesthetic and resource-protection goals of the Plan.
- 3) The Township shall enforce performance standards with respect to noise and traffic and generally good planning practice in industrial and commercial areas in order to ensure compatibility with adjacent and neighboring uses and to maintain a setting that anticipates and accommodates subsequent development.

C. Housing

Goal: To provide a diversity of housing opportunities, in harmony with existing development, the natural environment, and the land use and transportation goals of the Plan.

Objective: To allow for a range of housing types and sizes to

respond to changing housing needs, to provide housing for various stages of the life cycle, and for various income levels.

Policies:

- 1) The Township shall direct development of infill housing compatible with the structural types, scale, and neighborhood physical patterns of the built-up areas of the community.
- 2) On tracts undergoing residential development, the Township shall promote the concept of residential clustering for a more efficient use of land and infrastructure, preservation of natural and historic and archaeological resources, and creation of usable open space and recreation lands.
- 3) The Township shall facilitate the development of single-family attached and multi-family housing, as well as small-lot single family detached dwellings, at and adjacent to the Town Center in conformance with the Comprehensive Plan.
- 4) The Township shall conserve the existing housing stock of the municipality to maintain its residential character, neighborhood identities, and housing affordability.
- 6) The Township shall monitor the available sources of federal and state funding for housing rehabilitation, low- and moderate-income housing construction, and infrastructure improvements, and shall consider participation in these programs.

D. Circulation

Goal: To achieve a safe, efficient, and pleasant circulation system that is compatible with the character of the township and that will best serve both necessary and pleasure trips. This system should incorporate a variety of modes, including private automobile, transit, bicycle, and pedestrian travel.

Objective: To encourage traffic generated by new and existing commercial and industrial uses to utilize regional limited-access roads and to discourage dispersion of this traffic into residential areas of the community.

Policies:

- 1) The Township shall establish a Town Center area easily accessible from regional highways for the greatest concentration and mix of land uses.
- 2) The Township shall encourage planned, physically-integrated, multiple-use facilities that maximize opportunities for pedestrian movement both within each quadrant and between quadrants of the Town Center.
- 3) The Township shall severely limit the amount, intensity, and character of any commercial uses outside of the Town Center area.

Objective: To maintain a high level of service on the township's principal arterial roads, Lincoln Highway (Business Route 30) and Pottstown Pike (Route 100).

Policies:

- 1) The Township shall regulate the number and spacing of access driveways and intersecting streets to principal arterial and arterial routes so as to maintain free-flowing, safe vehicular movement.
- 2) The Township shall direct new commercial development to designated areas through the adoption and enforcement of the Comprehensive Plan.
- 3) The Township shall consider implementation of road widening and intersection improvements as recommended by the 1992 Traffic Master Plan Update or subsequent transportation studies.

Objective: To construct additional road linkages in concert with the development of areas designated for new residential, commercial, and industrial uses.

Policies:

- 1) The Township shall consider supporting the construction of a Waterloo Boulevard extension to link up to Business Route 30 west of Whitford Road.

- 2) The Township shall encourage the establishment of a Town Center Loop road system to improve mobility in the Town Center area.

Objective: To maintain a high level of service on roads in existing and proposed residential areas.

Policies:

- 1) The Township shall review all development proposals for appropriate vehicular access in keeping with the road classification system.
- 2) The Township shall support upgradings of roads and intersections where increasing traffic and/or dangerous conditions warrant circulation system improvements.
- 3) The Township shall encourage the construction of sidewalk improvements, including extensions to the system, where pedestrian traffic warrants change and where discontinuities in the current sidewalk network exist.

Objective: To permit opportunities for travel in the township by means other than private automobiles.

Objective: To promote the goals of the Clean Air Act Amendments.

Policies:

- 1) The Township shall promote the development of a network of pedestrian and cycling paths in park, open space, resource conservation, and utility corridor areas designated in the Comprehensive Plan.
- 2) The Township shall work towards creation of open space linkages from residential neighborhoods to designated open spaces and to the Town Center.
- 3) The Township shall promote the establishment of a pedestrian-oriented Town Center, encouraging pedestrian circulation throughout each quadrant of the Town Center.

- 4) The Township shall encourage the use of public transportation and shall work towards providing links from the Town Center area to neighborhoods beyond the Town Center and the establishment of public transit hubs in the Town Center.
- 5) The Township shall work with state, county, and other local municipalities towards resolving regional traffic problems.

E. Community Services

Goal: To provide public services, facilities, and utilities in the most cost-effective manner, taking into account community needs, safety, and environmental factors.

Objective: To meet the demands for services by current and future residents and businesses.

Policies:

- 1) The Township shall monitor the joint sewage treatment and disposal system and shall, either in conjunction with the other cooperating municipalities or independently, as appropriate, direct needed upgradings of system components to meet State standards for effluent quality, to reduce inflow and infiltration into transmission lines, and to maintain system efficiency.
- 2) The Township shall conduct long-range sewer system planning in cooperation with the members of the joint authority and other adjacent municipalities.
- 3) The Township shall encourage the installation of new types of innovative central sewage disposal systems that do not discharge into the municipal system in concert with new development (such as spray irrigation systems) provided they can be demonstrated to be efficient, effective, and environmentally-sound. Private on-lot sewage disposal systems shall be discouraged.
- 4) The Township shall review all substantial development proposals to determine their probable effects on public service systems, including schools, emergency services, utilities, recreation, and administrative services, and shall consider approval of such proposals only when the health, safety, and general welfare of the community can be assured.

Objective: To provide an adequate supply and a mix of recreation facilities, both passive and active, to serve the existing and projected populations of West Whiteland Township.

Policies:

- 1) The Township shall promote the development of a network of pedestrian and cycling paths in park, open space, and utility corridor areas designated in the Comprehensive Plan.
- 2) The Township shall work towards creation of open space linkages from residential neighborhoods to designated open spaces.
- 3) The Township shall promote the development of open space buffers in newly-developed areas that will serve as recreational amenities.
- 4) The Township shall promote the concept of residential clustering for a more efficient use of land, conservation of natural resources, and creation of usable open space and recreation lands.
- 5) The Township shall build into the zoning code development incentives to encourage private conservation, development, and/or maintenance of open space land.
- 6) The Township shall, in conjunction with Chester County, work to establish a major park facility in the northeast quadrant of the township.
- 7) The Township shall promote the development of new community facilities, including a community center building at the Town Center.
- 8) The Township shall maintain existing and prospective community facilities for their continuing use and enjoyment by township residents.
- 9) The Township shall work with local conservation groups towards open space conservation and achieving public access to private open space lands.

F. Resource Protection

Goal: To protect and enhance environmentally-sensitive and culturally-significant areas of the township.

Objective: To protect groundwater, floodplains, streams, wetlands, mature woodlands and specimen trees, steep slopes, ridge lines, scenic viewsheds, and other environmental features of the township.

Policies:

- 1) The Township shall enforce regulations in order to ensure that development in areas of environmentally-sensitive resources is undertaken in a manner that minimizes their destruction or impairment.
- 2) The Township shall continue to enforce regulations to restrict the construction of any structures for residential, commercial, industrial, or institutional use in floodplains.
- 3) The Township shall continually monitor private sewage treatment and disposal systems and shall enforce system upgrades or mandate connection to municipal systems, as required, to prevent environmental degradation.
- 4) The Township shall promote the concept of residential, commercial, or industrial clustering for increased protection of natural resources on tracts undergoing development.
- 5) The Township shall provide for development incentives to encourage private efforts towards conservation and/or maintenance of environmentally-sensitive resources.
- 6) The Township shall consider mandating the submission of comprehensive environmental assessment statements with applications for approval of substantial land developments.

Objective: To preserve and enhance the significant historical, archaeological, and cultural resources of the township.

Policies:

- 1) The Township shall devise and implement special controls over development in areas of historic and culturally valuable resources to minimize their destruction or impairment and promote their sensitive reuse and maintenance.
- 2) The Township shall consider the preparation of design guidelines for new development in association with historic sites and areas in the township.
- 3) The Township shall consider a variety of techniques, including density bonuses, revised development standards, limited tax or sewer tap-in fee abatements, fee-in-lieu amendments, and historic district creation to promote historic resource protection objectives.

G. Aesthetics

Goal: To protect and enhance West Whiteland's aesthetic assets, as well as to improve the image of the township.

Objective: To improve the image of existing and potential commercial areas.

Policies:

- 1) The Township shall establish an attractive and clearly-defined Town Center for the community.
- 2) The Township shall develop and enforce regulations requiring landscaping and tree planting along road frontages of commercial developments and planting in internal circulation and parking areas.
- 3) The Township shall strictly limit the extension of strip commercial development and shall develop and enforce regulations to initiate and bring about remedial actions for existing strip commercial areas, especially along Business Route 30 and Route 100.
- 4) The Township shall consider creation of an Aesthetics

Committee to prepare guidelines to protect and enhance West Whiteland's aesthetic assets and improve its image.

Objective: To protect and enhance the natural amenities of newly-developing tracts.

Policies:

- 1) The Township shall develop and enforce regulations governing development in harmony with the natural landscape, including maintenance of existing and planting of new trees and other vegetation, retention of topsoil, landscaping of setbacks, and perpetuation of views.

Objective: To protect and reinforce neighborhood and other special identity areas within the municipality.

Policies:

- 1) The Township shall prepare design guidelines for new development in special identity areas (such as the Town Center, the Business Route 30 and Route 100 corridors, and the Church Farm School properties) and shall consider providing development incentives to encourage conformance with design guidelines.

H. Planning

Goal: To pursue a variety of approaches and mechanisms for dealing with the challenges of growth faced by West Whiteland Township and its adjacent and neighboring communities.

Objective: To coordinate planning efforts among townships, counties, school districts, and other relevant decision-making bodies.

Policies:

- 1) The Township shall engage in cooperative and coordinated planning efforts with other jurisdictions, agencies, and groups wherever appropriate for the benefit of the community.

Objective: To put in place appropriate tools for managing growth.

Policies:

- 1) The Township shall consider the adoption of an Official Map, as permitted by the Municipalities Planning Code (MPC).

SECTION 3: LAND USE PLAN

The Land Use Plan (Figure 3.3.2) ties together all the elements that make up the Comprehensive Plan Update. It thus becomes the primary reference against which land-use decisions, as well as decisions on major public expenditures, can be measured for the next ten to twenty years. The Land Use Plan is concerned with the proposed location, intensity, and amount of different uses. It strives to be in harmony with trends affecting economic development in the township and its environs, the county and the surrounding region, while mirroring the values, needs, and expectations of township residents.

The Land Use Plan, as well as the other specific elements of the Growth Management Plan, is oriented toward planned development of West Whiteland Township through 2013, and reflects a moderating rate of residential growth, a balanced land-use mix, conservation of natural and cultural resources, and efficient utilization of existing systems. The Growth Management Plan is based upon a 2013 West Whiteland Township population of between 16,000 and 17,000 persons and an increase of about 1,600 housing units above the present inventory of built dwellings.

General Description

The Land Use Plan incorporates a Town Center concept (Figure 3.3.1) to provide for orderly growth. The concept provides a mechanism for accommodating certain types of commercial and residential development expected over the next ten to twenty years while controlling the impacts of this development on established residential neighborhoods and on the major open space area in the township. A mixed-use Town Center area, inclusive of existing development and potential development sites in the vicinity of the Exton Crossroads at Business Route 30 and Route 100, is central to the Plan, literally and figuratively.

The Land Use Plan contains a combination of ideas for residential, commercial, industrial and open space uses in the township:

Residential

- Existing residential neighborhoods to remain generally as is, with opportunities, where available, for compatible residential

infill;

- Clustered low-density residential development, in combination with extensive publicly-accessible open space areas, on the Church Farm School properties;
- New multi-family, single-family attached and smaller-lot single-family detached residential development in or adjacent to the Town Center and in areas within walking distance of SEPTA rail stations.

Retail

- Focused on the Town Center and integrated with Town Center office, residential, institutional and open space uses;
- Limited neighborhood retail areas, to encourage local walk-in patronage.

Office

- New office development focused on the Town Center and integrated with Town Center retail, residential, institutional and transit facilities;
- Continued low-intensity campus-type office development along Business Route 30 east and west of the Town Center and southeast of the Route 202 interchange. A new area for this type of development along the East Whiteland Township line between the Chester Valley Railroad right-of-way and Church Farm Road.

Industrial

- Integrated into existing industrial areas.

Open Space

- A continuous open space network, based primarily on natural-

feature corridors, connecting to larger park and green spaces;

- Major open space areas on the Church Farm School properties.

Care should be taken in relating the picture of future development in Figure 3.3.2 to expected development through the planning horizon of about twenty years. The Land Use Plan has built-in slack; rather than being a strict representation of the twenty-year "build-out", it illustrates those areas in which particular land uses can be supported by the policies of the Plan.

At the Crossroads

The Land Use Plan emphasizes a mix of office, retail, residential, institutional, and open space uses in each quadrant at the township's central crossroads, Business Route 30 and Route 100. The intent is to provide a clearly-defined, single location in the township for its most intensive kinds of uses, configured in such a way as to increase opportunities for "one-stop" patronage of several kinds of facilities, reduced rates of auto-trip generation, and increased opportunities for pedestrian circulation. Some of the basic principles for the future of the crossroads area are:

- Each quadrant at the crossroads becomes an area for a mix of retail, office, residential, institutional, and open space uses, with good physical connections among uses in each quadrant to encourage a "walking downtown" pedestrian-oriented environment within each quadrant.
- Improved connections from one quadrant to another are established. These include a new Town Center Loop made up of portions of existing streets combined with new road segments to form a complete ring connecting the quadrants, with the possibility of shuttle bus service operating from quadrant to quadrant. Transit vehicles would also use the Loop, as could private vehicles, depending on several factors. Pedestrian bridges over Route 100 could also connect the easterly quadrants to those on the west side of this principal arterial road.
- Structured parking for retail and office uses is developed on several or all of the quadrants, to reduce the extent of land area devoted to parking lots and allow for a closer integration of the different uses in each quadrant.

- Connections between new residential and office developments and the SEPTA R-5 train station(s) and other transit opportunities are created. In limited circumstances this may include "walk-in" connections to an expanded and improved Exton train station. In most circumstances this would include weather-protected, convenient shuttle bus stops built into new developments. Some of these locations would double as transit stops.
- Improvements to Business Route 30 in the Town Center area as the road evolves from a regional thoroughfare bordered by highway commercial strip development into a street with a character more like a landscaped boulevard. The opportunity to "reinvent" the Lincoln Highway (Business Route 30) comes with the impending opening of the Exton Bypass, which will replace Business Route 30 as the regional east-west highway. Improvements may include increased setbacks, underground electrical utilities, shared driveways and parking lots, revised signage and lighting, and more landscaping.

These approaches to the Town Center are intended to address many of the current and prospective land use and traffic problems in West Whiteland Township brought about by a proliferation of auto-dependent retail uses not only at the Exton Crossroads, but also extending east and west from this point along Business Route 30 and northward along Route 100 towards the township boundary with Uwchlan Township. The Land Use Plan establishes a clear perimeter to the area of the township intended for retail uses, encourages complementary office, residential, and institutional uses to join the retail activities and form a balanced land-use mix, addresses the auto dependency issue, and holds out the opportunity to improve the character, image, and quality-of-life of the community.

This latter point is a key aspect of the Plan. On the ground the extent of West Whiteland Township isn't obvious -- the township seems to flow seamlessly into adjacent municipalities at its borders. More significantly, perhaps, the center of the community is not clearly defined either. The Exton Crossroads is a well-known location in the region, but has scant associations with the township -- there is nothing "civic" or "community" there. Close by, in fact, are several significant community facilities -- the Township Building, Miller Park, the post office and the library, for example -- but these are disjointed elements, pieces of a puzzle that never come together themselves or with the other component parts of the area to produce a coherent place that is clearly the center of a community. The Land Use Plan proposes that the existing uses found in each of the quadrants at the Exton Crossroads, together with new elements to be constructed over the planning period, be knitted together to

make a place that, owing to its abundant opportunities and pleasant surroundings, acts as a magnet for township residents and makes them eager to spend considerable time there, and that is also an appropriate and recognizable representation of the township to visitors.

The Land Use Plan is concerned with land uses at a fairly general level -- its view is the township as a whole. The recommendations for the Town Center require more detailed examination of the circumstances and potentials of the Crossroads area itself, an exploration beyond the scope of township-wide land-use planning. In order to carry the Land Use Plan's recommendations with respect to the Town Center forward, a more-focused Town Center Plan needs to be developed. Since the Town Center Plan follows from and is a more-detailed study of the recommendations of the Land Use Plan, preparation of a Town Center Plan is the logical first step towards implementing the Land Use Plan.

Beyond the Town Center

The Land Use Plan depicts less intensive land uses arranged outside the limits of the Town Center, with an emphasis on conservation of open space, selective infill of residential neighborhoods, new low- and medium-density housing development, and opportunities for low-intensity business park and light industrial growth.

Conservation of open space includes the protection of natural resources, such as floodplains, wetlands, steep slopes, woodlands, and ridge lines. The Land Use Plan indicates the web of designated floodplains in the township as the backbone of a permanent open space network extending throughout the community, incorporating existing and prospective parklands, environmental features, utility and transportation corridors, and a golf course. The intent is to ensure that the maximum achievable acreage of open space be retained in West Whiteland as it heads towards its full "build-out", that critical natural elements are protected, that sufficient park and recreation opportunities are created, and that the prospect of open space linkages among designated parks, neighborhoods, and the Town Center be encouraged for resident mobility and recreational enjoyment.

The open space system has the added benefits of affording natural buffers between differing land uses and the creation of attractive landscaped parkways along major roadways.

Residential Uses

The housing element of the West Whiteland Township Growth Management Plan (see Section 5 of this chapter) explains in detail the intended locations for residential use, incorporating a gradation of densities. Distinctions among residential categories are made according to gross density limits rather than by specific housing types to increase flexibility in responding to natural site conditions, recreational needs, and market demands for a range of housing types and site sizes. On newly-developing tracts, it is intended that this flexibility should lead towards open space conservation, as well as the opportunity for development of a range of housing types to meet the needs and desires of the present and future residents of the township.

Residential infill describes the sensitive integration of new dwellings into the township's existing fabric and encompasses the addition of compatible residential development on vacant and undeveloped parcels in existing neighborhoods.

In general, low density development is proposed for most of the areas of the township intended to be residential, reflecting the present generally single-family detached dwelling character of the township and reinforcing this quality into the future. The Town Center area, on the other hand, where retail services, transit, community facilities, and jobs are all potentially within walking distance from residences, is designated as the most appropriate location in the township for higher residential densities. Medium density residential uses, still likely to be single-family detached dwellings, are relatively closer to the Town Center and to major roads than low density areas.

Light Industrial and Business Park Uses

The Land Use Plan indicates three areas that have already been locations for some light industrial/business park development as the most appropriate for continued and expanded uses of these kinds. These areas are East Business Route 30, generally to the east of Ship Road as far as the Church Farm School; west of the Town Center, between West Business Route 30 and the Route 30 Bypass; and in the vicinity of Route 202. The two eastern locations are both highly accessible from the Route 202-Route 30 Bypass interchange and the westerly area is similarly accessible from the Route 30 Bypass-Business Route 30 interchange just beyond the West Whiteland-East Caln boundary. In either case access to these areas can be achieved from regional highways without the need to travel through the center of the township or its

residential neighborhoods.

The two main light industrial/business park areas, both along Business Route 30, are well-positioned in terms of natural and man-made buffers between these uses and residential areas of the township. To the south lies the Route 30 Bypass and railroad lines and to the north is Business Route 30 (or, in the case of the East Business Route 30 area, the old Conrail railroad right-of-way). A series of floodplain corridors further delineates the light industrial/business park areas and buffers adjacent residential or institutional uses.

The character of these business park/light industrial areas has, to a large extent, already been set by existing development, but there is still ample room for expansion.

One characteristic of these areas is the frequent mixing of traditional light industrial uses (manufacturing, assembly, and warehousing) with low-intensity office uses in one campus-like development. The flexibility that this potential mixing has for landowners is important in creating and maintaining a successful complex. For the community it is critical that these areas be low-intensity developments -- it is the Town Center area that offers the potential for reduced auto-trip generation, by providing transit alternatives to automobile commuting and a walking precinct for employees to get lunch and do their shopping. These light industrial/business park campuses out towards the perimeter of the township are mostly truck-, automobile-, and interchange-oriented -- in order to control traffic impacts on the rest of the community, these areas should be developed at intensities far less than those appropriate in the Town Center.

General Industrial Uses

More traditional or "heavy" industrial uses may be accommodated along the western side of the township, between the East Caln Township line and Whitford Road and the active railroad corridor and the former Conrail line. This area is suitably located with respect to other uses in the township and is convenient to the Route 30 Bypass-Business Route 30 interchange.

Commercial Uses

The Plan recognizes the variety of types and intensities of commercial uses in West Whiteland Township, and seeks to accommodate the broad range of

potential market demands for land while controlling adverse effects on the community. The chief tool of the Plan towards implementing its policies concerning commercial development is the Town Center concept already outlined. Over the planning period, most new commercial uses, including offices and retail, are projected to be developed in the Town Center. Other uses are recommended in the Town Center in conjunction with commercial activities.

The Town Center is proposed as a blend of different uses, with potential combinations of office-commercial, retail-commercial, higher-density residential, institutional, hotel, and open space elements. For West Whiteland Township, an important advantage of the Town Center is the potential internalization of automobile trips, leading to a reduction in overall trip generation. Another advantage of the concept is its role in controlling commercial stripping of township thoroughfares. Through the Town Center approach, virtually all retail commercial growth is directed to this distinct center or cluster of activity; in this manner the process of commercial stripping would not gradually overtake the length of Business Route 30, Route 100 or other routes. Furthermore, the potential exists for the establishment of a public transit and shuttle bus hub at this location, offering the opportunity for both township residents and incoming workers to utilize bus or rail transportation and reduce automobile commuting.

Outside of the Town Center the only areas designated for commercial use are low-intensity office uses in conjunction with business park campuses (described previously), limited neighborhood-oriented retail nodes at selected locations, the existing shopping center at the southwest corner of Business Route 30 and Whitford Road (which may be considered firmly entrenched for the ten-to-twenty year planning horizon), and the commercial nursery on Whitford Road north of Business Route 30.

The small neighborhood centers are an idea consistent with the Town Center concept. Local services for township residents should be convenient and, for people living out towards the corners of the township, access to these services should not always require a trip into the Town Center. Neighborhood centers should not be oriented to customers from a wide area, however. Their patronage would contribute severely to traffic increases in West Whiteland's residential neighborhoods.

Institutional Uses

As was described in Chapter Two, Section 2, institutional uses are significant

for West Whiteland Township, especially as compared to many suburban communities. The Plan envisions that these uses will remain significant, in terms of their locations, land area and uses, through the planning period, but no significant expansion of institutional uses is foreseen.

The Church Farm School is expected to maintain the school campus on 140 acres on both sides of Business Route 30 at the eastern end of the township. The northernmost extent of the school campus would be the inactive railroad right-of-way about one-third- to one-half-mile north of Business Route 30.

The two other major township institutions, the Devereux School on Boot Road east of Route 100, and the Laborers District Council Education and Training Center on East Business Route 30, are expected to maintain their current facilities, with little or no expansion.

Fiscal Impacts of the Land Use Plan

At least until quite recently, West Whiteland Township has been widely perceived as having an ideal tax base, especially when compared to many other suburban municipalities. Characterized as well-balanced, the combination of a commercial core at the Exton Crossroads, an industrial "belt" between the main railroad corridor and Business Route 30, and neighborhoods comprising various residential structural types contributed to a community that was growing but not becoming overburdened by the effects of growth.

The last six to eight years, however, exhibited an increased pace of retail commercial growth, especially at the central hub of the township, but also extending out westward along Business Route 30 and north of Swedesford Road along Route 100. The emphasis on retail expansion has put considerable strain not only on the roadway network, but also on community services, especially policing.

The Land Use Plan tries to restore a better balance of uses in the township generally, and in the Town Center in particular.

Through an east-west band of the township and at its eastern end an increased emphasis on business park uses is made. These uses generate good real estate and earned income tax revenues for the Township, with relatively low municipal servicing demands.

For the Town Center, uses that complement the existing retail commercial

concentration, such as higher-intensity office and residential uses, are recommended. Office uses usually have more and higher-paying jobs than retail uses, contributing significantly in the form of earned income tax revenue to the Township, and have lower servicing costs.

The coalescing of retail commercial uses and higher-intensity office and residential uses in the Town Center should translate over time into greater efficiencies for local government in providing services, especially transportation and public safety, rather than a pattern in which retail commercial and other higher-intensity uses are widely-stripped along major thoroughfares or dispersed throughout the community.

SECTION 4: CIRCULATION PLAN

Summary of Current Conditions

The circulation system of West Whiteland Township is based on three major north-south links (Route 100, Whitford Road, and Ship Road), three major east-west links (Business Route 30, Swedesford Road/Waterloo Boulevard, and Boot Road), and a series of connecting roadways.

With increased development within and around West Whiteland Township over the last decades, the roadway network of West Whiteland Township has become overburdened.

Completion of the new Route 30 (Exton Bypass) is predicted to improve traffic conditions throughout West Whiteland Township, especially on Business Route 30, by diverting much of the through traffic to the Bypass. However, the combination of increased development and a focusing of much of Business Route 30 local traffic on the single mid-township intersection at Route 100 will lead to the need to continue to improve the circulation system township-wide and especially in the vicinity of the Exton Crossroads.

Proposed Circulation Plan

In order to further improve traffic flow in the township, meet the needs of projected population and employment levels in the township, and support the goals of the Town Center concept, improvements to the circulation system are proposed (Figure 3.4.1). These include creation of a roadway loop system around the center of the township and the intersection of Business Route 30 and Route 100. New linkages are proposed between Business Route 30 and Swedesford Road east and west of Route 100, providing alternative means of access to retail, residential, and employment uses in that area. This loop system also includes roadway links through the quadrants on the south side of Business Route 30, increasing mobility in the Crossroads area generally.

On the south side of Business Route 30, the loop road concept incorporates an east-west linkage along the path of Commerce Drive and the right-of-way of the former Conrail line. As well, an outer circumferential road joins Business Route 30 with Route 100 through the southwest quadrant. While conceptually, this circumferential route should also join Route 100 and Business Route 30 through the southeast quadrant, a suitable alignment for this road has yet to be determined. Such a linkage must not adversely affect

the Whiteland Crest neighborhood, nor the area around Exton Elementary School.

Three more roadway links are proposed in the township to improve circulation. The first one is a link between Business Route 30 and Swedesford Road east of Ship Road, through the Church Farm School lands, to serve traffic that would be generated by any development at the eastern end of this site. The second link is the Waterloo Boulevard extension connecting the existing terminus of Waterloo Boulevard at Whitford Road to Business Route 30 opposite the entrance to the Oaklands Corporate Center. The third new connection is an east-west road from Route 100 to Ship Road, midway between Swedesford Road and the township's northern boundary. All three roads will be important links to serve the traffic demands of additional development in the township.

Roadway Segment Improvements

Various studies conducted in West Whiteland Township have recommended certain roadway improvements to better facilitate existing traffic flow. Most of these studies, however, did not account for the impact of the Exton Bypass on the roadway network. The one improvement, though, that has been recommended in the past and should still be worthwhile even with the completion of the Exton Bypass, is the widening of Business Route 30 to two through lanes in each direction (with an additional center lane for left turns) through the township.

The Waterloo Boulevard extension should be considered as a four lane cross-section with left turn lanes. While capacity constraints in East Whiteland Township and between Ship Road and Whitford Road preclude Swedesford Road's use by a large amount of traffic diverted from Business Route 30, the potential exists for a four-lane minor arterial road right through the township, from the Waterloo Boulevard extension at the western end to the Swedesford Road segment as far as East Whiteland Township on the east. If the Township desires to implement this four-lane cross-township road, opportunities for developer-financed widenings along its route should be pursued over the next few years.

In addition to these improvements, Route 100, the lone north-south arterial in the township, should be widened to provide three through lanes in each direction from the Exton Bypass to south of Shoen Road. As a result of its prominent mid-township interchange with the Exton Bypass, as well as the increased development activity in the Town Center vicinity, Route 100 is

projected to serve significantly higher traffic volumes than today.

