

MASTER PLAN
Borough of Shrewsbury
Monmouth County, New Jersey

Mayor Donald Burden

William Dodge
Michael Denofa
Anthony Pellegrino



Peter Meyer
Jeff DeSalvo
Deidre DerAsadourian

October 8, 2014



David A. Cranmer
Professional Planner # 33LI00590300

I. ACKNOWLEDGMENTS

This Master Plan for the Borough of Shrewsbury was created through a cooperative effort with various municipal official and boards. It was through their hard work and dedication that the vision of the community was etched for the next generation.

PLANNING BOARD

Elizabeth M. Waterbury, PE, PP	Chair
Judy Martinelly	Vice Chairman
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Thomas X. Seaman	Borough Administrator
Donald W. Burden	Mayor
William Dodge	Council President
Michael Denofa	Councilman
Peter Meyer	Councilman
Jeffery DeSalvo	Councilman
Anthony Pelligrino	Councilman
Deidre DerAsadourian	Councilwoman

PROFESSIONALS

David A. Cranmer, PE, PP, CME	Borough Engineer & Planner
Michele Donato, Esq.	Planning Board Attorney
Martin Barger, Esq.	Borough Attorney

II. EXECUTIVE SUMMARY

The Borough of Shrewsbury is a tightly knit community, steeped in colonial history and tradition as evidenced by the state and national historic recognition the borough has received over the years. The community and its elected representatives enthusiastically embrace the tradition of the borough and are protective of the heritage that has been etched since the borough's inception.

In 1667, Shrewsbury was incorporated at the Second meeting of the Colonial Assembly, and was one of three (3) original townships in Monmouth County. Shrewsbury as it exists today was formed in 1926, and encompasses a 2.3 square mile land area in eastern Monmouth County.

The Borough's Historic Four Corners at the intersection of Sycamore Avenue and Broad Street is a National Historic District, which includes the Wardell House, the Allen House and Christ Church being listed on the State and National Registers of Historic Places. In all, fifty historic structures lie within the Borough dating from 1667 to the early 1900's.

Aside from its rich history, the borough has also been recognized by the New Jersey Planning Officials when it bestowed a long term planning achievement award in 2006 upon former Mayor Emilia Siciliano. Shrewsbury was recognized as a community with a long term commitment to comprehensive planning, explained by the former mayor as *"A sustainable society that can persist over generations; one that is far-seeing enough, flexible enough and wise enough not to undermine either its physical or its social systems of support."*

The Shrewsbury Environmental Commission plays a strong role in the shaping of the community and the spirit shared by its residents. The Environmental Commission championed a major effort to achieve the certification of Shrewsbury as a Bronze Sustainable Community by Sustainable Jersey on March 8, 2012. This certification and community awareness which it fostered, led to the formulation of the Sustainability Element, now included as part of this Master Plan.

Shrewsbury has been long known for its well-balanced zoning plan, which created a land use split of 60% residential and 40% commercial which has historically stabilized the municipal tax base. The commercial component consists of a significant degree of professional office space, the demand for which lessened after the closure of Fort Monmouth on September 15, 2011. As a result, the borough weathered economic challenges with respect to commercial property valuations and the commensurate tax impacts. Those challenges were met by the governing body through a multi-faceted approach to renew the economic vitality of the affected properties through planning and legislative changes.

The elected leadership of the borough has consistently adapted to changing socio-economic climates and adopted a proactive stance in protecting the vitality of the municipal tax base and budget. This Master Plan is evidence of the actions taken by the Borough leadership to preserve the heritage of Shrewsbury and maintain the character of the community for generations to come.

III. INTRODUCTION

The Borough of Shrewsbury Master Plan is a comprehensive revision to the current Master Plan which was originally adopted in 1966, and later updated in 1978 based upon the requirements of the Municipal Land Use Law which was enacted in 1975. This comprehensive revision has been prepared in strict conformance with the statutory requirements outlined in N.J.S.A. 40:55D-28, known as the Municipal Land Use Law to meet the goals and objectives stated herein.

This Master Plan establishes the demographic characteristics and land use patterns of the Borough as it presently exists, and formulates realistic planning and zoning strategies which will guide future decision makers in adopting sound land use policies to preserve the heritage and quality of life for future residents and visitors of Shrewsbury.

The purpose of this comprehensive revision to the present Master Plan is to refocus the vision for future development and redevelopment of Shrewsbury, taking into consideration those social, political and economic factors that presently exists or are reasonably expected to impact future development strategies.

The previous Master Plans adopted by the borough provided the requisite guidance to those making decisions at land use board levels, and provided the framework for the well balanced zone plan that presently exists. The vision created by the Master Plan in 1978 and subsequently modified through re-examination reports is very protective of the history of the borough land use patterns within the community; to the point of being limiting as to the diversification of uses that could be permitted without consideration of variance relief by the land use boards. Is to increase the diversification of uses and create for sustainable development.

OVERVIEW OF LAND USE PATTERNS

The present pattern of land use in the Borough of Shrewsbury reflects a variety of physical and development factors, and is the product of a comprehensive long range planning effort dating back to 1966. The historical character of Shrewsbury Borough can be seen at the "Four Corners" at the intersection of Broad Street and Sycamore Avenue, which anchors the Shrewsbury Historic District.

The colonial era churches and large rural and agricultural estates formed the nucleus of the original Shrewsbury area focused along Sycamore Avenue.

Broad Street has been an important north-south travel way which links the Borough with other coastal communities. Adjoining Red Bank and Eatontown both developed strong commercial centers in the mid to late 1800's, as the Borough of Shrewsbury remained as an agricultural and rural settlement. Following the turn of the century, the influence of Red Bank and its burgeoning population influenced the Borough as development began to extend along Broad Street and portions of Newman Springs Road. During the 1920's and 1930's additional commercial,

wholesale and light industrial uses moved into the northern portions of the Borough, which by then was the outer suburban fringe of Red Bank.

Following World War II, Shrewsbury shopping centers were developed including the area known as 'Shrewsbury Plaza' situated at the intersection of Broad Street and Shrewsbury Avenue at the southern boundary of the Borough. Small neighborhood shopping centers and supermarkets were also developed along Broad Street and Newman Springs Road and an increasing number of small offices were located along Broad Street, Newman Springs Road and Shrewsbury Avenue.

A sharp upswing in Residential development occurred in the post WWII era and continued into the 1960's. Residential development then slowed until the 1980's when large tracts of vacant land were developed as single family subdivisions in a manner similar to the surrounding communities and Monmouth County as a whole. By 2000 the Borough was substantially built-out with few parcels remaining for additional development.

Highway commercial uses were developed along Shrewsbury Avenue, including several major automotive dealerships. Professional office complexes were also developed along Shrewsbury Avenue and Broad Street, many of which housed contractors supporting Fort Monmouth, which ceased operations in 2006. By 1990, the Grove at Shrewsbury and the Market Place shopping centers had been constructed on Broad Street, representing significant retail developments that anchor the business district.

In its present configuration, residential land uses account for approximately 36% of the land area of the Borough while commercial approximately 21%, parks and opens spaces 9%, and the balance streets and highways or undevelopable conservation areas.

A detailed discussion of the housing characteristics of the Borough is contained in the Housing and Fair Share Plan Element of this Master Plan.

CIRCULATION

The traffic circulation patterns of the Borough area largely influenced by the performance of NJSH Route 35, known locally as Broad Street; and major east-west county arterial highways known locally as Sycamore Avenue and Newman Springs Road. Local roadways area self contained within the municipality and were established in a traditional grid pattern, which result in bypass traffic influencing local roadways.

The arterial and collector streets are integral elements of the New Jersey State and Monmouth County highway systems. With the exception of Shrewsbury Avenue, all arterial and collector streets are currently carrying traffic volumes at or in excess of their design capacity and traffic volumes are expected to increase in the future.

Intermodal transportation is available to residents of Shrewsbury. Public transit is provided by local and interstate bus services. Commuter rail service to Newark and New York, and south to Bayhead is provided by the New Jersey Transit Authority, with stations located in nearby Red Bank and Little Silver.

Air passenger and freight services are available at and at Newark Liberty International Airport and at other New York metropolitan airports.

Water transportation to New York city is readily available from locations in the Bayshore region to various seaports in the city.

UTILITIES

The Borough of Shrewsbury is serviced by the New Jersey American Water Company which provides water services to numerous municipalities in Monmouth County. The water company regional headquarters are located in the Borough, on Shrewsbury Avenue north of Sycamore Avenue. The water company obtains its water supply from the Swimming River in Middletown Township, from a second water plant on Swimming River located off Newman Springs Road in Middletown Township, and the state reservoir on the Manasquan River. Seasonal requests for outside water use restrictions have been implemented to preserve available capacities, however no lack of available water for prospective customers in Shrewsbury Borough is anticipated.

Sewage treatment and disposal is provided by the Two River Water Reclamation Authority (TRWRA), of which the Borough is a member community. As a member community, Shrewsbury Borough is billed on a flat rate based upon the number of residential units and commercial establishments. All sewerage infrastructure is owned and maintained by the TRWRA.

Garbage and refuse collection is provided by private contractors. The Borough has a Recycling Coordinator and a recycling program which is described in the Recycling Plan Element of this Master Plan.

Storm drainage is accomplished by a network of storm sewer collection pipes which discharge into Parker's Creek and Little Silver Creek. A comprehensive review of the Borough's stormwater collection system is contained in the Stormwater Management Plan Element of this Master Plan.

NATURAL FEATURES

Natural features in the Borough include environmentally sensitive lands and floodprone areas which have been delineated on a series of maps prepared by the Borough Environmental Commission, as well as various outside regulatory agencies. Maps include hydric soils, coastal wetlands, flood hazard and floodprone areas, areas with shallow depth to water table and locations of outstanding specimen trees. Key natural features have been included on the Natural

Features Map, as well as other mapping included in the Stormwater Management Element of this Master Plan.

The Federal Emergency Management Agency Digital Flood Insurance Rate Map (DFIRM) indicates those areas of the Borough subject to flooding in the 100 year storm event. Following Superstorm Sandy the DFIRM Maps were revised and superceded by Advisory Base Flood Elevation Maps, which increased the base flood level by several inches to several feet at various locations. These maps delineate those lands within the Borough for which separate municipal approval is required for development in Flood Hazard Areas.

The Shrewsbury Environmental Commission compiled a publication entitled “Borough of Shrewsbury Environmental Resource Inventory”, dated December 2003 which contains detailed mapping and description of natural resources and environmental constraints within the borough. The ERI is included herewith by reference and should be referred to when evaluating development or re-development initiatives within the Borough.

WETLANDS

The U.S. Fish and Wildlife Service has adopted a classification system which delineates and identifies tidal and freshwater wetlands. The system is hierarchical and structured with a combination of ecological, biological, hydrological and soil substrata characteristics. National Wetlands Inventory (NWI) maps have been prepared based upon identification of vegetation and visible water system from aerial photography. These maps were prepared as overlays from the U.S. Geological Survey quadrangle maps. Designated tidal wetlands within the Borough of Shrewsbury include areas along Parker’s Creek, while other freshwater wetlands outlie other waterbodies within the Borough.

The National Wetlands Inventory maps are not intended to be detailed maps of wetlands within the Borough, and are intended as a general guide. Soils classified as being hydric area also mapped to identify potential wetlands areas in accordance with the New Jersey Wetlands Act. Detailed field investigations of wetlands areas must be conducted as part of significant development undertakings for accurate delineation and compliance with the New Jersey Freshwater Wetlands Protection Act of 1987.

The discharge of dredge or fill material into wetlands or waterways is regulated by the United States Army Corps of Engineers, New York District, under Section 404 of the Clean Water Act (33 U.S.C. 1344). Jurisdiction over freshwater wetlands was transferred to the New Jersey Department of Environmental Protection on July 1, 1988 in accordance with the New Jersey Freshwater Wetlands Protection Act (P.L. 1987, C. 156).

SOILS

The United States Department of Agriculture, Soil Conservation Service delineated soil types on a county-wide basis. The *Monmouth County Soil Survey*, issued in April 1989, identifies ten (10) soil series within the Borough of Shrewsbury, subdivided into fifteen soil types. The soil series are identified as Adelphia, Colemantown, Collington, Elkton, Freehold, Holmdel, Humaquepts, Kresson, Shrewsbury and Undorthents. In general, the soils of the borough may be classified as acid producing, which must be considered in all significant development applications involving soil disturbances.

The two (2) most common soil series found in Shrewsbury are the Holmdel and the Freehold Series. The Holmdel series exists primarily in the east-central portion of the Borough, while the Freehold series exists in the northwestern portion of the Borough. These series typically consist of nearly level to steep, well drained to poorly drained, loamy soils.

Hydric soils are typically divided into groups according to their degree of association with wetlands. The National Wetlands Inventory, issued by the U.S. Department of the Interior, Fish and Wildlife Service has classified the Hydric soils of New Jersey as follows:

Group 1 hydric soils are those soils that nearly always display consistent hydric conditions. The Colemantown, Elkton, and Humaquepts soils series are considered to be Group 1 hydric soils.

Group 2 hydric soils are those soils which display consistent hydric conditions in most places, but additional verification is necessary. The Shrewsbury soil series is a Group 2 hydric soil.

Group 3 hydric soils are those soils which display hydric conditions in a few places, but additional verification is necessary. None of the soil series in Shrewsbury Borough have been classified as group 3 hydric soils.

The Soil Conservation Service (SCS) also maintains a list of soils, that in Monmouth County, display hydric conditions. These SCS hydric soils include Colemantown, Elkton, Humaquepts, Shrewsbury, and portions of the Adelphia, Freehold, Holmdel, and Kresson series.

IMPLEMENTATION STRATEGY

The most significant departures from the earlier versions Master Plan are noted to include the following:

- a. The inclusion of a Sustainability Element, as separately prepared by the Shrewsbury Environmental Commission.

- b. An amendment to the Housing and Fair Share Plan approved by the Coalition On Affordable Housing (COAH) which provides the borough protection from builder's remedy litigation.
- c. Recommendation for the adoption of a Complete Streets policy as part of the Circulation Element which provides for a policy of transportation planning which considers all modes of surface transportation when performing infrastructure maintenance and repair.

Upon adoption of this Master Plan by the Planning Board, the governing body will have a comprehensive planning tool to rely upon in taking the appropriate steps to amend current zoning ordinances as necessary to provide consistency between the Master Plan and Zoning Ordinance, This practice will strengthen the zone plan and facilitate sound decision making by the borough's land use boards.

HISTORIC STRUCTURES

- | | | | |
|--|---|---|--|
| 1) *Allen House - c. 1827 | 16) J. Whigh Brown House (Lent Oak) - c. 1816 | 37) Garret Stovi House - c. 1843 | 49) *Chapel Church Rectory - 1825 |
| 2) *William Van Borchstom House - c. 1824 | 17) *Hill House - c. 1820 | 38) *Chapel Church - c. 1828 | 41) *Joseph V. Holmes House - 1901 |
| 3) *C. S. Bradford House - c. 1829 | 18) *Hofman C. Parker House - c. 1845 | 39) *Original portion Parker House - 1805 | 42) *H. Holmes House - 1802 |
| 4) *Thurston House - c. 1829 | 19) *Hofman House (Thornbush) - c. 1857 | 21) *Presbyterian Church at Shrewsbury - c. 1821/1860 | 43) *Joseph Holmes House - c. 1828 |
| 5) *A. Brodwin House - c. 1833 | 20) *Van Buren Homestead - c. 1822 | 30) *Presbyterian Church (Main) - c. 1820 | 44) *Daniel Aronson House - c. 1860 |
| 6) *H. C. Fielder House - c. 1837 | 21) *Van Buren House - 1860 C. | 31) *Presbyterian Church (West) - c. 1820 | 45) *Hofman White House - 1789 |
| 7) *Garrett Tenbrook House - 1813 | 22) *Hofman House (Farmers College) - 1904 C. | 32) *Hofman Farm (Hofman) - c. 1822 | 46) *Shrewsbury Friends Meeting House (Dobson) - c. 1816 |
| 8) *Hofman & Randolph Borden House - 1906 | 23) *Hofman House (Hofman) - c. 1822 | 33) *Hofman Farm (Hofman) - c. 1822 | 47) *William Gray House - 1812 |
| 9) *Hofman House - c. 1822 | 24) *Hofman House (Hofman) - c. 1822 | 34) *Hofman Farm (Hofman) - c. 1822 | 48) *Hofman House - c. 1820 |
| 10) *Parker Campbell House - 1840 | 25) *Hofman House (Hofman) - c. 1822 | 35) *Kenneth J. Kennedy (Hofman) House - c. 1873 | 49) *Shrewsbury Borough School - 1906 |
| 11) *H. V. Wood House - 1828 | 26) *Hofman House (Hofman) - c. 1822 | 36) *Edith Kennedy (Hofman) House - c. 1873 | 50) *Hofman House - 1816 |
| 12) *Old Schoolhouse - 1858 | 27) *Hofman House (Hofman) - c. 1822 | 37) *Hofman House - 1827 & 1827 | 51) *Hofman House - c. 1820 |
| 13) *Hofman Blacksmith & Carriage Shop - Laves Co. - 1860 C. | 28) *Hofman House (Hofman) - c. 1822 | 38) *Hofman House - 1827 | 52) *Hofman House - 1816 |
| | 29) *Hofman House (Hofman) - c. 1822 | 39) *Hofman House - 1827 | 53) *Hofman House (post office residence) - 1826 |

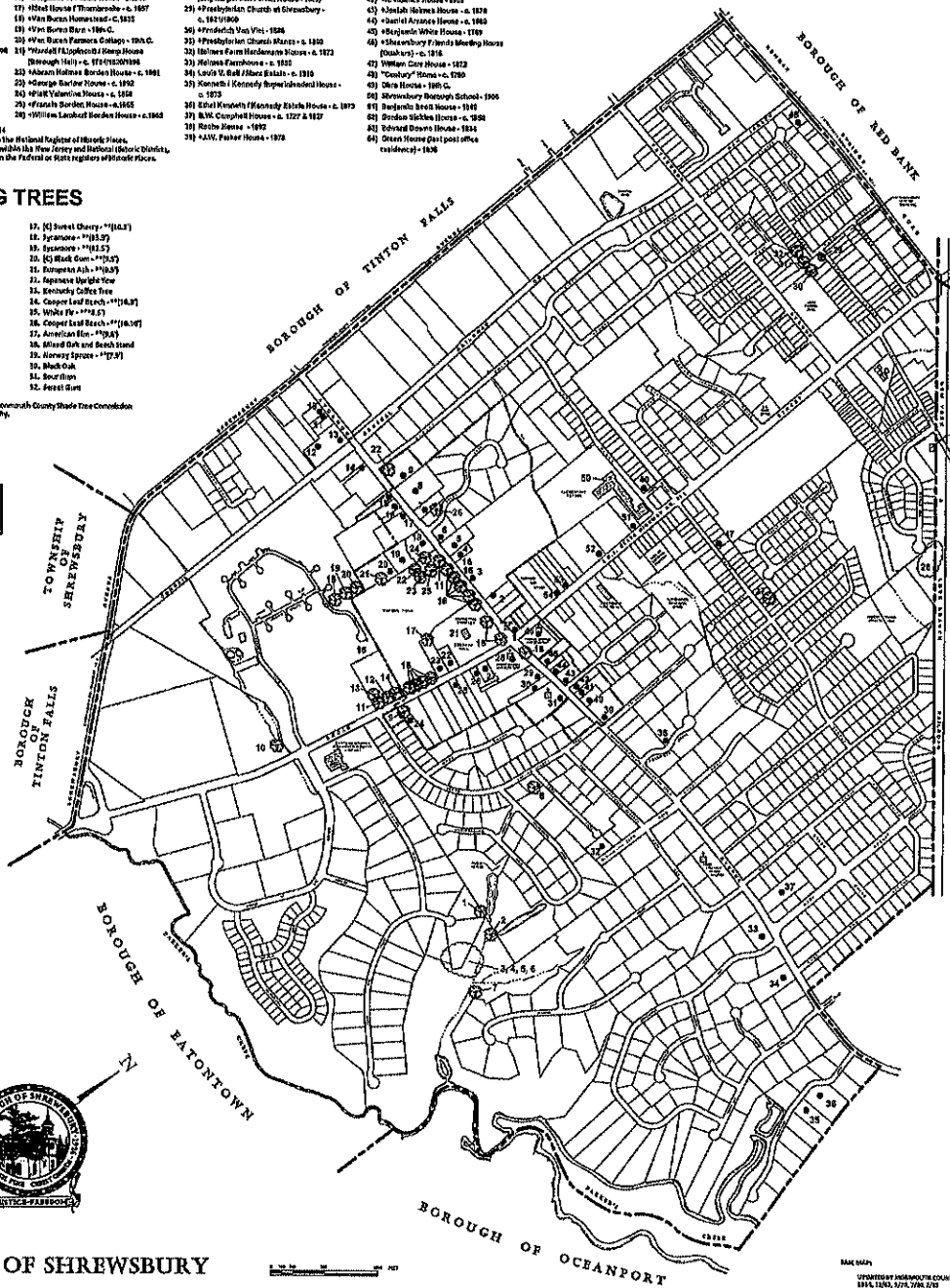
ICLIRGE | Shrewsbury Historical Society - 1934
 *These Outstand / or structures are listed on the National Register of Historic Places.
 †These structures / or structures are located within the New Jersey and National Historic Districts.
 ‡However, they are not listed individually on the Federal or State registers of Historic Places.

OUTSTANDING TREES

- | | |
|------------------------------------|----------------------------------|
| 1. Shagbark Hickory - **17' 8" | 17. (S) Sweet Cherry - **110.1' |
| 2. Mockernut or Hickory - **10' 7" | 18. Sycamore - **113.2' |
| 3. No Oak - **10' 7" | 19. Sycamore - **113.2' |
| 4. White Oak - **10' 7" | 20. (S) Black Gum - **12.2' |
| 5. White Oak - **10' 7" | 21. European Ash - **19.3' |
| 6. Sweet Gum - **10' 7" | 22. Japanese Sycamore |
| 7. Cluster of Popwood | 23. Kentucky Coffee Tree |
| 8. Elm - **11' 8" | 24. Cooper Leaf Birch - **114.3' |
| 9. Elm - **11' 8" | 25. White Fir - **12.5' |
| 10. Stand of Paper Birch | 26. Cooper Leaf Birch - **114.3' |
| 11. (H) American Birch - **113.2' | 27. American Elm - **19.3' |
| 12. European Birch - **113.2' | 28. Mixed Elm and Beech Stand |
| 13. (S) Weeping Birch - **113.2' | 29. Norway Spruce - **19.3' |
| 14. Norway Spruce - **11.3' | 30. Black Oak |
| 15. Black Cherry - **113.2' | 31. Sourwood |
| 16. Spruce | 32. Sweet Gum |

SOURCES: David Egan, Superintendent, Monmouth County Shade Tree Commission
 Dr. Joseph Park, Rutgers University.
 * Measured 1988 - Show
 ** Measured 8/27/84 - Size & Fall
 † State Record
 ‡ County Record

10 Historic Structure
 26 Outstanding Tree
 National Register Historic District Boundary



BOROUGH OF SHREWSBURY
 MONMOUTH COUNTY NEW JERSEY

DATE: 1988
 DEPARTMENT OF COMMUNITY PLANNING BOARD
 100 N. 11th St., 07734-2001
 SPONSORED BY TOWNSHIP ASSOCIATED
 100 N. 11th St., 07734-2001
 DESIGNED BY CHAMBER ENGINEERING, PA
 200 N. 11th St.

HYDRIC SOIL

- GROUP 1 - SOILS THAT NEARLY ALWAYS DISPLAY CONSISTENT HYDRIC CONDITIONS**
- Cm Collinstown loam
- En Elkton loam
- HV Humagepts, frequently flooded
- GROUP 2 SOILS - SOILS DISPLAYING CONSISTENT HYDRIC CONDITIONS IN MOST PLACES**
- Sn Sirewebury sandy loam

- ADDITIONAL HYDRIC SOILS & THEIR LOCATION (CLASSIFIED BY THE USDA SOIL CONSERVATION SERVICE)**
- AeA Alephia loam, 0-2% slopes Depressions & Swales
 - FrB Freehold sandy loam, 2-5% slopes Swales
 - HnA Holmdel sandy loam, 0-2% slopes Depressions & Swales
 - HnB Holmdel sandy loam, 2-5% slopes Swales
 - KvA Kresson loam, 0-5% slopes Depressions & Swales

DEPTH TO HIGH WATER TABLE

DEPTH IN FEET	SOIL SERIES
0 - 1.0	Cm, En, Sn
0.5 - 4.0	HnA, HnB
1.0 - 1.5	KvA
1.5 - 4.0	AeA
> 2.0	* FUB (Urban Land)
> 6.0	CrB, CoA, FrB, FrC, FrD, * FUB (Freehold)

* Note: FUB soil series is divided into Urban Land and Freehold subclasses

SOURCES: Wetlands of New Jersey, National Wetlands Inventory, U.S. Department of the Interior, July 1985.