The Township may also wish to consider potential upgrading of Ship Road between Business Route 30 and Swedesford Road. Such improvements need to be compatible with the historic and cultural features found along this route.

Intersection Improvements

Congestion at the intersection of Route 100, Swedesford Road, and Waterloo Boulevard may be partially attributed to the fact that two through lanes are actually needed in each direction on the east-west legs. Widening of Waterloo Boulevard to provide these additional lanes would also improve operations by allowing the two side streets to be better aligned, which would eliminate the need for split phasing of the traffic signal. In addition, the existing dual left turn lane movement for the westbound approach of Swedesford Road should be maintained by widening the Swedesford Road leg.

From a capacity perspective, a need for dual left turn lanes on Business Route 30 at the Route 100 intersection would remain, even with completion of the Bypass.

Many intersections in the township will experience congested conditions over the planning period simply because of a lack of adequate turn lanes on one or both of the intersecting roads. These lanes increase capacity by removing left-turn vehicles from the through traffic stream. It is recommended that further investigations be conducted at the locations below to determine the feasibility of providing left turn lanes on all approaches and to determine the required lane lengths:

- Whitford Road and Whitford Hills Road
- Whitford Road and Shoen Road
- Whitford Road and Waterloo Boulevard
- Whitford Road and Commerce Drive
- Whitford Road and Spackman Road
- Whitford Road and Burke Road
- Whitford Road and Boot Road
- Boot Road and Burke Road
- Boot Road and Route 100
- Boot Road and King Road
- Boot Road and Kirkland Road
- King Road and Phoenixville Pike North
- King Road and Phoenixville Pike South

- Business Route 30 and Ship Road
- Route 100 and Bartlett Avenue
- Route 100 and Commerce Drive
- Route 100 and Shoen Road

The intersection of Ship Road and King Road already satisfies traffic signal warrants; however, utility issues have prevented signal installation for the last five years. Efforts towards resolving these issues should be intensified in order to be able to achieve needed signal installation at this location.

Traffic signals should also be installed at all intersections of the loop road network with Swedesford Road, Waterloo Boulevard, Business Route 30, and Route 100.

Financing of Road Improvements

Other than the Exton Bypass, no new capacity-adding projects are planned by the Pennsylvania Department of Transportation (PennDOT) in the township on the current PennDOT Twelve-Year Highway Improvement Plan. Therefore creative means of financing must be identified in order to complete all road improvements recommended in the Comprehensive Plan and into the future. This could include continuation of the current practice of accepting developer-financed road improvements at existing intersections to correct current deficiencies and to mitigate traffic increases associated with new developments. Another method would be the establishment of Transportation Impact Fees as provided for under Act 209 of the State Legislature. Still another method would be the establishment of Special Assessment Districts, as has been done in East Whiteland and Tredyffrin Townships, to finance road improvements that would benefit the users in that District, through the use of a separate tax only on the non-residential properties in the respective District. As in East Whiteland and Tredyffrin Townships, funds could then be used as a match for PennDOT funding to maximize the amount of road improvements that could be completed in West Whiteland through locally-raised funds. Even though the township has no capacity-adding projects on the Twelve-Year Plan, the Planning and Programming Department at PennDOT has shown itself to be very receptive to such alternative financing methods and, based on past experience, should be willing to participate in such a Township scheme.

Congestion Management System Strategies

Since it is becoming extremely difficult to "build our way out" of transportation problems, numerous approaches are being applied with success in other areas in reducing transportation demand, instead of continually increasing transportation supply. This issue has been recognized by state and federal governments in their requirement that all businesses of over 100 employees in the Philadelphia area implement Employee Trip Reduction Plans (ETRP) over the next five years. The goal of these plans is to reduce Average Vehicle Occupancy (AVO) in the region by 15%, with a corresponding decrease in the volume of traffic on the region's road system. Currently, 36 businesses in West Whiteland Township must establish ETRP plans. With continued growth, this figure should increase.

However, Congestion Management System (CMS) strategies should not be limited to just these 36 (or more) businesses. An aggressive CMS approach by the Township could help tremendously in addressing future transportation needs. While these systems are now beginning to be employed nationwide, West Whiteland Township has the opportunity to be a leader in Pennsylvania in these kinds of initiatives. An aggressive approach to CMS would support the goals of the Town Center concept (Figure 3.3.1). The following discussion briefly presents some of the options available to the township:

Transportation Management Associations (TMAs). One resource for the local business community is the Chester Valley Transportation Management Association. This organization was created to assist the local business community in identifying successful travel demand reduction measures. All businesses should be encouraged to join the TMA and one option for controlling traffic growth would be to require all users in new non-residential developments to join the TMA as a part of the land development approvals process.

Trip Reduction Ordinances. As part of the land development approvals process, developers could be required to limit their developments' trip-making potential to 80% of that determined through the ITE's Trip Generation Manual. Such a system was proposed by SmithKline Beecham Corporation as part of the Applebrook development in East Goshen Township. With loop detectors in the access drives, the Township could determine when the site's trip-making quota was reached and not issue future building permits at the corporate office park until corrective actions were taken.

Access Management. It is important that property access along all arterial and collector roadways, but especially Business Route 30 and Route 100, be

controlled. Traffic should enter and exist major arterial roads only at a few well-separated strategic locations served by traffic signals. This may include providing access by collector or local roads on either side of Business Route 30 and Route 100, or connecting into the interior road system of an existing development that already has access on these major arterials. Over the long run, the Township should work with owners of existing properties with direct access onto Business Route 30 and Route 100 to develop alternative or shared access points. Furthermore, developments along these arterials that already have good access points should be strongly encouraged or even required to permit access through their properties to adjacent developments.

Public Transportation. Public transportation is an important component of any ETRP plan, but the township, like the rest of the region, lacks the public transportation network necessary to comprehensively accomplish auto trip reduction requirements. Other TMAs have worked closely with the Southeastern Pennsylvania Transportation Authority (SEPTA) to establish new routes that are partially funded by local business communities. In West Whiteland Township, such routes could link the two train stations with office, retail, and industrial areas of the township. Participation by the Township in the TMA could help guide the organization in this direction.

An impediment to use of the regional rail system by local residents is the inadequate parking capacity at the two existing train stations. The Township should take an active role in assisting SEPTA in the identification and possible funding of opportunities to provide additional parking, including possible station relocations to areas with potentially more available land for parking.

Pedestrian Circulation. Under the Rail Banking Provision outlined by the National Rails to Transit Act, Conrail has filed to turn over the Chester Valley Railroad right-of-way to Chester County for interim use. The provision gives Conrail the right to retain the transportation corridor but allows them to turn its use over to the County and, thus, stay abandonment indefinitely. The County plans to utilize the right-of-way as a pedestrian/bicycle trail that can be designed to link residential developments and employment and retail centers throughout the region. Funding for this project will be provided primarily by a grant from the Pennsylvania Department of Transportation. Once implemented, the proposed trail network has the potential to greatly enhance pedestrian access and circulation within West Whiteland Township.

A major concern in the design of such a trail is the manner in which the township's busy roadways would be crossed. The Chester County Parks and Recreation Department is currently considering alternative approaches with respect to crossings of Business Route 30 and Route 100. Crossing at grade

on both of these roads is generally considered unacceptable given the high volume of traffic served by each highway. Likewise, pedestrian underpasses are probably not practical because the trail will be at grade at the intersections of each thoroughfare -- the extensive tunneling required would be prohibitively expensive, and the length of such underpasses would make them cumbersome and risky for pedestrians and cyclists. Therefore, pedestrian overpasses are considered the favored alternative.

Crossing Business Route 30 would most likely involve the construction of a new pedestrian bridge, since the old railroad bridge at the Chester Valley Railroad right-of-way has been long since removed. A newly-favored location for a pedestrian bridge is in the vicinity of the Exton Square Mall; however, the exact location may depend on plans for adjacent tracts. There also exists the possibility of acquiring a limited right-of-way at the Church Farm School.

The most promising option for crossing Route 100 may involve diverting from the Chester Valley right-of-way south along Route 100 to the Morrisville right-of-way and using the existing Pennsylvania Railroad bridge. (The Morrisville right-of-way runs parallel to the Amtrak main line through the middle of the township.) Construction of a new bridge within the Chester Valley right-of-way is another alternative. The road cut at the junction of the trail and Route 100 is deep enough to easily accommodate the construction of such an overpass. A decision as to which alternative to pursue will probably depend on the cost of acquiring the Morrisville right-of-way.

Completion of this project will provide an important resource to the township. Aside from enhancing pedestrian access and circulation, the trail has the potential to be a component in employers' efforts to comply with the federally-mandated Employee Trip Reduction program. As a central link to many commercial and residential areas, the trail provides a viable alternative to driving during both morning and afternoon peak hours and during lunch time.

As part of the Intermodal Surface Transportation Efficiency Act (ISTEA), 80% matching funding is available for local governments to construct transportation enhancement features such as pedestrian bridges. These opportunities should be explored as part of land development activities in the central part of the township.

Projected Traffic Volumes

Projected traffic volumes were developed for 2013 traffic conditions in the township, including completion of the Bypass, based on the following

assumptions about traffic growth in the area:

- Through traffic in the area (traffic originating and destined outside the township) traveling through West Whiteland Township will grow at an annual rate of 3%.
- Traffic volumes between West Whiteland Township and surrounding municipalities will grow at annual rates of 4% to the north, 3% to the west, and 2% to the east and south of West Whiteland Township.

These growth factors were based on a review of historical traffic count information and on forecast population growth in the region. According to traffic count information contained in the many traffic reports reviewed as part of the comprehensive planning process, traffic in West Whiteland Township has been increasing at an annual rate of approximately 2.8%, due to growth inside and outside the township. Furthermore, according to 1990 census data, the population in West Whiteland Township increased by 2.95% annually between 1980 and 1990. Between 1980 and 1990, the population in all of Chester County increased by 1.89% per year.

In addition to background growth, the Land Use Plan's assumptions with respect to the location, intensity, and amount of different uses have been taken into account, as have Circulation Plan improvements outlined in Figure 3.4.1. Projected 2013 traffic volumes are included in Appendix 2 of the Comprehensive Plan.

SECTION 5: HOUSING PLAN

The goal of the housing element of the Growth Management Plan is to provide the opportunity for a range of housing types and sizes within the township to meet diverse housing needs while at the same time supporting the other major goals of the Plan.

Conservation and Infill

The housing element recognizes that reinforcement of existing districts and neighborhoods may be the most significant aspect of planning for residential use in West Whiteland Township. After the pace of residential construction over the last few decades (see Chapter 2, Section 5) many areas now contain mature neighborhoods, with only a few parcels available for development. Where these infill sites exist, they should be developed generally at densities comparable with the existing housing, in a form that is compatible with the neighborhood character. While it may appear that only limited opportunities to construct new housing remain in existing neighborhoods, the Pattern of Change section (Chapter 2, Section 3) has shown that a considerable amount of new residential development took place in these areas from 1982 to 1993 (Figure 2.3.1). Significant acreage remains available for new housing in many neighborhoods over the planning period.

Areas Available for Major New Residential Developments

Several large-, medium-, and moderate-sized tracts of land have the potential to be developed for residential use in West Whiteland Township over the planning period. The largest, by far, is known as the Church Farm School property, and encompasses some 1200 acres in the northeast quadrant of the township. Other areas available include the 166-acre Greentree tract south of the railroad-Bypass right-of-way, between Route 100 and Burke Road; a similar-sized tract known as the Foote Mineral site, west of Route 100 and north of the Bypass; the Darlington tract, on 28 acres south of Boot Road, just west of Route 100; the Tabas tract, a 23-acre parcel north of Business Route 30, a half-mile west of Whitford Road; and the 55-acre Hough-Loew site, south of Business Route 30 and a quarter-mile east of Route 100. Other, smaller parcels are also available for residential development.

Redevelopment of some significant tracts in the township is also possible over the planning period. Parcels suitable for residential use include the 33-acre

West Chester Gun Club property on Boot Road, east of Route 100; the adjoining 67-acre Devereux Foundation tract; parts of the 39-acre Davis Oil Company property, south of the railroad-Bypass right-of-way, east of Route 100; and the 44-acre Waterloo Gardens site, west of Whitford Road and north of Business Route 30.

Housing Types, Demographics, and the Town Center

As described in Chapter 2, Section 3, the 1980s saw a shift in residential construction in West Whiteland Township, from mostly single-family detached units to mostly single-family attached units. By 1990 West Whiteland exhibited opportunities available to current and prospective residents to select among large-lot single-family detached dwellings, medium-sized-lot single-family detached homes, single-family attached (townhouse) dwellings, and multi-family (garden apartment) housing.

As projected in Chapter 2, Section 5, the pace of construction of new residential units is likely to slow over the planning period, reflecting the transition of West Whiteland since 1980 from a township still fairly open to one much more filled up, and the opportunities afforded by completion of the Route 30 Bypass for Chester County residents to live further west than West Whiteland, but still within commuting distances of employment centers. While the number of housing units to be constructed per year in the township is expected to fall off, market demands for a variety of structural types and lot sizes may be expected to continue. Thus, West Whiteland should plan for additional opportunities to construct single-family detached homes on lots of various sizes, single-family attached dwellings, and multi-family housing.

There are at least two other major reasons for West Whiteland to plan for a variety of types of housing in new residential construction. The first relates to the demographics of the current township population, and the second to the desired special character for the Town Center.

While West Whiteland Township's population has been growing, it has also been aging (see Chapter 2, Section 5). Over the last two decades the proportion of the resident population over 65 years of age has been steadily rising and so has the proportion of residents over 40 years of age. For these residents, alternatives to the single-family detached form of housing are expected to be increasingly important through the planning period. In order to permit "empty-nesters" to remain in the community in which they have lived and raised families, continuing opportunities to develop moderate-sized-lot single-family detached, small-lot single-family detached, single-family attached, and multi-family dwelling units will be needed.

Over the planning period, West Whiteland Township will remain a community of mostly single-family detached dwellings. Apart from areas designated for parks, permanent open space and resource conservation, the majority of the presently-undeveloped land in the township is proposed for low and medium density residential uses predicted to incorporate single-family detached housing styles.

The Town Center, however, represents a special set of circumstances. Here, as described in detail in Section 3 of this chapter, residential uses are to play a key role in the creation of a unique place in the community, where a mix of uses and opportunities for pedestrian circulation combine to establish a clearly-defined and appealing central focus for the township. Without its pedestrian orientation, the Town Center's potential character cannot be achieved. And the ability of a close-at-hand "captive" group of nearby residents to walk to Town Center commercial, community, and transit services represents a critical component of potential pedestrian activity in the Town Center.

These Town Center and close-to-Town-Center residents will walk when it is a convenient and pleasant experience. Convenience is very much a function of proximity -- when one is close to a destination, one is more likely to find the prospect of walking there agreeable. Thus, facilities in the Town Center should be closer together than elsewhere in the township. For the Town Center area, moderate-sized-lot single-family detached, small-lot single-family detached, single-family attached, and multi-family units are likely housing types. For the township as a whole, the Town Center is the most logical location for these types of dwelling units; in fact, the need for the township to provide some of these kinds of residential development opportunities over the planning period and the Town Center idea complement each other.

The creation of a Town Center with unique qualities may contribute towards the development of very attractive, relatively high-priced dwelling units at this location. The township's locational advantages with respect to the area's highways and employment centers, and the convenient services, transportation, and leisure-time diversions at the Town Center can be significant in encouraging high-quality residential construction here.

Housing and Open Space

The housing element recognizes the Growth Management Plan's goals and objectives with respect to community services and resource protection. The Plan's interconnecting open space system, intended to permit pedestrian and bicycle connections to recreation, education, shopping, and employment locations, as well as to preserve township natural resources, is projected to be implemented through the ongoing process of land development. It is recommended that residential clustering, which permits a concentration of a tract's potential development on a small portion of the overall tract and leaving the remaining area available for open space and recreation use, be promoted in order to help realize the township open space system.

While some opportunities for residential clustering have been available over the last few years in the township, current regulations present few incentives for developers to actually employ this technique. If the Township is anxious to preserve the remaining open space areas in the community, residential clustering opportunities must be abundant and must be attractive to potential developers of land. All low-density and some medium-density residential zoning districts should offer clear opportunities for residential clustering. The benefits of the open space that results are substantial for township residents, and are permanent as well.

Affordable Housing

The Plan proposes to maintain and increase opportunities for affordable housing by emphasizing conservation of existing housing stock and by providing suitable settings for single-family attached and multi-family housing construction. In the area of housing conservation, of the over 2000 single-family attached and multi-family units currently in the West Whiteland Township, comprising some 44 percent of its total 1990 housing units, all are proposed to be retained through the planning period. As well, much of the single-family detached housing developed in West Whiteland Township in the 1940s, 1950s, and 1960s may currently qualify as "affordable", relative to prices for newer versions of this type of housing in Chester County.

Residential Classifications - Low Density

Low density residential development, generally less than two dwelling units per developable acre, is proposed in all areas of the township outside of the Town Center and an east-west corridor between the Bypass and Business

Route 30. (For a discussion of the term "developable acreage", see pages 3-9-3, 4-4, and 4-5.) Low density residential development is the single largest land use category in the Land Use Plan (Figure 3.3.2) and encompasses most of the vast areas of the township developed with residences since World War II, as well as much of the Church Farm School property, and several considerably smaller parcels with development opportunities. The existing low density residential areas are stable and are projected to remain much as they are through the planning period. As has been described in the Pattern of Change section in Chapter Two, infilling of these areas occurred through the 1970s and 1980s and similar opportunities remain, albeit reduced in number, to build on lots that were bypassed in the previous decades and to subdivide lots in the one-to-three acre range into two or more lots.

Any development of several units simultaneously, or of a large tract, is proposed to take place in a form that differs somewhat from the common practices of the last forty years. The incorporation of generous corridors of contiguous open space as part of the land development process is recommended in order to protect environmentally-sensitive resources, provide appropriate buffers between areas of differing land use and between major roadways and residences, and to form a continuous path system, where feasible, through the community. Where extensive open space exists, concerted efforts are required to conserve views of open land as well as extant woodlands, steep slopes, floodplains, and historic sites.

Residential Classifications - Medium Density

Medium density residential development is proposed to cover a much smaller percentage of the township, when compared to low density residential development. Existing medium density residential areas, generally at two to four dwelling units per acre, are found on the east side of Route 100, between the Bypass and the railroad right-of-way south of Business Route 30; along and north of Boot Road, a quarter-mile to a half-mile west of Route 100; north of Business Route 30, a half-mile east of the East Caln Township line; and several other smaller sites towards the southern boundary of the township.

Locations for new medium density residential use take their cue from the siting of the existing developments -- along Business Route 30 and Route 100, the township's major north-south and east-west arterial roads through the center of the municipality. Medium-density residential use is seen as a logical transition from the heavily-travelled Route 100 and Business Route 30 corridors to lower density residential areas further back from these corridors.

These locations alongside Routes 100 and Business 30 are also significant in the establishment of a defined Town Center area: Medium density residential uses are also seen as a logical transition from the higher-density, mixed-use Town Center area to the township's boundaries. Thus, additional medium density residential uses are proposed for the east side of Route 100, from the Uwchlan Township line to the shopping centers at Swedesford Road; and in several locations alongside Route 100 from the Boot Road area southward to the West Goshen Township line. Medium density residential uses at these locations serve to reinforce the Town Center as the focus for commercial activities by, in effect, substituting residential uses for strip commercial ones that might be attracted to the Route 100 and Business Route 30 corridors. The medium density residential uses along these two corridors also help to establish a perception for people driving into the township that the community character is mostly residential -- a change in character occurs only when one enters right into the Town Center. Medium density residential uses along Route 100 and Business Route 30, then, help to set up "gateways" to the Town Center coming in from all four sides of the township.

The densities proposed for medium density residential areas are entirely consistent with the construction of single-family detached housing types. At the lower end of the recommended density range, densities approximate those allowed in the current R-2 zoning district. At the higher end, moderate-sized-lot single-family-detached housing is easily accommodated.

Of the areas recommended for medium density residential use, those located relatively closer to the center of the township, closer to public transit, and closer to either Route 100 or Business Route 30 are better suited to accommodate densities towards the higher end of the medium density range.

Residential Classifications - High Density

High density residential development, at about four to eight dwelling units per developable acre, is currently found in a band along the north side of Waterloo Boulevard from Whitford Road to Route 100 (and up to Shoen Road in the eastern half of this area); east of Route 100 to Ship Road and north of the electric transmission line corridor; and in a much smaller area on Phoenixville Pike, north of Ship Road.

The two largest areas of existing high density residential development are at the perimeter of the Town Center area. Additional high density residential

development is proposed in the Town Center, as a critical component of the special mixed-use character envisioned for this area (see Housing Types, Demographics and the Town Center, above), and as a transition from the Town Center to the existing high density residential and medium density residential areas south of the railroad-Bypass corridor. The existing high density residential areas and proposed Town Center high density residential uses together represent a logical location for these uses in the overall distribution of residential uses into the future within the township, and offer strong potential support for the Town Center's mixed-use, pedestrian, and transit orientation. Housing types likely in these areas include moderate-sized-lot single-family detached dwellings, small-lot single-family detached dwellings, twins, townhouses, and garden apartments.

SECTION 6: CONSERVATION AND OPEN SPACE PLAN

The goals of the Conservation/Open Space element of the Growth Management Plan are to encourage the protection of the natural environment and cultural features, and to ensure adequate provision of open space to serve the existing and projected population of West Whiteland Township.

Open Space System

The Open Space Plan map (Figure 3.6.1) depicts the future extent of parks, permanent open space, and resource protection areas in West Whiteland Township. The Open Space Plan emphasizes a knitting together of a series of existing and proposed park, open space, and resource protection elements to form a continuous system of greenways extending throughout the community.

Some of the existing components of this system are noted on Figure 3.6.1 and include:

1. Public parks;
2. School fields and open areas;
3. Golf course (Whitford Country Club);
4. Electric transmission line right-of-way;
5. Easements and private conservation areas, with special emphasis on the West Valley Creek corridor.

Some of the proposed new components of the system include:

1. New public parks and designated public open spaces, in particular on that portion of the township known as the Church Farm School properties and in the Town Center;
2. Extensive areas of environmentally-sensitive features throughout the community, especially floodplains, wetlands, steep slopes, and woodlands;
3. A public open space trail along the old Chester Valley Railroad right-of-way;

4. New private open space and conservation areas created in the course of development of properties for new residential and non-residential uses or through the application of conservation easements to specific parcels of land;
5. Landscaped setbacks along Business Route 30 and Route 100, emphasizing the parkway or green boulevard aspects of the township's two principal arterial roads.

The continuous, interconnected open space network is intended to serve several purposes: 1. To conserve areas of environmentally-sensitive and culturally-valuable resources; 2. To provide appropriate buffers, where possible, between areas of differing land use, such as between residential and commercial; 3. To provide appropriate buffers between high-volume traffic arteries and residential and non-residential areas; 4. To form a continuous path system, wherever possible, throughout the township for walking, hiking, and cycling; 5. To permit pedestrian and bicycle access to a variety of destinations, including residential developments, schools, special natural features, shopping, and specific sites for recreational facilities; 6. To create sites where public recreational facilities may be developed; 7. To provide for some of the private open space and recreational space needs associated with new residential and non-residential developments; 8. To maintain and enhance local wildlife habitat; 9. To preserve vistas of the North Valley Hills and South Valley Hills ridges of the community.

Creating the System

The fundamental method for creating the interconnected open space system is through the land development process, although this is not the only method available. For the most part, however, provisions within the framework of regulations governing land development would help create the open space network and, at the same time, appropriate sites for possible future recreational facilities development. The method by which the network would be achieved includes the utilization of residential cluster development options by landowners, existing and potential new regulations limiting development of environmentally-sensitive lands, potential new clustering provisions governing non-residential development, and purchase of land for public open space purposes by the Township with funds obtained through impact fees from developers (such as provided for in Section 423 of the Township Subdivision and Land Development Ordinance).

Residential cluster development, available as an alternative to conventional development in situations where developers choose to pursue the cluster course and meet basic eligibility requirements, would be a primary mechanism

for making available land for open space and recreational use. The cluster option would offer a number of development alternatives to the landowner, including the opportunity to concentrate housing on a smaller portion of the tract than conventional development would permit and possibly density bonuses. At the same time, the ability to cluster may be conditioned on a minimum development size, the formation of a deed-mandated homeowners' association, and the offering of any required open space area to the Township for dedication.

Depending on a specific tract's location, in particular in relationship to lands designated for open space uses in the Land Use Plan and Open Space Plan, the Township may accept a developer's offer of dedication of open space land, may require only a public access path easement through it, or may leave it to the exclusive use and responsibility of the respective homeowners' association. In this manner, the Township may evaluate a prospective development's open space lands in terms of the open space network and its various parts identified in this Plan. Depending on the value of a particular piece of ground to the network, the Township may accept it, require public access through it, or not require any special conditions.

Through the residential land development process the Township may become, at its option, the beneficiary of lands to be potentially developed as new parkland, or to be held as part of a municipal recreational land bank for future park development. In the latter case, the dedicated land can still function as part of a continuous bicycle/pedestrian path system in the interim phase since, for most of the proposed open-space network, the emphasis should be on low-maintenance, natural-growth passive-recreation paths, with minimal upkeep needs. When the time comes for more capital-intensive park development of portions of the dedicated open space lands, State and County programs for parkland acquisition and development may assist in Township facility construction of recreational sites.

The Church Farm School Properties Open Space Opportunity

A Memorandum of Understanding signed by West Whiteland Township, Chester County, and the Church Farm School in June 1994 indicates that the Township and County will purchase over 700 acres of undeveloped land in the northeast quadrant of the township for open space uses. This opportunity to significantly expand the area of parkland in the township while simultaneously permanently preserving the largest remaining open space in the community is unique and should be pursued vigorously by the Township to a final agreement of sale. The area of land is generous and can accommodate most of the range of "Additional Park and Facility Needs" identified in the Township's 1992 Open Space, Recreation and Environmental Resources Plan.

At the same time, the area represents by far the largest single open space extant in the township and includes: The community's most outstanding scenic views and vistas of the wooded ridge line and slopes of the North Valley Hills; a significant number of historic buildings; important natural resource areas, such as floodplains, wetlands, steep slopes, woodlands, and wildlife habitat; and a potential pedestrian/bike trail along the Chester Valley Railroad right-of-way.

A detailed study for the development of parkland on Church Farm School lands that are to be acquired by the Township or otherwise become available for public recreational use should be undertaken. Issues to be considered include the type of recreational facilities that would be developed, setting priorities for their development, recreational programming, operations, staffing, funding, and administration. The products of this study are essential to provide solid information to Township officials and will provide a framework for facilities development that will be ready to implement as soon as the property sale is complete. This study should commence as an early implementation step for the Comprehensive Plan, and should be seen as an amendment to the Township's 1992 Open Space, Recreation and Environmental Resources Plan.

Historic and Cultural Resources

In the 1980s, West Whiteland Township enacted Article 13, the historic preservation portion of the Township Zoning Ordinance. Article 13 was a significant contribution to historic preservation in Pennsylvania and has been the model for similar zoning provisions in many Pennsylvania municipalities. The ordinance has been instrumental in saving a number of the township's most important and most vulnerable historic houses. Despite the existence of Article 13, however, the township has continued to lose both its historic landscape character and significant historic and prehistoric resources at an alarming rate. Even those historic houses that have been saved often exist with little vestige of their historic landscape context remaining.

The reason for this lack of success in preserving West Whiteland's historic resources lies in the lack of integration of the historic preservation goals outlined in Article 13 into the township vision, other township ordinances, and land development process as a whole. Historic preservation in West Whiteland has been viewed by many as an isolated issue intent upon preserving old, obsolete houses. It has been viewed as a financial burden to developers and, by others, as an obstruction to the progressive development of the township. Over the years, historic preservation goals have been at the center of internal local governmental conflicts. Though Article 13 includes incentives intended to encourage developers to include appropriate adaptive

reuse of historic buildings in their development plans, these incentives have been practically fruitless in competition with development opportunities in the township afforded by current zoning regulations.