Additional Hydric Soils, Monmouth County Hydric Soil List, USDA, Soil Conservation Service, Areskold 200.

Soil Surveys of Monmouth County, NJ, USDA, Soil Conservation Service, April 1988.

NON-HYDRIC SOILS

- CrB Collington sandy loam, 2-5% slopes
- CoA Collington loam, 0-2% slopes
- FrC Freehold sandy loam, 5-10% slopes
- FrD Freehold sandy loam, 10-15% slopes
- FUB Freehold sandy loam - Urban land complex, 0-10% slopes
- UA Urcaments, smoothed



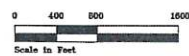
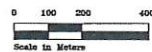
SOILS AND HYDRIC SOILS

BOROUGH OF SHREWSBURY

Monmouth County New Jersey

December 2003.

Base Map: Updated by Monmouth County Planning Board 1985, 11/87, 5/78, 7/80, 2/82
 Updated by T&M Associates 8/83, 11/87, 3/90, 12/93, 8/01, 12/03



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LAND USE

RESIDENTIAL

R-1	45,000 s.f.
R-1A	45,000 s.f. / Cluster
AH-MFB	Affordable Housing Multi-Family
PSC-1	Planned Senior Citizen
PSC-2	Planned Senior Citizen
PSC-3	Planned Senior Citizen
R-2	22,500 s.f.
R-3	15,000 s.f.
R-4	10,000 s.f.
R-4.5	8,000 s.f.
R-5	6,000 s.f.

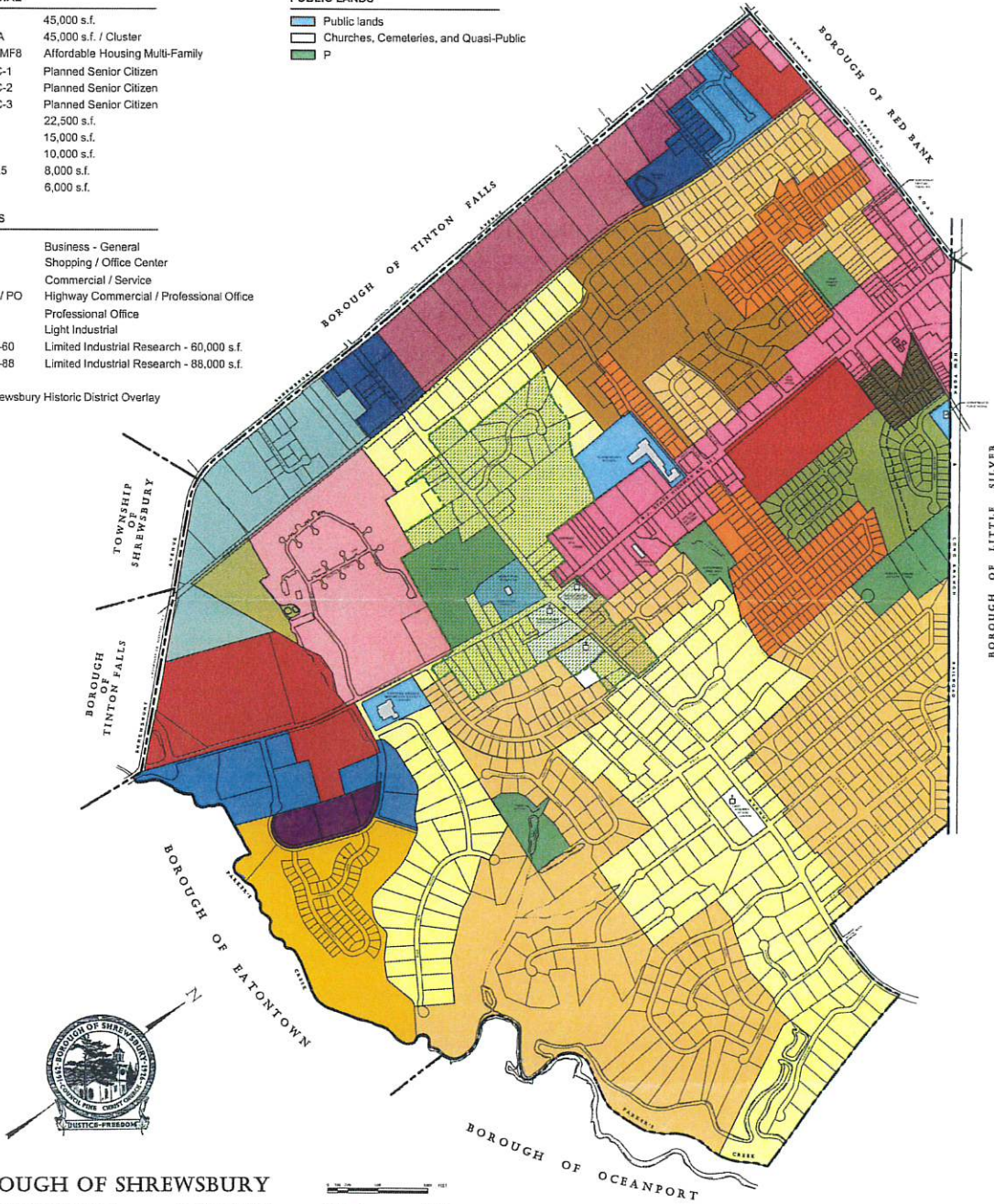
PUBLIC LANDS

Public lands
Churches, Cemeteries, and Quasi-Public
P

BUSINESS

B-1	Business - General
B-2	Shopping / Office Center
B-3	Commercial / Service
HC / PO	Highway Commercial / Professional Office
P-1	Professional Office
LI	Light Industrial
LIR-60	Limited Industrial Research - 60,000 s.f.
LIR-88	Limited Industrial Research - 88,000 s.f.

Shrewsbury Historic District Overlay



BOROUGH OF SHREWSBURY
 MONMOUTH COUNTY NEW JERSEY



IV. DEMOGRAPHIC PROFILE

The Borough of Shrewsbury has experienced a trend of stable population statistics, largely due to the lack of significant areas of land available for residential development. During the preceding census period only a nominal population increase was realized, as detailed below. It is expected that a brief jump in population of adults will be realized at the time of the next census as a result of two (2) significant development projects totaling 143 new residential townhouse units, including 66 age restricted units.

The population increase is projected to have no measurable impacts upon the Borough Elementary School or other essential borough services.

POPULATION CHARACTERISTICS OF THE BOROUGH OF SHREWSBURY

Table 1

POPULATION TRENDS, 1990-2010

	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>% Change</u> <u>1990-2000</u>	<u>% Change</u> <u>2000-2010</u>
Shrewsbury	3,096	3,590	3,809	16.0%	6.1%
Monmouth County	553,124	615,301	630,380	11.2%	2.4%

Source: US Census Bureau, North Jersey Transportation Planning Authority

The North Jersey Transportation Planning Authority's (NJTPA) population projections for the Borough of Shrewsbury and Monmouth County indicate that the population for the Borough and the County at large will continue to grow, though at a slower rate than experienced during the 1990s, reaching 2030 populations of 3,820 and 713,000, respectively. It is also important to note that the NJTPA projects that Shrewsbury's population will grow by only 6.4 percent from 2000 to 2030, which is significantly less than the rate of 15.9 percent projected for the County during the same period, as well as the rate of 13.8 percent experienced by the Borough during the 1990 – 2000 period.

According to the 2010 U.S. Census, the Borough of Shrewsbury's population is comprised of 1,310 households, with an average household size of 2.96 members. The median age of the Borough's population is 44.3 years, which is higher than that of Monmouth County (42.0 years) and the State of New Jersey (39.0 years). The median household income of Shrewsbury's households is \$119,996, which is much more than the respective figures for the State and the County. These indicators are exhibited in Table 2.

Table 2

DEMOGRAPHIC INDICATORS - 2010

	<u>Number of Households</u>	<u>Average Household Size</u>	<u>Median Age</u>	<u>% of Population > 65</u>	<u>Median Household Income</u>
Borough of Shrewsbury	1,310	2.96	38.4	17.6%	\$119,996
Monmouth County	258,410	2.70	37.7	12.5%	\$80,583
New Jersey	3,553,562	2.68	36.7	13.7%	\$83,881

Source: US Census Bureau

Table 3

POPULATION BY AGE - 2010

	<u>Number</u>	<u>% of Total</u>
Under 18 Years	1,027	26.9%
18 to 19 Years	69	1.9
20 to 24 Years	121	3.2%
25 to 34 Years	201	5.3%
35 to 49 Years	908	23.8%
50 to 64 Years	812	21.3%
65 Years and Older	671	17.6%

Source: US Census Bureau

A detailed description of the housing characteristics of the Borough is included in the Housing and Fair Share Plan Element of the Master Plan.

V. STATEMENT OF OBJECTIVES, PRINCIPLES, ASSUMPTIONS, POLICIES & STANDARDS

The Shrewsbury Borough Master Plan is a general guide for the physical, economic and social development of the borough. The Master Plan was developed in accordance with the provisions of the New Jersey Municipal Land Use Law (N.J.S.A. 40:55 D) and is designed to guide development and redevelopment of lands within the borough in a manner which will promote and protect the public health, safety, morals, and general welfare of the present and future residents of Shrewsbury Borough.

The Shrewsbury Master Plan is based upon objectives, principles, assumptions, policies and standards which have been developed over a period of time by the Borough Planning Board, Borough Council, Zoning Board of Adjustment, and other boards and agencies within the Borough. Master Plan proposals for the physical, economic and social development of Shrewsbury Borough are based upon the following:

OBJECTIVES

The Shrewsbury Borough Master Plan has been prepared based on several objectives of sound planning and purposes the Municipal Land Use Law as follows:

1. Encourage municipal actions which will guide the long range appropriate use, development and preservation of lands within Shrewsbury Borough in a manner designed and intended to promote the public health, safety, morals and general welfare of present and future residents.
2. Secure the safety of the community, to the extent possible from fire, flood, panic as well as other man-made or natural disasters.
3. Provide adequate light, air and open space within the Borough.
4. Ensure that development within the Borough does not conflict with the development and general welfare of neighboring municipalities, the County of Monmouth, the region, or the State of New Jersey.
5. Promote the establishment of appropriate population densities in locations that will contribute to the well-being of persons and neighborhoods; and preservation of the environment.

6. Encourage the appropriate and efficient expenditure of public funds by coordinating public and private investment and development within a framework of land use and development principles and policies.
7. Provide sufficient space in appropriate locations within the Borough for residential, business, office, industrial, mixed use, and public and quasi-public uses in a manner which will provide for balanced Borough growth and development.
8. Support the upgrading of substandard housing in the Borough through code enforcement, home improvement loans, technical assistance, education, ordinance, amendments, grants and provision of public improvements such as new streets, sidewalks, street lighting, street trees, drainage and sanitary sewage.
9. Encourage the location and design of transportation and circulation routes which will promote the free flow of traffic in appropriate locations while discouraging roadways in areas which would result in new congestion, blight or a substantial alteration to the character of an area.
10. Promote and enhance access to and utilization of all forms of public and mass transportation, including promoting the use of shuttles to link transit centers with each other, as well as with residents and businesses.
11. Provide alternative modes of transportation borough-wide, including pedestrian and bicycle pathways as part of a sustainable community.
12. Promote the conservation of open space through protection of wetlands, stream corridors, steep slopes and valuable natural resources and prevent degradation of the environment through improper use of land.
13. Acquire, develop and maintain park and recreation facilities as well as land for purely open space/conservation purposes within the Borough to meet reasonable needs and demands for recreation by present and future residents and to balance inevitable growth and land development with preservation needs.
14. Encourage the preservation and restoration of historic buildings and sites within the Borough to maintain the heritage of Shrewsbury for the education and enjoyment of future generations.

15. Encourage streamlining development review procedures and to extent possible simplification of the development standards and regulations to create a more efficient process which will help in reducing development costs.
16. Enhance the various neighborhoods throughout the Borough by providing for appropriate redevelopment, reinvestment, revitalization and capital improvements, designed to strengthen and improve the fabric of each area.
17. Encourage and promote a cooperative approach to economic development and revitalization through new investment, maintenance and reinvestment in existing commercial and industrial activities within the Borough in areas suitable for such development.
18. Encourage the efficient management of storm water through the development of appropriate guidelines which will prevent future drainage problems and provide environmentally sound land use planning. Emphasis should be consistent with the State of New Jersey's recently enacted storm water management regulations.
19. Encourage the preservation and active use of prime farmland for agricultural production through development of appropriate guidelines based upon state and municipal legislation and preservation techniques.
20. Control the bulk and scale of single-family residential structures in order to maintain consistency with neighborhood character and to avoid new structures that are disproportionately large, compared to the lots that they are on.

GUIDING PRINCIPLES

The Shrewsbury Borough Master Plan is based upon several land use and land development principles to foster smart growth and embrace sound planning objectives:

- a. Encouraging residential development in locations and at densities which are compatible with existing development patterns and which can be properly serviced by public roadways, utilities and services.
- b. Locating public, commercial, industrial, professional office and other non-residential uses at sites and in locations which are suitable for their use environmentally, economically and geographically; and are compatible with existing land uses, public facilities, roadways, and natural features.

- c. Protection of natural and environmental resources including floodplains, wetlands, marshlands, aquifer recharge areas, steep slopes and areas suitable for public and quasi-public recreational activities.
- d. Encouraging a development pattern which will protect and enhance the long term economic, social and welfare interests of present and future residents of the Borough.
- e. Recognition of the historic character of the Borough and significance of historic places.
- f. Mixed use development should be encouraged in appropriate locations, to provide a diversification of housing affordability within the Borough.

ASSUMPTIONS

The Shrewsbury Borough Master Plan has been prepared based upon certain assumptions consistent with the practice of sound planning:

- i. That there will be no catastrophic man-made or natural disasters which will greatly affect the existing natural and/or cultural development of the Borough, or the Borough's ability to implement this Master Plan.
- ii. That the Borough of Shrewsbury will be able to guide its growth in accordance with the Municipal Land Use Law and will have meaningful input into any proposed county, regional, state and/or federal development initiatives which may affect the Borough or its immediate environs.
- iii. That future growth during the next ten (10) year period will not exceed the capacity of the Borough to provide essential community facilities, utilities and/or services.

POLICIES

The Shrewsbury Borough Master Plan is based upon certain policies which have been developed and implemented by the governing body, as well as by Planning and Zoning Boards and other review agencies:

- a) Land use planning will provide for a variety of residential and non-residential uses; will encourage continuation of and enhancement of Shrewsbury as a quality suburban residential community. This includes a continued strong commitment to providing housing opportunities for families and individuals of all income levels.
- b) Land development should be designed to protect and enhance the environmental quality of the Borough and preserve and protect valuable open spaces and natural resources.

- c) The Borough will consider and evaluate innovative development proposals which would enhance and protect environmental features, minimize energy usage and encourage development densities consistent with existing patterns of development.
- d) The Borough will encourage mixed use, retail and food service development in appropriate locations within the Borough that will provide employment for present and future residents and contribute to a balanced and stable economic base for the Borough.
- e) The Borough will encourage and provide for review of the development of social, health, welfare, cultural, recreational, service and religious activities within the Borough to serve present and future residents of the Shrewsbury region.
- f) The Borough will continue its program of updating and supplementing the Master Plan and Land Use and Development Regulations as new data becomes available, as land development patterns and trends change and as community goals and objectives are modified.
- g) The Borough will continue to comply with the requirements of the New Jersey Council on Affordable Housing, as they presently exist.
- h) The Borough should continue to promote the construction of sidewalks in conjunction with new development and should develop a long term capital program for annual sidewalk installation and repairs.

STANDARDS

The Master Plan provides general standards for development, including type, density and location of development and delineation of areas which are generally not developable. The Master Plan also provides recommended standards for roadways and other facilities. The Borough Land Use Ordinance, including zoning, site plan, land subdivision and design regulations, provides specific standards for design, construction and development of individual land uses and development sites within the Borough.

In addition, Borough regulations pertaining to utilities, fire prevention, flood plains, wetlands, soil erosion, street trees and other development factors have been adopted and are applied by the Planning Board, Board of Adjustment, Environmental Commission, Board of Health and others. Monmouth County, the state of New Jersey and Federal planning and regulatory agencies also have detailed standards pertaining to environmental features, roadways, utilities, etc. which are utilized in the overall development process in Shrewsbury Borough.

VI. LAND USE PLAN ELEMENT

The Land Use Plan Element delineates proposed land uses and development densities for residential, business, professional office, light industrial, business, service, and other private land uses. In accordance with the Municipal Land Use Law, the land use plan element becomes the basis for the zoning map of the Borough.

The Borough is substantially built-out, with no significant parcels remaining for future development as determined by the Vacant Land Analysis performed in 2008 as part of the creation of a Fair Share Plan. The land use patterns which exist are best described as commercial districts along state and county highways, with residential districts of varying densities occupying the remaining developable lands.

Specific land use zoning districts are shown on the Land Use Map and described below:

RESIDENTIAL

Residential land uses are described on the basis of density or lot size. A more detailed discussion of residential development is contained in the Housing Plan Element of the Master Plan.

R-1 45,000 SF

The R-1 residential areas were established in the earliest Borough zoning ordinances and reflect the one (1) acre single-family detached dwelling unit development pattern which has occurred in conjunction with the historic "Four Corners" area of the Borough. This pattern of development has existed since before the turn of the century and is the dominant pattern of development along Sycamore Avenue, and along portions of Broad Street just south of the 'Four Corners'.

The R-1 area along Sycamore Avenue minimizes driveways and traffic onto Sycamore Avenue therefore is protective of the circulation patterns of Sycamore Avenue.

The R-1 residential area continued to develop through the 1980's and has been effective in protecting the sensitive environmental areas adjacent to Parker's Creek. A specific type of development pattern with large, deep lots is found along Blades Run which provides protection for Parker's Creek and its tributaries with the roadway on the ridge between the two drainage ways. The low-lying lots along Blades Run are within floodprone areas and in some cases contain NJDEPE designated wetlands. Northwest of Sunnybank Drive was also developed as an R-1 residential neighborhood in the late 1980's.

In reviewing the designated R-1 zone districts, protection and preservation for sensitive environmental areas was deemed to be an important factor in the future development of large tracts of undeveloped land along Parker's Creek. In conjunction with this objective, an alternative type of development was recommended in the 1984 Master Plan which provided for clustering of single-family homes on the upland, on-floodplain portion of the development tracts

to encourage protection of sensitive environmental areas. This is described below as the R-1A Cluster residential development type.

R-1A 45,000 S.F. Cluster

R-1A residential cluster development areas have been designed to provide for compatibility with existing one acre lot areas extending a lot Sycamore Avenue, Sunnybank Drive, Willow Court, Corn Lane, Old Farm Road, Blade's Run Drive, and Winding Brook way east of Route 35; and along Sycamore avenue from Route 35 west to the railroad.

The R-1A cluster provision is intended to protect the sensitive environmental areas along Parker's Creek which include 100 year flood hazard areas, flood fringe areas and areas with coastal or freshwater wetlands.

The R-1A cluster provision is designed to allow a density of development which would be based upon the maximum number of units which could be developed on an individual tract of land in accordance with the R-1A zone district requirements and excluding lands which are located within the 100-year flood hazard area or areas which are designated as wetlands in accordance with the New Jersey Wetlands Act of 1970. The cluster provision requires that lots developed adjacent to existing one acre or larger lots be developed in accordance with the R-1A development regulations and that interior lots or lots adjacent to development areas with lots less than one acre could be developed with 22,500 square foot lots on the upland portion of the tract.

The intent of cluster provision is to encourage open space along the existing stream corridor areas and tributaries which extend into the undeveloped R-1A areas. In addition to protecting the sensitive environmental areas, the R-1A cluster provision reduces development costs for public improvements including roadways, utilities and on-site grading and filling.

R-1B 45,000 S.F. Senior Citizen

The R-1B 45,000 s.f./Senior Citizen Development area provides for single-family detached homes in accordance with the R-1 zone district with an option to develop lands along Parker's Creek, east of the southern branch of the Conrail line, and west of the Shrewsbury Plaza. This area contains a total of approximately 6.8 acres are non-floodprone area. This zoning option was utilized by the Thornbrooke Development in the construction of the present Brandywine Assisted Living facility. No other similarly zoned land exist within the Borough.

R-2 22,200 S.F.

The R-2 residential area provides for a minimum lot size of 22,500 square feet. The R-2 area is located in the west/central portion of the Borough, principally along Samara, Birch and Spruce Drives. All properties within this zone district are built-out and no further development is expected, and no expansion of this zone is contemplated in the Master Plan.

R-3 15,000 S.F.

The R-3 residential area provide for a minimum lot size of 15,000 square feet. There are five (5) R-3 residential areas located within the Borough of Shrewsbury, and help diversify the affordability of homes within the community. Two (2) areas are geographically located in the northern portion the Borough; one (1) area is along Buttonwood Drive north of Sycamore in the central portion of the Borough; one area is along Silverbrooke Road south of Sycamore and extending to Broad Street and one large area is north of Sycamore Avenue at the eastern boarder of the Borough.

The R-3 residential areas are fully developed and no expansion of these areas is proposed in the Master plan.

R-4 10,000 S.F.

The R-4 residential areas provide for 10,000 square foot lot areas and include developed areas in the northern portion of the Borough along Alameda Court, Patterson Avenue and Henry Street. Another area of R-4 development is located in the central portion of the Borough in the area of Sickles Place, James Street, Borden Street, Robinson Street, Parker Place and White Street.

The R-4 residential areas are presently developed and no further development is expected, nor is any expansion of this zone district proposed in the Master Plan.

R-4.5 8,000 S.F.

The R-4.5 residential area consists of the Country View Estates development behind the Grove shopping center, knows as Brady Road and Meadow Drive. A second contiguous development designated as R-4.5 is Heritage Greens, located at the easterly most limit of the Borough along it's boundary with Little Silver. No further lands in the R-4.5 zone are available for development due to the presence of environmentally constrained lands, therefore no further development is expected in this zone. No expansion of this zone district is proposed in the Master Plan.

R-5 6,000 S.F.

The R-5 residential area provides for 6,000 square foot lots and is located in the Monroe Avenue area in the northern portion of the Borough . This zone district assists in diversifying the affordability of homes in the Borough, and all lots in this district are developed. No further development in this area is expect, nor is the expansion of this area is proposed in the Master Plan.

PSC-1 Planned Senior Citizen

The PSC-1 zone is limited to the planned development known as 'Thornbrooke', consisting of age restricted housing units. The development is completed and fully occupied, with no additional lands available for expansion.

PSC-2 Planned Senior Citizen

The PSC-1 zone is limited to the planned development known as 'Brandywine Assisted Living', which was constructed as part of the Thornbrooke development. This zone consists solely of a residential assisted living facility. The development is completed and fully occupied, with no additional lands available for expansion.

PSC-3 Planned Senior Citizen

The PSC-3 zone is limited to the planned development known as 'The Enclave at Shrewsbury', consisting of 66 age restricted housing units. The development is currently under construction and partially occupied, with no additional lands available for expansion.

AH-MF8

The AH-MF8 zone is the only zone which permits inclusionary housing in the Borough, and is limited to the planned development known as 'The Ivy at Shrewsbury'; and to certain lands lying between Trafford Street and Newman Springs Road, slated for a municipally sponsored 100% affordable housing development. This zone was formulated as part of the Borough's Fair Share Housing Plan as approved by the court.

No recommendations for expansion of this zone is contained in this Master Plan.

COMMERCIAL

The master plan provides for commercial development along principal arterial roadways such as State and County highways. Broad Street, Newman Springs Road and Shrewsbury Avenue make up the areas of the business zones and have developed historically for business uses.

Commercial zoning districts provide for a variety of uses based upon lot size and geographic relationship to other land uses within the borough. The present commercial zone districts are described below.