Though many of the township's remaining historic resources are already located in developed areas, development pressures will only increase in future years, and increased density and change will continue to threaten those remaining resources. Historic preservation is more than preserving isolated historic buildings; it is preserving community character. In West Whiteland, the key to preserving community character and historic resources lies in preserving the character of the township's historic landscape. The challenge is in creating, communicating, and implementing a realistic vision of how this character can be preserved while accommodating future change. Historic resources are only one part of the township's landscape character. The goals of historic preservation are integral with those of preserving open space, preserving environmental resources, and providing recreational opportunities.

To this end, though changes to Article 13 should be made, the most important measures to be taken in the interest of historic preservation in West Whiteland are the further refinement and timely implementation of the other growth management recommendations included in this Comprehensive Plan Update. Most important among these recommendations are: (1) the revised Land Use Plan and the redefinition of zoning districts, including area and bulk regulations; (2) the implementation of creative, flexible, yet detailed design guidelines for special identity areas such as the Town Center area or the Church Farm School properties; (3) the extension of the vision for these special identity areas into other areas of the township through the preservation of natural and historic landscape features in new development; and (4) the aggressive implementation of an open space network, including a significant contribution to that network by each new land development proposal. As the comprehensive planning process proceeds into the implementation phase, it will be important to explore ways that the Township can participate more fully in the evolution of land development plans, especially during the early formative phases, and that the land development plans can be more creative in preserving community character. All of the recommendations of this Comprehensive Plan Update should include the preservation of historic resources as an integral component of the preservation of community character.

Specific changes to Article 13 should include the requirement that significant historic resources be preserved in new land development proposals, just as significant environmental resources are preserved. The existing system of incentives simply has not worked. The zoning ordinance provisions implementing this requirement will need to be creative, flexible, and participatory, carefully balancing the rights of ownership with the long-term

interests of the community. They will require compelling new incentives and disincentives. The creation of design guidelines for the preservation of historic resources would be valuable in communicating to developers both the vision and the technical means of achieving preservation goals. In the revised ordinance, it should be clear that the preservation of historic resources means not only the preservation of historic buildings, but the preservation of the landscape contexts that are integral to the historical significance of those buildings. In addition, it should be clear that historic resources include archeological resources and historic landscape features, such as roads, hedgerows, fencelines, walls, vegetation, etc. Disturbance of archeological resources should be avoided in new development wherever possible. Where the historic character of the existing landscape cannot be preserved in new development, vestiges of that landscape should be preserved within the new development so that the historic landscape patterns can be discerned.

One possible technique for historic structure protection is the granting of facade easements by owners of historic properties to preservation organizations. In this manner the exterior facades of historic properties would remain intact, notwithstanding changes that might be made over time to the interior of buildings or to their contexts.

While this technique may be applicable in limited circumstances in West Whiteland, drawbacks to this method are twofold. First, the majority of the township's historic properties are fairly modest residences. Relative to a facade of a multi-story urban historic cast iron or stone commercial structure, the value of a residential facade in West Whiteland is small. Tax benefits that would accrue to a township property owner in return for giving a dwelling facade easement would be negligible, and the owner would still probably need to undertake some degree of restoration to the facade in question before it was eligible for donation. Second, the protection of a building facade against alteration is a very limited historic preservation measure. Wherever possible, the Township should be attempting to preserve enough of a building and its context so that the significance of the structure is not lost in the change occurring around it. The goal should be to respect the integrity of the building and its setting, not just its facades.

A more promising historic preservation technique may be the integration of historic preservation goals, objectives, and policies into broader Growth Management Plan implementation efforts. The preceding "Open Space System" and "Creating the System" subsections discuss how development incentives built into the zoning ordinance may help to achieve a higher degree of open space and natural resource protection than would otherwise be the case. In a similar manner, these incentives may be used to achieve a higher degree of historic resource protection.

Density bonuses in return for specific historic preservation actions where such resources exist on a site are one possible tool, but the basic by-right densities must be sufficiently low so that the bonusing mechanism would be attractive to developers and the historic preservation actions the Township is looking for would actually be achieved. (Chapter 4 observes that the existing by-right densities in many commercial and industrial districts are probably too high.)

A related idea also postulates that relatively low by-right densities for a given zoning district be complemented by several different zoning options for the prospective developer. No one would be compelled to use these options, but each would clearly spell out a series of obligations and benefits for anyone who chose to pursue a given option. These optional zoning procedures could mandate preservation of open space, retention of historic structures and their areas of significance, and other requirements, in return for which the developer might receive density bonuses, selected revised development standards, and perhaps limited tax or sewer tap-in fee abatements.

Another technique may be the expansion of the provisions of Section 423 of the Township Subdivision and Land Development Ordinance, currently requiring set-asides or fees-in-lieu for open space and recreation areas by all developers of land in the township. As preceding paragraphs of this Section make clear (also see Chapter 2, Section 4) historic structures in the township are frequently found intermingled with significant existing open space and with the Growth Management Plan's recommended open space network. (see Figure 3.6.1). Township efforts to establish this network, a permanent municipal open space resource, invariably will lead to opportunities to preserve historic resources along the way, and the explicit inclusion of historic and cultural areas in the list of community facilities associated with the Subdivision Ordinance's Section 423 should allow the Township to tap this source of funding towards historic preservation efforts.

Finally, while recent land development in West Whiteland Township has compromised the historic landscape context for many surviving historic structures, the integrity of the entire Church Farm School properties area is noteworthy, and special efforts to retain that integrity should be vigorously pursued. The Church Farm School area (some 1,200 to 1,500 acres) is a promising location to establish a Historic District in the township, with regulations that would allow the municipality to retain its historic structures and their related landscapes in the context of the sensitive integration of new development and activities into this area.

SECTION 7: COMMUNITY FACILITIES PLAN

The goal of the community facilities element of the Growth Management Plan is to provide the complement of facilities and services necessary to serve the residents of West Whiteland Township through the planning period. Public school, park and recreation, community, administration, and emergency services facilities are reviewed in this section.

Schools

The current number of public schools in the township, administered by the West Chester Area School District, should be adequate to serve West Whiteland Township's population through the planning period. While the school district projects that total district enrollment could increase by seventeen percent from 1993 to 2013, these projections reflect rapid population growth for townships such as East Bradford (see Tables 2.5.1 and 2.5.2) over the period. New school sites, if they are required, should logically be developed to the west of the township, not in it.

Absent major single-family residential development on the Church Farm School properties, township population increases over the planning period should not result in a need for additional sites for public school development. Facilities expansion, alterations and upgrades at Exton Elementary, Mary C. Howse Elementary, and Pierce Middle Schools may, however, be required over the planning period.

Parks and Recreation Facilities

According to the Township's 1992 Open Space, Recreation and Environmental Resources Plan, the Township has a deficit in parkland. A need for an additional 100 to 300 acres of parkland is identified to meet current and future demands through the year 2010 (see Table 16, page 73 of that plan).

When projecting future demands for recreational facilities and programs, it is necessary to consider not only existing circumstances but evolving demographic changes, land use forecasts, and broad cultural trends as well. While population growth and new residential development suggest increased demands for recreational facilities, commercial and industrial growth might also call for corresponding development of recreation sites for corporate

sports teams and fitness programs. A population shift towards age groups over 55 suggests the need for a greater variety of indoor and outdoor recreational opportunities, and the increased number of women's sports teams, in response to a general societal shift, is placing additional demands on community and school facilities.

The existing park sites and recreational facilities in the township that are available for sports activities are fully utilized, and to many residents the need for additional sports field areas is acute. At the same time, the 1993 Comprehensive Plan Questionnaire revealed that the most-preferred types of recreational facilities for residents were "hiking, biking, jogging, and equestrian trails" and "open space/natural habitats".

The Community Facilities element responds to the need for a variety of types of park and recreation facilities by identifying designated parklands as major land use components of both the Church Farm School properties and the Town Center area (see Section 3 of this chapter and Figures 3.3.2 and 3.6.1). The substantial acreage indicated for open space and recreational use in these two areas can accommodate a wide variety of types of parkland, from civic square-type spaces at the Town Center to major sports field and natural areas on the Church Farm School properties.

In addition, the community-wide interconnected network of open spaces described in Section 6 of this chapter can further accommodate resident demands for hiking/biking opportunities as well as nature appreciation.

Parkland acquisition and open space access are envisioned to come about through a combination of outright land purchases and the obtaining of recreation/preservation easements for specific pieces of the open space network through the approvals process for land development. These concepts are presented in Section 6 of this chapter.

Community Center

As West Whiteland matures as a community a need for a community center structure, perhaps including a senior center, day-care operation, library, and performing arts facilities, may evolve. A site for such a building could come through the land development process, as a part of a projected commercial or residential complex. Generally, it would be preferable to have such a facility centrally located in the township for easy accessibility to all residents, with public transit nearby and frontage on the township continuous open space system (described in Section 6). A site in the Town Center area is ideal,

presenting a central location convenient to residential concentrations and adjacent to higher-intensity uses such as retail or office-commercial so as to be able to tap their strong drawing power in attracting residents to events, displays, and activities; offering opportunities for residents to make one-stop use of Township facilities along with other Town Center functions; and integrated with the public transportation network.

A strategically-sited community center has the added benefit of being usable for variety of purposes by a variety of sponsors. Substantial income can accrue to the Township for community center operations through rental fees from day-care providers, corporations, and organizations using parts of the center during hours when the resident demand for space is low. The capital cost of the center construction may be funded, in part, through imposition of an impact fee on land developers -- a monetary charge levied by the Township -- but commercial and industrial developers would expect some reasonable benefits in return. The placement of the center at a location where employees can easily visit or otherwise use the center may be a key determinant in the realization of a West Whiteland Township community center building.

Township Building

The community center facility described above could be developed in conjunction with the construction of a new Township Building. The present facility on the west side of Route 100, south of Swedesford Road, has served the township well for many years, but was conceived and built at a time when the township had a much smaller population, the administrative functions of the township government were far fewer and less complex, and the profile of the township in the region was much lower.

West Whiteland Township is now an important suburban municipality in the greater Philadelphia region and the central focus for the community, its "Town Hall", should be at least as prominent and distinctive as the significant commercial establishments that surround it. Larger facilities for public assembly and for administrative functions are needed and the setting for the major public building in the community would be greatly enhanced by associated public open space, such as a civic square surrounding or adjacent to the facility.

As with the community center prospect, described above, development of a new Township Building should occur in the Town Center and may take place as a result of land becoming available for this purpose through the land development approvals process. The Township should consider the

opportunity to develop a new municipal building now, and be prepared to explore prospects for it when considering any redevelopment proposals in the Town Center area.

Emergency Services

The West Whiteland Fire Company is extremely well-located in the township -- virtually at its geographic center. The fire company possesses adequate manpower and equipment to provide emergency services to the community, but updated equipment will be needed over the course of the planning period and additional vehicles and associated apparatus will be necessary as further development occurs in the township.

The all-volunteer status of the fire company and ambulance corps is likely to produce increased staffing problems in the future. These community-based emergency service providers must compete with a variety of other agencies, activities, and programs for residents' time and interest. Volunteers must submit to greater time demands due to more sophisticated training procedures, and widely-dispersed work locations coupled with traffic congestion make it difficult for adequate numbers of volunteers to reach emergency scenes quickly during regular business hours. Additional paid firefighters and paramedics will probably be needed in West Whiteland Township and other suburban communities over the next few years.

Steady growth in the township police force seems inevitable, as West Whiteland Township traffic increases and new office, retail, and residential developments proceed. The police facilities at the Township Building are already overburdened and plans for expansion will need to be undertaken soon, but should be considered in combination with plans for a new Township Building. The issue of whether the police should remain in the same facility as the other Township administrative functions will be dependent on prospective locations for a new Township Building, its access, and whether adequate and appropriate space may be assigned for police uses.

SECTION 8: UTILITIES PLAN

The availability of central water and sewer is a major determinant for growth -- both the amount of growth and where it takes place. Where sewer facilities exist and have sufficient capacity to allow new development, there is incentive for growth to occur; likewise where they are not available growth will be relatively discouraged. The critical element, in most cases, is the excess sewage treatment plant capacity above that which is now being used, and is thus available for future development. Similarly, municipal decision-making with respect to utility service network extensions and upgrades can be employed as a growth management device -- the extension of sewer service to designated locations in the township is, along with development regulations such as zoning, a major planning implementation tool.

Sanitary Sewer System

The existing West Whiteland Township sanitary sewer system (Figure 2.8.1), although adequate in most respects, contains some sewer lines that need to be upgraded and have inflow/infiltration problems addressed. Further study is needed to pinpoint the exact locations of inflow/infiltration in the sanitary sewer system. Areas with unreasonable metered flows should be remetered and areas with excessive flows or infiltration rates should be further investigated by means of flow isolation. Then a program can be adopted to repair or replace the defective mains over a specified period of time.

The duties of the Township Public Works Department include undertaking these studies and remedial action programs. The Public Works Department should continue its inflow/infiltration reduction program and selectively repair or replace sanitary sewer lines as needed. Discrete projects to correct identified problem areas should be outlined, cost estimates made, and a timetable for phased upgrades completed. Those lines with severe problems, such as broken pipe and heavy root intrusion, should receive the highest priority for upgrading.

Unsewered Areas

Some developed areas in West Whiteland Township lack public sewers. These areas are scattered in the southwest quadrant of the community, in the vicinity of King Road-Boot Road, Burke Road, and Boot Road-Spackman Road, and in the northeast and southeast corners of the township (Figure

2.8.1). All areas of the township developed or proposed to be developed in higher density residential, commercial, or industrial uses should be served by adequate public sanitary sewer facilities. In addition, existing users of private sewage disposal systems should be required to connect to the central system wherever chronic on-site system failures occur or new sewer mains are installed nearby.

Future Development and Innovative Sewage Disposal Systems

West Whiteland Township has promoted the concept of on-site spray irrigation sewage disposal for any proposed development on the Church Farm School properties. In part, the concept has been seen by the Township as a method to ensure greater groundwater recharge in the community, thereby reducing net withdrawals from local groundwater and, in effect, allowing the municipality to extend the total water volume it could obtain from local wells. In part, the concept was also seen as reducing potential township wastewater flows into the Downingtown Regional Water Pollution Control Center, reserving the Township's allocation of the plant's present and future capacity for other purposes and reducing or eliminating the Township's obligations to increase sewer main, force main, and/or pumping station sizes.

In the case of groundwater recharge, the concept is still valid, but perhaps less so than it was, since the purchase of the municipality's public water supply system by Philadelphia Suburban Water Company (PSW). The company plans to connect its vast water supply system, including access to PSW's large Pickering treatment plant and reservoir at Phoenixville, to the West Whiteland system, so that local users will no longer be dependent on local groundwater for water supply.

The principle of groundwater recharge remains important for West Whiteland Township since the underlying aquifer feeds limestone springs that supply area streams.

In the case of the choice between directing wastewater into the Downingtown Area Regional Authority (DARA) system or on-site treatment and disposal, the Township should weigh carefully the full long-term benefits and costs of local on-site systems versus the regional authority option. A spray irrigation system does impose certain restrictions on the access to and use of open space areas that may be used for spraying, and technical aspects of the treatment system, as well as its management and control structure, have to be such so as to be able to assure the protection of the community from environmental damage and the Township from a need to involuntarily financially and

administratively take over the system.

The Township is presently in negotiations with West Goshen Township on an agreement that would see wastewater from the south Kirkland Avenue and Devereux Foundation campus area flow south and into the West Goshen Township sewer system. Construction of a new 700-foot gravity line would eliminate the need for the existing Chester Creek Pumping Station.

SECTION 9: ENVIRONMENTAL PROTECTION PLAN

The Environmental Protection element of the Growth Management Plan identifies specific areas in the township that are environmentally sensitive, based on several sources: The U.S. Army Corps of Engineers' 100-Year Floodplain designation prepared for the National Flood Insurance Program; the National Wetlands Inventory undertaken by the U.S. Fish and Wildlife Service and Pennsylvania Department of Environmental Resources; the Chester County Soil Survey prepared by the U.S. Department of Agriculture Soil Conservation Service; United States Geological Survey quadrangle series maps; and 1990 aerial photography. Areas that have been mapped include floodplains, wetlands, hydric soils, steep slopes, and woodlands.

These classes of environmentally-sensitive features are not uniform in their impact on development potential nor in what they represent as hazards to human life and property. There are levels of sensitivity, suggesting corresponding levels of response.

Floodplains

The first and most specific level is represented by the 100-year floodplain designated by the federal government (Figure 2.4.1). There is clear authority for a complete prohibition of residential development within the designated floodplain, and a set of standards for regulating the design and construction of non-residential development within the floodplain so as to prevent exacerbation of the flood hazard. Flood prone soils, identified by the U.S.D.A. Soil Conservation Service Soil Survey, at times do not correspond precisely with the federal floodplain designations. The flood prone soils, so classified because of their alluvial nature, indicating that they were deposited by floodwaters, reflect not only 100-year floods but also floods of lesser frequency. Where flood prone soils lie outside the federally-designated areas, the burden of proof should be on land developers to demonstrate by specific on-site tests, engineering analysis, and analysis of effects of impervious cover percentages of upstream development that could alter flow levels, that the generalized soil classification is in error for the specific site or that any construction will be designed to avoid any possibility of creating a hazard to human life and property or exacerbating local flooding. Thus as a matter of policy the flood prone soils initially should be subject to all of the development restrictions of the land within the 100-year floodplain.

Floodplains and Stormwater Management

As part of the Valley and Ridley Creek watersheds, West Whiteland Township will be strongly affected by the potential effects of future land development upon discharge rates into this creek and its tributaries. Stormwater management and flood and erosion control in West Whiteland Township are necessarily closely linked to upstream land development and stormwater management policies and practices, and it is essential that local regulations promulgated in West Whiteland and in all surrounding municipalities be based on watershed-wide considerations. Maintenance of stream water quality is an increasingly large concern in counties experiencing growth -- close inter-municipality and county-initiated cooperation on all stormwater management issues will be necessary over the coming years.

Wetlands

A second level of environmental sensitivity is represented by wetlands; generally areas within forested lands with a high water table and poor drainage, and having some degree of surface ponding during the year (Figure 2.4.1). Under the jurisdiction of the U.S. Army Corps of Engineers and the State Department of Environmental Resources, there is at the present time a steadily evolving regulatory framework concerning wetlands in Pennsylvania, mandating wetland surveys by developers of land and controlling the degree and type of wetland disturbance permitted. Municipalities can provide long-term wetlands protection by directing development away from these areas, by encouraging clustered construction on higher ground surrounding wetlands, and by purchasing wetlands important to protecting local floodplains or ecological systems. The West Whiteland Township Open Space Plan (Figure 3.6.1) incorporates a variety of natural resource areas, including floodplains and significant wetlands, where known.

Wildlife and Plants

Except for occasional transient species, no federally-listed or proposed threatened or endangered species are known to exist in the township. Animal and plant species on state threatened or endangered lists have been observed in the township and the Pennsylvania Natural Diversity Index (PNDI) indicates an area at the base of the North Valley Hills north of Church Farm Road as a location where special plant and/or wildlife species have been sighted (Figure 2.4.3).

The Open Space Plan (Figure 3.6.1) describes an extensive, interconnected network of protected open space areas incorporating a wide variety of sizes and types of landscapes and habitats. The continuous corridors of open space are a significant aspect of the system, providing for essential movement, dispersion, and migration of wildlife. Especially important to wildlife are the maintenance of natural corridors such as stream valleys and wooded ridgelines.

Other Natural Features

A third level of environmental sensitivity includes areas affected by the following constraints: Mature woodlands (Figure 2.4.3); areas of steep slope or erodible soils (Figure 2.4.2); and areas having a seasonal high water table within six inches of the soil surface (Figure 2.4.1). These features, especially when occurring in combination (Figure 2.4.5), suggest that little or no development should take place within the areas exhibiting these conditions or that development should be severely curtailed and closely regulated. The policy of the Township toward these environmentally-sensitive areas should be one of discouraging development wherever possible to prevent destruction of important resources or to protect residents of the township from future problems.

The chief instrument that the Township will have at its disposal to protect these areas will be the encouragement of cluster development and the flexible gross density development approach in residential areas. Essentially, the maximum number of units that would be permitted on a tract should be calculated based on the developable acreage of the tract (gross acreage minus existing rights-of-way, easements, floodplains, wetlands, and perhaps some proportion of steep slopes and woodlands). Having arrived at a figure for the total number of units permitted, the size and configuration of individual house lots becomes a much less critical issue than in conventional development, and these may be smaller or larger depending on the occurrence, extent, and significance of natural or cultural features that may be found on the tract. In turn, by requiring developers to base the number of dwelling units allowed to be built on the gross developable acreage of their development parcels, areas designated by the Township as being environmentally-sensitive are more likely to end up being set aside.

It must be recognized that maps of environmentally-sensitive areas are accurate to a general level only. Developers should be required as a matter of Township policy to undertake more detailed field studies of specific parcels proposed for development that will verify or modify the precise location of the

sensitive features on the township-wide maps. By requiring such Environmental Assessment studies, especially where there is a strong suspicion or known presence of environmentally-sensitive features, developers will be more aware of the need to protect scarce resources and to avoid future problems at an early point in the development process, leading to better land planning and design solutions in the long run.

CHAPTER 4: IMPLEMENTATION STRATEGY

This Plan must be used as a primary reference for evaluating and influencing future change in West Whiteland Township. The procedures and actions in this chapter are provided as the instructions for use of this Plan by the Planning Commission, Township Board of Supervisors, Zoning Hearing Board, Township staff, and the general public.

Adoption of the Plan

The first and most basic step in the implementation of the 1994 West Whiteland Township Comprehensive Plan is its official adoption by the Township Board of Supervisors. The Comprehensive Plan will then form the policy foundation for day-to-day decisions concerning development, as well as the framework for the zoning and subdivision ordinances that are the primary administrative tools for the control of growth and development in the township.

It is particularly important that the Plan be understood and endorsed by the officials of the township. Without such understanding and support, the Plan will not be useful nor will it be followed.

Zoning Changes

Zoning of land use is the single most important legal tool available to the Township for management of growth and development. The West Whiteland Township Zoning Ordinance should be updated and revised to reflect the goals, objectives, and policies of the Comprehensive Plan, and to effect its implementation. An updated Zoning Ordinance is the Township's most efficient and effective device for ensuring that rezonings and subdivision and land development approvals are in conformance with the Comprehensive Plan. A number of revisions to the text of West Whiteland Township's current zoning ordinance are recommended to contribute to the implementation of the Growth Management Plan. These are summarized below:

New Zoning Districts for the Town Center

The Town Center concept emphasizes a mix of residential, office, retail, institutional, and open space uses in each quadrant at the township's crossroads, Business Route 30 and Route 100 (see Chapter 3, Section 3).

The Town Center is intended to provide a single location in the township for its most intensive kinds of uses, configured in such a way as to increase opportunities for "one-stop" patronage of several kinds of facilities, reduced rates of auto-trip generation, and increased opportunities for pedestrian circulation. Each quadrant would contain a variety of uses and, through the interrelationship of uses and buildings throughout each quadrant, encourage pedestrian movement among all uses in the quadrant. As well, opportunities exist to establish pedestrian and vehicular connections from one quadrant to another.

A detailed description of the characteristics of zoning districts needed to implement the Town Center concept would be a major product of the Town Center Plan, a study recommended in Chapter 3, Section 3 (and described also under "Further Planning Studies" in this chapter). The type of zoning districts needed at the Town Center are likely to include:

1. Town Center Residential District. The Town Center Residential district would designate residential uses for two or three of the four quadrants at the Town Center, with pedestrian connections to retail services and open space areas in each quadrant and pedestrian or shuttle bus connections to the other quadrants and to the public transportation system. One possibility is to amend the existing Town Center Residential (TCR) district text, but these amendments would have to include mandating residential development and curtailing other uses.
2. Route 30 Corridor Business District. The Route 30 Corridor Business District would address some of the special circumstances of businesses and properties fronting on Business Route 30. Strip commercial uses dominate much of the Town Center frontage of Business Route 30, creating a number of problems. A pattern of strip commercial development results in a proliferation of access driveways, as well as increased numbers of commercial signs and lights. Free-flowing traffic is inhibited by frequent opportunities for slowing and turning to gain access to flanking businesses and for re-entering the traffic stream from these establishments. The likelihood of accidents is increased. The overall visual environment can present a potential safety hazard to motorists who may become confused by the array of signs and lights, both for traffic direction and commercial establishments, that predominate.

An elongation of the strip commercial areas of Business Route 30 would undermine it as a principal arterial road and create additional

environmental and aesthetic problems. Any future commercial development along Business Route 30 should take place within the areas already established and in the form of shopping centers with controlled access to Business Route 30.

Although in the near term, the opening of the Route 30 Bypass is expected to reduce traffic on Business Route 30, eventually volumes will grow. Competing demands for the Business Route 30 corridor translate into a need to develop a sophisticated development framework in order to reconcile and coordinate land use, through traffic movement, auto access to bordering properties, site layouts, parking, building envelopes, pedestrian activity, landscaping, lighting, buffering, and signage.

Current problems along the corridor, including difficult access to off-street parking, inadequate landscaping and stormwater management, and undistinguished building design and signage, are in need of remedial actions, but if the road is to function simultaneously as a principal arterial and a major retail shopping street for the township, new development regulations and design guidelines need to be put in place.

Traffic safety, congestion, and commercial-district image concerns should be addressed by regulating the number and spacing of access driveways and by developing and implementing revised regulations concerning setbacks, parking layout, landscaping, stormwater management, signage, and buffering.

Access for new development should be based on the principle of minimizing the number of driveways. New development may be required to have shared access, or marginal or rear access if practical. New access should be permitted conditioned on the property owner's consent to share access with future adjacent development where such access can be shown as feasible.

Remedial actions should focus on the issues of shared vehicular access, but also address parcel development standards (such as those pertaining to impervious coverage, landscaping, and stormwater management) in order to improve the image and environment of existing Business Route 30 commercial areas. Once these standards have been determined, they may be incorporated into land development regulations and the municipality can limit issuance of building permits for any alterations to existing establishments based on

compliance with the new standards.

3. Town Center Mixed-Use District. The Town Center Mixed-Use district would guide essentially infill development opportunities in the two quadrants of the Town Center that are largely developed (both north of Business Route 30). A higher degree of cooperation among property owners and integration of development among different parcels would be required here, when compared to the two quadrants south of Business Route 30. The benefits of infill development are the creation of "walking downtowns" in each quadrant, consisting of a mix of retail, office, residential, institutional, and open space uses, generous landscaping, and suitable parking, shuttle bus, and pedestrian movement opportunities. Structured parking should be established here, with users able to patronize several retail, office, and institutional establishments. The Town Center Mixed-Use district may require new developments to contain a mix of uses and/or may set overall limits on the amount of each kind of use within each quadrant.

These descriptions of Town Center zoning districts are general -- their characteristics would be more precisely spelled out as part of the Town Center Plan preparation.

Zoning Changes -- Residential Districts Outside the Town Center

An important recommendation is to change the emphasis of the requirements in the township's basic low density residential zoning categories from minimum lot sizes requirements to overall density limits. The intention is to permit greater development flexibility, leading to increased preservation of open space. As a corollary to the overall density limits, revised and expanded residential clustering development options should be made available in all districts, providing strong incentives for land developers to support the open space goals and objectives of the Growth Management Plan.

While these gross density limitations are intended to be applied to all zoning districts, the effects will be felt more significantly where sizable vacant tracts are available for residential developments. Creation of new cluster developments in these areas should result, providing recreational areas for residents of each new development, a continuous open space/path system to connect to other parts of the community, and conservation areas for environmentally-sensitive resources. In contrast, infill development in built-up portions of the township will be integrated into the existing neighborhood fabric, with similar lot sizes, building orientation, and yards to adjacent and

neighboring properties. Conceptually, while some changes are being proposed for the basic zoning districts, the intent is to preserve the status quo for existing developed areas -- to maintain the zoning standards for small building additions and limited development as at present.

Further zoning changes should address issues of natural resource protection. The enactment of township ordinances to conserve extant wetlands and woodlands is a logical next step towards implementation of the Growth Management Plan's policies concerning open space and environmental protection. A tree protection ordinance may be one meriting high priority.