B-1 Business

The B-1 general business areas designated on the zone plan include areas along Broad street and Newman Springs Road. Many of the present uses occupy structures which historically began as

residential structures, particularly along Broad Street where numerous historic residential structures have been converted to professional offices, and boutique shops.

The portion of the B-1 Zone generally anchored by the Grove Shopping Center and lying between Sycamore Avenue and Newman Springs Road necessarily comprises the borough's downtown area, and is in need of beautification and streetscape improvements.

The portion of the B-1 Zone along Newman Springs Road is unique in that lot configurations are generally shallow and wide, resulting in parking located in front yard areas. This area contains a variety of conforming and non-conforming uses, and has been identified as an area in need of revitalization. Significant re-development of the parcels located along Newman Springs Road has begun and is expected to continue in the foreseeable decade and should be addressed in this Master Plan.

There are no vacant parcels within the B-1 zone for future development, thus it is expected that only re-development will occur in this district.

B-2 Shopping Center

The B-2 Shopping Center zone district is specifically limited to larger tracts containing present shopping center developments known as 'Shrewsbury Plaza', located at the southern tip of Shrewsbury at the intersection of Broad Street and Shrewsbury Avenue; the Grove shopping center, located on Broad Street between White Street and Monroe Avenue; and at the former 'Stop & Shop', now 'Ocean States Job Lots' Plaza located along Newman Springs Road between the railroad crossing and Shrewsbury Avenue.

All parcels designated as B-2 area presently developed, and future re-development is not reasonably expected. It is noted that the 'Staples' shopping plaza, located on the east side of Broad Street, between the two (2) intersections of the Avenue of the Commons loop was developed functionally as a shopping center, however is located in the LIR 88 zone, therefore uses variances are frequently required for changes in use.

This Master Plan contains a recommendation for a rezoning of the 'Staples' shopping plaza, known as Block 70.01, Lot 2, from LIR-88 to B-2 to be functionally consistent with the historic use of the tract.

B-3 Business Service

The B-3 zone was created by action of the Governing Body in 2008 as part of the creation of the Borough's Affordable Housing plan, and is specifically limited to those properties fronting upon Shrewsbury Avenue, generally from Patterson Avenue north to Newman Springs Road.

The uses permitted in this zone include mixed used developments containing retail and personal service uses, primarily intended to be complementary to a multi-family inclusionary

development located in the immediate vicinity. The B-3 zone provides realistic zoning incentives for the creation of affordable housing for mixed use developments.

The Master Plan contains a recommendation to continue the B-3 zone east along Newman Springs Road from Shrewsbury Avenue to the B-2 Zone limit at the former Stop & Shop property.

HC-PO Highway Commercial Professional Office

The HC-PO zone is aligned along Shrewsbury Avenue, between Patterson Avenue and Sycamore Avenue, and encompasses the properties which front upon Shrewsbury Avenue and back up to the railroad corridor. The uses in this zone are generally professional offices and automotive dealerships.

The lots in this zone are exceptionally deep and provide for significant front yard setbacks, therefore the zone requirements are not well suited for other properties in the borough, thus no expansion of this zone district is proposed as part of this Master Plan.

P-1 Professional Office

The P-1 zone is limited in geographic coverage to properties fronting along Patterson Avenue, between Shrewsbury Avenue and Birch Drive; and along Sycamore Avenue between Shrewsbury Avenue and the railroad right of way. The purpose of this district is to permit the adaptive re-use of residential structures as professional offices, and permit the use of home offices for professionals.

All of the properties in this zone are developed, therefore only re-development is expected. No expansion of this zone district is proposed as part of this Master Plan.

LI/LIR 60/LIR 88

The Light Industrial and Light Industrial Research Zones are located in the southern portion of the Borough, generally along Shrewsbury Avenue, Riordan Place and Avenue at the Commons. The lots in this area are large in size and able to accommodate light industrial and research facilities without impacting adjacent land uses.

The vacancy of a significant portion of office space in this zone warrants the potential re-zoning of certain tracts to permit alternate uses, such as indoor recreation facilities which would be consistent with the style of structures which presently exist.

AREAS IN NEED OF REVITALIZATION

1. The lands along Newman Springs Road, between Shrewsbury Avenue and Broad Street; and continuing on Broad Street between Newman Springs Road and White Road have been identified as demonstrating signs of blight and in need of revitalization.

VII. RECYCLING ELEMENT

The New Jersey Statewide Mandatory Source Separation and Recycling Act of 1987 requires that municipal master plans include a recycling plan element which incorporates State recycling Plan goals for the collection, disposition and recycling of material designated in the Borough's recycling ordinance. In addition, the Borough Planning and Development regulations must include provisions for the collection, disposition and recycling of materials for any development proposal for:

- Fifty (50) or more single family dwelling units;
- Twenty five (25) or more multifamily dwelling units;
- Commercial or industrial development proposal utilizing 1,000 or more square feet of land.

The Borough recognizes that separating recyclable materials from the solid waste stream will extend the life of existing landfill facilities, conserve energy and valuable natural resources, and increase the supply of reusable raw materials for industry. The Borough also recognizes that recycling will reduce demands on resource recovery facilities which will, in turn, result in significant cost- savings in the planning, construction and operation of these facilities.

PLANNING AND DEVELOPMENT REGULATIONS

Following recommendations included in the 1991 Master Plan recycling element, Section 210 of the Borough Administrative Code was updated to include standards for collection, disposition and recycling of materials. These standards are consistent with the State Recycling Plan, and address recycling requirements for single-family, multi-family, and commercial developments.

BOROUGH RECYCLING PROGRAM

The Borough's recycling program is consistent with the Statewide Mandatory recycling Act of 1987.

COLLECTION AND DROP-OFFS

There are 4 recycling collection zones that represent basic quadrants of the Borough. The Borough provides for curbside collection of cans, bottles and plastic at prescribed days each month as published in the quarterly newsletter and listed on the borough website. Non-containerized leaves and brush are picked-up at regular intervals during the spring and fall seasons. Grass clippings are not accepted curbside or at the Borough recycling drop-off centers.

Shrewsbury residents may leave recyclable materials at the Borough primary recycling drop-off center located at the Public Works facility on White Road during designated hours, or place the

materials curbside for collection. The recycling facility will accept an array of recyclable materials including glass, tin, plastic, aluminum, appliances, newsprint paper, mixed paper, batteries, corrugated cardboard, tires, household paint and electronic components.

PUBLIC OUTREACH

A quarterly newsletter is distributed to Borough residents detailing pick-up schedules and the types of materials collected. Recycling guidelines and best-practices are outlined in the newsletter, and reminders are included about penalties for violating the Borough's recycling ordinance.

The Borough Website (www.shrewsburyboro.com) contains detailed information related to recycling, including collection zones, schedules for pickup, instructions for placing materials curbside, and drop off guidance.

RECOMMENDATIONS

The Borough should maintain and continually enhance its recycling program, and ensure that it remains consistent with New Jersey's Recycling Regulations effectuated by the New Jersey Department of Environmental Protection.

VIII. STORMWATER MANAGEMENT PLAN

Pursuant to the requirements of N.J.A.C. 7:14A-25 *Municipal Stormwater Regulations* the Borough of Shrewsbury, Monmouth County, New Jersey is required to adopt a Municipal Stormwater Management Plan (MSWMP), which outlines the strategy for the Borough of Shrewsbury (“Borough”) to address stormwater-related impacts. This plan contains the required elements described in N.J.A.C. 7:8 *Stormwater Management Rules*, and addresses groundwater recharge, stormwater quantity, and stormwater quality impacts by incorporating stormwater design and performance standards for new major development, defined as projects that disturb one (1) or more acre of land or increase impervious surface by one-quarter acre or more.

The standards incorporated herein are intended to minimize the adverse impacts of stormwater runoff related to water quality and flood control, along with the loss of groundwater recharge which provides baseflow in receiving water bodies. The plan also describes long-term operation and maintenance measures for existing and future stormwater management facilities.

The key elements incorporated into the Borough of Shrewsbury MSWMP include a “build-out” analysis based upon existing zoning and land available for development. Also included in the Borough’s MSWMP is a review and update of existing stormwater control ordinances, the Borough Master Plan, and other planning documents to allow for project designs that include low impact development techniques.

The final element of this plan is a mitigation strategy for when a variance or exemption of the design and performance standards is sought. As part of the mitigation section of the Stormwater Management Plan, specific stormwater management measures are identified to mitigate the impacts of development.

KEY GOALS

The Borough of Shrewsbury Municipal Stormwater Management Plan (MSWMP) has been prepared to meet the following key goals:

- A. To minimize the potential for flood damage to life and property.
- B. To minimize and effectively mitigate any increase in stormwater runoff from any new development or redevelopment proposals.
- C. To minimize or prevent the erosion of soil from any land development or construction activity.
- D. To assure the adequacy and hydraulic function of existing and proposed culverts and bridges, and other in-stream flow control or flood control appurtenances.
- E. To encourage through planning and design guidelines, the recharge of stormwater runoff to groundwaters to the extent as may be practical based upon soil and groundwater conditions.
- F. To prevent, to the greatest extent feasible, any increase in non-point source pollution.
- G. To maintain the integrity of Borough stream channels for their biological functions as well as for drainage by enhancing water quality and minimizing silt laden runoff.
- H. To minimize the presence of pollutants in stormwater runoff from new and existing development in an effort to restore, enhance, and maintain the chemical, physical, and biological integrity of the waters of the state. To protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, industrial, and other uses of water.
- I. To protect the public through the proper design and operation of stormwater management facilities.
- J. To re-open and preserve the economic resources of shellfish beds within the Shrewsbury River through runoff water quality enhancement.
- K. To reduce sedimentation of stream channels and tributaries of the Shrewsbury River through runoff water quality enhancement; and reduction of stream bank and stream channel erosion through soil erosion control and runoff quantity control.
- L. To promote the conservation of open space and natural resources, and prevent degradation of the environment through improper uses and/or intensities of land.

- M. To encourage coordination of municipal regulations and requirements with those of Monmouth County, the State of New Jersey and Federal Agencies which plan and/or regulate environmentally sensitive lands within the Borough, such as flood hazard areas, wetlands, and other environmentally sensitive areas.
- N. The regulation of stormwater management activities to ensure compliance with current and future Total Maximum Daily Loads of Pollutants (TMDL's) as determined by the NJDEP for receiving waterbodies.
- O. To promote the use of low impact development and redevelopment techniques to preserve environmental features.

To achieve these goals and objectives, this document outlines specific stormwater design and performance standards for development and re-development proposals within the Borough of Shrewsbury. Additionally, the MSWMP mandates certain stormwater management mitigation strategies to address impacts from existing development.

Preventative maintenance and corrective strategies are included in the MSWMP to ensure long-term effectiveness of stormwater management facilities. The plan also outlines safety standards for stormwater infrastructure to be implemented to protect public safety.

STORMWATER DISCUSSION

The grading, altering or development of land can dramatically affect the hydrologic cycle of a site, and ultimately an entire watershed as depicted in Figure 1. Prior to development, native vegetation can either directly intercept precipitation, or draw that portion that has infiltrated into the ground and return it to the atmosphere through evapotranspiration.

Development or alteration of a property's geophysical characteristics may replace this vegetation with lawn or impervious cover, thereby reducing the site's evapotranspiration and infiltration characteristics. The clearing and re-grading of a site may also remove natural depressions that temporarily store rainfall and reduce the amount of stormwater runoff to receiving water bodies.

Construction activities may also compact the soil layers and diminish a property's infiltration capacity, resulting in increased volumes and rates of stormwater runoff from the site to surface waters.

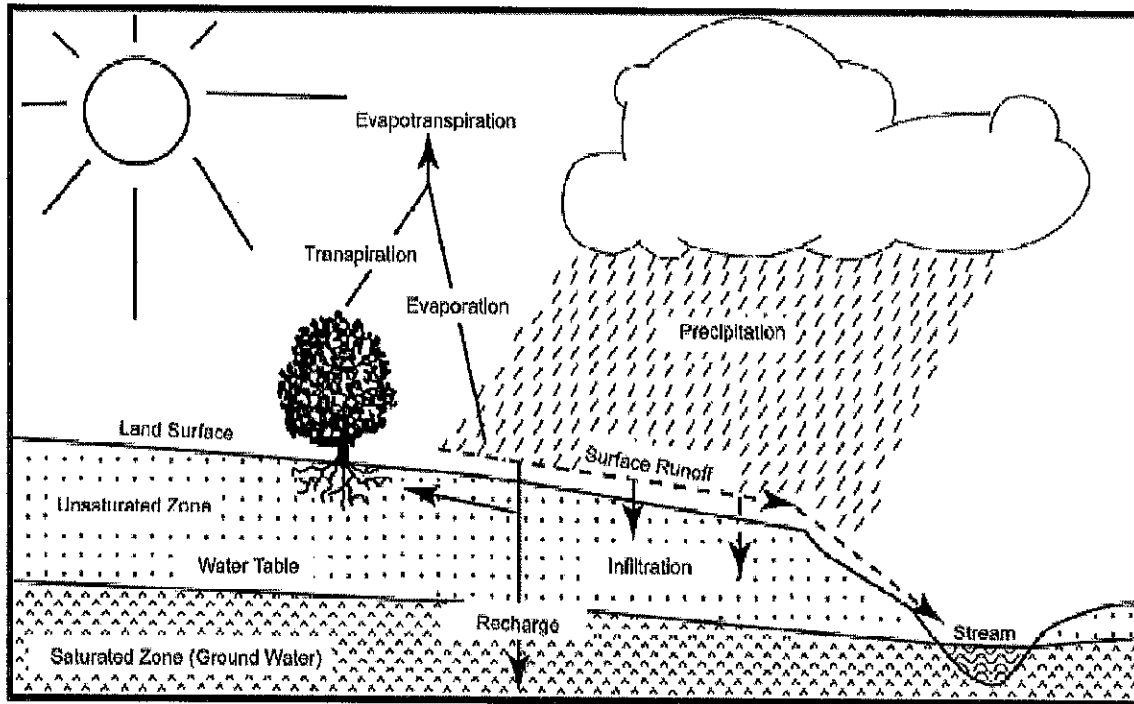
Impervious areas, which are connected to each other through gutters, channels, and storm sewers, convey runoff more rapidly than natural areas. This shortening of the transport, or travel time, increases the rainfall-runoff response of the drainage area, causing the floodwaters in downstream waterways to reach a rate of flow more rapidly and higher in magnitude than natural or pre-development conditions.

These increases typically create new, and aggravate existing downstream flooding and soil erosion issues and ultimately result in sedimentation of stream channels. The filtration of runoff and removal of pollutants, typically provided by surface and channel vegetation, is eliminated by the installation of storm sewers that discharge runoff directly into a stream corridor.

Increases in impervious area also decrease opportunities for infiltration which reduces the stream base flow and groundwater recharge levels. Reduced base flows and increased peak flows result in greater fluctuations between normal and peak flow rates, which may result in stream channel erosion. Reduced base flows can also negatively impact the hydrology of adjacent wetlands and the health of biological communities that depend on base flows. Finally, erosion and sedimentation can destroy habitat from which some species cannot adapt.

In addition to increases in runoff peaks, volumes, and loss of groundwater recharge, land development often results in the accumulation of pollutants on the land surface, which is subsequently mobilized and transported to streams by storm sewers. New impervious surfaces and cleared areas created by development can accumulate a variety of pollutants from the atmosphere, fertilizers, animal wastes, and leakage and wear from vehicles. Pollutants can include metals, suspended solids, hydrocarbons, pathogens, and nutrients.

FIGURE 1
Groundwater Recharge in the Hydrologic Cycle



Source: New Jersey Geological Survey Report GSR-32.

In addition to increased pollutant loading, land development or re-development may adversely impact water quality and stream biota in more subtle ways, such as stormwater falling on impervious surfaces or stored in detention or retention basins can become heated and raise the temperature of the downstream waterway, adversely affecting cold water fish species such as trout. Development activities may also remove trees along stream banks that normally provide shading, stabilization, and leaf litter that falls into streams and becomes food for the aquatic community.

Given the complexity and magnitude of hydrologic impacts associated with a development or redevelopment of land, or other alteration of physical characteristics of the topography of the lands of the Borough, this MSWMP outlines specific measures required to minimize such impacts.

BACKGROUND

In 1667, Shrewsbury was incorporated on the Second meeting of the Colonial Assembly, and was one of three (3) original townships in Monmouth County. Shrewsbury's first major industry was farming, most notably apple orchards. The Borough of Shrewsbury as it exists today was formed in 1926, and encompasses a 2.2 square mile land area in Monmouth County, New Jersey. The Borough's Historic Four Corners at the intersection of Sycamore Avenue and Broad Street is a National Historic District, which includes the Wardell House, the Allen House and Christ Church being listed on the State and National Registers of Historic Places. Fifty historic structures lie within the Borough dating from 1667 to the early 1900's.

The population of the Borough has increased from 2,962 in 1980, to 3,809 in 2010 resulting in the development of vacant lands and re-development of existing land uses. A need for age-restricted housing has also resulted in new development of vacant tracts within the Borough. The resulting changes in the landscape have likely resulted in increased stormwater runoff volumes and pollutant loads to the waterways of the municipality. Figures 2 and 3 depict the Borough of Shrewsbury municipal boundary on Aerial and USGS quadrangle maps.

The Atlantic Ocean moderates the Borough's temperate-humid climate. The Borough also receives an average of 44 inches of precipitation annually, with an average of 9.9 wet days per month. Snowfalls of four inches or more generally take place on an average of 3.5 times per winter.

Shrewsbury lies in the Outer Coastal Plain Province, specifically within the Red Bank-Tinton Sand formation. The Red Bank sand formation is dark gray-brown micaceous sandy clay that in its upper part becomes yellow reddish brown. In New Jersey, the Tinton sand formation is the youngest of the Cretaceous formations. The greenish-brown glauconite sands and clays are well hardened, forming the waterfall at Tinton Falls.

Shrewsbury's soils are generally found to be acidic. Soil conditions vary from the Freehold Soils generally found in the northwest sector of the Borough, to extremely acidic, poorly drained soils found in the southern portion of the Borough, as indicated on Figure 4. The four predominant soil types in the Borough are the following:

1. Holmdel sandy loam (HnA), which covers a large area in the east/southeast section of the Borough;
2. Freehold sandy loam (FrB, FUB & FrC), which covers an area in the central part from west to east, as well as sporadically in southwest and northeast areas of the Borough;
3. Colemanton loam (Cm), which appears in a thin band in the southern of the Borough; and
4. Kresson loam (KvA), which can be found in the southern part of the Borough.

FIGURE 2

BOROUGH OF SHREWSBURY



BOROUGH OF SHREWSBURY

SHREWSBURY MUNICIPAL STORMWATER MANAGEMENT PLAN

BOROUGH OF SHREWSBURY MONMOUTH COUNTY NEW JERSEY



Cranmer Engineering, P.A.

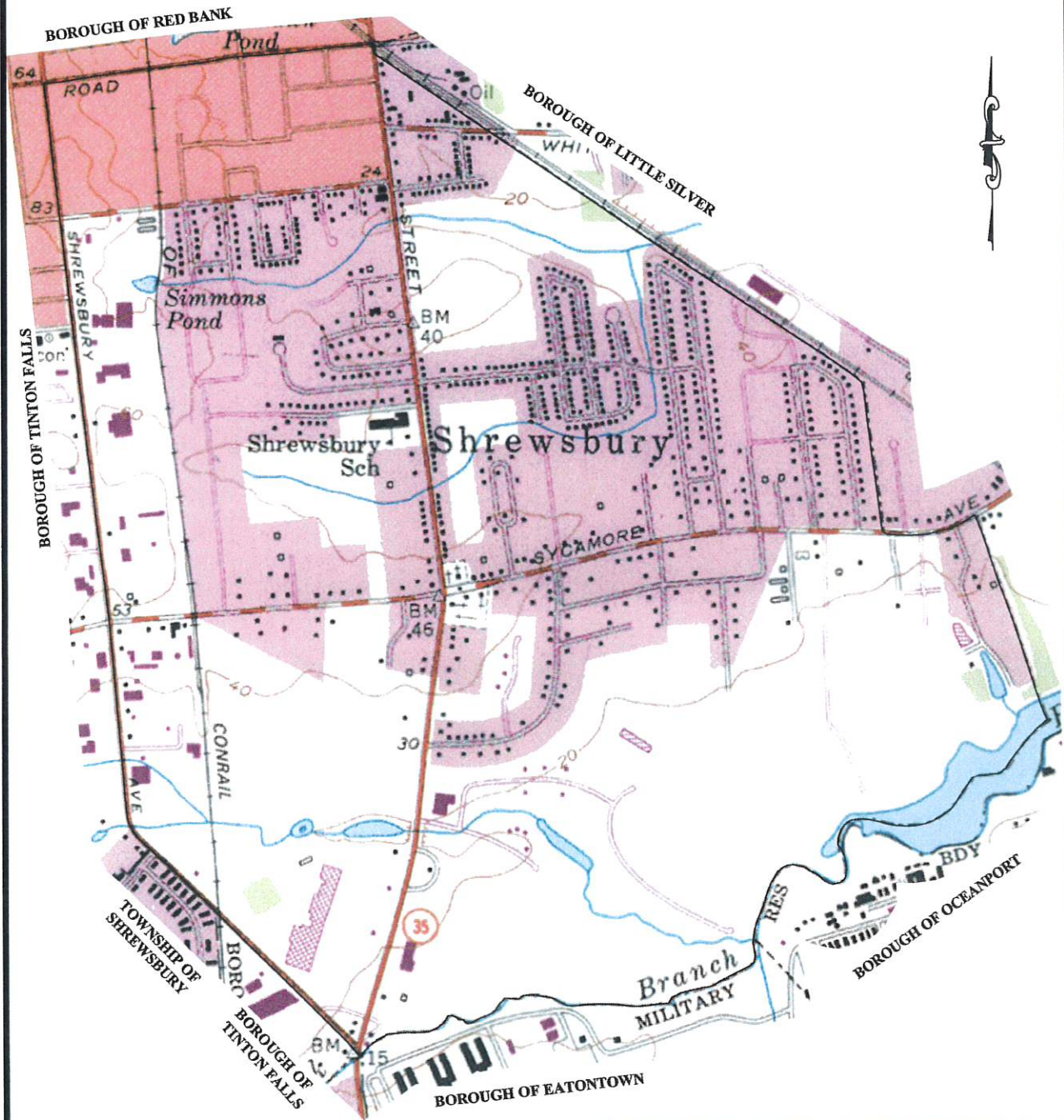
166 Patterson Avenue, Shrewsbury, NJ 07702
Tel (732) 212-8900 Fax (732) 212-8910

PROJECT NO. 1345-005-001	SCALE N.T.S.	DRAWN BY TAK	DESIGNED BY DAC
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FIGURE 3

BOROUGH OF SHREWSBURY

NAD-83 USGS QUADRANGLE 40073-C8-TF-024



USGS QUADRANGLE			
SHREWSBURY MUNICIPAL STORMWATER MANAGEMENT PLAN			
BOROUGH OF SHREWSBURY		MONMOUTH COUNTY	
NEW JERSEY			
Cranmer Engineering, P.A. 166 Patterson Avenue, Shrewsbury, NJ 07702 Tel (732) 212-8900 Fax (732) 212-8910			
PROJECT NO.	SCALE	DRAWN BY	DESIGNED BY
1345-005-001	N.T.S.	TAK	DAC

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FIGURE 4



The highest point within the Borough is 83 feet above sea level at the northwest corner of the Borough near the intersection of Shrewsbury Avenue and Patterson Avenue (the area that drains to Simmons Pond). The lowest point is sea level which is located at Parkers Creek in the southeast corner of the Borough. The range of elevations (from 83 feet to 0 feet) over a distance of about one mile in the Borough includes no large topographical features that strongly influence developments.

The Borough consists of two (2) types of wetlands, estuarine and freshwater. Parkers Creek is framed by estuarine wetlands which are composed of salt and brackish marshes and are home to myriad life forms. The food chain within these wetlands starts, at the bottom, with microscopic plankton which are fed upon by grass shrimp, and in turn become the food of many species of finfish such as fluke. The salt marsh is a nursery and feeding habitat for important food fishes and is an integral part of the ecological food chain. Oysters, Clams, mussels, shrimp and crabs also inhabit these wetland areas.