One inference of the above two points concerning overall residential tract density limits and natural resource protection is to conceptually combine the two ideas by setting up density limitations based on "developable" tract acreage, as opposed to gross acreage. Developable acreage may exclude floodplains and wetlands from consideration in determining base site area density calculations, and may also integrate consideration of a site's extent and type of steep slopes and woodlands in the calculation.

Zoning Changes -- Non-Residential Districts Outside the Town Center

Amendments to zoning ordinance texts for some non-residential districts outside the Town Center area are recommended to better protect the township character and support the Town Center idea.

Of particular concern are the densities currently permitted in the P-2 Professional District and regulations that have allowed, until very recently, a wide range of general retail activities under Planned Business Center provisions for this district.

Floor-area ratios as presently permitted in the P-2 Professional District approach those envisioned for the Town Center; in order to reinforce the Town Center as the designated location within the township for higher intensity office uses and simultaneously reinforce a low-to-medium density office character for the Business Route 30 western approach to the Town Center, lower maximum densities are recommended for the P-2 District. As a general guideline, floor-area ratios in the Town Center might be in the range of 0.50 to 0.70, whereas those in P-2 (and I-1) districts could be around 0.20 to 0.25.

The broad range of retail uses that were permitted under the P-2 Planned Business District provisions had served to undercut the Town Center area as the township's retail center and encouraged strip commercial uses in what was

nominally a professional office district. The P-2 Planned Business District provisions have now been modified to eliminate the Planned Business Center retail uses.

Similar to the situation with P-2 Professional office districts, maximum densities permitted in I-1 Limited Industrial districts should be lowered. I-1 Limited Industrial districts presently permit office buildings with floor-area ratios as high as 0.65, a level approaching that likely to be found at the Town Center. In order to encourage new medium-to-high density office uses to locate in the Town Center, I-1 district densities should be clearly lower than those for the Town Center. As well, I-1 Limited Industrial districts recently permitted restaurants as a by-right use, encouraging strip commercial activities on Business Route 30. In order to discourage commercial stripping of township thoroughfares, restaurants have now been eliminated as a permitted use in I-1 districts, except when such uses are internal to an office or industrial development.

In a similar vein, the regulations for C-2 Neighborhood Commercial districts are quite permissive in terms of density, use mix, and site development standards. While the idea of neighborhood commercial areas is consistent with the Plan (see Chapter 3, Section 3), these should be small, low-intensity districts. Modifications to C-2 Neighborhood Commercial district texts should include reduced intensities of use, limited types of uses, and increased landscaping.

Zoning Map Changes

Outside of the Town Center area, there are only limited zoning map changes implied by the Growth Management Plan. For the most part, text changes alone would be needed to implement the ideas in the Plan. Recommended text changes include those mentioned above, plus selective changes to existing standards with respect to property access, setbacks, signage, landscaping, buffering, and parking, particularly as they affect commercial and industrial areas. The Land Use Plan, for example, recommends the treatment of the right-of-way of Business Route 30 and Route 100 as a landscaped boulevard for much of the length of these two roads through the community. The concepts of shared parking, which permits complementary uses to share required parking according to specific criteria, and reserve parking, which provides a system to encourage more green space on commercial and industrial tracts while ensuring adequate provision for parking, should both be pursued by the Township.

Within the Town Center area, significant map changes are recommended in

order to implement the Town Center concept and the zoning district ideas for the Town Center outlined above.

Subdivision Regulations

Subdivision regulations are second only to the zoning ordinance as a tool for managing growth -- especially in influencing the quality of new developments. These regulations detail the standards of any required improvements accompanying construction. The Comprehensive Plan makes several recommendations which affect street access, open space, landscaping, and other improvements. Adoption of these recommendations within the West Whiteland Township Subdivision and Land Development Ordinance will implement better quality development.

Some of the recommendations of the Growth Management Plan chapter strongly suggest amendments to the Subdivision and Land Development Ordinance's standards with respect to curb cuts, landscaping, open space, natural features protection, and historical and cultural resource preservation.

For example, the recommendations of Chapter 3, Section 6's subsection on Historic and Cultural Resources make specific reference to changes to Section 423 of the Subdivision and Land Development Ordinance. Requiring Environmental Assessment Statements for major new land developments is recommended in Chapter 3, Section 9.

Potentially wide-ranging changes to Subdivision and Land Development Ordinance standards are suggested by the Plan's recommendations with respect to the Town Center (Chapter 3, Section 3) and to the Church Farm School area (Chapter 3, the concluding part of Section 6). For these special identity areas, standards that are different than those appropriate in the rest of the township may be desirable. For example, a more pedestrian-oriented area should have road right-of-way and cartway widths that are narrower than for conventional areas, tighter horizontal curve radii, and revised parking regulations, sight distances, and sidewalk widths, similar to those standards outlined in the American Society of Civil Engineers, National Association of Homebuilders, and Urban Land Institute publication Residential Streets, 2nd ed. and increasingly followed in many municipalities trying to create more "pedestrian-friendly" neighborhoods.

Consistent with these ideas would be revised standards for shorter, more-closely spaced light standards (poles), more-closely spaced street trees, and the elimination of certain terms such as " . . . the rectilinear design of streets

and lots . . . should be avoided" from the Township Subdivision and Land Development Ordinance. (In fact, a grid or modified grid street system is considered best-suited to pedestrian movement.)

The Comprehensive Plan also makes recommendations concerning a reduction in the number of access driveways along thoroughfares, and the concept of shared access. These issues should be addressed through amendments to both the Zoning and Subdivision and Land Development Ordinances.

The Township should also prepare an Ultimate Right-of-Way Map for all roads in the township. Ultimate rights-of-way shown for each street should be appropriate for its functional classification, projected traffic volumes, land uses of abutting properties, and general neighborhood or district character. This map should be incorporated into the Subdivision and Land Development Ordinance and all applicants for subdivision and land development approval should be expected to indicate a willingness to dedicate lands between the existing right-of-way line and ultimate right-of-way to the Township or State in order to accommodate future road widenings. The Ultimate Right-of-Way Map is a valuable long-range planning tool, appropriate to anticipate and accommodate road improvements that will be needed over time.

Using the Plan

After official adoption of the Comprehensive Plan (as well as the zoning and subdivision ordinance revisions) the use of the Comprehensive Plan as a reference document on a frequent basis becomes the most important part of the Comprehensive Plan implementation program. Neither the Growth Management Plan nor the zoning and subdivision ordinances can completely anticipate or absolutely control the future growth of West Whiteland Township. Future development will be determined by day-to-day decisions made by the Township Board of Supervisors, the Planning Commission, Zoning Hearing Board, and township staff, largely in response to proposals made by private developers. In each situation where the Township must respond to a specific development proposal, the Comprehensive Plan should be used as a reference to guide the Township in the evaluation of the proposal.

The natural resource maps, part of the Comprehensive Plan, are one of the first sources to be referred to in considering any development proposal. The maps should be able to identify potential problem areas. In some cases, the developer will be required to supply more precise information on the natural and man-made determinants of development suitability. The technical

expertise of Township, County, and State agency staff will be needed to determine whether any potential problems so identified can be overcome.

The Land Use Plan should be consulted early in the review of any development proposal. If the proposed use corresponds to that shown on the Land Use Plan, the major issues will concern design considerations, technical questions, and guarantees of performance on the part of the developer. If the proposed use differs from that shown on the Land Use Plan, the proposal will require careful scrutiny.

A list of criteria that the Planning Commission and others may use in review of applications is included at the end of this chapter and may serve as a structure for review to ensure that all plans are treated with similar thoroughness and deliberation. Recommendations from the Planning Commission to the Township Board of Supervisors should refer to the proposal's satisfaction or shortcomings with respect to the evaluation criteria along with any additional facts relating to the application.

There are a number of tools available, beyond the zoning and subdivision ordinances, for evaluating specific proposals and for controlling development. The ability of the Township to limit the extent and type of growth to areas defined by the Land Use Plan or by subsequent studies, is reinforced through Township management of the central sewer system. Direction, extent, and type of growth may be effectively implemented through the combination of zoning and subdivision regulations, including new conservation standards for wetlands, woodlands, and steep slopes, and control of a sanitary sewer service. Any extension of municipal sewer services should be conditioned on landowners' consent to the general land-use and zoning guidelines recommended by the Comprehensive Plan.

Further Planning Studies

The nature of the comprehensive planning process requires that proposals for the long range development of the township be prepared at a general level. Typically, time and resources do not permit a detailed examination of a number of allied and more specific issues. A combination of factors strongly suggests the need for several follow-up planning and design efforts to address issues of importance to West Whiteland Township.

Of particular importance is the preparation of a Town Center Plan. The Town Center Plan would entail a detailed study of the circumstances and potentials of the Town Center area and recommendations for disposition of different

uses and site design considerations in each quadrant of the Town Center. The Plan would also address access, circulation, and parking; open space, stormwater management, and landscaping; zoning; and an overall picture of the manner in which all the "pieces" of the Town Center are envisioned to function together.

A Town Center Plan would also produce a set of Design Guidelines for private development in the Town Center that could, in turn, be translated into zoning ordinance amendments for districts within the Town Center.

A related Business Route 30 Corridor Plan is also seen as critically important. It could look at the entire corridor from the western boundary of the township to its eastern edge, or a more limited zone between (such as from Whitford to Ship Roads). With the opening of the Bypass and the changes in character envisioned for the Town Center, a Business Route 30 Corridor Plan is timely. This Plan would consist of:

- An arterial street access management plan and commercial strip remedial action plan, focusing on:
 - Right-of-way and cartway cross-sections and issues of shared driveway access for improved vehicular safety and traffic flow;
 - Landscaped setbacks to create a "green boulevard" appearance;
 - Upgraded development standards for site layout, landscaping, signage, setbacks, parking, stormwater management, lighting, and buffering to improve the image and environment along this thoroughfare.

Products of this study could be used in the preparation of zoning ordinance amendments to create Route 30 Corridor Business District zoning, mentioned above.

Once revised development standards have been determined, through preparation of a Town Center Plan and a Business Route 30 Corridor Plan, they may be incorporated into land development regulations. The Township can limit issuance of building permits for any alterations to existing structures or land development approvals based on compliance with these regulations. Standards determined in the Town Center Plan may be applied elsewhere in the township, when appropriate.

Other studies or study updates that should be undertaken include updating of the Township's Traffic Master Plan (after the Business Route 30 Corridor Plan is complete) and the Township's Sewer Plan.

Information Gathering, Processing, Storage and Retrieval

The Township system for processing, storing, and retrieving information filed as part of applications for subdivision and land development approvals and rezonings should be computerized. Applications should be coded by number, with corresponding paper and computer-based files, including standardized forms for recording basic information such as the location and dimensions of the tract, the characteristics of the proposed development, and the application and review status. Submitted plans and other pertinent documents should be microfilmed and/or scanned and stored on computer files.

Township staff should prepare an annual report to the Board of Supervisors and the Planning Commission summarizing development activities in the township. The compilation and publication of the following data would be useful in documenting the character and quantity of change in the township over time and would be extremely useful in the day-to-day administration of planning and zoning activities in the township. The items recommended for inclusion in the report are:

- Population estimates
- School population
- Employment estimates

- Development activity summary (new development & redevelopment)

Residential development

- New housing units, by type
- Acres of residential development
- Acres of private and dedicated open space

New nonresidential construction

- Acres of new development by land use
- Gross floor area by use

Changes of zoning

Planning Commission Annual Reviews

The Planning Commission should, as an annual agenda item, formally review the annual long-range capital improvements program for the township to ensure that physical improvements that are being programmed are in accordance with the overall intent of the Comprehensive Plan. The review should also include consideration of items which are called for by the Comprehensive Plan. A formal review and recommendation concerning the long-range capital improvements program should be forwarded to the Supervisors prior to its adoption.

A second annual agenda item should be the Planning Commission Annual Plan, which should:

- Review the degree of accomplishment of the previous year's objectives;
- Summarize studies or projects finished or underway;
- Identify Comprehensive Plan recommendations that are planned to be addressed in the next year;
- Plan for future projects or studies, including issues that the Planning Commission intends to review or initiate and ordinances that require review.

Implementation Steps for the Comprehensive Plan

<u>Action</u>	<u>Responsible Parties</u>
1. Adopt the Plan, including its implementation recommendations.	• Supervisors
2. Prepare a detailed Town Center Plan.	• Planning Commission • Planning Staff • Town Center Plan Steering Committee
3. Prepare Business Route 30 and Route 100 Corridor Plans.	• Planning Commission • Planning Staff • Corridor Plans Steering Committee
4. Prepare drafts of high-priority zoning ordinance map and text changes proposed in the Comprehensive Plan, Town Center Plan, and Corridor Plans.	• Planning Commission • Planning Staff • Zoning Changes Steering Committee • Solicitor
5. Conduct hearings and enact high-priority zoning ordinance changes.	• Supervisors
6. Update Township's Open Space, Recreation and Environmental Resources Plan to reflect Church Farm School properties decisions.	• Planning Commission • Planning Staff • Parks & Recreation Commission
7. Update Township's Sewer Master Plan (after recommended zoning changes are enacted).	• Planning Commission • Planning & Public Works Staff • Municipal Services Commission • Engineer

(continued . . .)

Implementation Steps for the Comprehensive Plan

Action

Responsible Parties

- | | |
|---|---|
| 8. Update Township's Transportation Master Plan (after Business Route 30 and Route 100 Corridor Plans are completed). | <ul style="list-style-type: none">• Planning Commission• Planning Staff• Highway Network Improvement Committee |
| 9. Prepare a long-term capital improvements program for roads, open space, public environment projects, etc. for the Township, including local match for State and County projects and anticipated developer contributions. | <ul style="list-style-type: none">• Planning Commission• Planning & Public Works Staff |
| 10. Work with Chester County to get West Whiteland Township improvement projects onto PennDOT's 12-Year Plan and other State programs. | <ul style="list-style-type: none">• Planning Commission• Planning Staff• Highway Network Improvement Committee• Chester County Planning Commission |
| 11. Township Administrative Actions -- Monitor growth and change, prepare annual report on Plan implementation, seek funding for special projects and studies, and incrementally update Comprehensive Plan from time to time. | <ul style="list-style-type: none">• Planning Commission• Planning Staff |

EVALUATION GUIDELINES

FOR REVIEW OF SUBDIVISION AND LAND DEVELOPMENT APPLICATIONS BY THE PLANNING COMMISSION

1. Is the proposed use in conformance with the Comprehensive Land Use Plan (in addition to zoning and subdivision regulations)?
2. Is the proposal supportive of the goals and objectives for the overall Plan and for the Land Use element that applies to this kind of development?
3. Is the development suitable for the location requested with respect to soil limitations, steep slopes, woodland, and floodplains?
4. What will the impact be of the proposed development on safety and present capacity of public services such as schools, roads, sewers, water storm drainage, solid waste system capacity, or police or fire protection?
5. Has adequate evidence been submitted which demonstrates the developer's intent to minimize or eliminate possible negative effects on the natural environment, community services, adjacent properties, and the surrounding neighborhood?
6. Are there any historic features on or near the property? What effect will this proposal have on such sites?
7. What effect will the proposed use have on the character and rate of future development? Will this effect inhibit or encourage the achievement of the Comprehensive Plan's Goals and Objectives?
8. If the developer is proposing to dedicate open space to the Township, is this open space fulfilling a useful purpose as described in the Comprehensive Plan, or is the dedication of this open space area a convenient way of isolating land which is difficult or unfit to develop. Dedicated open space should add to the inventory of recreation assets, benefit the residents of the development and the Township through preservation of natural features, and/or create a needed buffer between incompatible uses.

Design of open space must include provision for future maintenance. Adequate vehicular access routes must be provided to all open space

that may require some maintenance, including natural areas, and especially stream or water areas.

If land is to be used for recreation, is it large enough to be realistically used for the kind of recreation it is offered for, and is it "front yard" type space with ample public accessibility? If it is small, what kind of recreation activities is it to be used for that cannot be accommodated in the private yards of the residents of the development? Is the open space highly observable from public areas? Is it highly fragmented or does it serve as an extension of private yards? Does the open space back up to numerous private yards where noise or activity in the open space may reduce the privacy of the private property? If the open space is a linear element to be used for walking, cycling, jogging, and other similar activities, is it along public areas, or does it run along the lot lines of private yards?

What precautions or design features will ensure that the open space boundaries will be respected by the adjoining property owners?

If the land is dedicated as a buffer, is a buffer really needed? If the buffer is needed, is the location of the buffer an effective one? Buffers may be useful between land uses or activities that generate adverse acoustic or visual effects. They are not desirable in situations where the uses are simply different scales of similar kinds of land use. Linear buffers should be continuously accessible from public streets or create borders that are contiguous to public or semipublic open space.

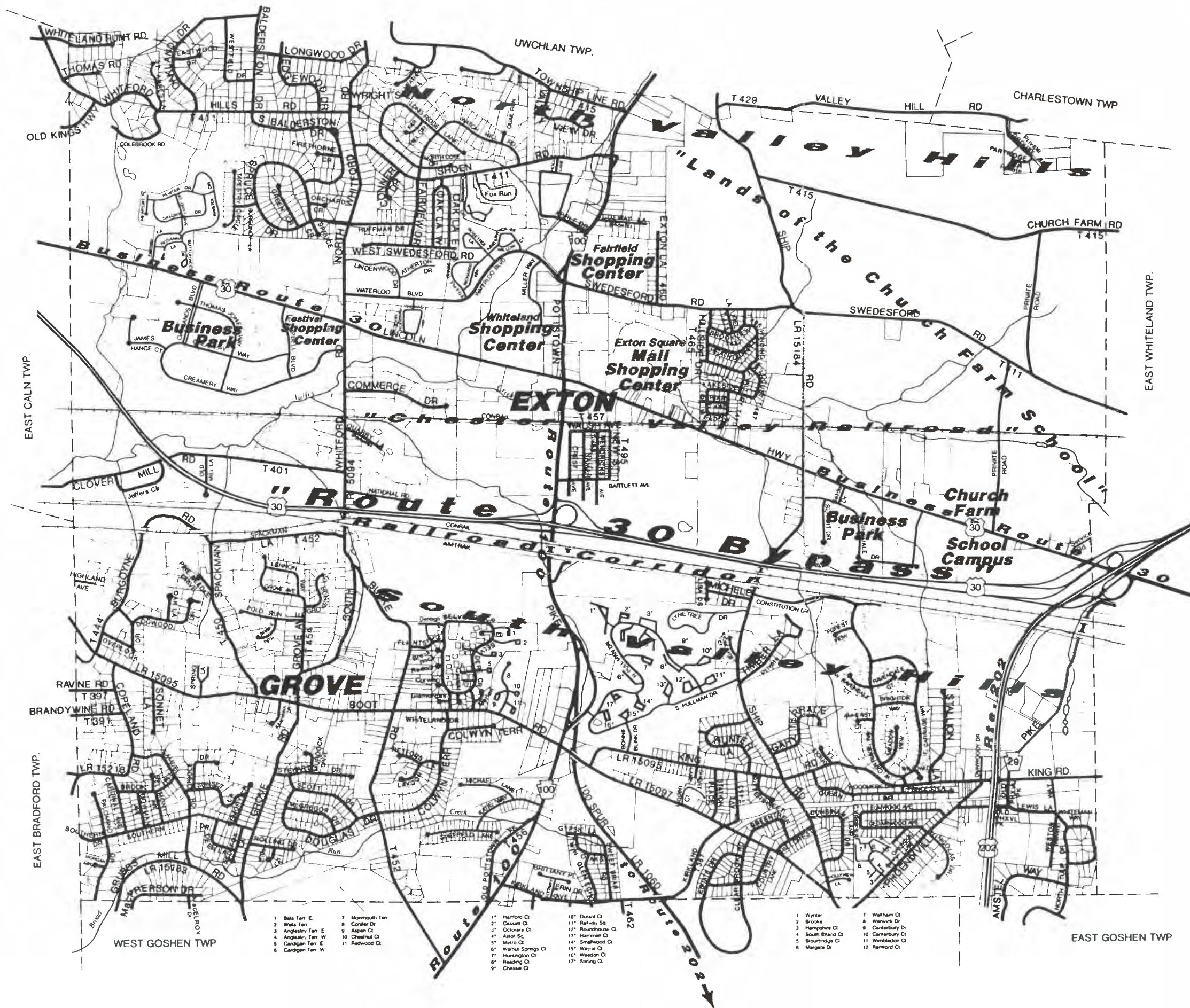
Is land set aside to preserve special environmental features contiguous to other similar areas on adjacent parcels? How important is the natural feature or condition being set aside? Is the natural area part of a larger dedicated open space parcel? How will natural areas be preserved and maintained? Is there a legal document that describes the limits of future clearing or disturbance that will be allowed?

If the land is to be set aside as a landscape feature, who will maintain it? Is the feature one that will be a public amenity? Is the feature one that will improve the appearance of the township as well as that of the development?

Are there any landscape features that exist on the land now that will be destroyed by the proposed development? Are those features more important or attractive than the ones being proposed, and if so, can the existing features be incorporated?

9. If the site is not suitable for the proposed use, but the use is particularly desirable or necessary in the township, is there any other land available that would be more suitable? Conversely, is there a better use for the land proposed for development?
10. If the proposal involves redevelopment of an existing property, what impact does the project have on the existing character of the neighborhood? Are the existing structures or landscape elements worth retaining and how can they be integrated into the proposed development?

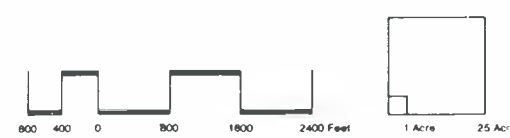
SELECTED COMMUNITY FEATURES



WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update



- 1. Belle Terr E
- 2. Wells Terr
- 3. Anglesley Terr E
- 4. Anglesley Terr W
- 5. Cardigan Terr E
- 6. Cardigan Terr W
- 7. Monmouth Terr
- 8. Conifer Dr
- 9. Aspen Ct
- 10. Chestnut Ct
- 11. Redwood Ct

- 12. Hartford Ct
- 13. Cassatt Ct
- 14. Octavia Ct
- 15. Astor Sq
- 16. Metro Ct
- 17. Walnut Springs Ct
- 18. Harrington Ct
- 19. Reading Ct
- 20. Cheslea Ct

- 21. Durant Ct
- 22. Railway Sq
- 23. Roundhouse Ct
- 24. Harman Ct
- 25. Smallwood Ct
- 26. Wayne Ct
- 27. Weston Ct
- 28. Sterling Ct

- 29. Wyker
- 30. Brooke
- 31. Hampshire Ct
- 32. South Blvd Ct
- 33. Scourbridge Ct
- 34. Margate Ct

- 35. Waltham Ct
- 36. Warwick Dr
- 37. Canterbury Ct
- 38. Carrerbury Ct
- 39. Wembleton Ct
- 40. Ramford Ct

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 18 E. Walnut Street, 2nd Floor
 Philadelphia, PA 19103

- o Traffic Planning and Design, Inc.
- o Coughlin, Keene & Associates
- o John Milner Associates
- o Geddes Brecher Qualls Cunningham

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EXISTING LAND USE

-  Agriculture, Open Space & Vacant
-  Residential - Single Family Detached
-  Residential - Single Family Attached
-  Residential - Multi Family
-  Retail / Commercial
-  Office / Commercial
-  General Industrial
-  Light Industrial / Business Park
-  Public Institutional
-  Private Institutional
-  Public Recreational
-  Private Recreational
-  Utility / Transportation
-  Parking
-  Nursery / Orchard
-  Water
-  Under Construction
-  Vacant Building