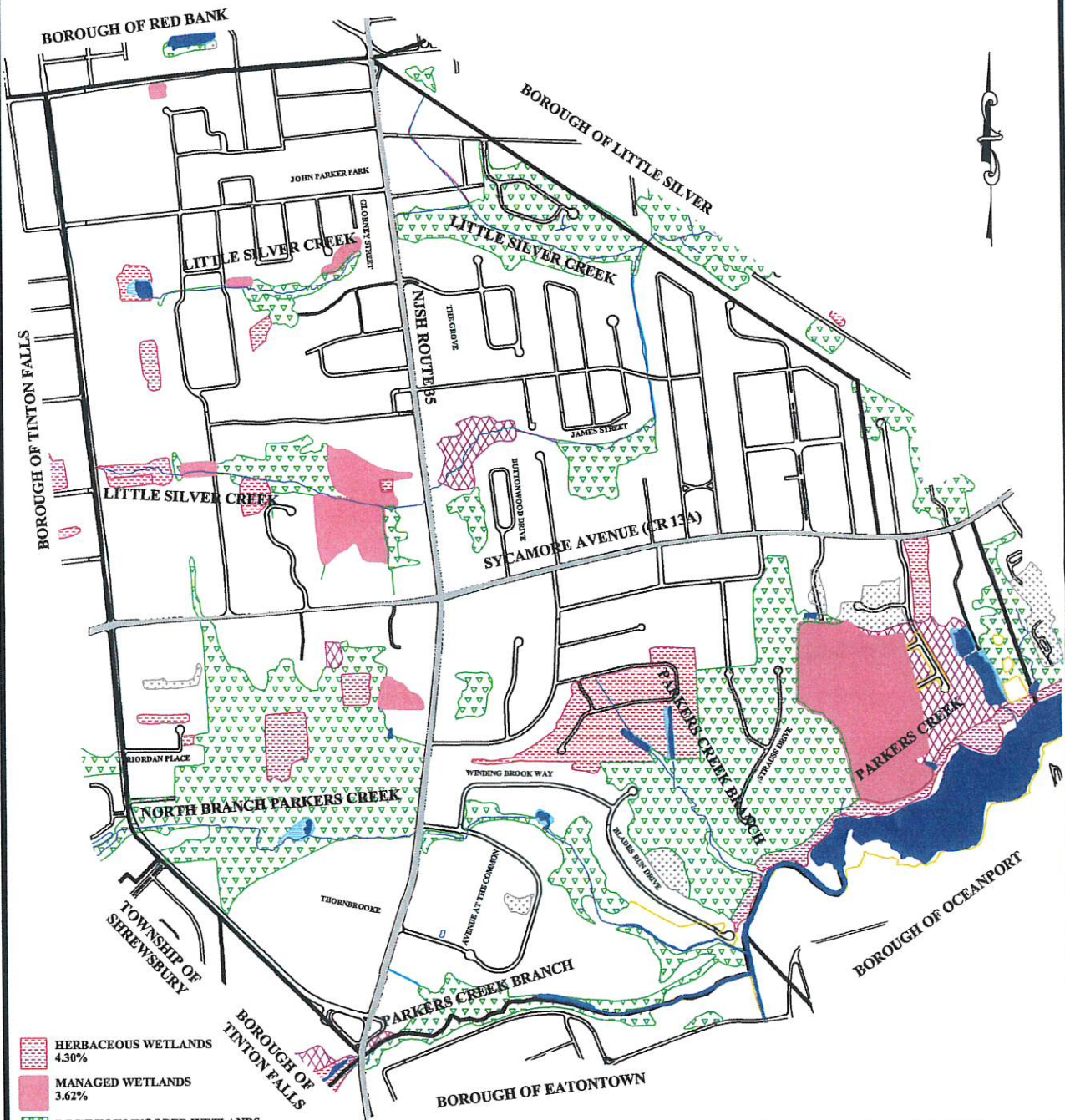
Additionally, estuarine wetland areas provide food and cover for migrating and breeding waterfowl. The Borough lies within the Atlantic Flyway, which is the traditional migratory bird route for hundreds of species of birds. Areas along Parkers Creek provide habitat for migratory waterfowl, songbirds and birds of prey. The Shrewsbury River is a Category 1 waterbody which has a significant hard clam and soft clam resource which is a source of nourishment for the birds. The clam beds are currently closed to commercial harvesting due to waterway impairment and the increased temperature of runoff. Upon re-opening, they shall enhance the economic value of the Shrewsbury River. The grasses and plants that grow in these marshes help to remove pollution from the water.

Freshwater wetlands are areas of freshwater marshes, bogs or swamps. Such wetlands lie scattered throughout Shrewsbury, as shown in Figure 5. Some of the larger expanses of these wetlands lie in tracts owned by the Borough north of Buttonwood Drive and also along the stream corridor that connects the wet-basins in the Azalea Farms development to Parkers Creek; as well as its tributary along Strauss Drive. Other large wetland areas lie at Thornbrooke, Parker Park ball field (Patterson Avenue), Glorney Street, west of the Conrail tracks and south of Riordan Place, across the stream behind the homes on the south side of James Street, on Sunnybank Drive, along the northern boundary of The Grove, and along the stream which flows behind the Shrewsbury Borough School.

Freshwater wetlands also exist on the Enclave at Shrewsbury tract along Avenue at the Commons and to the rear of some homes along Winding Brook Way and Blades Run Drive. Freshwater marshes are of great ecological value and support basic elements of the food chain which end with the important predators such as fish, turtles and mammals. The marshes serve as refuge for wintering and migratory populations of songbirds and waterfowl. Freshwater wetlands can serve as important predators such as fish, turtles and mammals. The marshes serve as refuge for wintering and migratory populations of songbirds and waterfowl. Fresh water wetlands can serve as important aquifer recharge areas.

FIGURE 5

BOROUGH OF SHREWSBURY WETLANDS



- HERBACEOUS WETLANDS
4.30%
- MANAGED WETLANDS
3.62%
- DECIDUOUS WOODED WETLANDS
12.46%
- DECIDUOUS SHRUB / SHRUB WETLANDS
1.65%
- DISTURBED WETLANDS
0.76%
- ARTIFICIAL LAKES
0.43%
- STREAMS & CANALS
- TIDAL WETLANDS
0.02%
- UPPER WETLANDS BOUNDARY

NOTES:
 TOTAL ACRES IN BOROUGH 1,403.58 ACRES
 TOTAL WETLANDS (23.24%) 326.36 ACRES

WETLANDS

SHREWSBURY MUNICIPAL STORMWATER MANAGEMENT PLAN
 BOROUGH OF SHREWSBURY MONMOUTH COUNTY NEW JERSEY

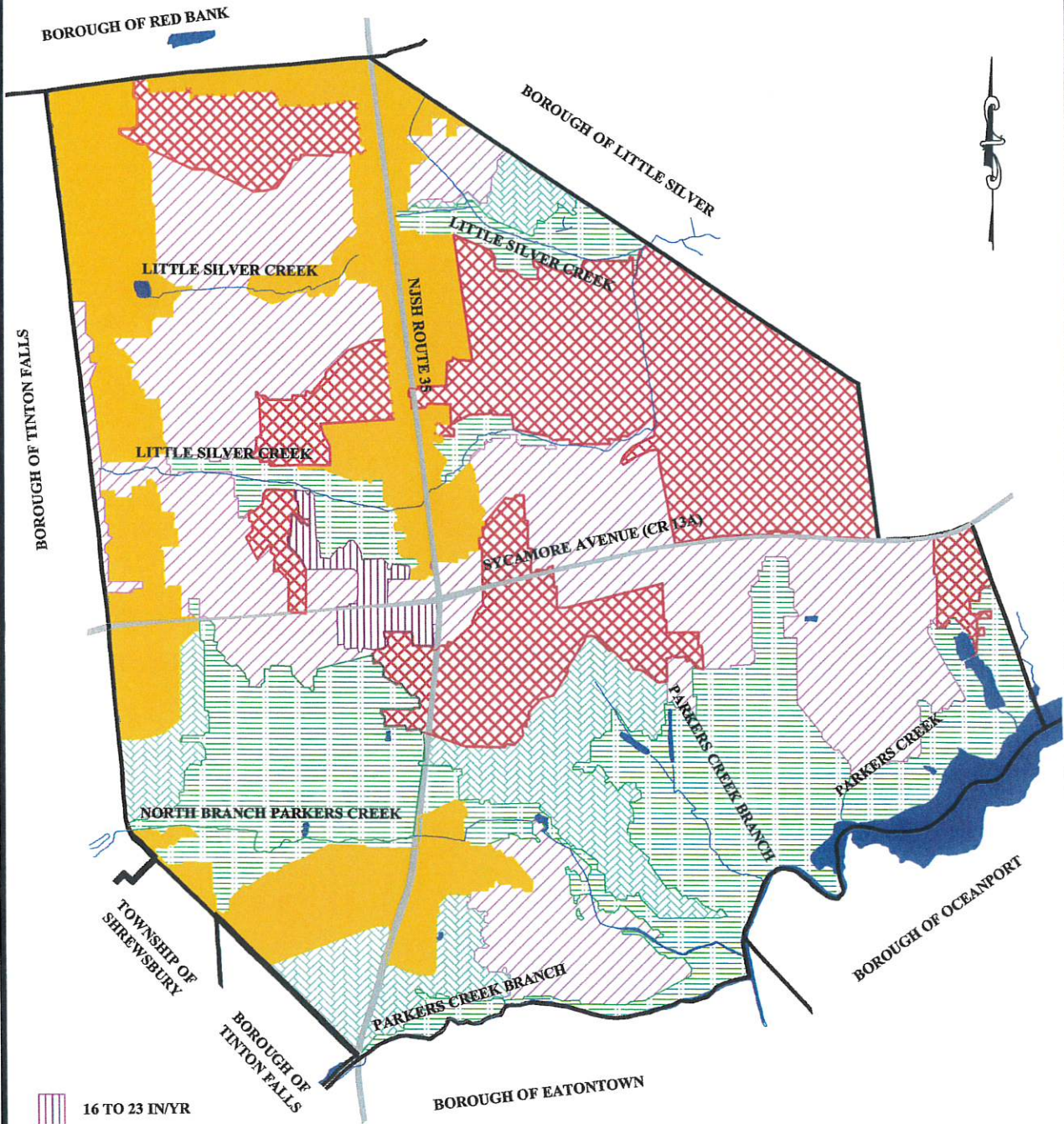
CETM Cranmer Engineering, P.A.
 166 Patterson Avenue, Shrewsbury, NJ 07702
 Tel (732) 212-8900 Fax (732) 212-8910

PROJECT NO. 1345-005-001	SCALE N.T.S.	DRAWN BY TAK	DESIGNED BY DAC
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FIGURE 6

BOROUGH OF SHREWSBURY GROUNDWATER RECHARGE AREAS



- 16 TO 23 IN/YR
- 11 TO 15 IN/YR
- 8 TO 10 IN/YR
- 1 TO 7 IN/YR
- 0 IN/YR
- HYDRIC SOILS
- WETLANDS & OPEN WATER
- NO RECHARGE CALCULATED

GROUNDWATER RECHARGE AREAS			
SHREWSBURY MUNICIPAL STORMWATER MANAGEMENT PLAN			
BOROUGH OF SHREWSBURY		MONMOUTH COUNTY	
NEW JERSEY			
Cranmer Engineering, P.A. 166 Patterson Avenue, Shrewsbury, NJ 07702 Tel (732) 212-8900 Fax (732) 212-8910			
PROJECT NO.	SCALE	DRAWN BY	DESIGNED BY
1345-005-001	N.T.S.	TAK	DAC

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BOROUGH WATERWAYS

The Borough lies within the Navesink-Shrewsbury River Drainage Basin having all surface water flow to Parkers Creek or to Little Silver Creek. Runoff then flows through Little Silver, and ultimately into the Shrewsbury River. The four (4) streams that transect the Borough divide Shrewsbury into smaller watersheds, as illustrated in Figure 7.

A Southern Branch of Parkers Creek (Lafetras Brook) originates in the section of Tinton Falls which lies to the east of the Garden State Parkway, to the west of Hope Road, and to the north of Tinton Avenue. The Northern Branch of Parkers Creek (Cameron Creek) also originates in Tinton Falls but just to the east of Hope Road and South of Sycamore Avenue. Cameron Creek flows under Shrewsbury Avenue just north of Shrewsbury Township and receives runoff from the north along the west side of the Conrail tracks. It continues through the Thornbrooke development, drains to the east side of the Conrail tracks and enters Broderson's Pond, which was once dammed and surrounded with ornamental brick and fieldstone. The second pond on the property, which appears on the National Wetland Inventory Maps, has been silted in as a result of nearby development and lies just west of NJ State Highway Route 35.

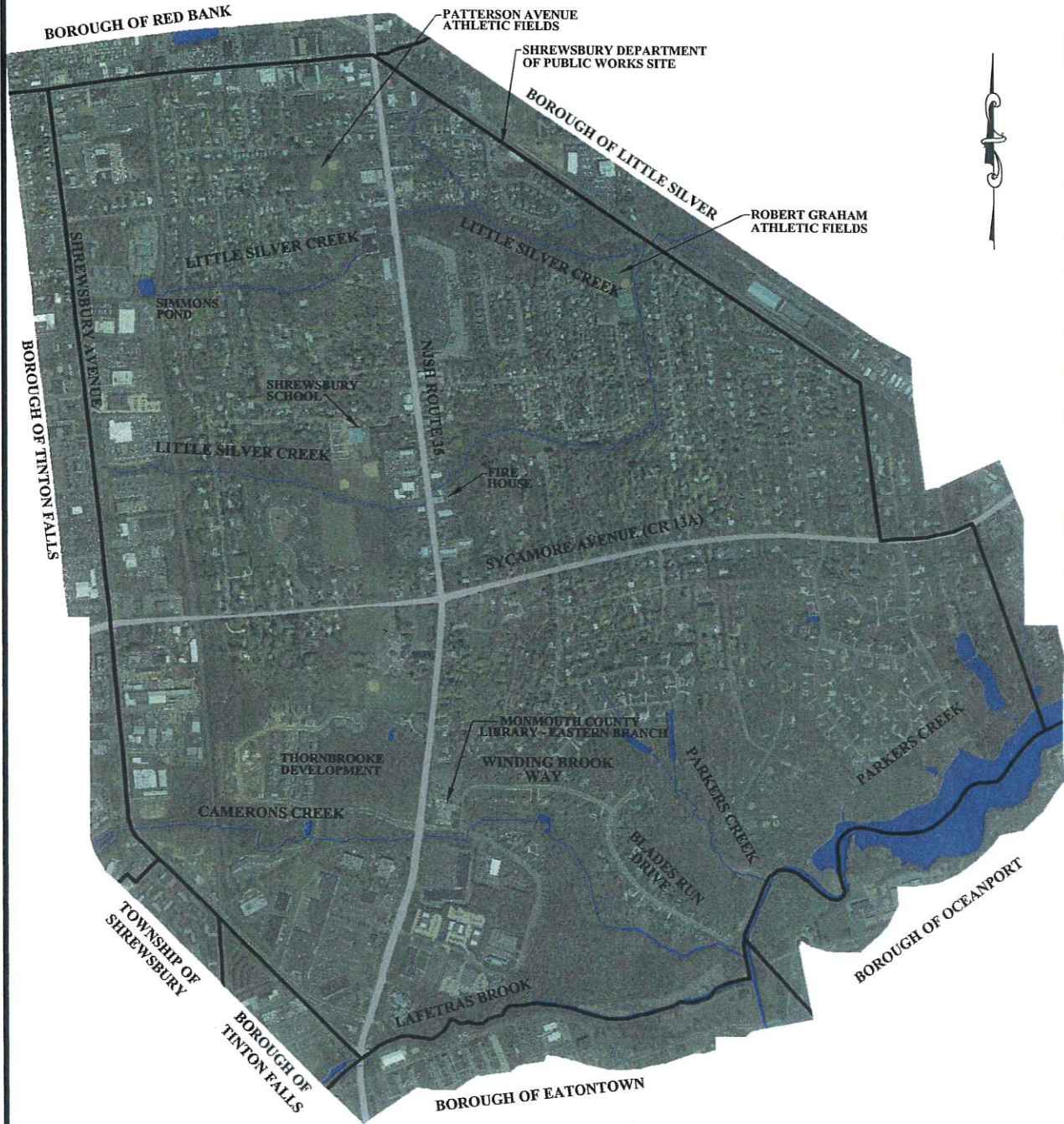
The stream is conveyed under Broad Street just south of the Monmouth County Eastern Branch Library and subsequently serves as the border between the residential properties on Winding Brook Way and Blades Run Drive, and the commercial properties along Avenue at The Commons. These two streams converge at the cul-de-sac at the southern end of Blades Run Drive and become Parkers Creek.


The other two main streams in the Borough originate in the area east of Shrewsbury Avenue and merge to become Little Silver Creek. The more southerly of these two unnamed streams starts at Shrewsbury Avenue in the area of North Gilbert Street. It flows south of Obre Place and the Shrewsbury Borough School, under NJ State Highway Route 35 just north of the firehouse, meanders through the Buttonwood Conservation Area and then turns north and passes between Sickles Place and Garden Road. It continues along the east side of Robert Graham Athletic Field (commonly know as Sickles Field) until it merges with the northern tributary to Little Silver Creek.

The more northerly tributary of Little Silver Creek, unofficially referred to as Little Silver Brook, originates in the area of Shrewsbury that drains into Simmons Pond, just to the southeast of the intersection of Patterson and Shrewsbury Avenues. The stream flows from the pond under the Conrail tracks. Part of its easterly flow through the Borough is channeled. Also, during an earlier period of construction in the Borough, when less was known of streams and their drainage patterns, it was piped for some of its distance (underneath the parking lot and buildings which are called The Grove West across from The Grove on NJ State Highway Route 35). This stream is piped under NJ State Highway Route 35 and the detention basins of The Grove empty into it. A drainage ditch collecting water from the northern side of White Road and running behind the properties of North Monroe also feeds into this stream, which divides Country View Estates from Heritage Green. The detention basins of Heritage Green drain into it as well. It then flows through Borough owned property marking the northern boundary of Sickles Park.

FIGURE 7

BOROUGH OF SHREWSBURY WATERWAYS



WATERWAYS				
SHREWSBURY MUNICIPAL STORMWATER MANAGEMENT PLAN				
BOROUGH OF SHREWSBURY		MONMOUTH COUNTY		NEW JERSEY
 Cranmer Engineering, P.A. 166 Patterson Avenue, Shrewsbury, NJ 07702 Tel (732) 212-8900 Fax (732) 212-8910				
PROJECT NO. 1345-005-001	FILE NAME: WATERWAYS.DWG	SCALE N.T.S.	DRAWN BY TAK	DESIGNED BY DAC

These two northerly streams converge just before passing under the NJ Transit tracks between the end of Garden Road and the Borough Public Works site and then become Little Silver Creek.

Nonpoint source pollution is the main cause of nutrient enrichment in the Borough's streams. Due to the increase in nutrients, algae and weeds become abundant reducing oxygen, harming aquatic life and causing the accelerated aging of the streams. This progression is affecting the ponds on Sunnybank Drive, on the Thornbrooke development, between Winding Brook Way and Avenue Of The Common, and the wet basins that collect stormwater runoff on the Ester W. Hymer Nature Preserve. Sediment laden runoff exacerbates this condition by facilitating the siltation of stream beds resulting in poor hydraulic conveyance characteristics.

Parkers Creek, on the southerly border of the Borough, and its tributaries are included in a Regional Stormwater Management Study for the Parkers Creek Watershed currently being undertaken jointly by the Freehold Soil Conservation District and the Monmouth County Planning Board. The NJDEP and other regulatory agencies collect water quality chemical data on the streams in the state. The Shrewsbury Environmental Commission periodically collects water quality data of the Borough streams. The MSWMP will be updated as this information becomes available.

A TMDL is the amount of a pollutant that can be accepted by a water body without causing an exceedance of water quality standards or interfering with the ability to use a water body for one or more of its designated uses. The allowable load is allocated to the various sources of the pollutant, such as stormwater and wastewater discharges, which require an NJPDES permit to discharge, and nonpoint source, which includes stormwater runoff from agricultural areas and residential areas, along with a margin of safety. Provisions may also be made for future sources in the form of reserve capacity. An implementation plan is developed to identify how the various sources will be reduced to the designated allocations. Implementation strategies may include improved stormwater treatment plants, adoption of ordinances, reforestation of stream corridors, retrofitting stormwater systems, and other BMPs.

The New Jersey Integrated Water Quality Monitoring and Assessment Report (305(b) and 303(d)) (Integrated List) is required by the federal Clean Water Act to be prepared biennially and is a valuable source of water quality information. This combined report presents the extent to which New Jersey waters are attaining water quality standards, and identifies waters that are impaired. Sublist 5 of the Integrated List constitutes the list of waters impaired or threatened by pollutants, for which one or more TMDLs are needed.

The following waterway(s) of the Borough appear on Sublist 5:

Appendix I B Sublist 5 of the 2004 Integrated List (By Waterbody/Parameter) With Priority Ranking						
Region	WMA	Station Name/Waterbody	Site ID #	Impairment	Priority	Data Source
Atlantic Coast	12	Parker Creek Branch-Tidal	40, R04	Dissolved Oxygen	Medium	MONITORING, NJDEP Coastal Monitoring

Parkers Creek is ranked as a medium priority, on Appendix I-B of Sublist 5, with impairment noted for dissolved oxygen, which indicates that a TMDL shall be required to enhance water quality requirements.

Appendix 1-C of Sublist 5, which is re-printed in pertinent part below, indicates those waterbodies for which a TMDL is required by 2006. Parkers Creek does not appear on this list, therefore, no immediate action is required.

Appendix 1-C

State of New Jersey's
2004 Integrated Water Quality monitoring and Assessment Report
June 22, 2004

TMDLs or other responses to be completed by 2006:
--

Atlantic Coastal Region:			
WMA 12			
Site ID	Station Name	Non-Attainment Parameter(s)	Response(s) by 2006:
01407760	Shark River near Neptune	Phosphorus	TP TMDL
Wreck Pond	Wreck Pond-12	Fecal coliform	Fecal TMDL

A TMDL for the Parkers Creek watershed will be prepared by NJDEP and assigned at a date in the future. Thus, the required TMDL shall subsequently be incorporated into the Borough of Shrewsbury MSWMP as a plan amendment.

DESIGN & PERFORMANCE STANDARDS

The Borough of Shrewsbury adopted the design and performance standards for stormwater management measures as presented in N.J.A.C. 7:8-5 to minimize the adverse impact of stormwater runoff on water quality and water quantity and loss of groundwater recharge in receiving water bodies. The design and performance standards include the language for maintenance of stormwater management measures consistent with the stormwater management rules at N.J.A.C. 7:8-5.8 *Maintenance Requirements*, and language for safety standards consistent with N.J.A.C. 7:8-6 *Safety Standards for Stormwater Management Basins*. The ordinances were subsequently approved by the Monmouth County Planning Board and remain in full effect.

Chapter 94 of the Shrewsbury Administrative Code, entitled *Zoning and Land Development*, has been amended to incorporate nonstructural stormwater management strategies into basic design guidelines. Changes were made to the following articles of Chapter 94 to incorporate these challenges:

Article V. General Provisions and Regulations

Section 94-5.9: Building Requirements; Subsection C.2: The maximum coverage of a lot by buildings shall be as set forth in the Schedule of Zoning District Regulations and expressed as the percentage of total building area to land area wherein the land area is the area of the lot less any area over which construction of buildings or roadways is prohibited because of riparian lands, lakes, ponds, tidelands, tidal wetlands, freshwater wetlands or wetland buffer areas.

Section 94-5.13: Preservation of Natural Features: Wherever feasible, all of the following shall be preserved in their natural state: Jurisdictional Freshwater Wetlands as defined by the New Jersey Wetlands Act of 1970 and the Freshwater Wetlands Act of 1987 and delineated on wetlands maps prepared by the New Jersey Department of Environmental Protection and as defined by the New Jersey Department of Environmental Protection Coastal Management Development Policies and contained in the New Jersey Administrative Code and wetlands and wetland (hydric) soils as regulated by the United States Army Corps of Engineers.

Section 94-5.24. Wetlands Permit: No building, structure or use shall be permitted within areas defined as freshwater wetlands or buffer zones by the New Jersey Wetlands Act of 1970 and the Freshwater Wetlands Act of 1987 and delineated on the wetlands maps prepared by the New Jersey Department of Environmental Protection or delineated in accordance with regulations promulgated under the Act, except in accordance with a permit issued under the Act.

Section 94-5.27. Floodplain Management: Within a flood hazard area designated pursuant to Article X, §94-10.13B, and regulated pursuant to §94-10.13, the following design standards shall apply to developments requiring a floodplain encroachment permit:

Subsection C - Utilities; (2): New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

Subsection D - Subdivision Applications; (3): All subdivision applications shall be designed to have adequate drainage provided to reduce exposure to flood damage.

Subsection D - Subdivision Applications; (4): Base flood elevation data shall be provided for all minor and major subdivision applications and for all other proposed development which is greater than one (1) acre.

Subsection D - Subdivision Applications; (5): In reviewing subdivision applications, §94-5.13 "Preservation of natural features" shall be enforced.

Subsection G – Additional Conditions; (5): All fill and other earthwork must be carried out according to the Freehold Soil Conservation District and NJDEP regulatory requirements.

Subsection H - Floodways; (3): The construction, alteration, enlargement or rebuilding of any structure in a floodway is prohibited.

Article VI. Development Application Procedures and Plat Details

Section 94-6.4. Applications For Development Requiring Planning Board Or Board Of Adjustment Action; Subsection F.7: Adequate provision has been made for the collection and disposal of stormwater runoff and the proposed drainage facilities have been approved by the Board Engineer.

Article VIII. Design Standards and Improvement Specifications

Section 94-8.9. Clearing And Grading; Subsection G: Lot and site grading. Lots and sites shall be graded to ensure proper drainage and to prevent the collection of stormwater. Said grading shall be performed in a manner which will minimize the damage to or destruction of trees growing on the land. Topsoil shall be provided and/or redistributed on the surface as cover and shall be stabilized by seeding or planting. Grading plans shall be submitted with the preliminary and final site plans or subdivision plans, and any departure from these plans must be approved in accordance with the requirements of this chapter for the modification of improvements. Grading shall be designed to prevent or minimize drainage to structures or improvements when major storms, exceeding the design basis of the storm drainage system, occur.

Section 94-8.9. Clearing And Grading; Subsection G.3: The minimum slope for lawns shall be two percent (2%) and, for smooth hard-finished surfaces, other than roadways, one percent (1%).

Section 94-8.11. Curbs And Gutters; Subsection A: Curbing shall be constructed in accordance with RSIS requirements for all major subdivisions. In the case of minor subdivisions, the municipal appraising authority shall require certain improvements, if deemed necessary, in accordance with RSIS standards.

Section 94-8.14. Easements; Subsection A: Drainage easements shall be required in accordance with RSIS standards for all residential developments.

Section 94-8.26. Off-street Parking; Subsection A.12: Residential developments shall provide sufficient off-street parking facilities as required by RSIS Standards.

Section 94-8.38. Storm Drainage Facilities: This section has been amended to support the Borough policy for flood control, groundwater recharge and pollutant reduction:

Subsection A: Flood control, groundwater recharge, and pollutant reduction through nonstructural or low impact techniques shall be explored before relying on structural BMPs. Structural BMPs should be integrated with nonstructural stormwater management measures and proper maintenance plans. Nonstructural measures include both environmentally sensitive site design and source controls that prevent pollutants from being placed on the site. Source control plans should be developed based upon physical site conditions and the origin, nature, and the anticipated loading of potential pollutants. Multiple stormwater management BMPs may be necessary to achieve the established performance standards for water quality, quantity, and groundwater recharge.

The Borough encourages environmentally sensitive site design and low impact development techniques which do not inhibit low impervious coverage.

The ordinance, in great detail, defines the purpose, applicability of the policy, compatibility with other permit and ordinance requirements; and addresses design and performance standards for stormwater management measures; stormwater management requirements for major development; nonstructural stormwater management strategies; erosion control, groundwater runoff and groundwater recharge; standards for structural stormwater management measures; sources for technical guidance; safety standards for trash racks, overflow gates and escape provisions; variance or exception from safety standards; requirement of site development stormwater plan; maintenance plan for the stormwater measures; and provides a checklist of requirements and a section defining terms used.

Section 94-8.40. Street Design And Construction; Subsection G.3: In residential subdivisions, the design of streets shall be in accordance with the standards contained in RSIS as currently amended.

During construction, Borough personnel, along with inspectors from the Freehold Soil Conservation District, shall observe the construction of the project to ensure that the stormwater management measures are constructed and function as designed. In addition, prior to major development approval, the Borough shall require a long term maintenance plan for all stormwater management facilities proposed, and shall further require the posting of escrow monies and or maintenance bonds, where appropriate to ensure the long term maintenance and proper function of all facilities constructed.

The Borough shall also ensure the continued long-term maintenance of stormwater management facilities through the requirement of filing annual reports by responsible parties, and posting of maintenance trust and escrow funds.

Applicants are required to integrate structured and non-structural Stormwater management strategies as outlined in the NJDEP BMP Manual. The applicants shall have the ability to select the mitigation strategy contained in the BMP manual that is best suited for their specific application. The Borough reserves the right to review and recommend alternate strategies to meet the intent of the Stormwater control ordinance and MSWMP.

PLAN CONSISTENCY

The Borough of Shrewsbury is in the Freehold Soil Conservation District Regional Stormwater Management Planning Area (Monmouth County). The Borough has been advised that a Regional Stormwater Management Study of the Parkers Creek Watershed is in progress. If necessary, the MSWMP will be updated to be consistent with a future Regional Stormwater Management Plan (RSWMP) which may result from the ongoing study.

Shrewsbury's Stormwater Management Ordinances require all development and redevelopment plans to comply with New Jersey's Soil Erosion and Sediment Control Standards. During construction, Borough inspectors will observe on-site soil erosion and sediment control measures and report any inconsistencies with the Freehold Soil Conservation District.

Shrewsbury's Stormwater Management Plan is an element of the Borough of Shrewsbury Master Plan and is consistent with the Residential Site Improvement Standards (RSIS), N.J.A.C. 5:21. The Borough will utilize the most current update of the RSIS in the stormwater review of residential areas. The MSWMP will be updated to be consistent with any future updates to the RSIS.

In addition to the above, the Borough Environmental Commission has established and implemented a Water Quality Monitoring Program, which shall be executed in concert with the Municipality's obligation to perform routine outfall monitoring. The data collected by the Environmental Commission shall be incorporated herein as relevant data becomes available.

The Borough has implemented certain planning strategies as part of its ongoing Master Plan process, including those outlined below:

- Planning in the Borough of Shrewsbury will include a variety of residential and nonresidential uses which will be compatible with existing development patterns and in accordance with constraints of environmental features which are a major physiographic aspect of the Borough.
- Consider and evaluate innovative development proposals which would enhance and protect environmental features, minimize energy uses and encourage development densities consistent with existing patterns of development.
- The Planning Board in conjunction with other boards and agencies will continue to review development proposals in terms of natural and environmental resources including floodplains, wetlands, wetland buffer areas, intermittent streams and surface drainage areas, and areas suitable for public and quasi-public recreation activities.
- Encourage establishment of reasonable lot coverage for building, parking lots and other impervious surfaces and ensure open space and buffers on all development sites.
- Encourage wooded, landscaped and grass buffer areas along Route 35, Newman Springs Road (County Route 520) and Shrewsbury Avenue.

In terms of open space, the 1978 Master Plan recommended that a green belt system be initiated along stream corridors to link parks and schools sites to other open space and wetland areas. The plan provided for green belts along Parker's Creek and its tributaries and along Little Silver Creek and its tributaries. The green belt along Parker's Creek is now nearly complete. The Master Plan incorporates conservation areas including the NJDEP designated wetlands along Parker's Creek in the vicinity of Blade's Run Drive and also delineates flood hazard areas. The flood hazard areas are comparable to the green belt areas which were included in the 1978 Master Plan and it is recommended that these flood hazard areas be protected from development. Environmental regulations at the state and federal levels should be adhered to relative to the flood hazard areas and to NJDEP designated saline and freshwater wetlands.

The New Jersey Department of Environmental Protection, Division of Coastal Resources, Coastal Resources and Development Policies (N.J.A.C. 7:7E-1.1 et. seq.) designate the following special areas which are physiographically applicable to Shrewsbury Borough: Natural Waters Edge – Floodplains, which are defined as flood hazard areas by the Flood Hazard Area Control Act (N.J.S.A. 58:16A-50) or by the Federal Emergency Management with the Federal Executive Order 11988 on Floodplain safeguarding waterfront resources within the state. Development is discouraged in these areas by State and Federal policies. The CAFRA policy on wetlands which are defined as lands inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation adapted for life in saturated soil conditions, also applies to Shrewsbury Borough. In general, development of all kinds is prohibited in the wetlands areas unless the proposed development can meet certain criteria. These include developments which required water access or are water oriented, have no prudent or feasible alternative on a non-wetland site, will result in minim feasible alterations or impairment of the wetland, and will result in minimum feasible alterations or impairment of the natural contour or the natural vegetation of the wetlands. Related to the wetlands area are the CAFRA definition and policies concerning wetlands buffers which are all lands within 300 feet of wetlands as defined by CAFRA. Development is prohibited in a wetlands buffer area unless it can be demonstrated that the proposed development will not have a significant adverse impact on the wetlands and on the natural ecotone between the wetlands and the surrounding upland.

CAFRA also regulates intermittent stream corridors. Intermittent streams do occur within the Borough of Shrewsbury along the tributaries and low-lying areas feeding into Parker's Creek and Little Silver Creek. Natural drainage areas can be protected as part of the site plans and subdivision review process, and protection of these areas is encouraged.

While the area east of Broad Street is included within the CAFRA region, the policies established by CAFRA and the NJDEP in conjunction with Federal agencies are important to the Borough for areas west of Broad Street also. Stream corridor areas in the vicinity of Meadow Drive, the Elementary School and north of Shrewsbury Plaza Shopping Center should be protected and preserved to the greatest extent possible since they are an important visual and natural resources within the Borough. These areas also provide a very important function of allowing Stormwater to travel overland and recharge soils while reducing the need for expensive subsurface piped drainage systems.

The Parks, Recreation, Conservation and Open Space Plan Element is a very important long-term planning goal and objective since many of the sensitive environmental areas along stream corridors, particularly Parker's Creek, have not yet been developed. Historically, these areas are not advantageous to development due to the severe problems of surface and subsurface drainage and flooding, wet subsoils, etc. These areas do, however, form an important visual, aesthetic and physiographic role in the future development of the Borough. The present character of development in Shrewsbury Borough has occurred in part as a result of these key natural resources features.

NON-STRUCTURAL STORMWATER MANAGEMENT STRATEGIES

The Borough of Shrewsbury has reviewed the master plan and ordinances, and has provided a list of the sections in the Shrewsbury Administrative Code land use and zoning ordinances that are to be modified to incorporate nonstructural stormwater management strategies. Once the ordinance texts are completed, they will be submitted to the Monmouth County Planning Board for review and approval within twelve (12) months of the adoption of the Stormwater Management Plan. A copy will be sent to the Department of Environmental Protection at the time of submission.

Borough Ordinance 837

On June 24, 2004, The Shrewsbury Borough Council voted unanimously to adopt Ordinance 837, thereby creating a new zoning district, *Planned Senior Citizen Development* (PSC-3), for the 39.6 acres bordering Parkers Creek. Of the 39.6 acres, only 19 acres are deemed developable based on the New Jersey Department of Environmental Protection maps and studies of field surveys, Natural Inventory maps prepared by the Shrewsbury Environmental Commission and **Section 94-5.13 Preservation of Natural Features** and **Section 94-5.27 Floodplain Management**. The PSC-3 Zoning District is limited to single family detached dwellings with a minimum lot area of 6,600 square feet with a maximum building coverage of 30% and a maximum total of impervious coverage of 35%. Pursuant to the ordinance, all on-site and off-site drainage facilities shall be provided in accordance with Borough requirements and regulations.

Impervious Coverage is defined in **Section 94-2.3 Definitions** as any natural or manmade surface which does not permit infiltration of water and which causes surface runoff. All buildings, parking areas, driveways, roads, sidewalks, and any areas in concrete and asphalt shall be considered an "impervious surface" within this definition. Porous asphalt and concrete shall be deemed to be an impervious surface. In addition areas determined by the Borough Engineer to be impervious within this definition will also be classed as "impervious surface" coverage

The Borough has 10 residential zoning districts with varying minimum lot size requirements. Each district has a maximum percent impervious surface allocation of 20 percent for detached single-family residences with minimum lot sizes ranging from 6,000 to 45,000 square feet; 40 percent for a planned age restricted cluster development, which has a minimum lot size of five acres and 35 percent for a planned age-restricted development with minimum lot area of 6,600 square feet. The Borough has six types of non-residential districts: general business, shopping / office center, highway commercial, professional offices, office parks, office / business service. Each district has a designated percentage of lot coverage for impervious surface: 60 percent to 65 percent for a maximum lot coverage ranging from 20,000 square feet for the general business district to 88,000 square feet for an office park district.

The Borough continues to evaluate the maximum allowable impervious cover in each zone. If a developer is granted a variance to exceed the maximum allowable impervious cover, the applicant must mitigate the impact of the additional impervious surfaces through the use of mitigation strategies in compliance with the BMP Manual.

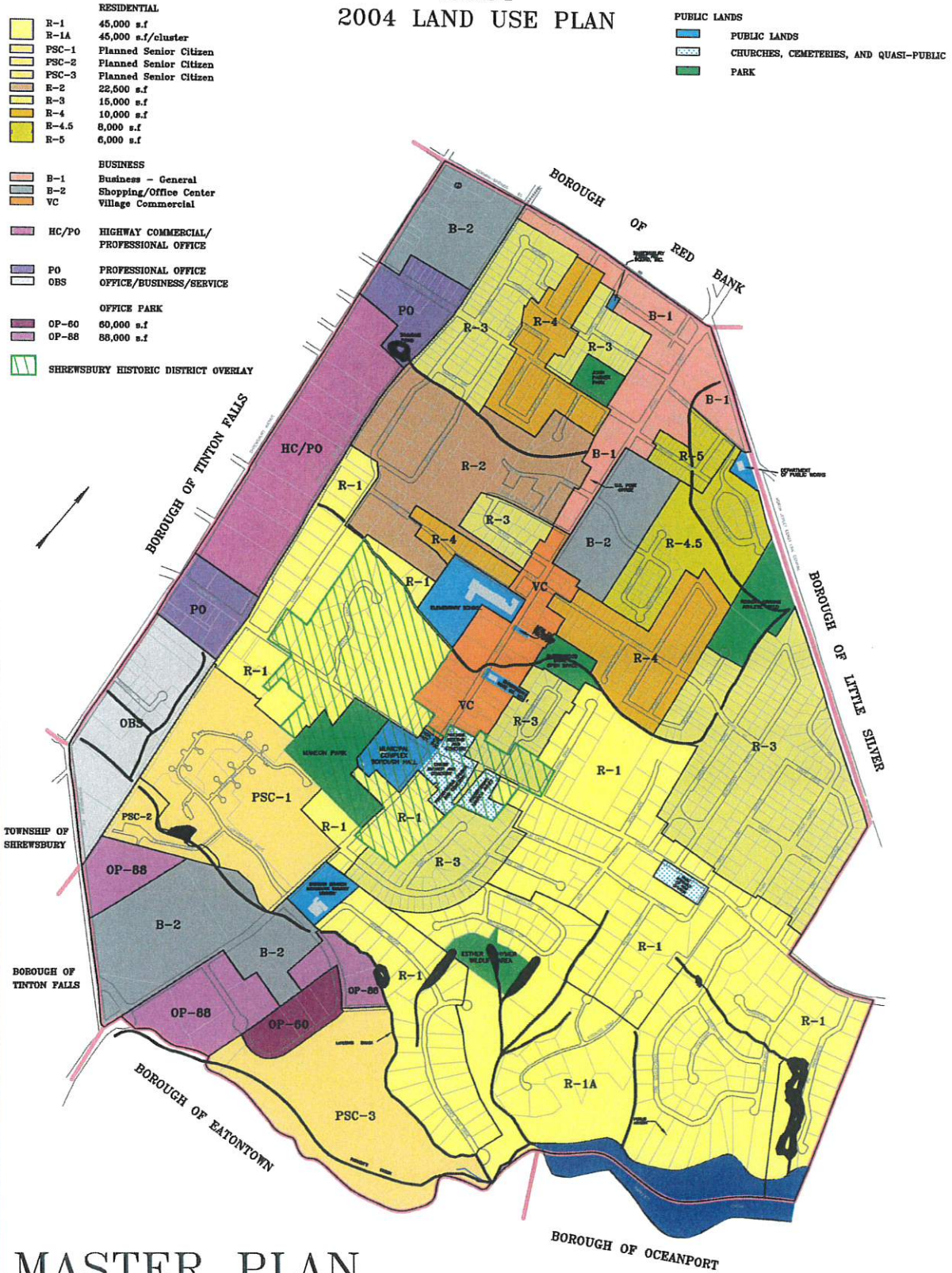
The mitigation effort must address water quality, flooding and groundwater recharge as described in **Section 94-8.38 Storm Drainage Facilities**.

The Planning Board shall continue to encourage the use of low impact design techniques, along with non-structural stormwater management strategies to meet the goals of this Plan. Applicants are required to utilize mitigation strategies which are incorporated in the NJDEP Best Management Practices (BMP) Manual for innovative stormwater design strategies to advance this goal.

The BMP Manual is hereby incorporated herein by reference.

FIGURE 8

DRAFT 2004 LAND USE PLAN



MASTER PLAN BOROUGH OF SHREWSBURY Monmouth County New Jersey

Adopted: _____ 2004
 Base Map: Updated by Monmouth County Planning Board 1985, 11/87, 5/79, 7/80, 2/82
 Updated by T&M Associates 6/83, 11/87, 3/90, 12/93, 6/01, 11/03
 H:\SHDR\00070\Plans\MSTRPLN_11-14-03.DWG

0 100 200 400
 Scale in Meters

0 400 800 1600
 Scale in Feet



LAND USE & BUILD-OUT ANALYSIS

The Borough has endorsed the Monmouth County Planning Board Projections of May 2004 for the Borough of Shrewsbury of Developable Land by Composite Zone, Potential Development, and Population & Employment Projections for 2025 and has incorporated the Monmouth County Planning Board detailed land use and potential development analysis for the years 2005 and 2025 in the Shrewsbury 2004 Cross Acceptance Report.

The County's municipal population projections for the years 2005 and 2025 were based on the 2000 Census and 1995 statistics of the last developable land of 39.6 acres (Block 70.2, Lot 6) as shown in Figure 9. The Potential Development Projections for 2025 of 3,716 were based on a 2.97 person per household ratio.

As evidenced by Figure 9, the Borough of Shrewsbury has less than one (1) square mile of vacant or developable land, thus a Build Out analysis is not required pursuant to the requirements of N.J.A.C. 7:14A-25 *Municipal Stormwater Regulations*.

FIGURE 9

**Monmouth County Planning Board Projections
Shrewsbury Borough**

Date: Jan. 10, 2005

Developable Land By Composite Zone									
	Conser- vation Recreation	Single Family Residential	Multi-family Residential	Mixed-Use	Commercial	Office Business	Research Office Warehouse Laboratory	Industrial	Total
1995 Acres of Developable Land	0.0	79.7	0.0	3.9	6.0	0.0	4.5	11.2	105.3

Potential Development

	Conser- vation Recreation Residential Units	Conser- vation Recreation Comm. Square Feet	Single Family Residential Units	Mixed-Use Multi-family Residential Units	Mixed-Use Multi-family Residential Units	Mixed-Use Comm. Square Feet	Commercial Square Feet	Office Business Square Feet	Research Office Warehouse Laboratory Square Feet	Industrial Square Feet
Entire Municipality at Build-out	0	0	122	2	2	25659	81631	0	58832	172955
Entire Municipality at Horizon	0	0	75	2	2	25659	81631	0	58832	4290

Horizon Year: 2025
Horizon Period: 30
Person Per Household Ratio: 2.97

Population & Employment Projections

	1995 CA Estimate	2000 Census	Model Additional	2025 Projection
Population	-	3590	191	3781
95 Cross Accepted Employment	3924	-	292	4216

	Projections	
2025 Population Projection =	3781	
2025 Employment Projection =	4216	
2000 Employment Projection =	3973	

FIGURE 9

Monmouth County Planning Board Projections
Shrewsbury Borough

Additional Impervious Cover by Composite Zone

Composite Zone Categories (in Acres)

Municipality	Composite Zone Categories (in Acres)						Total Area (Acres)		
	Conser- vation Recreation	Single Family Residential	Multi-family Residential	Mixed-Use	Commer- cial	Office Business		Research Office Warehouse Laboratory	Industrial
Shrewsbury Borough	0.0	22.1	0.2	2.4	3.6	0.0	2.7	7.3	38.3

Date: Jan. 10, 2005

Municipal Development Projection Factors

dwelling units		square feet			
Sing. Fam.	Multi-fam.	Commerc.	Office	Industrial	Cons/Com
2.5	1	53101	14233	143	10

Date: Jan. 10, 2005

Source: 7 year annual average trend for the time period 1997-2003 was calculated for each municipality based on the MCPB database of subdivision and site plan approvals.

Note: The 7-Year Single Family trend of 2 du/year was replaced by a factor of 2.5 du/yr to account for PSC-3 development, along with routine development.

Employment Projections Factors

	Cnsy Cm	Mx CM	Comm	Off-Bus	ROWL	Ind
emp/1000sf	1	1	1	3	3	2
use group	*	M	M	B	B	F

Source: Chapter 94, Substantive Rules of the New Jersey Council on Affordable Housing for the Period Beginning Dec. 20, 2004

*Note: Neither the COAH Use Groups nor the ITE Trip Generation Handbook had an employment factor for a use similar to Conservation/Recreation Commercial. After a cursory review of ConRec applications in Monmouth County, a factor of 1 emp./1000 sf was determined to be acceptable.

MITIGATION PLANS

This mitigation plan is provided for any proposed development which is granted a variance or exemption from the stormwater management design and performance standards. Presented is a hierarchy of options for applicants to choose from.

Mitigation Project Criteria

1. The mitigation project must be implemented in the same drainage area as the proposed development. The project must provide additional groundwater recharge benefits, or protection from stormwater runoff quality and quantity from previously developed property that does not currently meet the design and performance standards outlined in the Municipal Stormwater Management Plan. The developer must ensure the long-term maintenance of the project, including the maintenance requirements under Chapters 8 and 9 of the NJDEP *Stormwater BMP Manual*.
 - a. The applicant can select one of the following projects listed to compensate for the deficit from the performance standards resulting from the proposed project. More detailed information on the projects can be obtained from the Borough Engineer. Listed below are specific projects that can be used to address the mitigation requirement.

Water Quality

- i. Desilting and De-Snagging of Little Silver Creek between Broad Street and White Street.
- ii. Retro-fitting of existing storm sewer inlets, where non-point source pollution can be identified, with Pre-Treatment Devices certified by the NJDEP for 80% TSS Removal.
- iii. Stabilization of Stream Bank Erosion along Little Silver Creek between Broad Street and White Street.
- iv. De-Silting of Little Silver Creek culvert beneath Conrail RR tracks at the Little Silver Boundary.
- v. Retro-fitting of existing outfall points along Parkers Creek and Little Silver Creek to bring the conduit outlet protection up to current standards outlined in the Standards For Soil Erosion and Sediment Control in New Jersey regulations.
- vi. Completion of Greenbelt along Parkers Creek.

Water Quantity

- vii. Replacement of undersized culvert and Outlet Control Structure along Parkers Creek tributary at the point which it crosses beneath Trafalgar Place.

2. If a suitable site cannot be located in the same drainage area as the proposed development, as discussed in Option 1, the mitigation project may provide mitigation that is not equivalent to the impacts for which the variance or exemption is sought, but that addresses the same issue. For example, if a variance is given because the 80 percent TSS requirement is not met, the selected project may address water quality impacts due to a fecal impairment. Listed below are specific projects that can be used to address the mitigation option.

Water Quality

- i. Desilting of existing borough waterways or storm sewers in need of same.
- ii. Completion of the Greenbelt along Parkers Creek.
- iii. Retro-fitting of municipally-owned outfalls with compliant conduit outlet protection measures.
- iv. Repair of roadside erosion or stream bank erosion in any areas identified as in need of repair.
- v. Retro-fitting of municipally-owned storm sewer inlets with approved pre-treatment devices at locations where measurable benefits can be demonstrated. In cases of privately owned storm sewer re-fits, written consent of property owner must be obtained.
- vi. Installation of vehicle washwater collection and treatment system at Borough of Shrewsbury DPW facility.