Source: Norman Day Associates

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

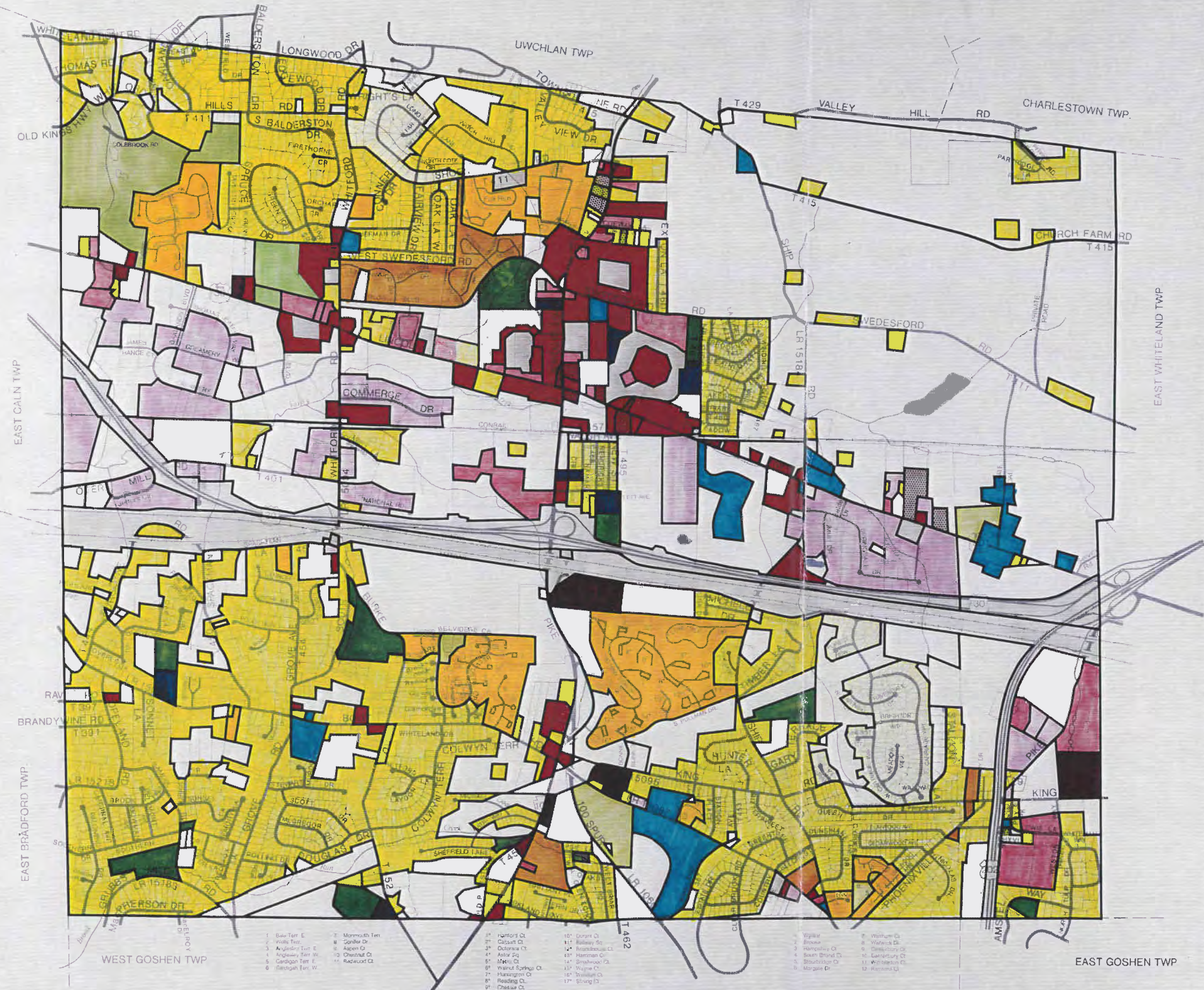
Comprehensive Plan Update



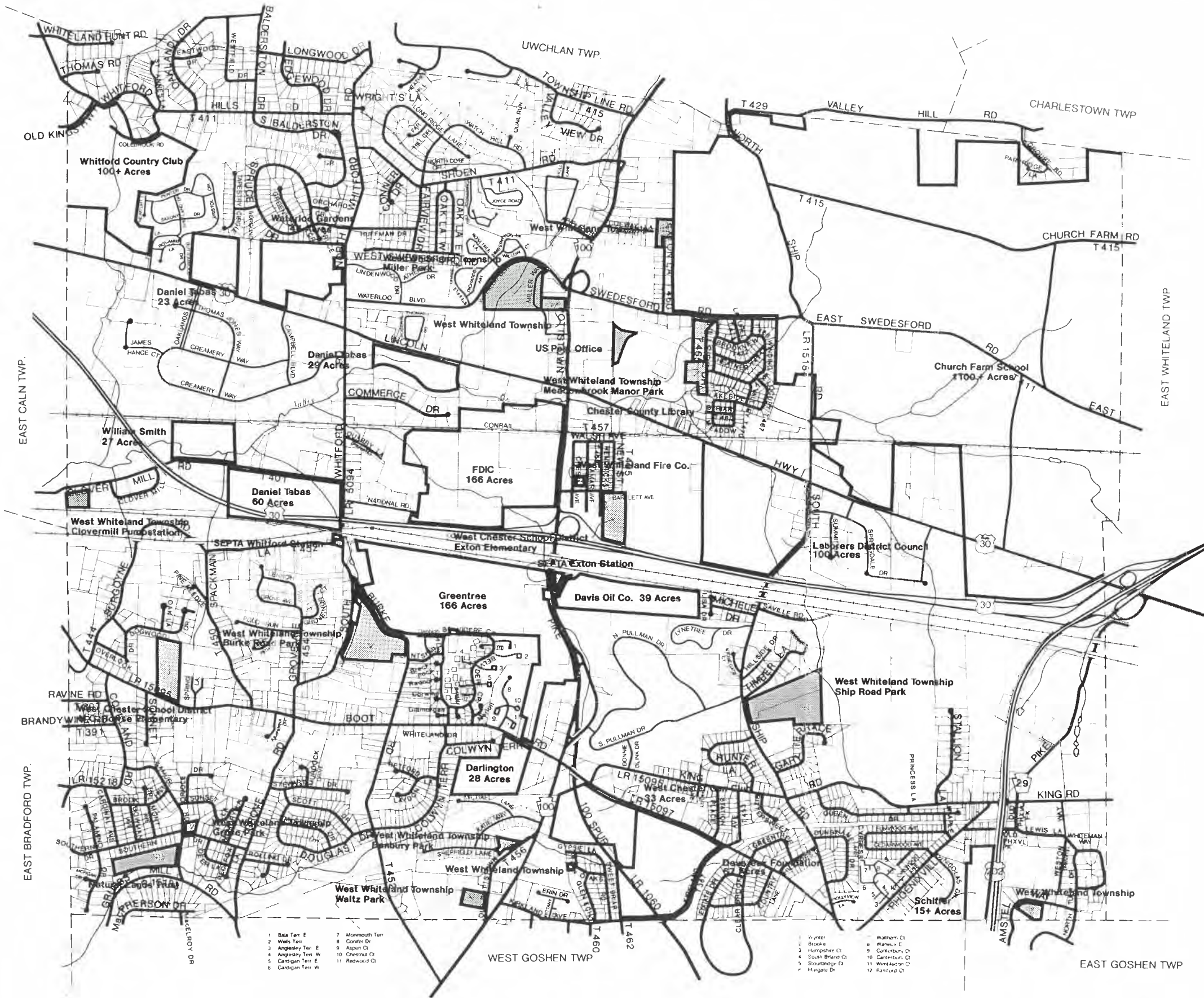
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- 1. Blue Terr. E
- 2. Monmouth Terr.
- 3. Walnut Ct.
- 4. Oakmont Ct.
- 5. Angler's Terr. E
- 6. Aspen Cr.
- 7. Kingsway Terr. W
- 8. Chestnut Ct.
- 9. Gardigan Terr. E
- 10. Redwood Ct.
- 11. Whitford Ct.
- 12. Clifton Ct.
- 13. Oakmont Ct.
- 14. Astor Sq.
- 15. Mill Ct.
- 16. Walnut Springs Ct.
- 17. Massingham Ct.
- 18. Reading Ct.
- 19. Chestnut Ct.
- 20. Gorge Ct.
- 21. Railway Sq.
- 22. Reisterstown Ct.
- 23. Herriman Ct.
- 24. Strawberry Cr.
- 25. Wayne Ct.
- 26. Traylor Ct.
- 27. Spring Ct.
- 28. Walnut Cr.
- 29. Walnut Cr.
- 30. Walnut Cr.
- 31. Walnut Cr.
- 32. Walnut Cr.
- 33. Walnut Cr.
- 34. Walnut Cr.
- 35. Walnut Cr.
- 36. Walnut Cr.
- 37. Walnut Cr.
- 38. Walnut Cr.
- 39. Walnut Cr.
- 40. Walnut Cr.
- 41. Walnut Cr.
- 42. Walnut Cr.
- 43. Walnut Cr.
- 44. Walnut Cr.
- 45. Walnut Cr.
- 46. Walnut Cr.
- 47. Walnut Cr.
- 48. Walnut Cr.
- 49. Walnut Cr.
- 50. Walnut Cr.



LAND OWNERSHIP

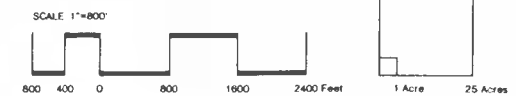
- Major Land Owners
- Public Ownership

Source: West Whiteland Township

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

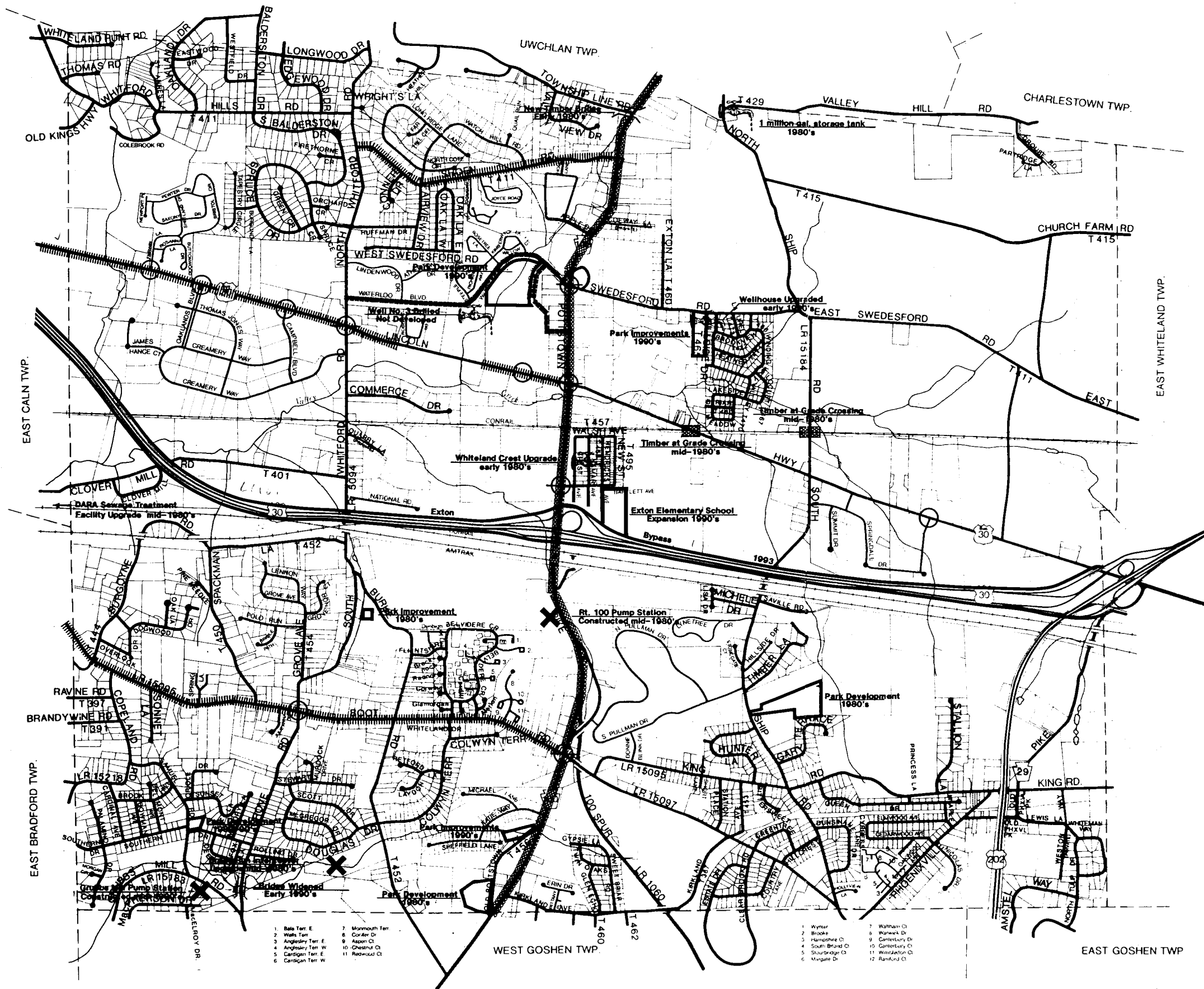
Comprehensive Plan Update



- o Traffic Planning and Design, Inc.
- o Coughlin, Keene, & Associates
- o John Miner Associates
- o Geddes Brecher Qualls Cunningham

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PUBLIC IMPROVEMENTS 1982-1992

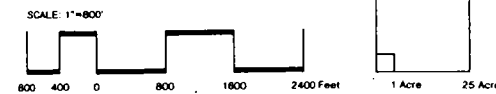
- New Traffic Signal
- + Intersection Upgrade
- ▬ New Road
- ▨ Road Repaired
- ▤ Road Widened
- || Bridge Upgrade
- ✕ Sanitary Sewer Work
- ⚙ Water System Improvements

Source: West Whiteland Township

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update



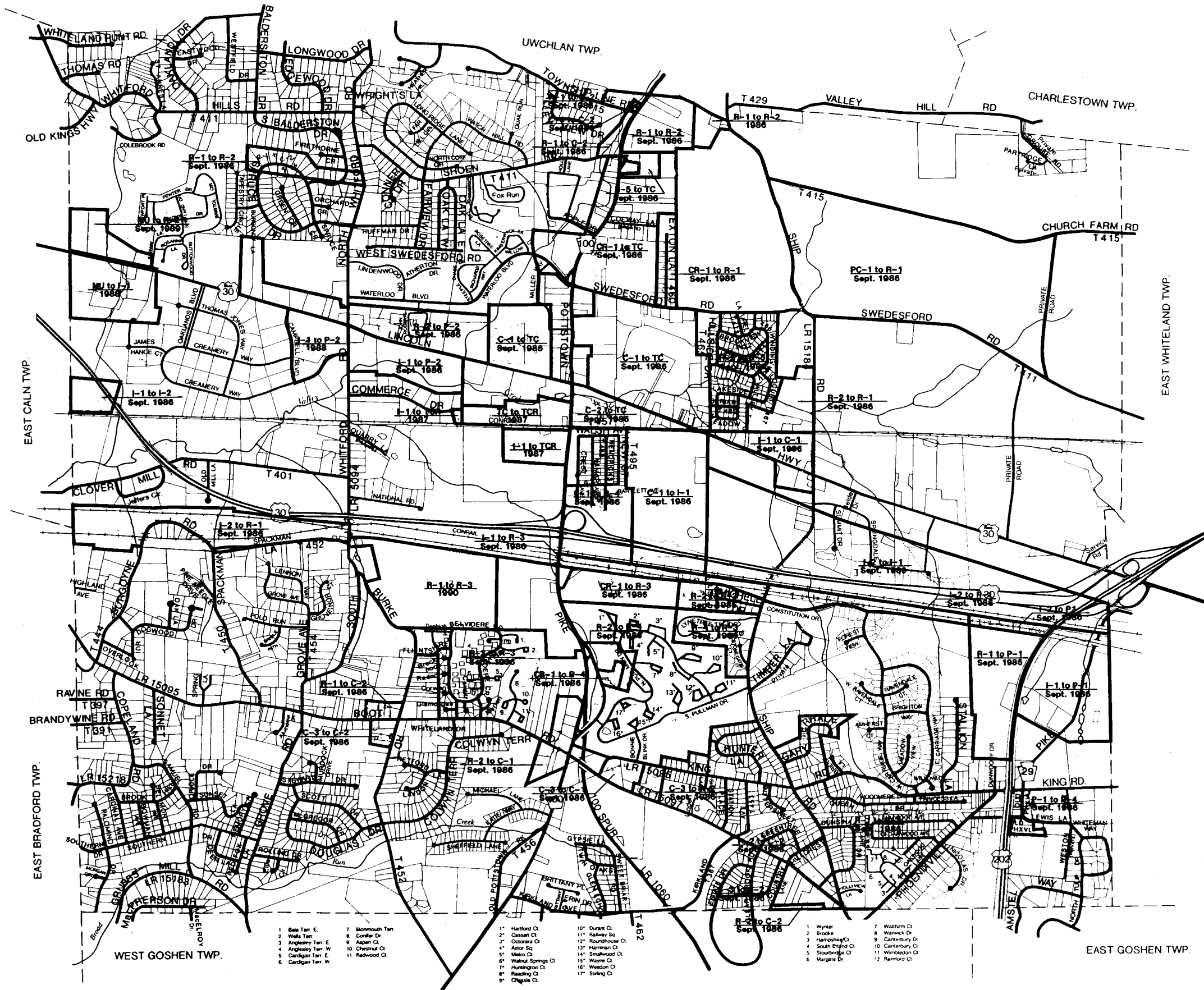
- 1. Bala Terr. E
- 2. Wills Terr.
- 3. Anglesley Terr. E
- 4. Anglesley Terr. W
- 5. Carrigan Terr. E
- 6. Carrigan Terr. W
- 7. Monmouth Terr.
- 8. Corlier Dr.
- 9. Asson Ct.
- 10. Chestnut Ct.
- 11. Redwood Ct.

- 1. Wymer
- 2. Brooke
- 3. Hampshire Ct.
- 4. South Brand Ct.
- 5. Shrubridge Ct.
- 6. Navigator Dr.
- 7. Waltham Ct.
- 8. Marlow Dr.
- 9. Canterbury Dr.
- 10. Canterbury Dr.
- 11. Winton Ct.
- 12. Rainton Ct.

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ZONING CHANGES 1985 - 1993



Source: West Whiteland Township

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update

SCALE: 1"=800'



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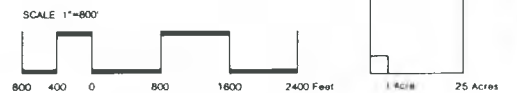
HYDROLOGY

- 100 Year Flood Plain
- Flood Plain Soils
- Hydric Soils
- Wetlands (outside floodplain)
- Major Watershed Divide
- Minor Watershed Divide
- Carbonate Formation
- PennDOT US Route 30 Wetlands Mitigation

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

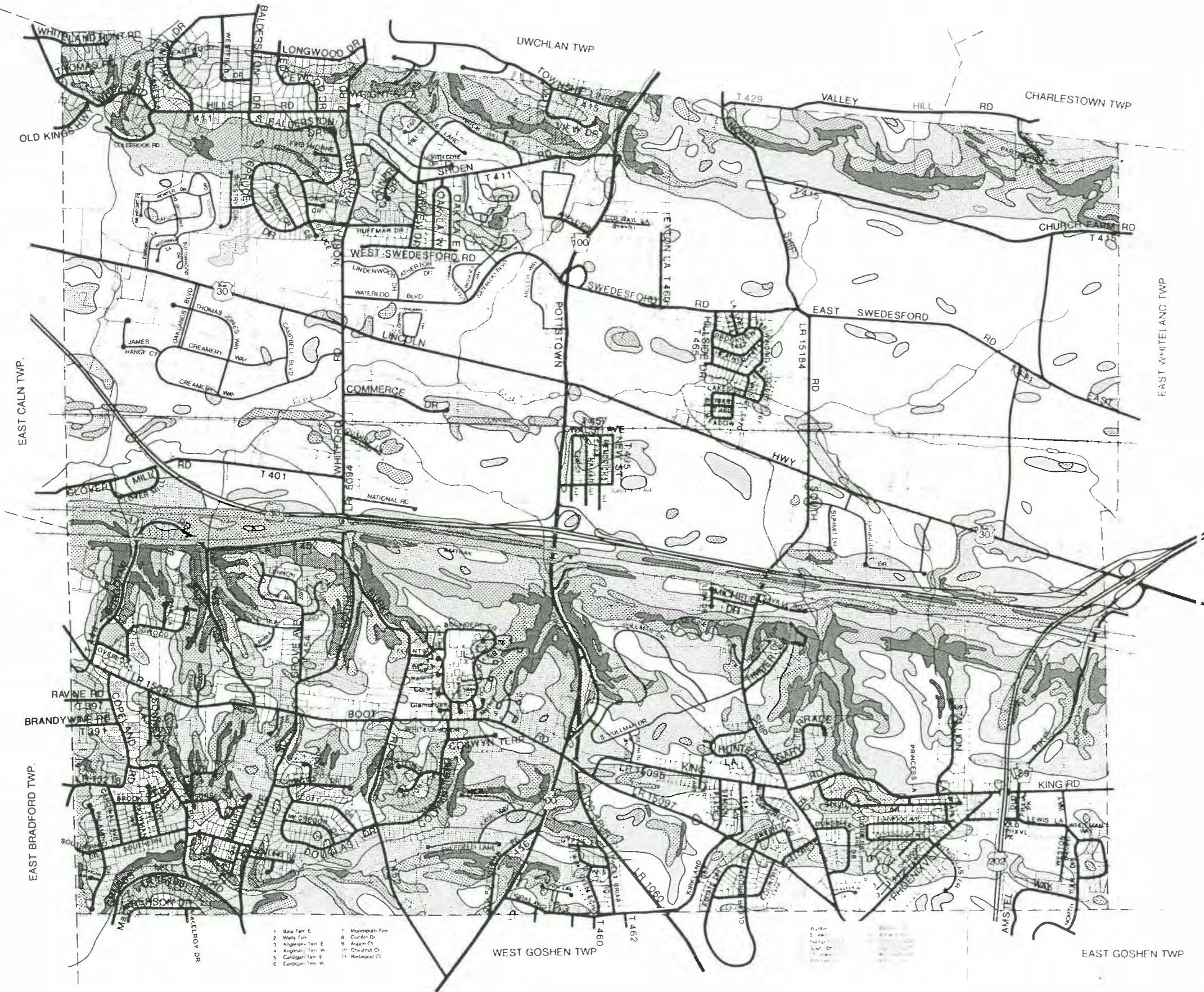
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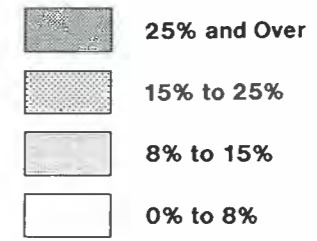
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|------------------------|-------------------|---------------------|---------------------|
| 1. Beta Terr. E | 7. Monmouth Terr. | 1. Wyrser | 7. Waltham Ct. |
| 2. Wells Terr. | 8. Conifer Dr. | 2. Brooke | 8. Warden Dr. |
| 3. Anglers Terr. E | 9. Aspen Ct. | 3. Hampshire Ct. | 9. Cartersbury Ct. |
| 4. Anglers Terr. W | 10. Chestnut Ct. | 4. South Briand Ct. | 10. Cartersbury Ct. |
| 5. Cardigan Terr. E | 11. Retford Ct. | 5. Strumbidge Ct. | 11. Winkfield Ct. |
| 6. Cartersbury Terr. W | | 6. Margate Ct. | 12. Ramrod Ct. |

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SLOPES

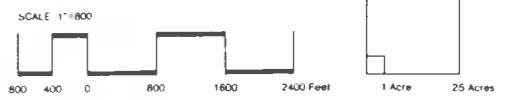


1983 West Whiteland Township Comprehensive Plan

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update



- 1. Salt Terr. E
- 2. Water Terr.
- 3. Angeleno Terr. E
- 4. Angeleno Terr. W
- 5. Cardigan Terr. E
- 6. Cardigan Terr. W
- 7. Marmarth Terr.
- 8. Currier Dr.
- 9. Aspen Ct.
- 10. Chestnut Ct.
- 11. Redwood Ct.

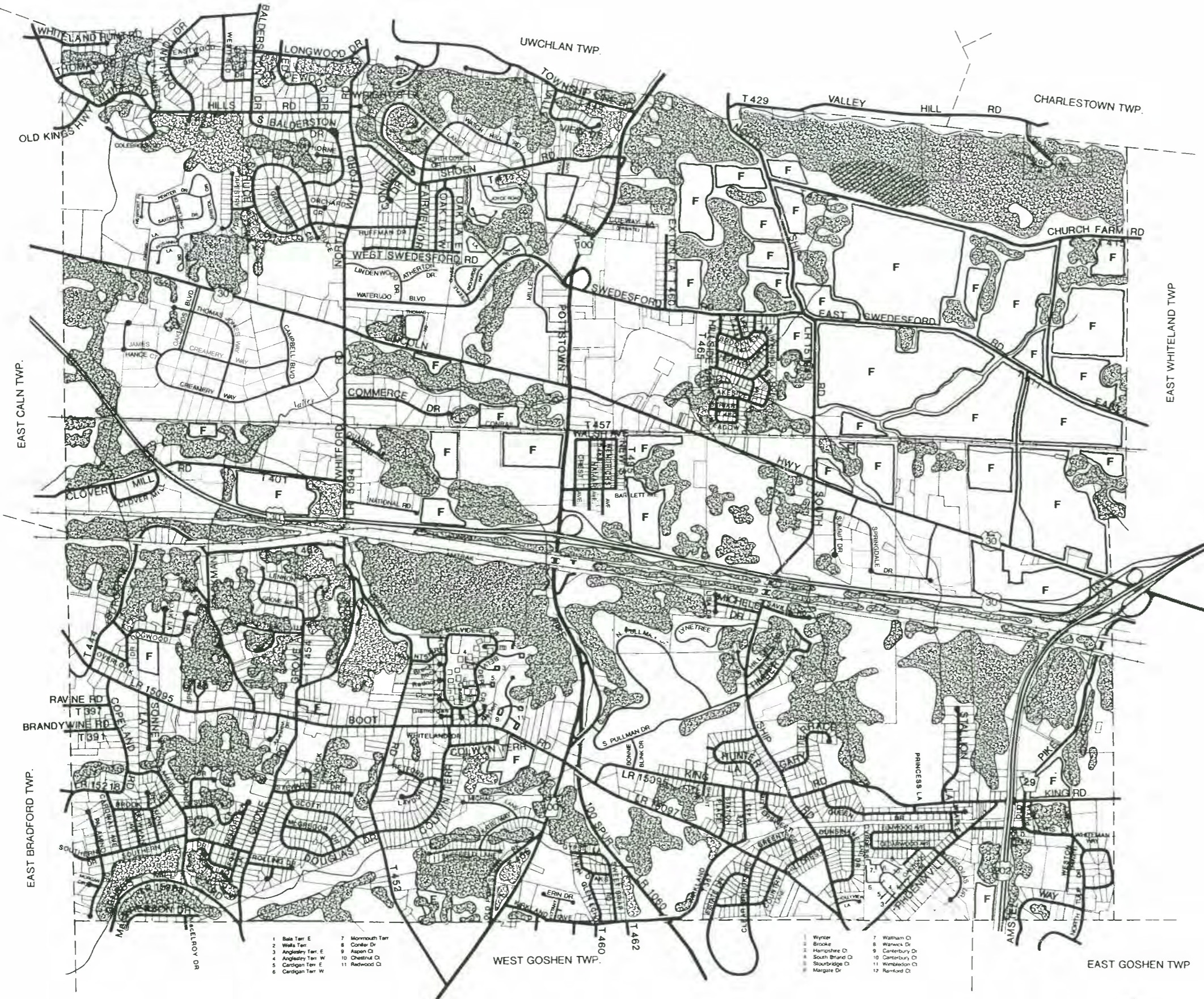
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WOODLANDS & FARMLANDS

- Farmland
- Pennsylvania Natural Diversity Index Site
- Woodland

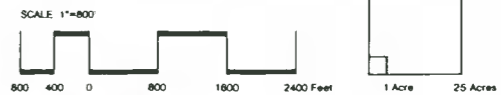


Source: 1992 Open Space and Recreation Plan, 1990 Aerial Photography

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update



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HISTORIC & SCENIC RESOURCES

- * Class I Historic Resource
- Class II Historic Resource
- Class III Historic Resource
- △ Scenic View
- ≡ Gateway
- ◇ Visual Landmark
- ▨ National Register Historic District

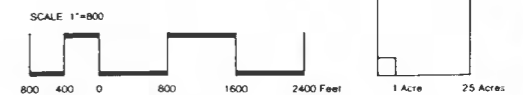
For key to site numbering system, see Appendix 4.