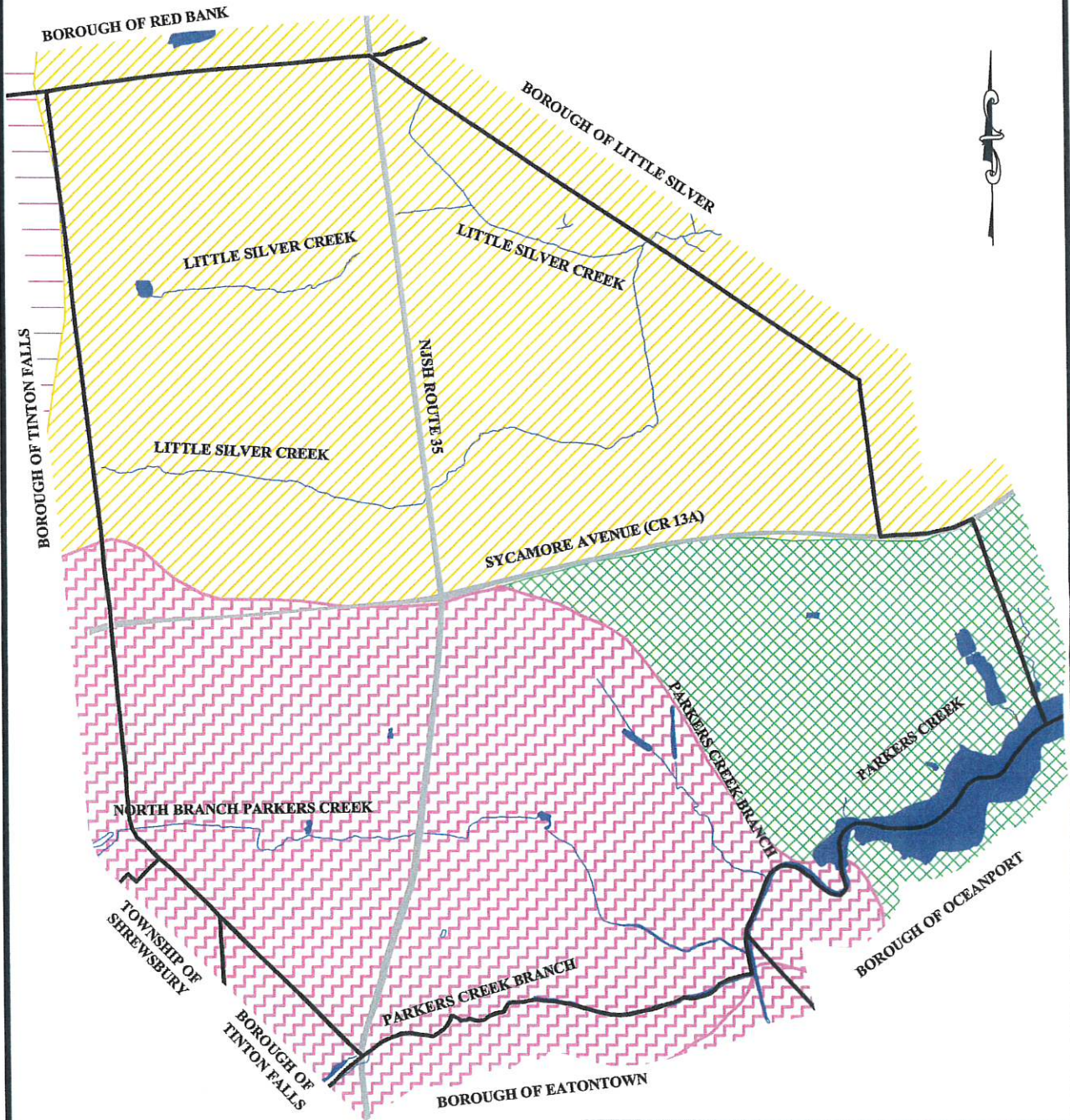
Water Quantity

- i. Installation of additional storm sewers and recharge system along Haddon Avenue to relieve existing flooding conditions.
- ii. Installation of stormwater control measures along Monroe Avenue to relieve existing flooding.

The municipality may allow a developer to provide funding or partial funding to the municipality for an environmental enhancement project that has been identified in a Municipal Stormwater Management Plan, or towards the development of a Regional Stormwater Management Plan. The funding must be equal to or greater than the cost to implement the mitigation outlined above, including costs associated with purchasing the property or easement for mitigation, and the cost associated with the long-term maintenance requirements of the mitigation measure.

FIGURE 10

BOROUGH OF SHREWSBURY HYDROLOGIC UNITS (HUC14's)



- 02030104070100
- 02030104080010
- 02030104080020
- 02030104080030

HYDROLOGIC UNITS (HUC14's)			
SHREWSBURY MUNICIPAL STORMWATER MANAGEMENT PLAN			
BOROUGH OF SHREWSBURY		MONMOUTH COUNTY	NEW JERSEY
Cranmer Engineering, P.A. 166 Patterson Avenue, Shrewsbury, NJ 07702 Tel (732) 212-8900 Fax (732) 212-8910			
PROJECT NO. 1345-005-001	SCALE N.T.S.	DRAWN BY TAK	DESIGNED BY DAC

Plotted: 10/18/05 - 11:15 AM By: Dariusz
File: F:\1345-005-001\025 Map\HUC14.dwg ----> HUC14

IX. HOUSING ELEMENT & FAIR SHARE PLAN

The Housing Element and Fair Share Plan of the Borough of Shrewsbury, Monmouth County, New Jersey has been designed to achieve the goal of access to affordable housing to meet present and prospective future needs, with particular attention to low and moderate income housing. This plan follows the requirements of Section 3.10 of the New Jersey Fair Housing Act (FHA), N.J.S.A. 52:27D-3.10, and the relevant provisions of the regulations adopted by the New Jersey Council On Affordable Housing (COAH) at N.J.A.C. 5:97-2.3 (“Content of a Housing Element”) and N.J.A.C. 5:97-3.2 (“Content of a Fair Share Plan”).

OVERVIEW

The Borough of Shrewsbury was one of the first established municipalities in Monmouth County, founded in 1665. The Borough is a fully developed community containing 2.3 square miles of land area, situated in the eastern region of Monmouth County. Typical of many municipalities in eastern Monmouth County, the Borough of Shrewsbury has sparse vacant land available for future development thus focuses on re-development initiatives as a means to create opportunities for the creation of affordable housing.

The Borough is a historic community with a delineated historic district, as well as several buildings found on the National and State Register of Historic Places. The State Development and Re-Development Plan indicates that the Borough lies in a Metropolitan Planning Area (PA-1), which is an area designated to “*Provide for much of the state’s future redevelopment; revitalize cities and towns; promote growth in compact forms; stabilize older suburbs; redesign areas of sprawl; and protect the character of existing stable communities*”.

The Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., requires that a municipal master plan include a Housing Plan Element in order for the municipality to exercise the power to zone and regulate land use. The Housing Plan Element and Fair Share Plan is adopted by the Borough Planning Board and endorsed by the Borough Council. Once these two actions are accomplished, Section 3.13 of the FHA permits a municipality to file its adopted and endorsed Housing Plan Element and Fair Share Plan with COAH and to either petition COAH for substantive certification or to seek judicial approval of its plan through the filing of a complaint seeking declaratory relief. Once an affordable housing plan is approved by the Court, the municipality will secure a Judgment of Compliance and Repose, protecting it from Mount Laurel lawsuits for a 10-year period.

This amendment to the Borough Master Plan addresses the planning requirements of the *Substantive Rules of the New Jersey Council on Affordable Housing which became effective on October 20, 2008 (N.J.A.C. 5:96-1.1 et. seq. and N.J.A.C. 5:97-1.1 et seq.)*.

BACKGROUND TO THIS AMENDED HOUSING ELEMENT AND FAIR SHARE PLAN

On June 2, 2008, the New Jersey Council on Affordable Housing adopted a set of Substantive Rules found at N.J.A.C. 5:97 et seq. (Mount Laurel III) which became effective on October 20, 2008. Mount Laurel III establishes the planning requirements that each municipality must follow to address the cumulative housing obligations created therein. The Borough has demonstrated its commitment to meeting its affordable housing obligation by formulating a Cycle III Housing Element and Fair Share Plan and receiving approval of the court. A Judgement of Compliance and Repose was entered on April 13, 2010 by Hon. Dennis R. O'Brien, J.S.C. thereby insulating the Borough from builder's remedy lawsuits through December 31, 2018.

The Borough continues its commitment to voluntary compliance with *Mount Laurel* requirements and to the preparation of a plan addressing the Borough's affordable housing obligation under Mount Laurel IV regulations. A motion granting immunity to Builder's Remedy Lawsuits was entered by the court August 19, 2015, and later challenged by interveners. The result of litigation was a settlement entered into between the Borough of Shrewsbury and Fair Share Housing Center/NJ Builders Association, which identified agreed upon terms of quantifying the present and prospective future affordable housing needs.

A Settlement Agreement dated June 20, 2017 spells out the terms by which the Borough's affordable housing obligations under Mount Laurel IV shall be met, subject to approval by the court. The ensuing Housing Element and Fair Share Housing Plan is designed to embody the terms of the Settlement Agreement and enable the court to enter a Judgment of Compliance and Repose insulating the Borough from builders remedy litigation through 2025.

MANDATORY CONTENTS OF THE HOUSING ELEMENT

The essential components of a Housing Element, as set forth in the State Fair Housing Act (N.J.S.A. 52:27D-301), include the following:

- a. An inventory of the municipality's housing stock by age, condition, purchase or rental value, occupancy characteristics, and type, including the number of units affordable to low and moderate income households and substandard housing capable of being rehabilitated, and in conduction this inventory, to all necessary property tax assessment records and information in the assessors office, including but not limited to the property record cards;
- b. A projection of the municipality's housing stock, including the probable future construction of low and moderate income housing, for the next ten years, taking into account, but not necessarily limited to, construction permits issued, approvals of applications for development and probable residential development of land;

- c. An analysis of the municipality’s demographic characteristics, including but not necessarily limited to, household size, income level, and age;
- d. An analysis of the existing and probable future employment characteristics of the municipality;
- e. A determination of the municipality’s present and prospective fair share for low and moderate income housing and its capacity to accommodate its present and prospective housing needs, including its fair share for low and moderate income housing; and
- f. A consideration of the lands that is most appropriate for construction of low and moderate income housing and of the existing structures most appropriate for conversion to, or rehabilitation for, low and moderate income housing, including a consideration of lands of developers who have expressed a commitment to provide low and moderate income housing.

DEMOGRAPHIC, HOUSING AND EMPLOYMENT CHARACTERISTICS

As required by N.J.S.A. 52:27D-3.10, all housing elements must contain an analysis of the community’s demographic, housing, and economic characteristics. In fulfillment of this requirement, the following sections profile the Borough of Shrewsbury with information obtained from the U.S. Census Bureau, the North Jersey Transportation Planning Authority, and the New Jersey Department of Labor and Workforce Development.

POPULATION CHARACTERISTICS OF THE BOROUGH OF SHREWSBURY

A snapshot of the population trends of the Borough of Shrewsbury as compared to the County of Monmouth are illustrated below.

Table 1

POPULATION TRENDS, 1990-2010

	<u>1990</u>	<u>2000</u>	<u>2010</u>	<u>% Change 1990-2000</u>	<u>% Change 2000-2010</u>
Borough of Shrewsbury	3,096	3,590	3,809	16.0%	6.1%
Monmouth County	553,124	615,301	639,500	11.2%	3.9%

Source: US Census Bureau, North Jersey Transportation Planning Authority

Table 2

POPULATION BY AGE - 2010

	Number	% of Total
Under 5 Years	226	5.9%
5 to 9 Years	285	7.5%
10 to 14 Years	315	8.3%
15 to 19 Years	270	7.1%
20 to 24 Years	121	3.2%
25 to 34 Years	201	5.2%
35 to 44 Years	530	13.9%
45 to 54 Years	687	18.0%
55 to 59 Years	269	7.1%
60 to 64 Years	234	6.1%
65 Years and Older	671	17.6%

Source: US Census Bureau

HOUSING STOCK ANALYSIS

The housing stock characteristics in the Borough of Shrewsbury include the number and type of housing units, occupancy household characteristics, age (the year the structure was built), condition of units, purchase or rental value of units, affordability to low and moderate income housing, and rate of construction.

In preparing this plan the latest available housing and demographic information was obtained from the US Census Bureau based upon 2013-2017 American Community Survey 5 Year Estimates, along with the North Jersey Transportation Planning Authority estimated on population through 2045. The referenced data is tabulated and summarized herein to demonstrate the various points of analysis.

According to the Census Bureau Shrewsbury has an estimated total of 1,516 housing units and 1,450 households as evidenced in the 2017 American Community Survey. This represents an increase of 293 total units since the 2010 U.S. Census, which reported a total of 1,223 units. Development occurring in the Borough since 2010 is responsible for adding 143 new residential units, however this number appears to include age restricted institutional facilities currently under construction, thus explaining the delta between number of housing units and households. Of the total units, 66 units were identified as vacant in 2017. When assessing the relationship of owner-occupied residential units to rental units, it is evident that 91.7% of all occupied dwelling units in the community are owner-occupied, having a median home value of \$530,200.

Table 3**HOUSING CHARACTERISTICS – 2017 AMERICAN COMMUNITY SURVEY**

	Number	% of Total
I. Housing Units		
Number of Units	1,516	100.0%
Occupied Housing Units	1,450	95.6%
Number of Units (1990)	1,125	100.0%
Vacant Housing Units	66	4.4%
II. Occupancy/Household Characteristics		
Number of Households	1,450	100.0%
Persons Per Household	2.96	N/A
Family Household	1,131	78.0%
Non-Family Households	319	22.0%
Householders 65 and over	284	19.6%
III. Year Structure Built		
2014 or Later	25	1.6%
2010 to 2013	49	3.2%
2000 to 2009	178	11.9%
1990 to 1999	73	4.8%
1980 to 1989	160	10.6%
1970 to 1979	79	5.2%
1960 to 1969	142	9.4%
1950 to 1959	474	31.3%
1940 to 1949	145	9.6%
1939 or earlier	191	12.6%
IV. Condition of Units		
Lacking complete plumbing facilities	0	0.0%
Lacking complete kitchen facilities	0	0.0%
V. Home Value (Owner Occupied Units)		
\$1,000,000 and up	29	2.2%
\$500,000 to \$999,999	698	52.4%
\$300,000 to \$499,999	457	34.3%
\$200,000 - \$299,999	108	8.1%
\$150,000 - \$199,000	12	0.9%
\$100,000 - \$149,000	13	1.0%
\$50,000 - \$99,99	0	0.0%
\$0 - \$50,000	14	1.1%
Median Value	\$530,100	N/A
VI. Rental Value (Renter Occupied Units)		
\$2,500 and up	33	36.7%
\$2,000 to \$2,499	49	54.4%
\$1,500 to \$1,999	8	8.9%
< \$1,499	0	0.0%
Median Rent	\$2,378	N/A

Source: US Census Bureau Community 5 Year Survey 2013-2017

The Borough's housing stock is diverse with respect to age and family size. The largest single time period with respect to housing construction occurred the period between 1950 and 1959, during which time 474 detached individual dwellings were constructed, typically on ¼ to ½ acre lots. As the development of Monmouth County progressed as a whole, the Borough of Shrewsbury followed suit until all available land was developed. The rate of new housing construction has diminished, with all new units beyond the 2010 census primarily attributable to inclusionary, age restricted and residential institution projects carried out under re-development scenarios.

A Vacant Land Analysis was performed in 2004 and re-verified in 2010 confirming that zero vacant land exists in the Borough as previously approved by the court.

The median home value in Shrewsbury is typical of the eastern Monmouth County area at \$530,100. The housing affordability index detailed in Table 4 indicates that monthly costs of ownership exceeds 35% of income. Similarly, the average monthly rent value in Shrewsbury is \$2,378, with 45.6% of households estimated to spend greater than 35% of income on rent.

Table 4

HOUSING AFFORDABILITY AS A PERCENTAGE OF 2013 - 2017 HOUSEHOLD INCOME

	Number	% of Total
Selected Monthly Owner Cost		
< 20%	280	27.7%
20% to 24.9%	195	19.3%
25% to 29.9%	155	15.3%
30% to 34.9%	0	0.0%
35% or more	303	29.9%
Gross Rent		
< 15%	8	8.9%
15% to 19%	8	8.9%
20% to 24%	33	36.7%
25% to 34.9%	0	0.0%
35% or more	41	45.6%

Source: US Census Bureau Community 5 Year Survey 2013-2017

With regard to the affordability of owned and rented housing units to low and moderate income households, it should be noted that 62.3% of the selected monthly owner costs displayed in Table 4 are less than 30 percent of the estimated household income. Similarly, 54.5% of renters spend less than 30 percent of their household income on housing. The criterion for housing affordability is that no more than 30 percent of the gross income should be allocated for housing costs.

According to the 2017 Community Survey 5 Year Estimate, Shrewsbury has a total of 1,450 households. Of the total number of households 1,131 were family households (78.0%) and 319 (22.0%) were non-family households. Householders 65 years of age or older accounted for 284 (19.6%) of the households in Shrewsbury.

SHREWSBURY'S EMPLOYMENT CHARACTERISTICS

At the time of the 2017 U.S. Census estimate, 1,922 or 60.2 percent of Shrewsbury's population, aged 16 years old and over, was engaged in the labor force. Table 5 describes the varied activities of this segment of the population.

Table 5

OCCUPATION OF EMPLOYED CIVILIAN POPULATION AGED 16 AND OVER - 2010

	Number	% of Total
Management, Professional, and Related	912	49.2%
Service	201	10.8%
Sales and Office	561	30.2%
Nat. Resources, Construction and Maintenance	103	5.6%
Production, Transportation, and Material	78	4.2%

Source: US Census Bureau

The two largest occupational groups within the civilian labor force in 2017 were Management, Professional, and Related Occupations, and Sales and Office Occupations. The distribution of income per household in the Borough of Shrewsbury is outlined below in Table 6.

Table 6

HOUSEHOLD INCOME -2017

	Number	% of Total
Less than \$10,000	25	1.7%
\$10,000 to \$14,999	30	2.1%
\$15,000 to \$24,999	8	0.6%
\$25,000 to \$34,999	97	6.7%
\$35,000 to \$49,999	80	5.5%
\$50,000 to \$74,999	153	10.6%
\$75,000 to \$99,999	154	10.6%
\$100,000 to \$149,999	340	23.4%
\$150,000 to \$199,999	247	17.0%
\$200,000 or More	316	21.8%
<i>Median Household Income</i>	<i>\$122,321</i>	

Source: US Census Bureau

Per Capita Income within the Borough in 2017 is estimated at \$55,346 while the median household income was \$122,321. A total of 15 households reported income of less than \$25,000, or 1.3 percent of the households. A total of 30 households reported income between \$25,000 and \$34,999 or 2.7 percent of the households. A total of 28 households reported income between \$35,000 and \$49,999 or 3.4 percent. A total of 122 reported income between \$50,000 and \$74,999 or 10.8 percent. A total of 104 households reported income of \$75,000 - \$99,999 and 528 households reported income of \$100,000 to \$199,999. A total of 294 households reported income of \$200,000 or more.

The median household income and the per capita income of the municipal population were more than the median household income and the per capita income at the State level. With respect to per capita income, Shrewsbury is in the upper quarter of the State's municipalities and ranks 110 out of 566 municipalities (Source: New Jersey Department of Labor and Workforce Development).

With regard to growth in employment in Shrewsbury, the North Jersey Transportation Planning Authority has published employment projections. According to the NJTPA projections, there will be 6,438 jobs in Shrewsbury in 2045, which is essentially level with the number of jobs recorded in 2015 of 6,396.

EMPLOYMENT AND HOUSING GROWTH PROJECTION

The North Jersey Transportation Planning Authority's (NJTPA) population projections for the Borough of Shrewsbury and Monmouth County indicate that the population for the Borough and the County at large will continue to grow, though at a slower rate than experienced during earlier growth periods, reaching 2045 populations of 4,033 and 671,946, respectively. It is also important to note that the NJTPA projects that Shrewsbury's population will grow by 0.2 percent from 2015 to 2045, which is significantly less than the rate of 6.4 percent projected for the County during the same period, as well as the rate of 13.8 percent experienced by the Borough during the 1990s.

According to the 2010 U.S. Census, the Borough of Shrewsbury's population was comprised of 1,353 households, with an average household size of 2.87 members. The median age of the Borough's population was 44.3 years, which is higher than that of Monmouth County (37.7 years) and the State of New Jersey (36.7 years). The segment of population 65 years and older in the Borough of Shrewsbury is presently estimated 17.6%, attributable to recently completed age-restricted developments. In addition, the median household income of Shrewsbury's households is \$122,321, which is much more than the respective figures for the State and the County. These indicators are presented in Table 7.

Table 7

DEMOGRAPHIC INDICATORS - 2010

	<u>Number of Households</u>	<u>Average Household Size</u>	<u>Median Age</u>	<u>% of Population > 65</u>	<u>Median Household Income</u>
Borough of Shrewsbury	1,450	2.87	44.3	12.0%	\$86,911
Monmouth County	224,236	2.70	37.7	12.5%	\$64,271
New Jersey	3,064,645	2.68	36.7	13.2%	\$55,146

Source: US Census Bureau

As a comparison, 12.0 percent of Shrewsbury's 2000 population was aged 65 years and over, and the same age group comprised 17.6% of the 2017 population. More detailed information regarding the distribution of Shrewsbury's population among different age cohorts is presented in Table 7.

FAIR SHARE PLAN

The Borough's Fair Share obligation is comprised of a present need or rehabilitation share, a prior round obligation for new construction from the prior rounds from 1987 to 1999, and a prospective need obligation for the period of 2015-2015.

The Settlement Agreement entered into by the Borough of Shrewsbury and accepted by the court in a Fairness Hearing conducted on September 26, 2017 before Hon. Jaimee S. Perri, J.S.C. outlines the various components of the borough's fair share obligation as follows:

Present Need (Rehabilitation Share)	10 Units
Prior Round Obligation (1987-1999)	277 Units
Prospective Need Obligation (2015-2025)	197 Units

PRESENT NEED (REHABILITATION SHARE)

The Present Need or Rehabilitation Share of the overall fair share obligation is intended to provide a source of funding to rehabilitate housing for occupancy by families meeting affordability requirements. The source of funding includes the Affordable Housing Trust Account established by ordinance of the governing body where contributions are deposited for those projects that are not required to provide on-site affordable units.

Rehabilitation investments under this program shall average a minimum of \$10,000 per unit and shall include the rehabilitation of at least one (1) major system. The rehabilitation program shall be structured to encourage rehabilitation and continued occupancy using mechanisms such as low-interest and forgivable loans.

The rehabilitation program shall be designed to provide rehabilitation funding for rental units, as well as owner-occupied units, and shall have a mechanism to re-capture funds for any units which are sold prior to the sundown period of affordability controls.

The rehabilitation units shall be subject to 10 year controls on affordability in the form of a lien or deed restriction. The overall rehabilitation program shall be designed and implemented to meet the requirements of N.J.A.C. 5:97-6.2.

PRIOR ROUND OBLIGATION (1987 – 1999)

With regard to the Borough's 277 unit prior round obligation, the Borough is entitled to a vacant land adjustment pursuant to N.J.A.C. 5:97-5.1 and 5.2. The adjustment results in a realistic development potential (RDP) of zero (0) for the new construction obligation from 1987 to 1999.

The prior round Realistic Development Potential (RDP) and vacant land adjustment is documented in the Vacant Land Inventory and Analysis Report prepared for the Borough

on August 3, 2005 by T&M Associates. Pursuant to COAH's regulations, the Borough must undertake good faith measures to capture affordable housing opportunities to address the unmet need resulting from the vacant land adjustment from the 1987 to 1999 for new construction obligation.

PROSPECTIVE NEED OBLIGATION (2015 - 2025)

The Borough of Shrewsbury does not accept the basis of the methodology or calculations of Dr. David Kinsey, PhD, PP, FAICP. In accepting the terms of the Settlement Agreement the Borough agrees to accept a Prospective Need of 197 units, representing the Borough's allocation of the Round III regional need.

The cumulative prior cycle and third round unmet need obligation is the sum of 277 units plus 197 units as outlined in the Settlement Agreement. Included in this calculation is the third round realistic RDP of 29 units based upon construction that has taken place in the Borough during the Third Round.