Source: 1992 Open Space and Recreation Plan

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

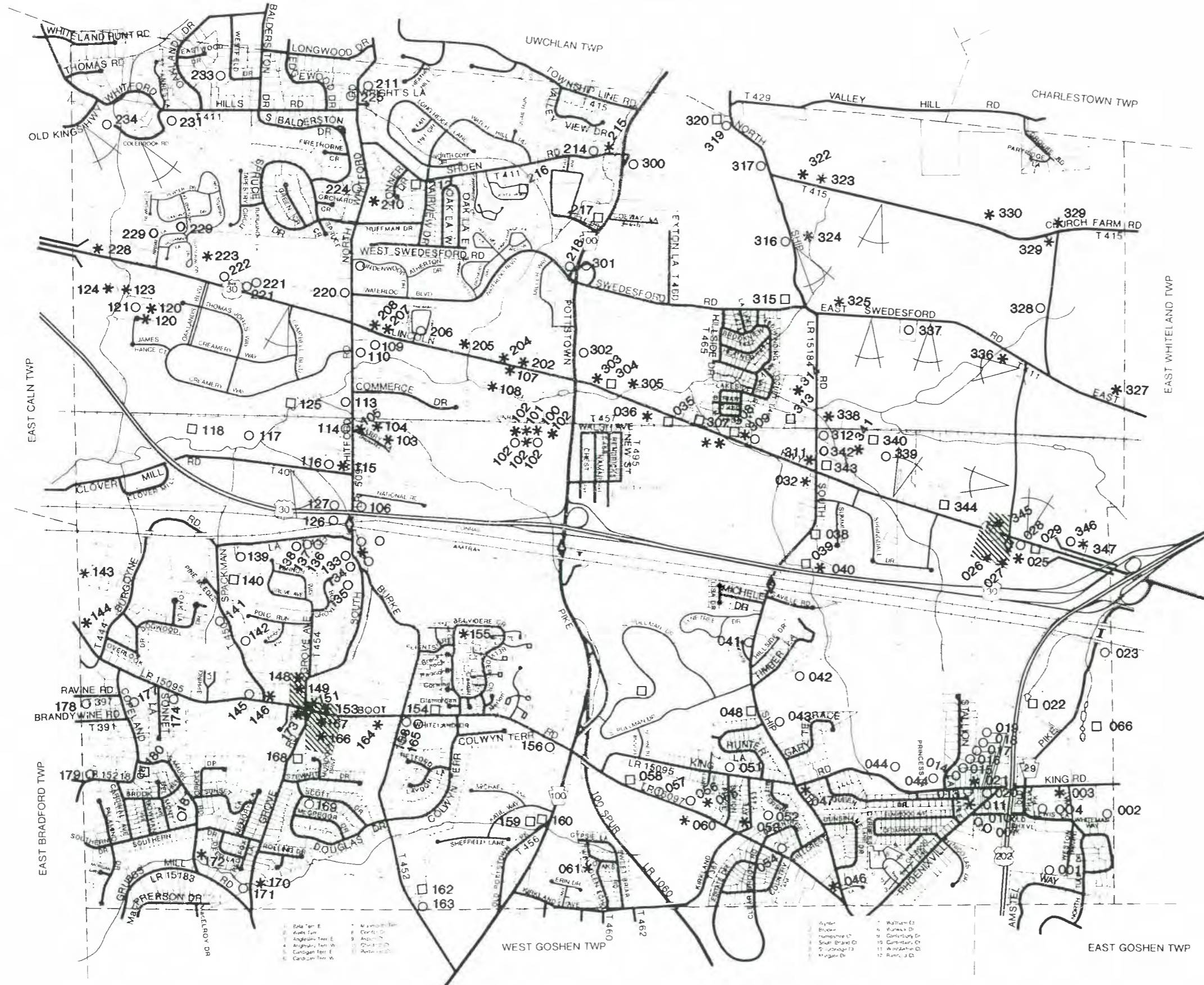
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1. Ball's Run E	8. Walnut Run	13. Walnut Cr
2. Ayles Run	9. Cherry Cr	14. Furnace Cr
3. Anglin's Run E	10. Anglin Cr	15. Conestoga Cr
4. Anglin's Run W	11. Clark Cr	16. Conestoga Cr
5. Conestoga Run E	12. Red Bank Cr	17. Conestoga Cr
6. Conestoga Run W	13. Red Bank Cr	18. Conestoga Cr
7. Conestoga Cr	14. Red Bank Cr	19. Conestoga Cr

COMPOSITE CONSTRAINTS

- 1 Very Severe (Floodplain)
- 2 Severe (Slopes over 25%, Wetlands, PNDI Site)
- 3 Moderate (Slopes 15-25%, Hydric Soils, Woodlands, Historic Resource Areas)
- 4 Slight Constraints



Source: Norman Day Associates

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

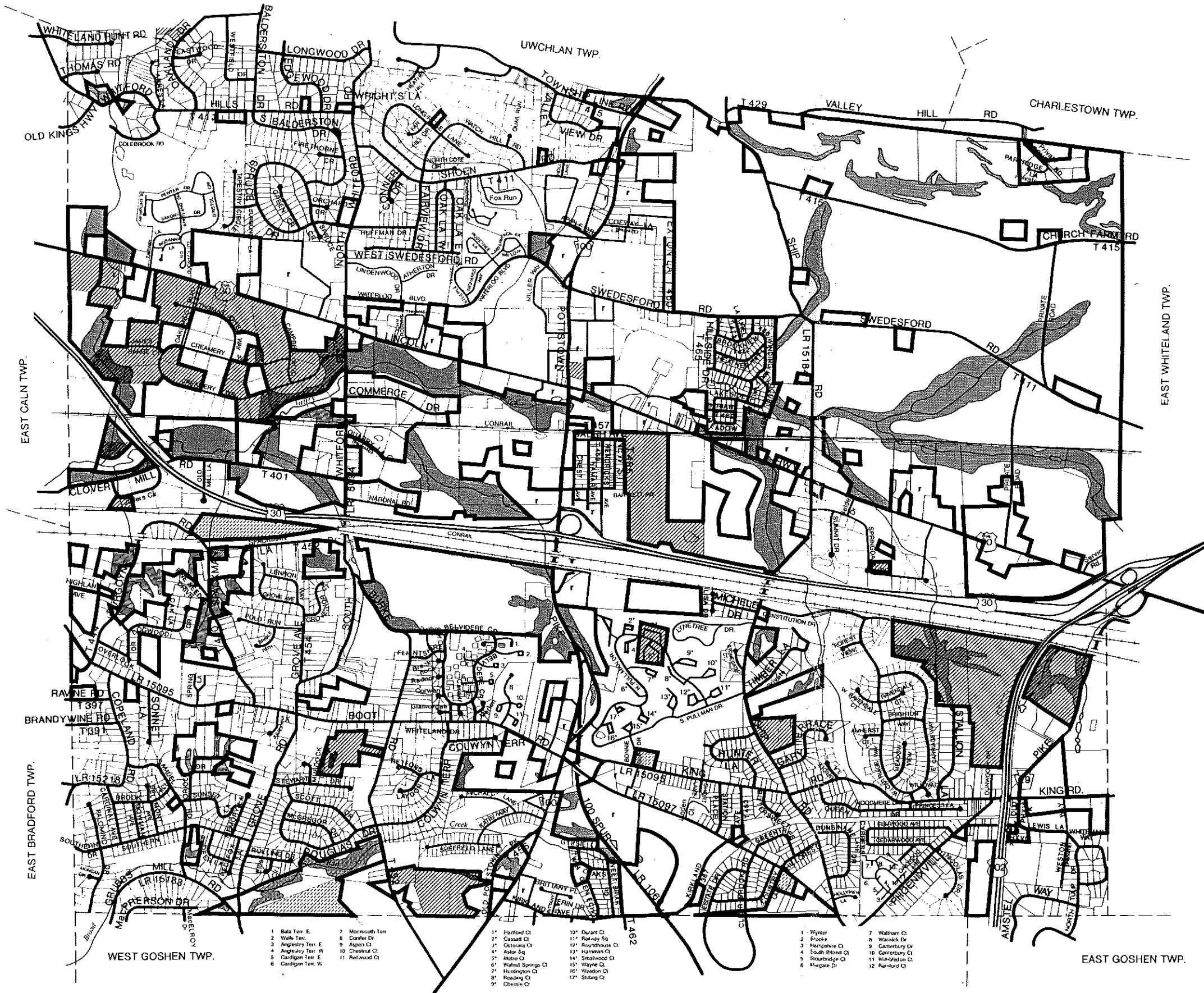
Comprehensive Plan Update








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HOLDING CAPACITY

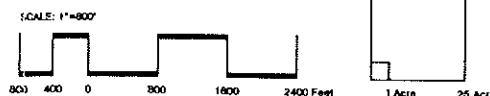
-  "Developable" Land
-  "Redevelopable" Land
-  Floodplains & Steep Slopes
-  Approved Development
-  Proposed Development

Source: Norman Day Associates

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update

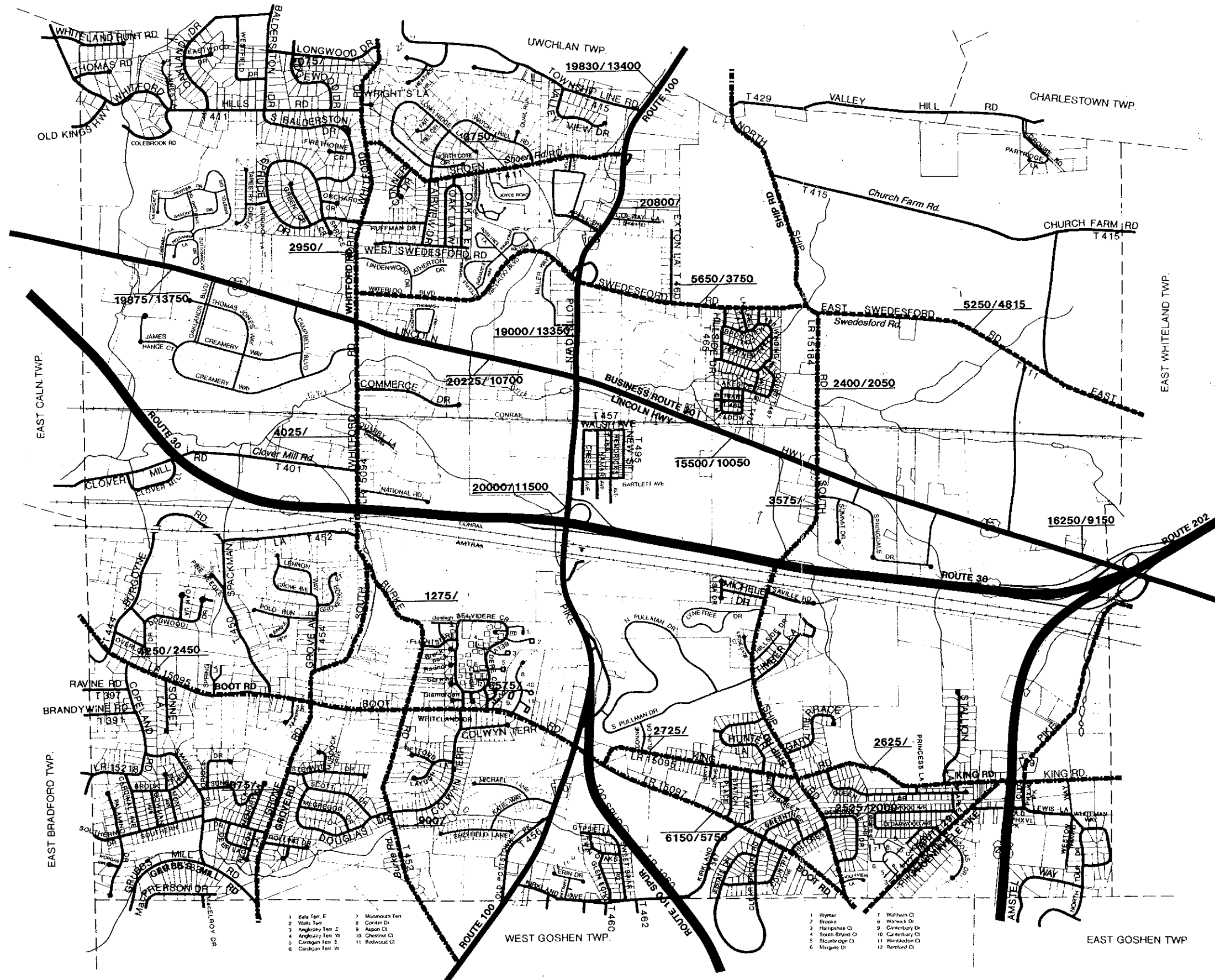


- | | | | | | |
|-----------------------|-------------------|------------------------|--------------------|----------------------|--------------------|
| 1. Bala Terr. E. | 7. Monmouth Terr. | 11. Hartford Ct. | 19. Duane Ct. | 27. Wyner | 35. Walham Ct. |
| 2. Wells Terr. | 8. Conifer Dr. | 12. Cassatt Ct. | 20. Rollway Sq. | 28. Brooke | 36. Warwick Dr. |
| 3. Anglesley Terr. E. | 9. Aspen Ct. | 13. Octavia Ct. | 21. Roundhouse Ct. | 29. Hampshire Dr. | 37. Canterbury Dr. |
| 4. Anglesley Terr. W. | 10. Chestnut Ct. | 14. Apple Sq. | 22. Hamman Ct. | 30. South Island Ct. | 38. Carlebury Ct. |
| 5. Cardigan Terr. E. | 11. Redwood Ct. | 15. Metro Ct. | 23. Smallwood Ct. | 31. Stourbridge Ct. | 39. Wainwright Ct. |
| 6. Cardigan Terr. W. | | 16. Walnut Springs Ct. | 24. Wayne Ct. | 32. Mergate Dr. | 40. Railroad Ct. |
| | | 17. Huntington Ct. | 25. Wenden Ct. | | |
| | | 18. Reading Ct. | 26. Stetson Ct. | | |
| | | 19. Chessie Ct. | | | |

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ROAD FUNCTIONAL CLASSIFICATION

- Limited Access Highways
- Principal Arterials
- Arterials
- Collectors

Source: 1987 West Whiteland Township Traffic Master Plan, West Whiteland Township

ROAD JURISDICTIONAL CLASSIFICATION

- ROAD NAME** State Highway
- Road Name* Township Road

Source: 1983 West Whiteland Township Comprehensive Plan

TRAFFIC VOLUMES

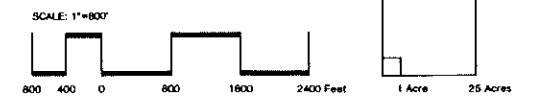
- 0000/0000 1987 AADT / 1982 AADT
- AA**DT = Average Annual Daily Traffic Volume

Source: 1983 West Whiteland Township Comprehensive Plan, 1987 West Whiteland Township Traffic Master Plan

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update



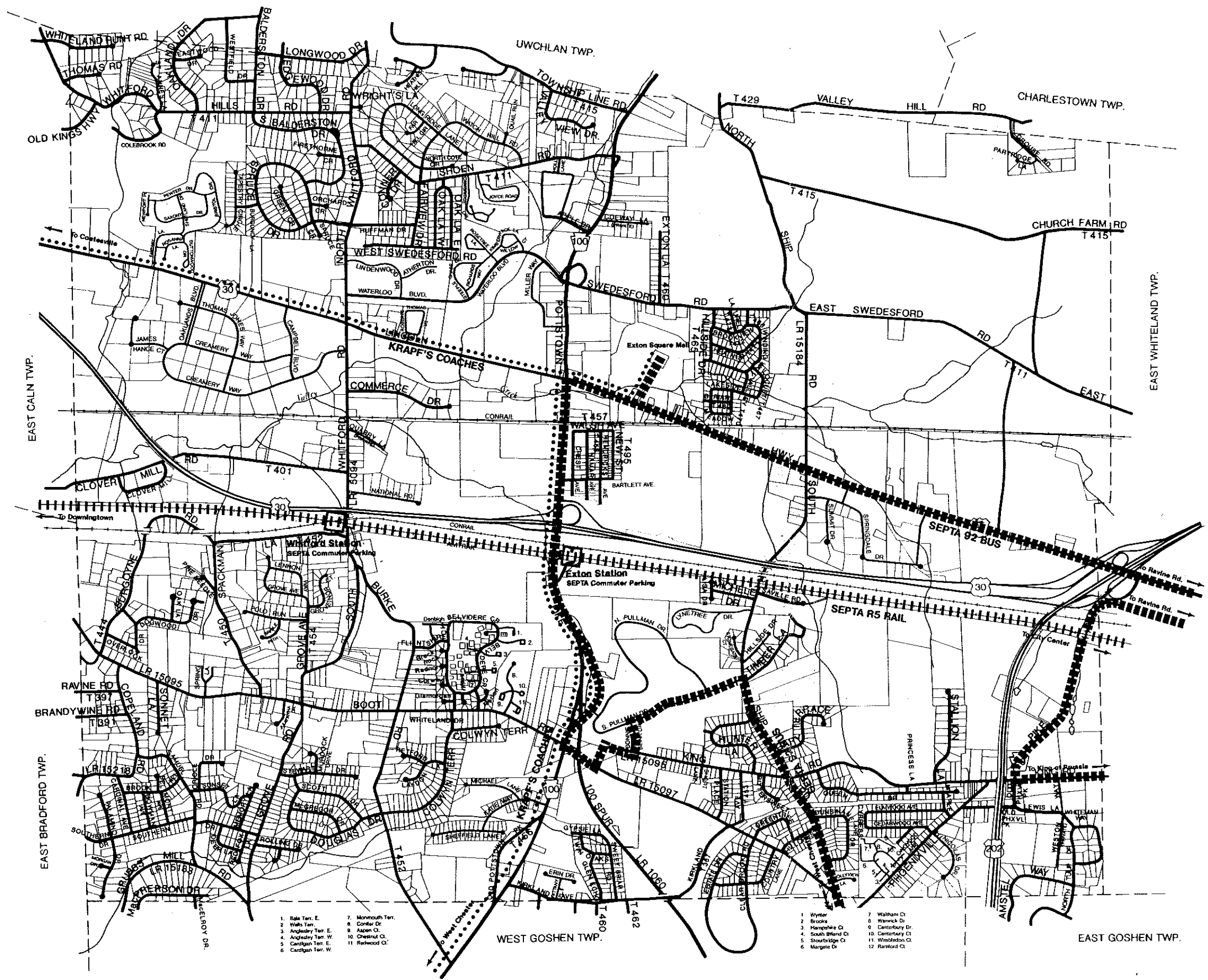
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EXISTING TRANSIT

- ||||||| SEPTA R5 Rail
- SEPTA 92 Bus
- Krapf's Coaches

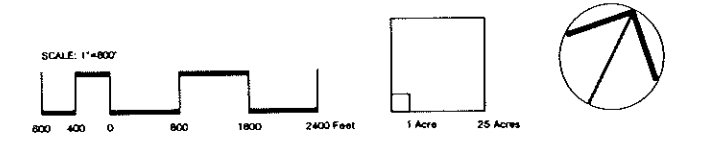


Source: SEPTA & Krapf's Coaches

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update



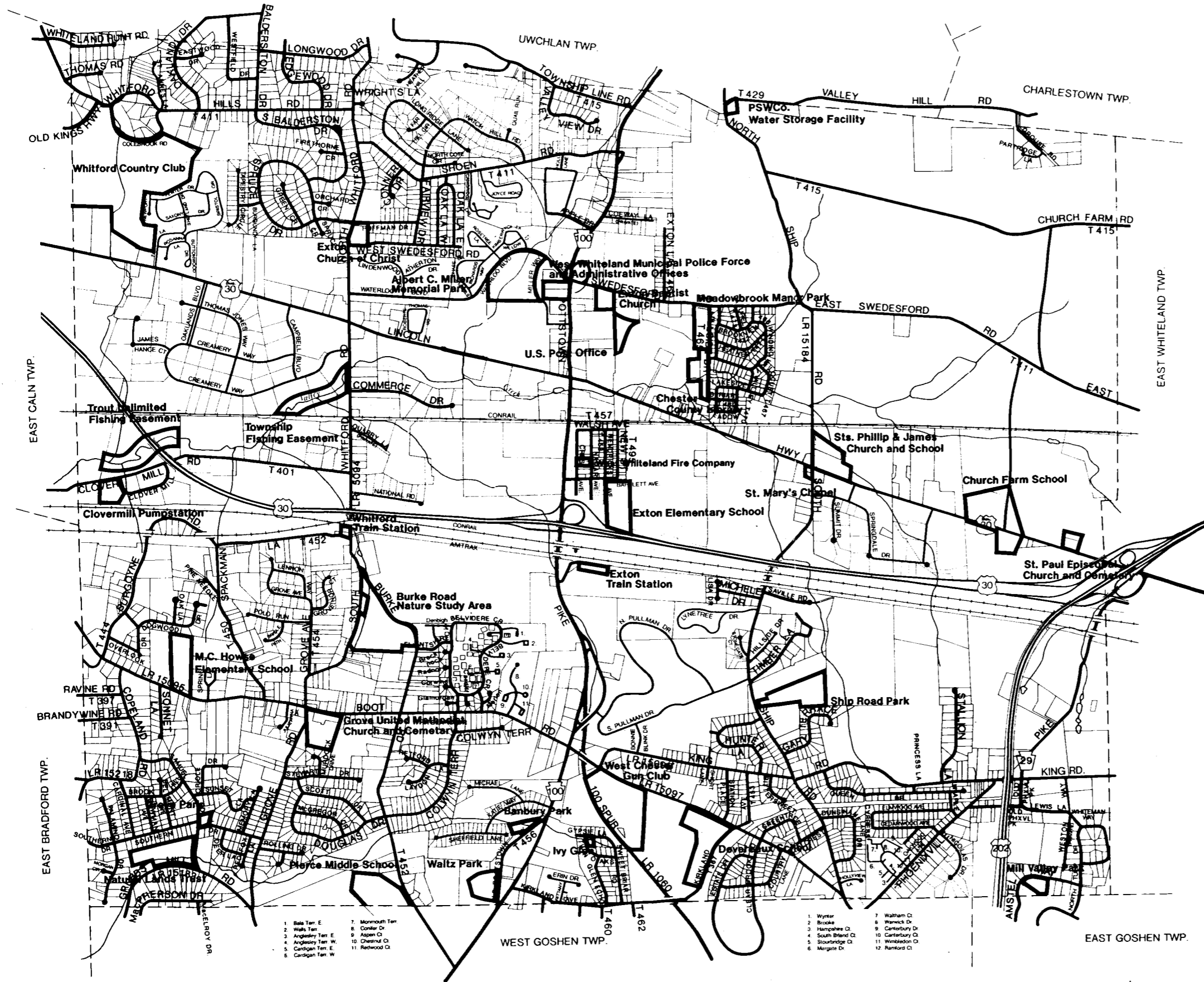
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|-----------------------|--------------------|
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| 2. Walls Terr. | 8. Conker Cr. |
| 3. Anglesley Terr. E. | 9. Aspen Ct. |
| 4. Anglesley Terr. W. | 10. Chestnut Ct. |
| 5. Castigan Terr. E. | 11. Redwood Ct. |
| 6. Castigan Terr. W. | |
| 1. Wymor | 7. Walkham Ct. |
| 2. Brooke | 8. Warwick Dr. |
| 3. Mansfield Ct. | 9. Canterbury Dr. |
| 4. South Island Ct. | 10. Canterbury Ct. |
| 5. Stone Edge Ct. | 11. Windward Ct. |
| 6. Margate Dr. | 12. Ramford Ct. |

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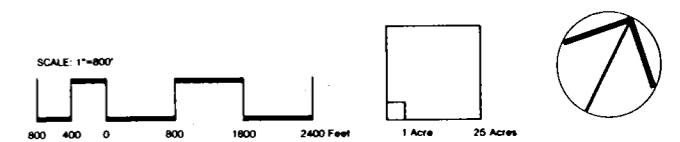
COMMUNITY FACILITIES



Source: West Whiteland Township

WEST WHITELAND TOWNSHIP Chester County, Pennsylvania

Comprehensive Plan Update



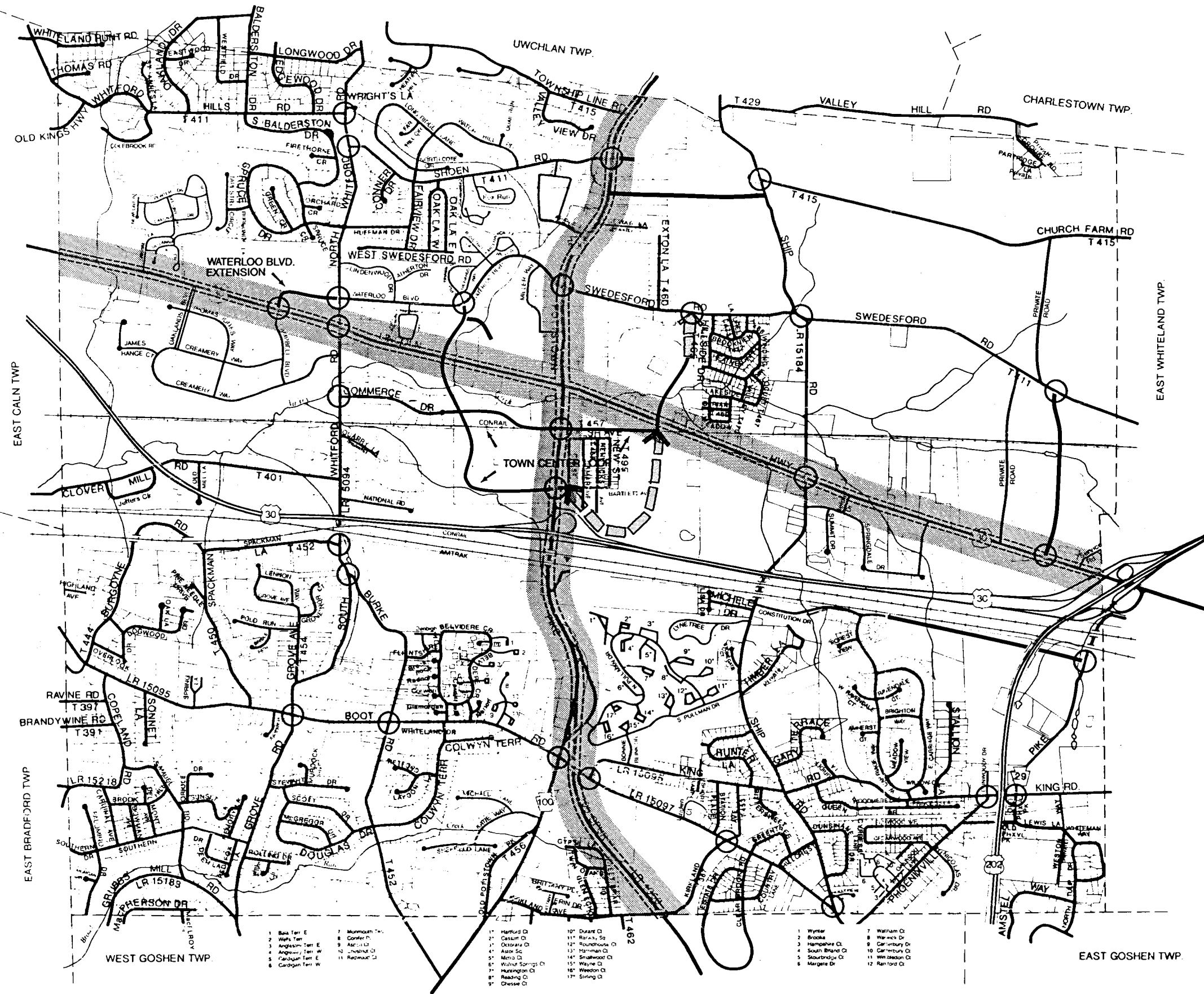
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- 3. Anglesley Ter. E
- 4. Anglesley Ter. W.
- 5. Cardigan Ter. E.
- 6. Cardigan Ter. W.
- 7. Monmouth Ter.
- 8. Conkle Dr.
- 9. Appen Ct.
- 10. Chestnut Ct.
- 11. Redwood Ct.

- 1. Wyker
- 2. Brooke
- 3. Hampshire Ct.
- 4. South Blend Ct.
- 5. Stourbridge Ct.
- 6. Margate Dr.
- 7. Waltham Ct.
- 8. Warwick Dr.
- 9. Canterbury Dr.
- 10. Canterbury Ct.
- 11. Windblown Ct.
- 12. Ramford Ct.