The 29 unit RDP is derived by adding the number of residential units constructed (77 Units 'Ivy' + 66 Units 'Enclave') and dividing by 5, which equates to 29 units.

The third round RDP is satisfied with credits already achieved as computed below.

K Hovnanian 'Ivy' Development Block 2, Lots 1 & 13	16 Units Constructed
Monmouth County ARC Home Block 60, Lot 35	6 Units Rental Units
The Chelsea Assisted Living Block 3, Lot 1	11 Rental Units (4 Credits Applied)
Rental Bonus Credits	<u>3 Units</u> 29 Units Credit

After applying the credits for the third round RDP, the remaining prior round unmet need will equal 445 units.

COMPLIANCE TECHNIQUES

The Borough's strategy to meet its fair share obligation relies upon the following components:

1. In an attempt to address the 445 unit unmet need, the Borough has already adopted an Affordable Housing Development Fee Ordinance and established an Affordable Housing Trust Fund. The trust fund shall be utilized to facilitate such programs as the rehabilitation program, as well as any future municipally sponsored programs or projects.
2. In an attempt to address the 445 unit unmet need, the Borough will amend the previously created redevelopment overlay zone (AH-MF8) on Newman Springs Road to include additional properties situated at Block 2, Lots 18, 19, 20, 21 and Block 13, Lots 4,5,6.
3. In an attempt to address the 445 unit unmet need, the Borough previously created a mixed use zone (B3) which permits the construction of mixed use developments, and provide compensatory benefits to developers for the construction of accessory apartments over non-residential uses with a 20% affordable housing set aside.
4. In an attempt to address the 445 unit unmet need, the Borough will amend the AH-MF8 overlay zone and land use plan to include properties known as Block 3, Lot 8 (621 Shrewsbury Avenue) at a property-specific density of 14 DU/Acre.
5. In an attempt to address the 445 unit unmet need, the Borough will amend the AH-MF8 overlay zone and land use plan to include properties known as Block 29, Lots 7, 8, 9, 10, 11 at a property-specific densities of 14 DU/Acre.

6. In an attempt to address the 445 unit unmet need the present AH-MU overlay zone enacted as part of the prior Fair Share Plan shall be amended to remove the absolute requirement for first floor commercial use and permit residential as a primary use. The AH-MU zoning ordinance shall also be amended to remove the maximum number of units per structure and provide a sliding scale, ranging from a minimum of 8 DU/Acre to a maximum of 14 DU/Acre which considers such factors as lot size, mix of uses, height, setback, coverage and lot dimensions.
7. In an attempt to address the 445 unit unmet need a Spending Plan shall be developed which includes provisions for the development of two (2) market to affordable units developed in cooperation with a non-profit affordable housing developer.
8. In an attempt to address the 445 unit unmet need the Borough has adopted an Inclusionary Zoning Ordinance which requires an affordable housing set-aside of 15% for rental units and 20% for 'For Sale' units. This ordinance applies to all new multi-family developments with five (5) units or more.
9. The Present Need or Rehabilitation Share of the overall fair share obligation shall be satisfied through the implementation of a local rehabilitation program or participation in a Monmouth County regional rehabilitation program. To implement a local program the Borough of Shrewsbury will contract with a qualified private entity to provide affirmative marketing and administrative oversight in the qualification of applicants and implementation of the actual construction.

Alternatively, the Borough may elect to participate in a regional rehabilitation program implemented by the Monmouth County Division of Planning, Office of Community Development, for all or part of the overall 10 unit present need obligation.

COMPLIANCE GOALS

The above enumerated compliance techniques shall be implemented through the enactment of legislation and application of planning tools and processes to meet certain specific goals with respect to the creation of real opportunities for affordable housing in the Borough.

The specific goals to be accomplished through this process include the following:

- a. At least one-half of all affordable units addressing the Third Round Prospective Need shall be available to family households.
- b. At least 13% of all new affordable housing units created under this plan shall be affordable to very low income household earning 30% or less of the median income. At least one-half of the very low income units shall be available to families.

- c. At least 25% of the Third Round Prospective Need obligation shall be satisfied with rental units, of which at least 50% shall be available to families.
- d. Not more than 25% of any new affordable units created shall be age-restricted.
- e. At least 50% of all affordable units in any one (1) inclusionary site shall be affordable to low income and very low income households, with the remaining units available to moderate income households.
- f. The Borough will comply with affirmative marketing and affordability regulations set forth at N.J.A.C. 5:80-26.1 (UHAC) except that in lieu of the requirement at N.J.A.C. 5:80-26.3(d) for 10% of all low and moderate income rental units to be affordable to households earning 35% or less of the median income, the requirement shall be that 13% of all low and moderate income rental units shall be affordable to households earning 30% or less of median income.

ZONING MAP

BOROUGH OF SHREWSBURY, MONMOUTH COUNTY, NEW JERSEY

ZONING DISTRICTS

 SHREWSBURY HISTORIC DISTRICT OVERLAY

AFFORDABLE HOUSING OVERLAY DISTRICTS

 AH-MF8 AFFORDABLE HOUSING MULTI-FAMILY

 AH-MU AFFORDABLE HOUSING MIXED USE

RESIDENTIAL ZONES

R-1	45,000 s.f.
R-1A	45,000 s.f./Cluster
R-1B	45,000 s.f./Senior Cluster
R-2	22,500 s.f.
R-3	15,000 s.f.
R-4	10,000 s.f.
R-4.5	8,000 s.f.
R-5	8,000 s.f.

PSC-1	Planned Senior Citizen
PSC-2	Planned Senior Citizen
PSC-3	Planned Senior Citizen






BUSINESS ZONES

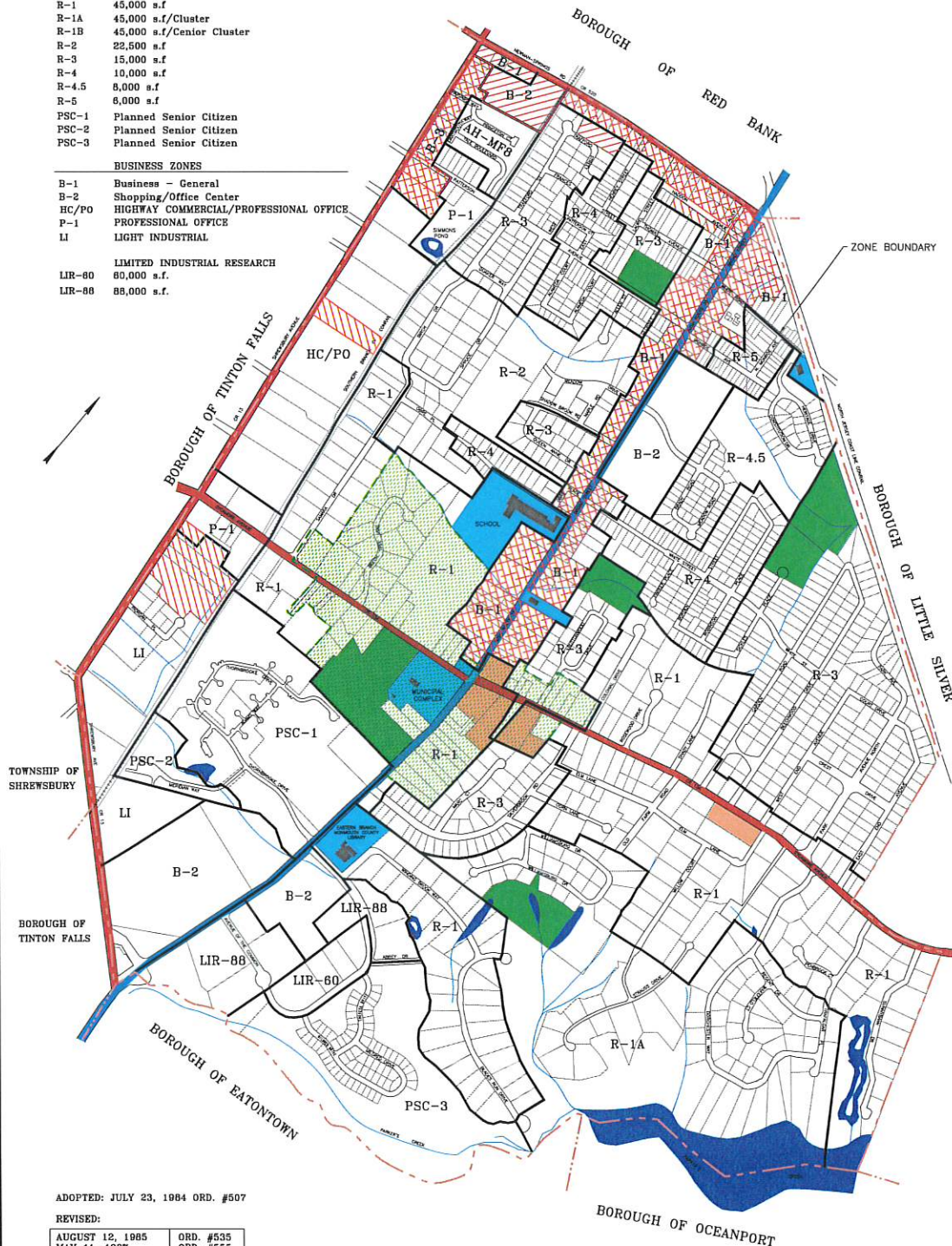
B-1	Business - General
B-2	Shopping/Office Center
HC/PO	HIGHWAY COMMERCIAL/PROFESSIONAL OFFICE
P-1	PROFESSIONAL OFFICE
LI	LIGHT INDUSTRIAL

LIMITED INDUSTRIAL RESEARCH

LIR-80	80,000 s.f.
LIR-86	88,000 s.f.

COMMUNITY FACILITIES

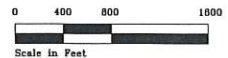
-  PUBLIC LANDS/FACILITIES
-  CHURCHES, CEMETERIES, AND QUASI-PUBLIC
-  PARK & OPEN SPACES
-  STATE HIGHWAY
-  COUNTY ROAD



ADOPTED: JULY 23, 1984 ORD. #507

REVISED:

AUGUST 12, 1985	ORD. #535
MAY 11, 1987	ORD. #555
MARCH 12, 1990	ORD. #603
NOVEMBER 13, 1995	ORD. #708
JUNE 21, 2004	ORD. #837
JUNE 5, 2008	ORD. #873
DECEMBER 15, 2008	ORD. #924
DECEMBER 15, 2008	ORD. #925
MAY 20, 2019	ORD. #1050
MAY 15, 2019	ORD. #1060



X. CIRCULATION PLAN ELEMENT

The circulation plan element consists of an inventory of highways, roadways and public transportation services within the Borough. The circulation plan roadway classification conforms with the Monmouth County Planning Board and the New Jersey Department of Transportation classification system of roadways. In this classification system roadways are categorized on the basis of function and volume of traffic. The system designations were developed on a basis consistent with the federal highway functional classification system.

The functional classification system of highways provides four types of roadways within Shrewsbury. The entire borough is located within the “urban” region of the state for highway planning purposes and the four roadway types include principal arterial, minor arterial, collector, and local streets.

ARTERIAL HIGHWAYS

Broad Street (NJSH Route 35) is a five (5) lane arterial highway containing four (4) travel lanes plus a center turning lane. Route 35 carries heavy volumes of traffic in a north-south direction and extends south from Carteret in central Middlesex County, parallel to the coast to Seaside Heights in central Ocean County. NJDOT published traffic counts as of May, 2014 indicate that an average daily traffic volume of roughly 24,000 vehicles per day, evenly distributed between northbound and southbound traffic.

The bulk of traffic on Route 35 is attributable to regional ‘through’ traffic with pass-by stops at local business and commercial centers. Major destinations along Route 35 which generate highway traffic include The Grove, Shrewsbury Plaza, Staples (Formerly Treasure Island) Plaza and office building complexes situated on Avenue of the Commons and Broad Street. The original development pattern along Route 35 in Shrewsbury was residential, which has substantially been replaced by commercial properties.

A small section of residential land uses exist along Route 35 between Sycamore Avenue and Silverbrook Road. Many of the homes are historic and maintained for their historic and cultural value to the community.

Signalized intersections along NJSH Route 35 (Broad Street) typically result in delays during peak hours. Traffic congestion on Route 35 coincides with peak hours of rail traffic associated with the NJ Transit NE Coast line. During peak AM and PM hours traffic congestion begins at the Route 35 & Newman Springs Road intersection and extends southward, typically to the Thomas/White Road traffic signal.

The intersection of Route 35 (Broad Street) and Sycamore Avenue (County Route 13A) experiences peak hour congestion during AM and PM peak hours of Route 35. When traffic

congestion is heavy users of the roadway typically seek alternate pathways to avoid delays and will utilize local roadways as 'cut-throughs' and resulting in increased traffic safety concerns.

At the center of the Shrewsbury historic district, the site of the official Shrewsbury settlement is the intersection of Broad Street (NJSH Route 35) and Sycamore Avenue (Monmouth County Route 13A). Three (3) historic buildings and two cemeteries limit the right of way to 66 feet and the pavement width to 52 feet in limit the vicinity of the historic district. While the right of way varies from 66 feet to 82 feet through the borough, the pavement is consistently 52 feet wide except for a slight wider section near the Borough's southern border with Eatontown.

A number of studies have been performed by NJDOT and involving local stakeholders to assess the feasibility of increasing the capacity of Highway 35 and reducing congestion. Many alternatives were analyzed including highway widening, geometric modifications, roundabouts and traffic signal timing alterations. As a result of the study the traffic signals along Route 35 are maintained by NJDOT with current technology to ensure proper operation, however any geometric modifications were determined to be incompatible with surrounding land uses, including the Historic District and associated historical places and structures at the four corners.

COUNTY HIGHWAYS

The borough of Shrewsbury is essential bisected in the north-south direction by NJSH Route 35 (Broad Street), and in an East-West direction by County Highway 13A (Sycamore Avenue). The land use composition of Sycamore Avenue is mainly residential within the Borough, with the exception of the municipal complex situated at the Sycamore Avenue and Broad Street intersection. A small section of commercial properties exist along Sycamore Avenue between Shrewsbury Avenue (CR 13) and Conrail tracks several hundred feet east.

Shrewsbury Avenue is a five (5) lane highway traveling in a north-south direction, parallel to Route 35 and providing access to commercial and industrial land uses. The value of Shrewsbury Avenue to the Route 35 corridor lies in its ability to transfer north and southbound traffic off of Route 35 and onto Shrewsbury Avenue. The southerly end of Shrewsbury Avenue flows directly to Route 35 at its southern terminus, however Shrewsbury Avenue is separated from Route 35 at the northerly limit of the Borough. Studies have been conducted to determine the feasibility of a direct connection between Shrewsbury Avenue and Route 35, however considerable alterations of the traffic patterns in Red Bank would have to be undertaken, thus no plans to further that initiative exist.

LOCAL ROADWAYS

Approximately 19 miles of local roadways exist within the Borough, arranged in a manner which provides adequate access to primarily residential properties. The congestion experienced along arterial and county highways has resulted in functional changes to local roadways in an effort to control cut-through traffic.

An example of functional modifications to address cut-through traffic is Thomas Avenue, which was altered to a one-way condition out to Route 35.

The borough continues to evaluate problem areas and evaluate alternatives to reduce impacts of regional highways on local roads. Potential mitigation strategies include legislative changes (i.e. Speed Limit reductions), geometric modifications such as traffic calming, pedestrian safety initiatives, and functional modifications to eliminate cut-through pathways.

The borough transportation infrastructure is maintained by the Borough in a thoughtful manner to include continuous evaluations and budgeting for repairs and upgrades. The Borough follows a Complete Streets policy which dictates that each roadway to be maintained or upgraded is evaluated for compatibility with all modes of transportation and barrier-free accessibility.

The Borough's long range planning process includes stakeholder outreach to elicit feedback regarding local roadway concerns, evaluation of each roadway's consistency with engineering standards and a comprehensive approach to context-sensitive design strategies targeted at improving traffic safety on a borough-wide level and improving the quality of life for all Borough residents.

The land use composition of the Borough with a substantial degree of commercial land uses is helpful in stabilizing the municipal tax base, however requires an enhanced level of diligence and creativity in managing the traffic impacts associated with state highways and large commercial traffic generators in close proximity to residential areas.

XI. COMMUNITY FACILITIES PLAN ELEMENT

The Borough of Shrewsbury and its volunteer boards, committees, commissions and emergency services operate and maintain certain public facilities to provide essential and public services to the community. Additionally, there are a number of cultural, religious and historic facilities available to the public that are operated and maintained by other public, quasi-public, and private entities located within the Borough of Shrewsbury.

The list of community facilities includes the following, as graphically indicated on the Community Facilities Map.

INVENTORY OF EXISTING COMMUNITY FACILITIES

Essential Public Facilities:

<i>Shrewsbury Municipal Complex</i> 419 Sycamore Avenue Block 30, Lot 13.01	Central location of borough government administrative offices and police station. Location of public meeting place for Borough Council, Land Use Boards, Commissions, and Municipal Court Room.
<i>Shrewsbury Hose Company No. 1</i> 783 Broad Street Block 40, Lot 11	Fire Department Headquarters including apparatus garage, administrative and command offices, meeting facilities, and election polling Place.
<i>Shrewsbury First Aid Squad</i> 115 Haddon Avenue Block 13, Lot 1	First Aid Squad Headquarters including ambulance garage, administrative and command offices, meeting facilities, and election polling place.
<i>Monmouth County Library Eastern Branch</i> 1001 Broad Street Block 64.01, Lot 32	Owned and operated by the Monmouth County Library System on behalf of the Board of Chosen Freeholders.

Educational Facilities:

<i>Shrewsbury Elementary School</i> 20 Obre Place Block 28, Lot 1	K-8 School operated by the Shrewsbury Board of Education. Facilities consist of administrative offices, classrooms, and outdoor recreational fields.
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Health Care Facilities:

Brandywine Senior Living at the Sycamore

5 Meridian Way
Block 30, Lot 8.01

Assisted living residential care facility consisting of 130 beds, on site personal amenities, parking garage, and passive recreational amenities.

Meridian Nursing and Rehab

89 Avenue at the Commons
Block , L70.01, Lot 5

Inpatient skilled nursing and subacute rehabilitation facility, operated by Meridian Health Systems and containing 140 beds. Facility provides long term nursing care and serves as an alternative to prolonged hospital stays.

ARC of Monmouth

929 Broad Street
Block 60, Lot 35

Group residence operated ARC of Monmouth providing supervised living to adults with developmental disabilities.

Religious Facilities:

Shrewsbury Quakers

375 Sycamore Avenue
Block 40, Lot 1

Part of the historic 'Four Corners', Shrewsbury Monthly Meeting of the Religious Society of Friends. Historic religious hall and cemetery dating back to 1660's, appearing on state and national registers of historic places.

Christ Church Episcopal

380 Sycamore Avenue
Block 60, Lot 1

Part of the 'Historic Four Corners', Parish and cemetery founded in 1702, appearing on state and national registers of historic places. The historic bell tower of Christ Church appears on the official seal of the borough.

First Assembly of God

220 Sycamore Avenue
Block 60, Lot 4

Religious assembly hall and administrative facilities for First Assembly of God Church. Services include ministries for adults and children.

Presbyterian Church

352 Sycamore Avenue
Block 60, Lot 2

Historic religious assembly hall, manse and cemetery originally constructed in 1705. Appears on national and state registers of historic places.

Historical Facilities:

Allen House

400 Sycamore Avenue
Block 28, Lot 16-17

Owned and operated by the Monmouth County Historical Association as a museum open to the public during limited periods.

***Shrewsbury Historical Society
Museum***

419 Sycamore Avenue
Block 60, Lot 1

Museum and educational center open to the public during limited periods, located at the Shrewsbury Municipal Complex. Operated by the Shrewsbury Historical Society.

COMMUNITY & ESSENTIAL SERVICES PROVIDED

The Borough of Shrewsbury provides municipal and essential services to residents and visitors of the Borough, including police and fire protection. The municipal based services are described below.

Law Enforcement

The **Shrewsbury Police Department** is headquartered in the municipal complex and provides 24 hour per day police and law enforcement services to the community. The department is staffed by full time police officers, command officers, dispatchers, and civilian administrative employees. The department is headquartered at the Shrewsbury Municipal Complex, consisting of administrative and investigative offices, court facilities, jail cells and a dispatch center.

Fire Protection

Fire protection within the Borough of Shrewsbury is provided by **Shrewsbury Hose Company No.1**, consisting of and all volunteer staff of firefighters and officers. The department was formed in 1908 and operates several pieces of fire suppression and rescue apparatus. The fire department is a privately held non-profit corporation housed on Broad Street and has demonstrated the ability to adequately meet the needs of the community.

The fire department participates in regional mutual aid agreements and responds to incidents in other municipalities and counties as requested.

Emergency Medical Services

Twenty-four hour emergency medical services within the Borough of Shrewsbury are provided by the **Shrewsbury First Aid Squad**. The First Aid Squad is a non-profit private corporation formed in 1964 and operates two (2) basic life support ambulances, staffed by volunteers 24 hours per day. The squad is headquartered in a privately held structure located at the intersection of Haddon Avenue and Laurel Street, and participates in regional mutual aid agreements which result in responses outside of the Borough from time to time.

Department of Public Works

The Shrewsbury Department of Public Works consists of roughly 15 full time municipal employees providing customary snow removal, street sweeping, property maintenance and repairs to borough-owned infrastructure, as well as recycling services and repairs to borough vehicles. The DPW staff operates and maintains a fleet of light and heavy equipment to carry out its functions.

The Department of Public Works is located at 90 White Road, where the recycling center is operated six (6) days per week by DPW staff.

PROJECTED NEEDS FOR COMMUNITY FACILITIES

It is anticipated that the workload and demand for essential services shall realize a modest increase over the foreseeable decade as recently approved and constructed residential developments become occupied, and as presently under-developed non-residential properties are re-developed with more intense uses.

Daytime population increases may be expected from the redevelopment of commercial properties, to more attractive uses which shall draw more visitors into the borough during business hours. The redevelopment of properties results in the supplementing of the municipal tax base, but has the unintended consequence of increased demands on essential services such as police, fire and EMS, as well as the requisite support and administrative services of borough government.

The specific demands that are expected to increase are related to snow removal, police protection, fire suppression and emergency medical services. As a result, the following projected needs should be planned for by the governing body and appropriate steps taken to acquire property or equipment as required:

- a. The Shrewsbury First Aid Squad is expected to see a nominal increase in demand for services as daytime and nighttime populations grow. Residential population is expected to continue the current trend of single percentage point increases over the next decade, however an age shift is contemplated toward older adults due to recent age-restricted developments.

Consequently, it may be of community benefit to relocate the squad headquarters to a location more centered in the borough and convenient to responding volunteers, such as adjacent to the municipal complex, which may reduce response times as well as impacts to the residential neighborhoods that surround the present first aid squad headquarters.

It is recommended that adjoining properties which may become available for purchase be identified as potential locations for future acquisition and construction of First Aid Squad headquarters using borough funds or grant monies, if available.

Specific sites to be identified as properties for potential future acquisition are as follows:

- i. Block 30, Lot 14, commonly known as 912 Broad Street.

- b. The Shrewsbury Department of Public Works operates and maintains the Borough Recycling Center at the DPW facility located at 90 White Road. The facility consists of a garage area, fueling location for borough vehicles, mobile office trailer, and outdoor storage yard for light and heavy equipment. The recycling center is not well delineated from the DPW operational area, nor are there well delineated access or circulation paths for users to follow.

Additionally, the Municipal Stormwater Management Regulations require vehicle washing facilities to contain effluent from the routine washing of vehicles such as trucks, heavy equipment and street sweepers. To remain in compliance with the permit requirements it will likely become necessary to construct such a facility, or enter into a shared services agreement with another municipality and wash the DPW vehicles at an alternate location.

The DPW and recycling facility should be considered for physical improvements to improve circulation paths for recycling drop-off users, and to integrate a potential location for a future truck washing facility, should it be deemed in the best interest of Shrewsbury to construct same.

XII. RECREATION PLAN ELEMENT

INVENTORY OF ACTIVE RECREATION FACILITIES

The Borough of Shrewsbury owns and maintains three (3) active recreation facilities at various locations throughout the Borough. Each facility consists of active recreational amenities for the various youth athletic leagues as well as visiting tournament teams. Each facility is identified on the Recreation and Open Space Map included herewith and described below.