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CIRCULATION PLAN

- Recommended New Links
- Desired Linkage, Alignment Undetermined.
- Intersection Improvements
- Business Route 30 & Route 100 Improvements
- Business Route 30 & Route 100 Widening

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update

- | | | | | | |
|---------------------|--------------------|------------------------|--------------------|---------------------|----------------------|
| 1. Bala Terr. E | 7. Moorcroft Terr. | 11. Harford Ct. | 17. Deane Ct. | 1. Wymer | 7. Westham Ct. |
| 2. Wells Terr. | 8. Conifer Pl. | 12. Calkin Ct. | 18. Rarick Sq. | 2. Brooks | 8. Westch Dr. |
| 3. Angleton Terr. E | 9. Aspen Ln. | 13. Octavia Ct. | 19. Roundhouse Ct. | 3. Hampshire Ct. | 9. Carletonbury Dr. |
| 4. Angleton Terr. W | 10. Redwood Ct. | 14. Astor Sq. | 20. Shamrock Ct. | 4. South Bridge Ct. | 10. Carletonbury Dr. |
| 5. Candigan Terr. E | | 15. Metro Ct. | 21. Squalwood Ct. | 5. Southbridge Ct. | 11. Westwood Ct. |
| 6. Candigan Terr. W | | 16. Walnut Springs Ct. | 22. Wayne Dr. | 6. Margate Dr. | 12. Ramford Ct. |
| | | 17. Harrington Ct. | 23. Reading Ct. | | |
| | | 18. Reading Ct. | 24. Chelsea Ct. | | |
| | | 19. Chelsea Ct. | | | |



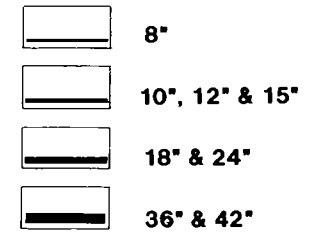
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 • Coughlin, Keane, & Associates
 • Jolly Miller Associates
 • Geddes Brecher Quirk Cunningham

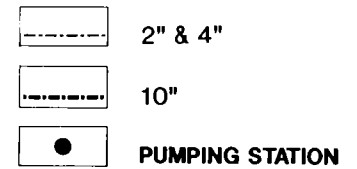
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SEWER SYSTEM

SANITARY SEWER PIPE DIAMETER



FORCE MAIN DIAMETER



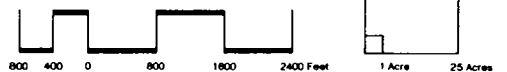
Source: West Whiteland Township

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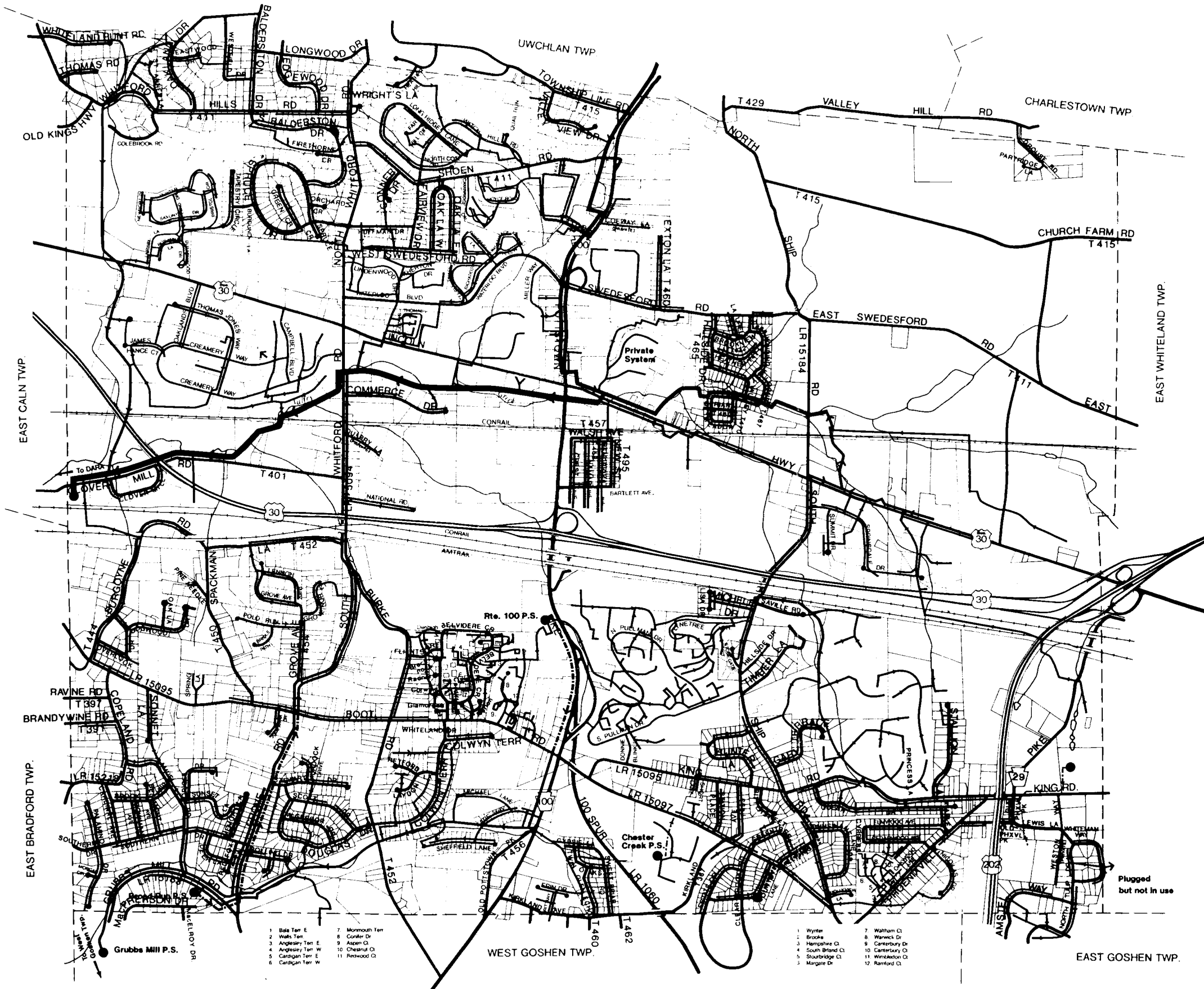
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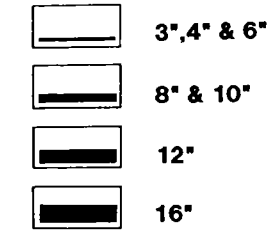
- 1. Bala Ter. E
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- 3. Anglesy Ter. E
- 4. Carrigan Ter. E
- 5. Carrigan Ter. W
- 6. Cardigan Ter. W
- 7. Monmouth Ter.
- 8. Corlier Dr.
- 9. Aspen Ct.
- 10. Chestnut Ct.
- 11. Redwood Ct.

- 1. Wynter
- 2. Brooke
- 3. Hampshire Ct.
- 4. South Briand Ct.
- 5. Shourbridge Ct.
- 6. Margate Dr.
- 7. Waltham Ct.
- 8. Warwick Dr.
- 9. Canterbury Ct.
- 10. Canterbury Ct.
- 11. Wintonia Ct.
- 12. Ramford Ct.

Plugged but not in use

WATER SYSTEM

WATER MAIN DIAMETER



Source: West Whiteland Township

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

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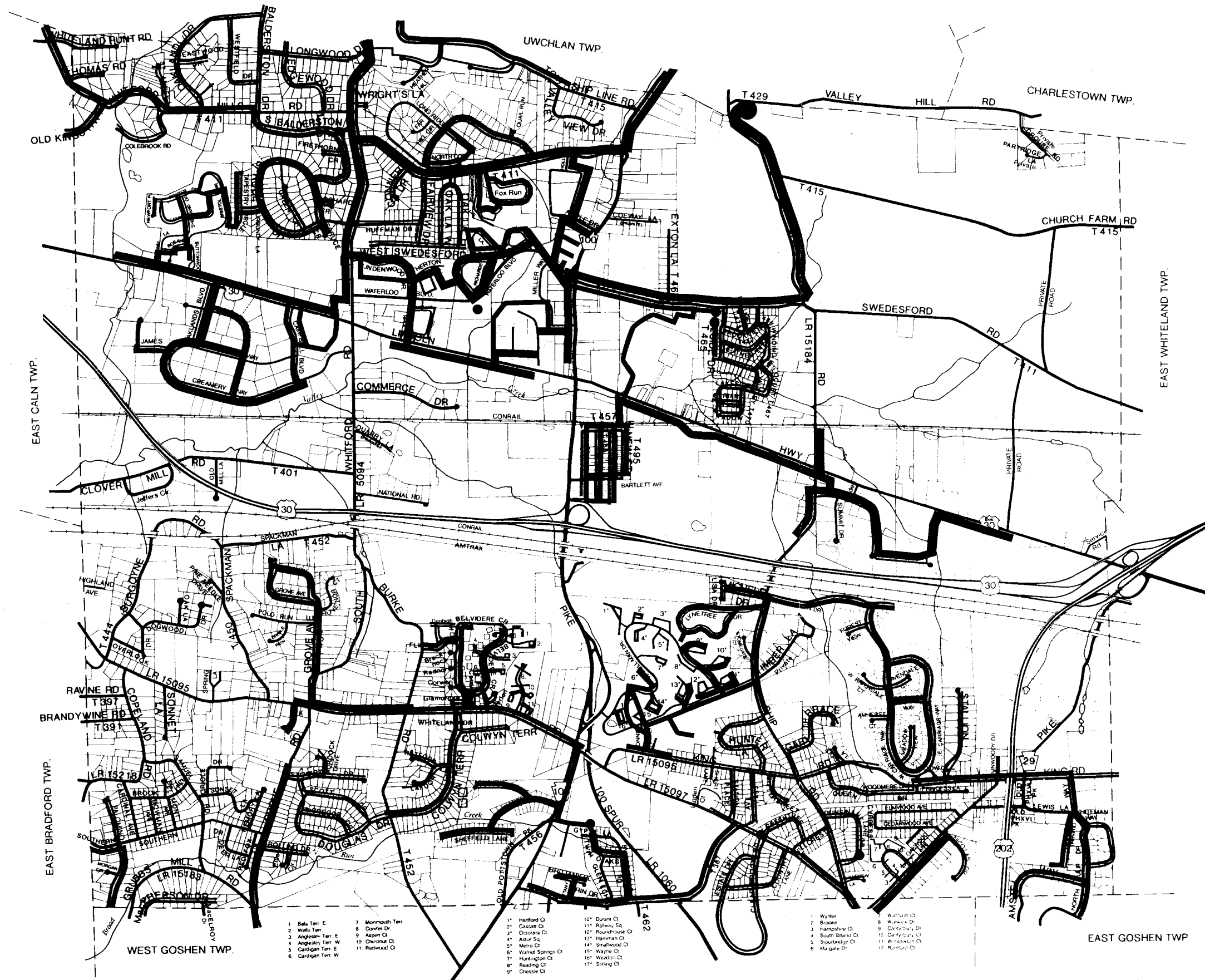
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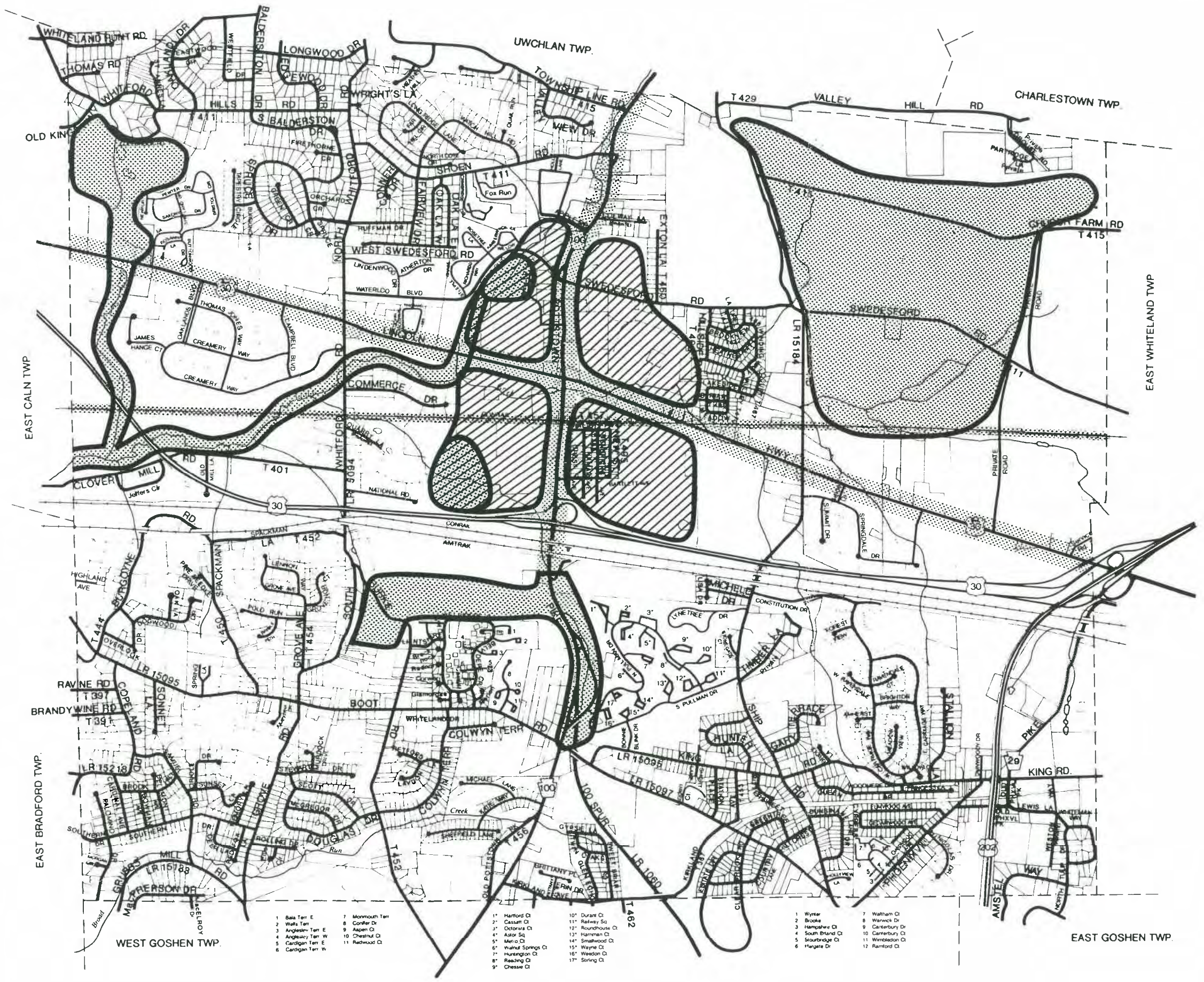
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- o John Miller Associates
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
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- | | | | | | |
|---------------------|-------------------|------------------------|---------------------|---------------------|---------------------|
| 1. Bala Terr. E | 7. Monmouth Terr. | 11. Hartford Ct. | 101. Duane Ct. | 141. Wynker | 2. Waltham Ct. |
| 2. Wells Terr. | 8. Conifer Dr. | 12. Cassam Ct. | 111. Railway Sq. | 3. Briske | 3. Waltham Ct. |
| 3. Angles Terr. E | 9. Aspen Ct. | 13. Octorara Ct. | 121. Roundhouse Ct. | 4. Hampshire Ct. | 4. Canterbury Dr. |
| 4. Angles Terr. W | 10. Chestnut Ct. | 14. Astor Sq. | 131. Harriman Ct. | 5. South Etnard Ct. | 5. South Etnard Ct. |
| 5. Cardigan Terr. E | 11. Redwood Ct. | 15. Metro Ct. | 141. Smallwood Ct. | 6. Southbridge Ct. | 6. Southbridge Ct. |
| 6. Cardigan Terr. W | | 16. Walnut Springs Ct. | 151. Wayne Ct. | 7. Margate Dr. | 7. Margate Dr. |
| | | 17. Huntington Ct. | 161. Weeblon Ct. | | |
| | | 18. Reading Ct. | 171. Sebring Ct. | | |
| | | 19. Chessie Ct. | | | |



TOWN CENTER CONCEPT

-  Mixed-Use Quadrants at Exton Crossroads
-  Business Route 30 and Route 100 Landscaped Boulevards
-  Significant Parks and Open Space Connections
-  Significant Parks and Open Space Connections

WEST WHITELAND TOWNSHIP

Chester County, Pennsylvania

Comprehensive Plan Update

- | | | | | | |
|--------------------|------------------|-----------------------|-------------------|-----------------|-------------------|
| 1. Bala Terr E | 7. Monmouth Terr | 11. Hartford Ct | 10. Durant Ct | 1. Wyrar | 7. Waltham Ct |
| 2. Walls Terr | 8. Conifer Ct | 12. Cassatt Ct | 11. Railway Sq | 2. Brooke | 8. Warwick Dr |
| 3. Angelen Terr E | 9. Aspen Ct | 13. Dolorosa Ct | 12. Roundhouse Ct | 3. Hampshire Ct | 9. Canterbury Dr |
| 4. Angelen Terr W | 10. Chestnut Ct | 14. Astor Sq | 13. Hammen Ct | 4. Southland Ct | 10. Canterbury Ct |
| 5. Cardigan Terr E | 11. Redwood Ct | 15. Metro Ct | 14. Smallwood Ct | 5. Soudridge Ct | 11. Winstedon Ct |
| 6. Cardigan Terr W | | 16. Walnut Springs Ct | 15. Wayne Ct | 6. Margate Dr | 12. Ramford Ct |
| | | 17. Huntington Ct | 16. Wendon Ct | | |
| | | 18. Reading Ct | 17. Sterling Ct | | |
| | | 19. Chessee Ct | | | |

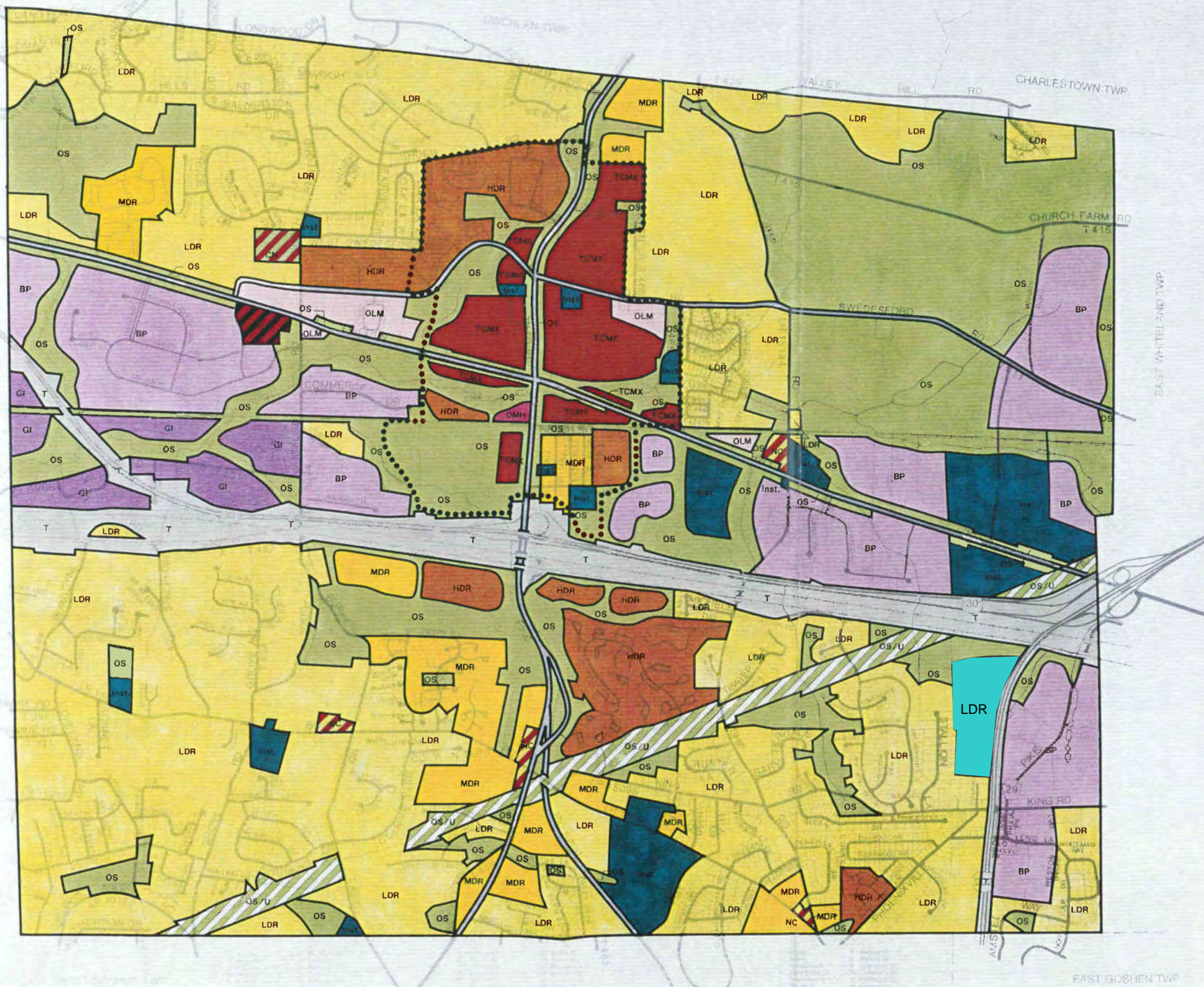


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o Traffic Planning and Design, Inc.
 o Coughlin, Keene & Associates
 o John Miner Associates
 o Geddes Brecher Qualls Cunningham

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LAND USE PLAN

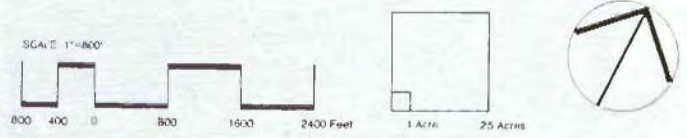


- LDR** Low Density Residential. < 2 Du/Ac
- MDR** Medium Density Residential. 2 to 4 Du/Ac
- HDR** High Density Residential. 4 to 8 Du/Ac
- OLM** Office Commercial, Low to Medium Density
- OMH** Office Commercial, Medium to High Density
- BP** Business Park
- NC** Neighborhood Commercial
- Town Center Boundary
- TCMX** Town Center Mixed Use
- Shopping Center
- CN** Commercial Nursery
- GI** General Industrial
- Inst.** Institutional
- OS** Parks, Permanent Open Space & Resource Conservation
- T** Transportation
- U** Utility
- Change from 'BP' to 'LDR' by Resolution 2015-19, April 8, 2015

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Comprehensive Plan Update



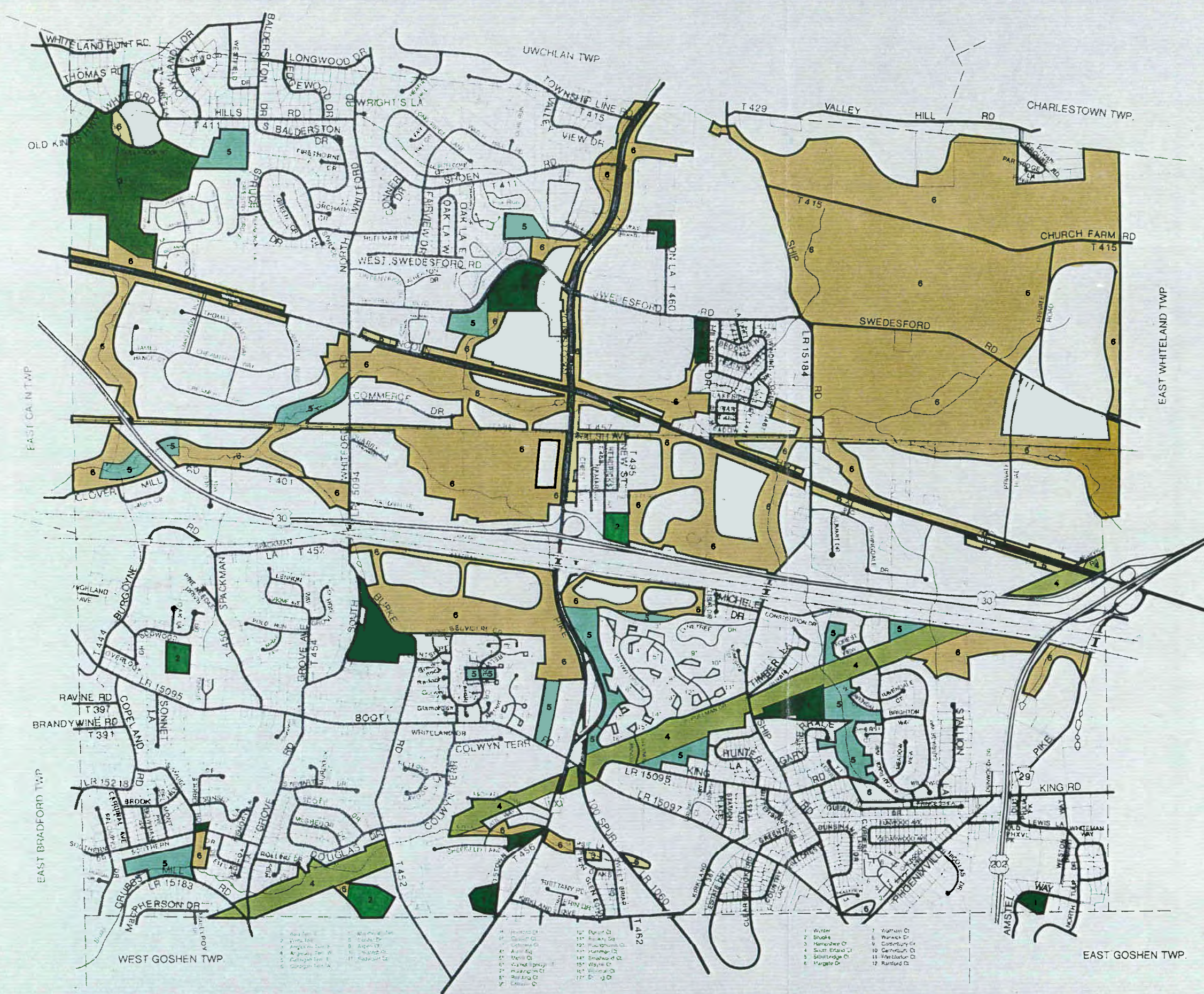
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OPEN SPACE PLAN

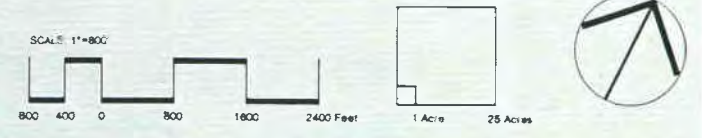
- Existing Parks
- Existing School Fields/Open Areas
- Existing Golf Course
- Electric Transmission Line Corridor
- Existing Easements & Private Conservation Areas
- New Parks, Permanent Open Space & Resource Conservation Areas



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APPENDIX 1: Relationship of West Whiteland Township Comprehensive Plan to Local and Regional Plans

Seven municipalities border West Whiteland Township, including East Whiteland Township to the east, East Goshen Township to the southeast, West Goshen Township to the south, East Bradford Township to the southwest, East Caln Township to the west, Uwchlan Township to the north, and Charlestown Township to the northeast. West Whiteland Township and the surrounding seven townships are located in Chester County. The land use recommendations for West Whiteland Township that are embodied in this comprehensive plan document are consistent with current development patterns and future plans in these related jurisdictions.

East Whiteland Township

The sections of East Whiteland Township near West Whiteland Township's border contain industrial and commercial developments in the vicinity of the two Conrail lines, the electrical transmission lines, and the intersection of Routes 30 and 202. Low density residential development and open space occur beyond the utility and transportation corridors. Major highway connections to West Whiteland Township include Route 30, Route 202, and Swedesford Road. Church Farm Road and King Road connect the residential districts of the two townships.

The Land Use Plan for West Whiteland Township is consistent with existing conditions and future plans in East Whiteland Township. In West Whiteland, institutional and business park development is proposed near the intersection of Route 30 and Route 202 -- uses that are generally compatible with the industrial and commercial development in East Whiteland Township. Business park development on Swedesford Road in West Whiteland Township would be separated by an open space buffer from medium-density residential and light industrial development in East Whiteland Township. The rest of the Church Farm School lands adjacent to East Whiteland Township would be preserved as open space. Low density residential development east of Route 29 in West Whiteland Township is consistent with the adjacent residential development proposed in the East Whiteland Township Land Use Plan.

East Goshen Township

The East Goshen Township-West Whiteland Township line is 0.5 miles long, with low density residential development on both sides. While Route 202 passes through the two townships as a limited-access highway, Amstel Way and North Tulip Drive connect the low density residential development of the two townships. Low density residential development prevails both in West Whiteland Township and East Goshen Township and no changes in this established land use pattern are planned by either municipality.

West Goshen Township

In West Goshen Township, development along the West Whiteland Township border is similar to that on the north side of the line -- mainly low density residential development and open space. In addition to extensive privately-owned vacant and open space lands, the grounds of Pierce Middle School and the electrical transmission line corridor are shared by the two townships. Route 100 and its spur connect West Whiteland Township to West Goshen Township. Route 29, Burke Road, Grove Road, and Boot Roads also connect the municipalities, as do many residential streets along the 3.5-mile border.

The Land Use Plan for West Whiteland Township is consistent with existing conditions in and future plans for West Goshen Township. In West Whiteland, low density residential development is proposed almost all along the West Goshen line, matching the pattern on the other side of this boundary. A small neighborhood commercial core is proposed associated with medium density residential development at the Ship-Boot intersection -- this is across from a commercial area in West Goshen Township.

East Bradford Township

East Bradford Township shares a border with West Whiteland Township as far north as the main railroad corridor. Low density residential development and open space occurs on both sides of the municipal boundary. Besides a number of small residential streets, Boot Road is the major residential connector road between East Bradford and West Whiteland Townships.

The West Whiteland Township Land Use Plan shows low density residential development for the area adjoining the East Bradford line, a use consistent with existing and planned development in East Bradford Township.

East Caln Township

About half the length of East Caln Township's border with West Whiteland Township consists of a major quarry, with the area north of Business Route 30 dominated by single family residential developments and Whitford Golf Course. Business Route 30, the major east-west road of West Whiteland Township, connects commercial development in East Caln Township to West Whiteland Township, while Clover Mill Road links the respective industrial areas. Whitford Hills Road ensures the continuity of residential districts in both townships.

The Conrail tracks, Business Route 30, and the Bypass provide high accessibility for industrial development in the southern part of East Caln Township and central-west portion of West Whiteland Township. The existing residential land use pattern on both sides of the township boundary north of Business Route 30 is maintained in the land use plans of both townships.

Uwchlan Township

Adjoining areas of Uwchlan Township are mainly devoted to low density residential and open space uses. The North Valley Hills ridge line is a prominent feature along this boundary, producing a general environmental constraint against intensive development. Route 100 and Ship and Whitford Roads are the main north-south links connecting Uwchlan Township to West Whiteland Township, with some additional small residential streets providing interconnection.

The West Whiteland Township Land Use Plan's Town Center character changes to medium density residential development along Route 100 to the Uwchlan Township line. East and west of Route 100 low density residential development predominates, which is compatible with the residential densities in Uwchlan Township and in its own Land Use Plan.

Charlestown Township

Nearby areas of Charlestown Township are characterized by low density residential development and undeveloped lands. The West Whiteland Township side is known as the Church Farm School properties, is mainly open space today, and has some potential for low density residential development

in the Land Use Plan.

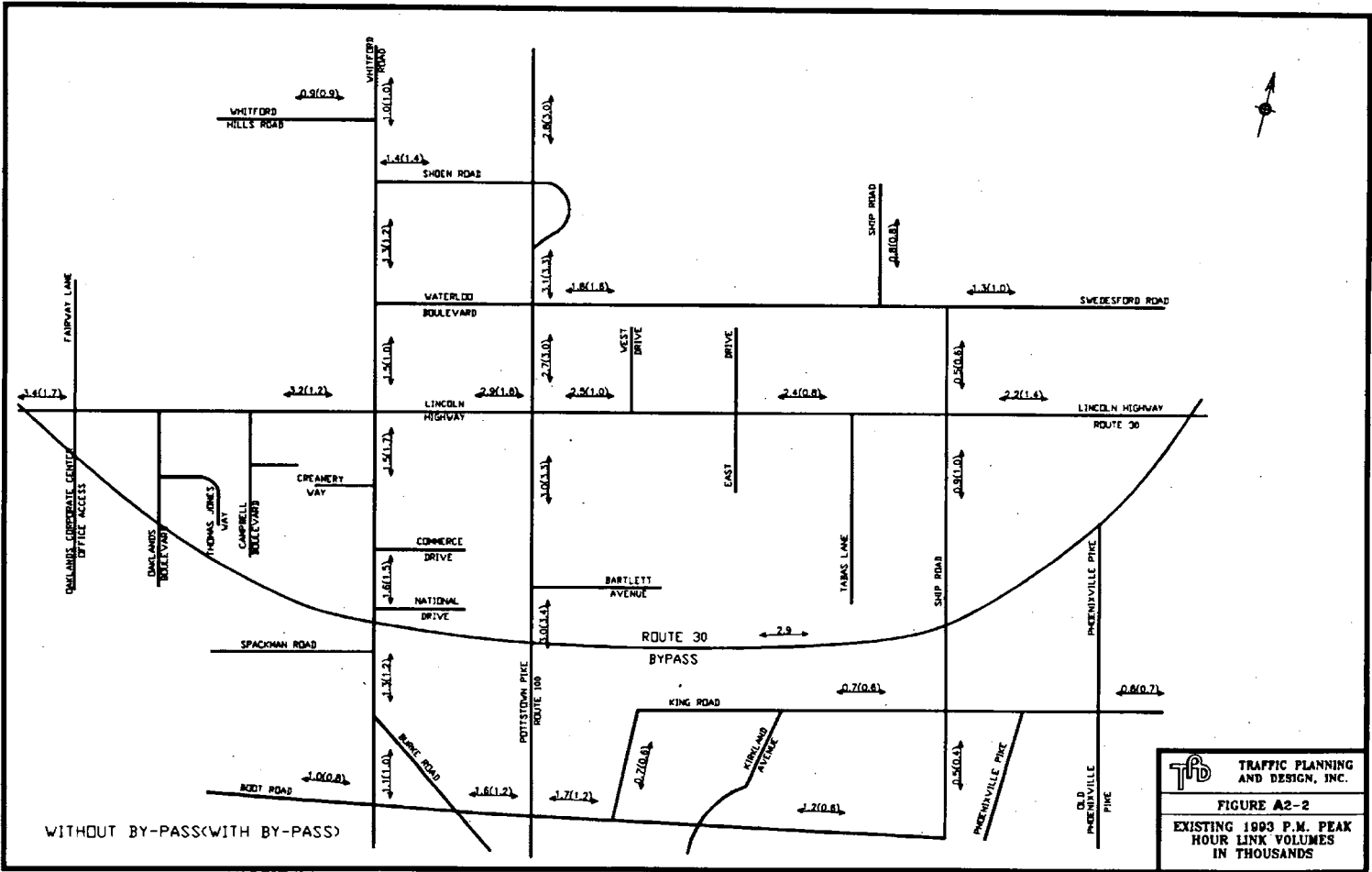
Chester County


Chester County Land Use Plan, devised in 1988, is intended to serve as an overall guide to land development and public services at the county level. The County Land Use Plan accommodates appropriate development densities where infrastructure currently exists or is proposed to occur, with the balance of the county intended mainly for preservation of agricultural land and environmentally-sensitive areas. Described as following a consolidated development pattern rather than a scattered scenario, the Chester County Plan contains four development categories; Activity Centers, Employment Centers, Suburban Development, and Redevelopment Reserve; and three conservation or open space categories, including Agriculture, Recreation, and Stream Valley Greenways.

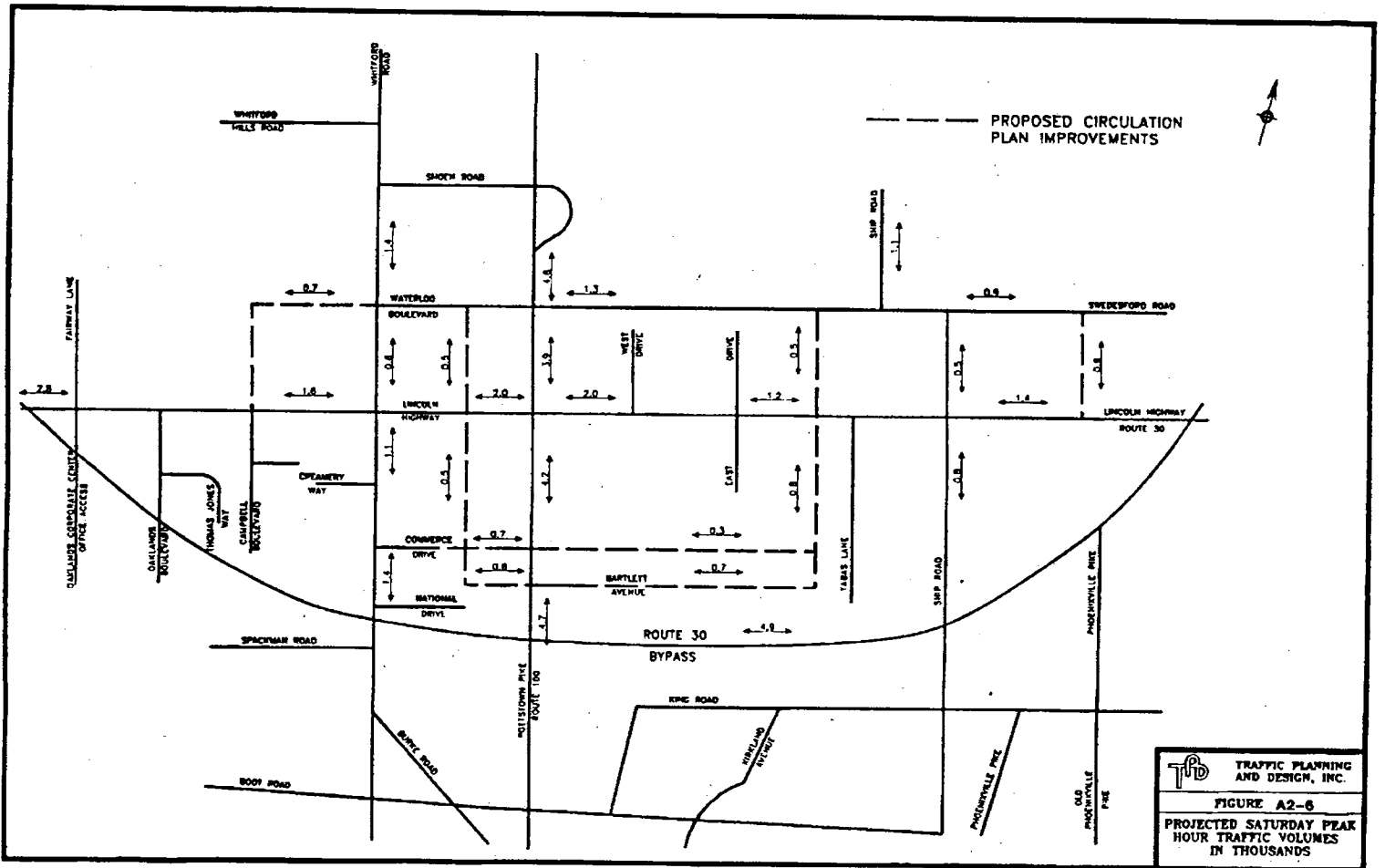
The County Plan recommendations for West Whiteland Township and vicinity call for a regional center at the intersection of Route 100 and Route 30, surrounded by Activity Centers characterized by concentrations of commercial activity, employment areas, institutional uses, and residential developments. Employment areas focus mainly on industrial and office parks, concentrated along Business Route 30. Suburban residential development, with a variety of densities, is proposed all through West Whiteland Township, excluding the Church Farm. The Church Farm properties are designated as a development reserve. Valley Creek is indicated as a Stream Valley Greenway.

The West Whiteland Township Comprehensive Plan is consistent with the intent of the County Plan as it relates to the township. The Town Center mixed-use area is similar to that shown in the County Plan. Industrial, institutional, and business park developments are concentrated along the Route 30 utility and transportation corridors and Route 202. There is an orderly progression of housing types and densities, with the great majority of the township planned for low density residential development.

**APPENDIX 2: 1993 Traffic Volumes and Projected 2013
Traffic Volumes**




TRAFFIC PLANNING AND DESIGN, INC.
FIGURE A2-2
EXISTING 1993 P.M. PEAK HOUR LINK VOLUMES IN THOUSANDS



TRAFFIC PLANNING AND DESIGN, INC.
 FIGURE A2-6
 PROJECTED SATURDAY PEAK HOUR TRAFFIC VOLUMES IN THOUSANDS

**APPENDIX 3: Results of Resident and Business Operators
Questionnaire**

Comprehensive Plan

1993

West Whiteland Township is updating its Comprehensive Plan. This Plan is important to you because the results of it will affect your quality of life. It will do so by defining how and where the Township will grow; and growth obviously affects us all. Since the Plan will affect you, we would like your help in writing it. You can help by taking a few minutes of your time to respond to the following questionnaire. Thank you for your time and thoughts!

For the issues listed, please indicate whether you believe these issues are relevant and should be looked at in the preparation of a Comprehensive Plan Update.

	Very Significant	Moderately Significant	Not Significant
▪ Future impact of the Exton Bypass on the Township.	<input type="checkbox"/> 510	<input type="checkbox"/> 78	<input type="checkbox"/> 6
▪ Growing volumes of traffic on existing roads in the community.	<input type="checkbox"/> 558	<input type="checkbox"/> 34	<input type="checkbox"/> 4
▪ Growth in commercial development.	<input type="checkbox"/> 449	<input type="checkbox"/> 131	<input type="checkbox"/> 13
▪ Future of the Church Farm School properties.	<input type="checkbox"/> 379	<input type="checkbox"/> 179	<input type="checkbox"/> 32
▪ Protection of natural features.	<input type="checkbox"/> 418	<input type="checkbox"/> 160	<input type="checkbox"/> 15
▪ Protection of historic resources.	<input type="checkbox"/> 257	<input type="checkbox"/> 276	<input type="checkbox"/> 59
▪ Amount and quality of passive recreational facilities.	<input type="checkbox"/> 203	<input type="checkbox"/> 327	<input type="checkbox"/> 61
▪ Amount and quality of active recreational facilities.	<input type="checkbox"/> 234	<input type="checkbox"/> 281	<input type="checkbox"/> 67
▪ Quality and character of commercial developments.	<input type="checkbox"/> 419	<input type="checkbox"/> 161	<input type="checkbox"/> 12
Quality and character of residential developments.	<input type="checkbox"/> 420	<input type="checkbox"/> 157	<input type="checkbox"/> 13

Please list any issues in addition to those in question #1 and indicate their significance.

New Issue	Very Significant	Moderately Significant
Prevention of additional retail construction	26	
Protection of Natural Resources (open space)	17	
Need for Public Transit	7	
Crime Prevention	7	
Limiting quality of residential development	6	

6. West Whiteland has faced marked increases in traffic volumes on local roads over the last ten years. If available, would you use public transportation to reduce traffic congestion? Yes 203 No 278 Undecided 93

If you drive your car to work, where is your job located?

Within Chester County (specify location).....	217
Philadelphia	37
Wilmington	1
King of Prussia.....	40
Other (please specify area).....	

How else might Township traffic congestion be reduced?

Improve the roads	121
Completion of Exton Bypass	39
Control/Stop Development	42
Promote Ride Sharing	29
Creation of Pedestrian Accommodations	38

7. Which roads and intersections are currently most critically in need of improvements and what kind of improvements are needed?

at an intersection	149
Route 30	112
Chp + Route 30	80
Chp + Swedesford	78
100 + Swedesford/	
Waterloo Intersection	63
Whitford + 30	56
Whitford + Waterloo	50
Whitford Rd	35

8. Are you reasonably satisfied with the character and appearance of existing commercial areas along Route 100 and Route 30? Yes 274 No 258 Undecided 53

If not, what are your areas of concern: Access? Parking? Signage? Landscaping? General	81	43	53	106	
Appearance and Image? Other?	174				

Other - (Other - Bus.) 57

2. Assume for the moment that the total annual revenue available to the Township from all sources increased by 25%. The Township would then be in a position to initiate various new programs to improve the community. What programs or projects do you think the Township should pursue? Which should be given the highest priority? Please list below the types of efforts you would want to see started and indicate by number the relative importance (priority) for each, number one being the highest priority.

Traffic/road improvements	183
Open space/natural resources acquisition/preservation	161
Recreational facilities	70
Other recreation facilities	73
Walkway/trails	37
Bike ways	35
Youth Programs	25
Senior Culture Center	12

5. Please feel free to offer any additional comments, concerns or ideas that you feel may be relevant to the Comprehensive Plan Update.

THANK YOU! Please letter fold, staple and return to West Whiteland Township. Please return the questionnaire no later than June 7, 1993.

For additional information on the Comprehensive Plan Process, please see page 6.

APPENDIX 4: List of Historic Sites of West Whiteland Township (also see Figure 2.4.4)

MAP KEY (see Figure 2.4.4)

Site # Class Name/Location

001		Morstein, 1426 Lewis Lane
002		Twelve Oaks, 1369 King Road
003	I/NR	Morstein Station, Woodland, Zermatt King Road
004		Morstein gatehouse, 1401 Lewis Lane
005	UN	400 King Rd
006	UN	1319 Phoenixville Pk
007		Malvern Farm Supply, moved here, 1365 Phoenixville Pk
008	UN	1371 Phoenixville Pk
009	UN	1368 Phoenixville Pk
010		Fitzgerald farmhouse, 1359 Phoenixville Pk
011		Halfway House, 1360 Phoenixville Pk
012		Haldeman house, 1101 King Rd
013		1150 King Rd
014		"Railroad Row" 1200-1204-1206-1208-1212-346 King Rd
015		" "
016		" "
017		" "
018		" "
019		" "
020		1214 King Rd
021	I/NR	David Ashbridge log house, 1181 King Rd
022		1444 Phoenixville Pk
023		Glen Loch station, 1551 Phoenixville Pk
024		1200 E. Lincoln
025		CFS dormitories, E. Lincoln
026		CFS headmaster's house
027		CFS Church of the Atonement
028		E. Lincoln
029		E. Lincoln
030		*ruins near 640 E. Lincoln
031	DEM	Summit Hall, 640 E. Lincoln
032		St. Mary's Chapel, Ship & E. Lincoln
033		commercial building, 402 E. Lincoln
034	DEM	Mary Ann Ryan's general store (E & S auto)
035		Moses Feed and Grain, 312 E. Lincoln
036	I/DOE	Zook-Rodney house, 290 E. Lincoln
037	DEM	Valley Creek coffee house, 101 S. Pottstown Pk
038		Tenant house, 125 S. Ship Rd
039		Tenant house, 131 S. Ship Rd
040		Joseph Konnagee house, 131 S. Ship Rd.
041		Stone house, 1454 S. Ship Rd
042		Battle of the Clouds, S. Ship Rd east to 202 bypass. King Rd north to PA RR
043		George Meredith farm, 1421 S. Ship Rd
044		Ryerrs Infirmary for Dumb Animals, 950 King Rd
045	DEM	Tenant farm (Dowling's Farm), 1316 S. Ship Rd
046	I/NR	William Everhart house, S.Ship & Boot Rd.
047	I/NR	Greenwood School, 700 King Rd

048 Tenant farm, 1426 S. Ship Rd
 049 DEM Tenant house, 1501 S. Pottstown Pk
 050 DEM Bonnie Blink dairy farm, 1501 S. Pottstown Pk
 051 Stone farmhouse, 451 King Rd
 052 Anne Cresson's boarding school, 1375 Kirkland Ave
 053 I/NR Kirkland Station, 1370 Kirkland Ave
 054 Farmhouse, 651 E. Boot Rd
 055 I/NR Autun/Meadowcourt, 371 E. Boot Rd
 056 Pines, gatehouse for Meadowcourt, E. Boot Rd
 057 Pines cottage, E. Boot Rd
 058 Farmhouse, 175 E. Boot Rd
 060 I/NR Chesteridge, Benjamin Rush house, E. Boot Rd
 061 I/NR Daniel Meredith house, 1358 Glen Echo Rd
 062 DEM Indian King Tavern, S. Pottstown Pk & King Rd
 063 Loch Aerie
 064 II Guernsey Cow sign
 065 DEM Vittle House, Lincoln Hwy
 066 II Railroad Steam Ponds
 067 thru 099 - No files
 100 Site of Thomas family homestead, 200 S. Pottstown Pk
 101 I/DOE Woodcutter's Cottage, 200 S. Pottstown Pk
 102 I/DOE Richard Ashbridge house, 200 S. Pottstown Pk
 103 I/NR Thomas Quarry office, Quarry Lane
 104 I/NR Thomas Quarry workers' houses, Quarry Lane
 105 "
 106 Golden Acres farmhouse, 315 S. Whitford Rd
 107 I/NR Thomas Mill miller's house, 130 W. Lincoln
 108 I/NR Thomas Mill, 130 W. Lincoln
 109 Oaklands schoolhouse, 105 S. Whitford Rd.
 110 Oaklands tenant house, 105 S. Whitford Rd. "Acorn"
 111 DEM Tenant house, 104 S. Whitford
 112 DEM Stone farmhouse, 408 W. Lincoln
 113 Meadowhouse, Richard Hance house, 146 S. Whitford Rd
 114 Quarry worker's house, 206 S. Whitford Rd
 115 I/NR Joseph Price house, 401 Clover Mill Rd
 116 Joseph Price barn, 441 Clover Mill Rd
 117 House rebuilt after fire, 501 Clover Mill Rd.
 118 Ruins of stone house, Clover Mill Rd
 119 DEM Tenant house, 600 W. Lincoln
 120 I/NR Hunt Downing house, Arrandale, 600 W. Lincoln
 121 DEM Tenant house, 600 W. Lincoln
 122 DEM Tenant house, 600 W. Lincoln
 123 I/NR Wee Grimmet, 624 W. Lincoln
 124 II Grimmet,
 125 Ruins, Hoopes Mill, Clover Mill Rd
 126 Whitford Station, PA RR & S. Whitford Rd
 127 Whitford Bridge
 128 Blacksmith shop, 1575 W. Whitford Rd.
 129 II ? GHD 1551 S. Whitford Rd.
 130 I/NR House at Whitford station, 405 S. Whitford Rd.
 131 Wheelwright shop, 1575 S. Whitford Rd.
 132 DEM Oakland Hotel, NW corner Spackman Ln/Whitford Rd.
 133 Stone farmhouse, 406 S. Whitford
 134 Log building, 406 W. Whitford Rd

135 Stone farmhouse, 1540 S. Whitford
136 RR house, 408 Spackman Ln
137 RR house, 410 Spackman Ln
138 RR house, 412 Spackman Ln
139 508 Spackman Ln
140 Tenant house, "Thrush Brush" 510 Spackman Ln
141 Tenant house, " 'Leven Acres" 519 Spackman Ln
142 Thorney Acres, 1425 Spackman Ln
143 I/NR Frances W. Kennedy house, 1417 Highland Ave
144 I/NR Kinbawn, 405 Highland Ave.
145 Parsonage, Grove Methodist Church, 555 W. Boot Rd
146 I/NR Hannah White log house, 545 W. Boot Rd
147 I/NR GHD Blacksmith house, 515 W. Boot Rd
148 I/NR GHD John Fisher house, 1410 S. Whitford Rd
149 I/NR GHD House, 1402 S. Whitford Rd
150 I/NR GHD House, 501 W. Boot Rd
151 I/NR GHD General store, 499 W. Boot Rd
152 I/NR GHD 1-room school, 471 W. Boot Rd
153 I/NR GHD Storekeeper's house, 485 W. Boot Rd
154 Tenant house, log core, 255 W. Boot Rd
155 I/NR Whitford Garne, 201 W. Boot Rd
156 Greenway, 60 W. Boot Rd
157 Ruins, Richard Walsh barn, 1397 Whiteland Drive
158 Tenant house, 296 W. Boot Rd
159 Site, Green Bank Farm, 1370 S. Pottstown Pike
160 Site, Green Bank Farm tenant house, 1370 S. Pottstown
161 Foundation, Richard Walsh house, 272 Colwyn Terrace
162 Barn, 1333 Burke Rd
163 James Hoffman house, 1312 Burke Rd
164 I/NR Riter Boyer house, 350 W. Boot Rd
165 Tenant house, 290 W. Boot Rd
166 I/NR Cemetery, 490 W. Boot Rd
167 I/NR GHD Grove Methodist Church, 490 W. Boot Rd
168 Frame house, 1365 Grove Rd
169 Vernon L. Hoffman house, 1365 Grove Rd
170 I/NR George Hoffman house, 1311 Grove Rd
171 Early prefab house, 1306 Grove Rd
172 I/NR Newlin Miller's house, 1240 Samuel Rd
173 I/NR GHD Grove Tavern, 500 W. Boot Rd
174 Stone farmhouse, 650 W. Boot Rd
175 UN 706 W. Boot Rd
176 UN 1387 Copeland Rd
177 Stone house, 1357 Copeland School Rd
178 Stone house, 714 Ravine Rd
179 Woolerton log house, 1282 Copeland School Rd
180 Frame house, 1296 Samuel Rd
181 Stone farmhouse, 1270 Samuel Rd
182 II Whitford Station freight depot, 407 Spackman Ln
183 DEM Exton Lodge
184 DEM Belvedere store (SW corner Rt. 30 & Whitford Rd)
185 Whitford Inn
186 thru 199 - No files
200
201 Stone house, 108 N. Pottstown Pike

202 I/NR Whitford Hall, 145 W. Lincoln Hwy
 203 DEM Tenant house, 145 W. Lincoln Hwy
 204 Whitford Lodge, 179 W. Lincoln Hwy
 205 DOE Ivy Cottage, 225 W. Lincoln Hwy
 206 Tenant house, 325 W. Lincoln Hwy
 207 I/NR Oaklands, 349 W. Lincoln Hwy
 208 I/NR Oaklands Gatehouse, 349 W. Lincoln Hwy
 209 Whitford Schoolhouse, 289 N. Whitford Rd.
 210 I/NR Fairview, Charles Thomas house, 225 N. Whitford Rd
 211 Valley View Farm, 435 N. Whitford Rd.
 212 Fairview or Northside School, 308 W. Shoen Rd
 213 James D. Peck house, 225 Shoen Rd
 214 Maple Spring Farm, 105 Shoen Rd
 215 Trimble Mill, 103 Shoen Rd
 216 Site of WW Silica Mines, Shoen Rd
 217 Commercial adaptation of old building, 340 N. Pottstown
 218 Dorsey Ashbridge house, Jughandle of N. Pottstown
 219 220 N. Pottstown
 220 Tenant house, 112 N. Whitford Rd
 221 Ball and Ball, 463 W. Lincoln Hwy
 222 II Whitford PO, 463 W. Lincoln Hwy
 223 I/NR Woodledge, Park L. Plank house, 525 W. Lincoln
 224 Tenant house, 244 N. Whitford Rd
 225 Gothic Revival farmhouse, 426 N. Whitford Rd
 226 I/NR West Whiteland Inn, 609 W. Lincoln Hwy
 227 Stable for WW Inn, 609 W. Lincoln Hwy
 228 I/NR Colebrook Manor, 637 W. Lincoln Hwy
 229 Colebrook Farm, 601 W. Lincoln Hwy
 230 DEM Tenant house, 603 W. Lincoln Hwy
 231 Folly Cottage, 570 Colebrook Rd
 232 No file
 233 Lost Acres, 522 Westfield Drive
 234 Whitford Country Club, 600 Whitford Hills Rd.
 235 DEM Lindenwood, NW corner Rt. 30 & Whitford Rd
 236 DEM Ruins, Chandler tract
 237 Felix's Farm Market
 238 DEM Exton Motel (Denny's)
 239 DEM Exton Drive In
 240 Old house behind Genuardi's?
 241 thru 299 - No files
 300 Stone house, 403 N. Pottstown
 301 Victorian mansion, Geo. Ashbridge house, 101 Swedesford
 302 Malvern Federal Bldg., 109 N. Pottstown
 303 I/NR Sleepy Hollow Hall, 109 E. Lincoln Hwy
 304 Guernsey Cow Dairy Bar, 111 E. Lincoln Hwy
 305 I/NR Zook House, Exton Meadows, Exton Sq. Mall
 306 UN Suburban Sportswear, 317 E. Lincoln Hwy
 307 Tenant house, 407 E. Lincoln Hwy
 308 House at turnpike station, 411 E. Lincoln Hwy
 309 I/NR Exton Hotel, 423 E. Lincoln Hwy
 310 III 509 E. Lincoln Hwy
 311 I/NR Ship Inn, 100 N. Ship Rd
 312 First Ship School, 111 N. Ship Rd
 313 Hickory Hearth, stone core, 116 N. Ship Rd

314 John Cuthbert House/Green Valley Farm, 208 N. Ship
315 Ruins, stone tenant house, Swedesford Rd, W. of N. Ship
316 Stone tenant house, 328 N. Ship
317 Stone tenant house, 460 N. Ship
318 Ruins, Dr. Jones, N. Ship Rd
319 Stone farm house, 533 N. Ship Rd
320 Barn, 531 N. Ship Rd
321 DEM Cockerham pig farm
322 I/NR Colfelt house, John Bell farm, 463 N. Ship
323 Colfelt tenant house, 461 N. Ship
324 I/NR Benjamin Jacobs house, Strawbridge farm, 325 N. Ship
325 I/NR Fox Chase Inn, 613 Swedesford Rd
326 UN CFS, E. Swedesford Rd
327 I/NR Pickwick, E. Swedesford Rd
328 Kates gatehouse, CF Rd
329 I/NR Solitude Farm, DF Rd
330 I/NR Kates Mansion, Hewson Cox house, CF RD
331 I/NR Solitude Farm, CF Rd
332 UN Valley Hill Farm, Valley Hill Rd
333 UN 89 W. Valley Hill Rd
334 VOID E. Whiteland, barn CFS
335 VOID E. Whiteland, Shirley mansion, E. Swedesford Rd
336 I/NR Benjamin Pennypacker house, 800 E. Swedesford Rd
337 Crack O'Dawn, 732 E. Swedesford Rd
338 I/NR Evan Lewis house, 117 N. Ship Rd
339 Tenant house, 115 N. Ship Rd
340 Tenant house, 113 N. Ship Rd
341 I/NR Lochiel Farm, 111A N. Ship Rd
342 Second Ship Road School, 101 N. Ship Rd
343 Rectory, Sts. Philip & James, 701 E. Lincoln Hwy
344 Barn, 731-733 E. Lincoln Hwy
345 I/NR Greystock Hall, CFS, E. Lincoln Hwy
346 St. Paul's Episcopal Church rectory, 901 E. Lincoln
347 I/NR St. Paul's Episcopal Church, 901 E. Lincoln
348 I/NR Williams' Deluxe Cabins, E. Lincoln
349 DEM Trimble house, Exton Sq. Mall (library)
350 DEM Trimble tenant house
351 UN Exton PO
352 UN Library, Exton Sq. Mall