1. **Parker Park** is 3.65 acre park acquired with Green Acres funds, located at the easterly end of Patterson Avenue in the northwest quadrant of the Borough. Facilities within the park include two (2) little league fields, one (1) basketball court and playground equipment contained in an accessible tot lot. This facility was upgraded by the Borough in 2006 and 2014 with new turf and drainage improvements to enhance the usability of the fields. The park does not provide off-street parking and is frequently utilized by little league, softball and soccer teams throughout the year, and contains playground and passive recreation areas for year-round enjoyment by the community.
2. **Robert Graham Athletic Fields** is an 8.8 acre park acquired with Green Acres funds located at the end of Sickle Place in the northeast quadrant of the Borough. Facilities within the park include one (1) 90 foot baseline baseball field, one (1) 60 foot baseline little league field, one (1) half-sized basketball court, three (3) outdoor tennis courts, tot-lot playground equipment, and circuitous walking paths. This facility was upgraded within the preceding five (5) years to reconstruct the little league field and resurface the tennis courts. This park provides on-street parking at the end of the Sickles Place cul-de-sac for 8-10 vehicles.
3. **Manson Park** is located within the Borough of Shrewsbury's municipal Complex and consists of 16.13 acres. The park was acquired using Green Acres funds and constructed in 2000. Facilities within the park include one (1) little league baseball field, two (2) soccer fields, tot-lot playground equipment and a perimeter walking trail. Off-Street parking for the park and restroom facilities are shared with the municipal complex.

Additional recreational facilities owned and maintained by the Shrewsbury Board of Education are located at the Shrewsbury Borough School. Existing outdoor facilities include two (2) little league baseball fields, one (1) soccer field, two (2) small soccer fields, one (1) basketball court and various playground amenities.

A summary of Borough owned and maintained active recreation amenities is tabulated below.

TABLE

Existing Active Recreation Facilities

FACILITY	Area (Ac.)	Baseball Fields	Soccer Fields	Tennis Courts	Basketball Courts	Play Structures	Walking Trail
Parker Park Block 14, Lot 18.01	3.65	2	1 (Shared)	0	1	1 (Tot Lot)	0
Robert Graham Athletic Fields Block 38, Lot 3 Block 46, Lot 23	8.8	2	1 (Shared)	3	1	1 (Tot Lot)	0
Manson Park Block 30, Lot 13	16.13	1	2	0	0	1 (Tot Lot)	.3 mile
Total	28.58	5	3	3	2	3	.3 mile

INVENTORY OF PASSIVE RECREATION FACILITIES

The Borough of Shrewsbury owns and maintains three passive recreation facilities. These parks include Buttonwood Park, Esther Hymer Nature Preserve and Beech Tree Lane Parcel. Each of these facilities is undeveloped and provides opportunity for passive recreation and open space preservation.

- a. **Buttonwood Park** is 4.8 acre passive park located in the northeast quadrant of the Borough. This partially wooded park is located north of Buttonwood Drive and provides a pedestrian connection between Parker Place and Colonial Drive, primarily used by school children.
- b. **Esther Hymer Nature Preserve** is a 10.62 acre passive preserve located in the southeast region of the Borough. This park was dedicated to the Borough by the developer of Azalea Farms subdivision and is owned and maintained by the Borough of Shrewsbury. The site is substantially wooded with two (2) small ponds and serves as a wildlife sanctuary. It is a greenway link to the conservation easement along Parker's Creek and provides wildlife habitat for many bird species. There are two public access points from Williamsburg Drive with no off-street parking facilities or functional walking paths.
- c. **Beech Tree Open Space** parcel is a .3 acre Borough owned parcel. It is located at the intersection of Sycamore Avenue and Beech Tree Lane (fig 7). It is an open area with a specimen 4' caliper copper beech tree located in the central park of the parcel.

- d. **Farrell Property** is an undeveloped open space tract located at the easterly limit of Heritage Drive, abutting the New York & Long Branch Railroad right of way. The parcel consist of 2.15 acres without recreational amenities or facilities for off-street parking.
- e. **Bonanno Farm** is an existing active equestrian farm located on Sycamore Avenue that remains under private ownership. The Borough acquired the development rights in 2010 to the parcel using Green Acres funds for the purposes of preserving open space. There is a 10 foot wide public access easement, however no recreational amenities or parking facilities presently exist.

A summary of borough owned and maintained passive recreational facilities is tabulated below.

Existing Passive Recreational Facilities

PARK	AREA (Ac)	RECREATIONAL AMENITIES
Buttonwood Park Block 41, Lot 15	4.8	Pedestrian Connection
Esther Hymer Nature Preserve Block 70, Lot 7.02	10.62	None
Beech Tree Park Block 28, Lot 44.11	.3	None
Farrell Property Block 38, Lot 2	2.15	None
Total	17.87	

GREENBELT INVENTORY

The Borough of Shrewsbury contains a significant area of conservation easements which surround surface water bodies of Parker's Creek and Little Silver Creek and their tributaries. These areas are restricted from development in perpetuity and provide transitional areas between developed lands and protected waterways. They serve to provide wildlife refuge as well as to protect water quality of the state by assisting in the filtering of overland runoff.

The first easement is located in the northeast quadrant south of Heritage Drive and Constitution Drive and partially abuts the western edge of Robert Graham Athletic Fields Park. The second conservation easement is located in the northwest quadrant north of the Beechtree Lane subdivision. The third and largest conservation easement is located in the southeast quadrant adjacent to Parker’s Creek south of Dorchester Way continuing behind Strauss Drive and connection to Esther Hymer Nature Preserve. The fourth and smallest conservation easement is located between Regent Drive and Penbrooke Court. The fifth conservation easement is located along the stream and pond south of Thornbrooke Way.

The total acreage of these conservation easements is approximately 83 acres with some partially located on residential lots.

Existing Greenbelt Areas

	Location	Approximate Acres
Conservation Easement #1	Heritage & Constitution Drive	9 +/- acres
Conservation Easement #2	Beechtree Lane	3.5 +/- acres
Conservation Easement #3	Parkers Creek	53 +/- acres
Conservation Easement #4	Regent Drive & Penbrooke Ct.	1.5 +/- acres
Conservation Easement #5	Thornbrooke Way	16 +/- acres
		Total: 83 +/- acres

NEEDS ANALYSIS

The ability of any community to provide adequate facilities for municipally based recreational programs is elemental to fostering community gathering and spirit. Thus a successful and highly utilized recreational program remains a core requirement to achieving a high quality of life for the residents of the community.

The open space and recreational needs of the Borough of Shrewsbury are determined by many factors such a population census information, current recreation activity levels of participation, existing park inventory, geographic distribution of facilities relative to population and stakeholder input.

Based on the Demographic Profile contained herein the 2010 census total population for the Borough of Shrewsbury is 3,809 with 1,310 households. The median age within the Borough is 44.3 which is indicative of a community with young families. Building trends within the Borough suggest residents are constructing additions onto their homes to accommodate increased spatial needs instead of moving to large homes within the Borough or to other municipalities.

Adults age 65 and older comprise 17.6% of the Borough’s population while 27% of the population is under age 18. There has been a notable shift in the trend of residents in the 5-14 age

range, which indicates an increased demand for active recreational amenities within the community to meet the needs of the residents.

Input elicited from the Borough youth recreational program leadership indicates that the present inventory of athletic facilities is marginally adequate to meet the present need of the community. The scheduling of practice and games, particularly related to little-league baseball fields presents logistical challenges and results in constant use of all facilities.

As the Borough continues to provide opportunities for housing of varying levels of affordability it is expected that the current trend of increasing population of residents between 5 and 14 years will result in a continual growth of municipally based athletic programs.

Based upon widely accepted planning standards, municipalities strive to achieve approximately 3% of their land area as active and passive recreational lands. The present Coalition On Affordable Housing (COAH) standards rely upon this guide when determining the degree of developable lands remaining in any municipality, and thus subject to growth share. The Borough of Shrewsbury is comprised of 2.3 square miles which is 1,472 acres. According to the COAH standards, 3% of total acreage should be dedicated to conservation, parklands and recreation, equating to 44.16 acres. The Borough has a total of 41.03 acres in active and passive recreational parks and has approximately 83 acres in conservation.

STRATEGY TO MEET PROJECT NEEDS

To meet the projected needs of the borough based recreational programs additional facilities must be constructed upon presently under-developed parklands, or upon additional properties to be acquired for such purpose.

Expansion of Present Parks

The present inventory of active recreational amenities suggests that Manson Park presents the only realistic opportunity for the creation of additional active recreational amenities, such as ballfields, soccer fields, lacrosse fields and additional walking paths. This park is also unique in that it has adequate off-street parking that it shares with the municipal complex, thus minimizing any negative impacts to surrounding streets or land uses.

The recreation commission indicated that there is a compelling need for two (2) additional baseball fields, as well as two (2) additional soccer/lacrosse fields to meet current and projected needs. This facility is the most centrally located within the municipality, and has the land area available for future recreational development, thus should be considered.

The remaining borough parks are presently developed to the maximum feasible extent, and the construction of additional facilities is unlikely to be practical.

Acquisition of Additional Parklands

The Borough of Shrewsbury may identify parcels could potentially be acquired for the purposes of providing additional parklands within the community. The parcels which have been identified as future acquisition parcels are outlined below.

- Block 30, Lot 16 is 3.3 acre residential property south of Manson Park adjacent to the park soccer field and path system. This parcel presently contains a single family residential structure and front upon Broad Street (NJSH Route 35). This parcel is contiguous with Manson Park, therefore would result in the expansion of an existing facility. It would also provide a greenway link to the conservation lands associated with the Thornbrooke Development and offer active and passive recreation opportunities.
- Block 28, Lot 2 is a 0.73 acre tract located on the west side of Broad Street, adjacent to the Shrewsbury Elementary School. This tract may provide additional land area for expansion of the recreational amenities located at the school, or for the construction of an indoor sports facility.

Creation of Facilities Through Zoning

The recreation program leadership expressed a compelling need for an indoor facility to be utilized for winter sports such as basketball. The only present indoor facilities exist at the Shrewsbury Elementary School, which are inadequate to be utilized for a municipal recreation program.

The present inventory of Borough parklands does not present a realistic opportunity for the construction of an indoor sports facility. Another potential would be to provide for indoor sports and recreational facilities as permitted uses, in those zones where such use would be harmonious with the zone plan, such as LI or HC-PO zones.

XIII. HISTORIC PRESERVATION PLAN ELEMENT

The Borough of Shrewsbury is rich in tradition and colonial history, which is symbolized by the inclusion of the Christ Church bell tower in the official borough seal. The borough contains a multitude of sites and structures appearing on the State and National Registers of Historic Places and a delineated Historic District.

A key component of this Master Plan is to establish the historical significance of Shrewsbury to the region, and outline strategies to ensure continued protection of historically significant places.

SHREWSBURY HISTORICAL SOCIETY

The preservation of Shrewsbury's history for the enjoyment of future generations is of paramount importance to the community and its leaders. The Borough Council formed the Shrewsbury Historical Society by ordinance, enlisting the service of volunteer members to operate a repository of local history documents and artifacts located on the municipal complex grounds.

Elements of Shrewsbury's history are preserved and archived at the Shrewsbury Historical Society adjacent to the municipal center. The society was incorporated on June 22, 1972 and the facility operated by them is a 2,273 square foot building which was opened to the public in 1982. The facility serves as a museum, library, and educational research center supported solely by its members and volunteers.

HISTORY

Incorporated as a Borough on March 22, 1926, first council meeting was held on July 19, 1926. The borough of Shrewsbury is one of the older settlement areas in the state of New Jersey and one of the two original settlements in Monmouth County created under the provisions of the Navesink Patent of 1665. Shrewsbury Township, which was formed in 1693 with the incorporation of Monmouth County, included what is now the Borough of Shrewsbury.

Founded at the crossroads of a major east-west Indian path, the Burlington Path (now Sycamore Avenue) and a major north-south path (now Broad Street), Shrewsbury Village (now the Borough of Shrewsbury Historic District or the "Four Corners") became the center of the early Shrewsbury settlement. Early in its history the Shrewsbury Village area became a meeting place for the Quakers. The Friends Meeting House and Cemetery were originally built in approximately 1672 and is located on the corner of Sycamore Avenue and Broad Street. The current structure dates back to 1816 and was the first Quaker Meeting House in New Jersey.

In 1702, the Episcopal Church became established in Shrewsbury and in approximately 1706 Christ Episcopal Church was built as a place of worship. The present church was built in approximately 1769 and it was added to the National Register of Historic places on October 25, 1995.

In 1705, the Presbyterian Church was organized in Shrewsbury. Land was purchased by the church in 1727 and soon thereafter the first Presbyterian Church in Shrewsbury was built. The present Presbyterian Church was built in approximately 1821.

Shrewsbury Village remained the population center of its immediate region through the eighteenth century. Notwithstanding the early concentration of both religious and residential development at the "Four Corners", the remainder of what is now the Borough of Shrewsbury developed in a pattern similar to that of the surrounding area. Large parcels of land were obtained by independent parties who settled in a dispersed pattern.

On May 8, 1974, the Allen House (Block 28, Lots 16 & 17), and on July 27, 1974 the current municipal building, known as the Seth Lippincott-Wardell House (Block 30, Lot 13) were added to the National Register of Historic Places.

In 1976, the area surrounding the "Four Corners" was listed on the New Jersey register of Historic Places. Two years later, on July 17, 1978 the district was listed on the National Register of Historic Places.

The Shrewsbury Historic District consists of forty-seven parcels of property. Thirty-four of the homes in the district are over 100 years old. The Quaker Friends Meeting house, Christ Church and the Presbyterian Church are also included within the district. The Monmouth County Historic sites inventory has also designated an historic district within the Borough of Shrewsbury.

Table 3 shows structures and/or sites that are included in the Shrewsbury Historic District as designated in the Monmouth County Historic Sites Inventory of 1984.

HISTORIC DISTRICT

The Borough of Shrewsbury delineated a Historic District, identified on the Official, which is anchored by the historic 'Four Corners' at the intersection of Broad Street and Sycamore Avenue, and extends east and west along Sycamore Avenue; as well as north and south along Broad Street.

The historic places identified in Table 3 are located in this district.

REGULATIONS

The properties which lie within the Historic District of the Borough are subject to regulations contained in §94-5.31 of the Code of the Borough of Shrewsbury. The ordinance requires all development applications, or construction permit applications to obtain a Certificate of Appropriateness from the planning board prior to the commencement of construction. Regulated elements include building materials, visual appearance, preservation of structures and architectural elements.

TABLE 3

**HISTORIC SITES AND STRUCTURES
AS DESIGNATED BY THE MONMOUTH COUNTY HISTORIC SITES INVENTORY, 1984**

Description	Tax Map Block & Lot	Date Constructed
*Shrewsbury Historic District area of Sycamore Ave. & Broad Street	Various	18 th & 19 th Cent.
+Christ Episcopal Church SE corner of Sycamore Ave. & Broad Street	B. 60 L. 1	C. 1769
+Garrett Stout House 901 Broad St.	B. 60 L. 42	C. 1845
+William Lambert Borden House 905 Broad St.	B. 60 L. 41	C. 1865
+Abraham Holmes Borden House 912 Broad St.	B.30 L. 14	C. 1891
+Francis Borden House 917 Broad St.	B.60 L. 37	C. 1840
+Platt Valentine House 939 Broad St.	B. 60 L. 33	C. 1858
+Shrewsbury Friends Meeting House NE Corner of Sycamore Ave & Broad St.	B. 40 L. 1	C. 1816
*Allen House NW Corner of Sycamore Ave. & Broad St.	B. 28 L. 16,17	C. 1679
+Shrewsbury Presbyterian Church S. Side of Sycamore Ave., east of Broad Street	B. 60 L. 2	1821
*Seth Lippincott House- Wardell House 419 Sycamore Ave.	B. 30 L. 13	C. 1820
Hurley Blacksmith and Carriage Shop SW corner of Sycamore and the Conrail railroad	B. 29 L. 1	19 th Cent.
+Christ Church Rectory 329 Sycamore Ave.	B. 41 L. 26	19 th Cent.

+Presbyterian Manse Sycamore Ave.	B. 60 L. 4,5	C. 1850
+Daniel Arrance House 351 Sycamore Ave.	B. 41 L. 2	C. 1860
+Benjamin White House 355 Sycamore Ave.	B. 41 L. 4	C. 1790
+William Van Shoick House 420 Sycamore Ave.	B. 28 L. 20	C. 1854
+446 Sycamore Ave.	B. 28 L. 21	19 th Cent.
+J. Broadmeadow House 450 Sycamore Ave.	B. 28 L. 22	19 th Cent.
+458 Sycamore Ave.	B. 28 L. 23	19 th Cent.
+J.H. Nicholson House (Dr. James Cooper House) 477 Sycamore Ave.	B. 30 L. 7	C. 1870
+Salton House 481 Sycamore Ave.	B. 30 L. 2	C. 1820
+Waldron Brown House 486 Sycamore Ave.	B. 28 L. 26	C. 1892
+489 Sycamore Ave.	B. 30 L. 1	19 th Cent.
Richard Campbell House 525 Sycamore Ave.	B. 29 L. 2	C. 1865
W. Wolcott House 529 Sycamore Ave.	B. 29 L. 3	C. 1870
Peter Campbell House 533 Sycamore Ave.	B. 29 L. 4	C. 1860

*These sites and/or structures are listed on the National and New Jersey Registers of Historic Places

+These sites and/or structures are located within the New Jersey and National Historic Districts, however, they are not listed individually on the Federal or State Registers of Historic Places.

Monmouth County Historic Site Inventory, Summary Report, 1980-1984, Office of New Jersey Heritage, Monmouth County Park System, Monmouth County Historical Association, prepared by Gail Hunton and James C. McCabe.

National Register of Historic Places Inventory, Nomination Form-Shrewsbury Borough Historic District.

New Jersey and National Register of Historic Places, as of December 31, 1984, Office of New Jersey Heritage, New Jersey Department of Environmental Protection, Division of Parks and Forestry.

XIV. SUSTAINABILITY ELEMENT

The purpose of the Sustainability Element of the Master Plan shall be to establish a framework to guide the transformation of Shrewsbury Borough into a ‘*Sustainable Community*’, or one that enacts governmental policies to ensure the preservation of a healthy natural environment and prosperous local economy for future generations.

A sustainable community is defined by the New Jersey Department of Environmental Protection as one that:

- *Acknowledges* that economic, environmental and social issues are interrelated and that these issues should be addressed “holistically.”
- *Recognizes* the sensitive interface between the natural and built environments.
- *Understands* and begins to shift away from polluting and wasteful practices.
- *Considers* the full environmental, economic and social impacts and costs of development and community operations.
- *Understands* its natural, cultural, historical and human assets and resources and acts to protect and enhance them.
- *Fosters* multi-stakeholder collaboration and citizen participation.
- *Promotes* resource conservation and pollution prevention.
- *Focuses* on improving community health and quality of life.
- *Acts* to create value-added products and services in the local economy.

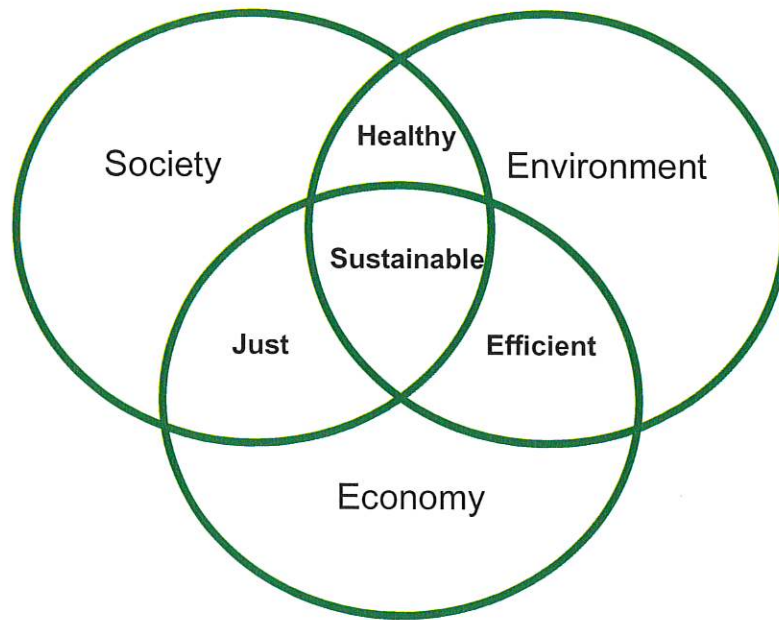
Sustainable community planning entails the use of civic design standards that will meet the needs of the present in an equitable manner, without compromising the ability of future generations to meet their own needs. Although it is common to plan for the present and near future, the New Jersey State Development and Redevelopment Plan’s (SDRP) vision for New Jersey describes smart growth as *sustainable growth that creates communities of enduring value*. The sustainability element of the Shrewsbury Master Plan exacts the SDRP vision of sustainability on the local level.

The Sustainability Element of the Shrewsbury Master Plan has been prepared in accordance with the Municipal Land Use Law (MLUL) found at N.J.S.A. 40:55D-28.a, which grants the planning board jurisdiction to “prepare, and after public hearing, adopt or amend a master plan or components thereof, to guide the use of the lands within a municipality in a manner which protects public health and safety and promotes the general welfare.” The intended function of

the Sustainability Element of the Master plan is to establish goals, policies and strategies to protect natural resources, and create a healthy and sustainable economy and community.

This element of the Shrewsbury Master Plan outlines how the sustainability objectives underlie, relate to, and provide additional direction to the elements of their Master Plan. This document will serve as a foundation and blueprint for incorporating sustainability into all aspects of local governance.

The focus of the Sustainability Element shall include energy management, greenhouse gas reduction, 'green' land use and building design, water conservation, solid waste management, pollution reduction, sustainable economic development, mobility and access, and environmental education.



VISION STATEMENT

The Borough of Shrewsbury is situated in the eastern portion of Monmouth County, within the Parker's Creek watershed, thus preservation of a healthy natural environment is highlighted due to the regional impacts on the coastal ecosystem.

As a result, the local vision established for the borough incorporates development and redevelopment strategies to strengthen the character of natural greenways and bio-systems, and integrate 'green living' initiatives into the community best practices.

On a global scale, the vision for the borough embraces green initiatives to conserve energy through the use of renewable energy sources, implementation of energy efficient building design and renovation, and implementation of a community strategy to reduce the reliance on motor vehicles as a primary means of transportation within the community.

These steps will ultimately lead to the reduction in the carbon footprint of the borough, and strengthen the vibrant sense of community already embraced by the residents of Shrewsbury. The action plans to be formulated as a result of sustainable planning may include some or all of the following steps to be undertaken by municipal government and citizens within the Borough of Shrewsbury:

- Performing greenhouse gas and energy audits of municipal and private facilities
- Create greenhouse gas reduction action plan
- Maximizing energy conservation and efficiency
- Using alternative and renewable energy uses
- Requiring and promoting water conservation and use efficiency
- Reducing automobile-dependency
- Providing programs and incentives for sustainable business and business practices
- Requiring or encouraging "green building" standards for municipal facilities and redevelopment areas, and encouraging green design for other private development projects.
- Adopting green purchasing policies for municipal government
- Improving local materials reduction, and enhancing current recycling programs.
- Providing public education and outreach to help residents incorporate sustainable practices into their homes and lifestyles.

The actions to be undertaken by the Borough of Shrewsbury shall be guided by sound planning principles and efficient government policy to implement a rational strategy to create a sustainable community.

SUSTAINABILITY ACTION PLAN

The guiding principle of ‘Sustainability’ may be broadly applied to established policies and practices borough-wide, through community planning, government policy, public education and regulation enactment.

The implementation of an action plan is readily accomplished by establishing goals and objectives to be accomplished, and formulating a rational nexus to evaluate the effectiveness of strategies. The suggested actions to be undertaken are outlined below and categorized by mechanism of implementation strategy.

I. Sustainable Land Use

Land use policy and decision making is implemented locally at the land use board level, thus incorporating sustainable land use practices and ideas in the early stages of the overall process is elemental to the success of this plan. It shall be the intent herein to present an array of guiding principles to enable the borough land use boards to formulate sustainable development through policy changes and technical guidance during the approval process.

Specific recommendations are presented below, along with strategies for implementation and measurable goals to gauge effectiveness.

A. Develop and implement smart growth strategies that foster pedestrian accessibility, employ green civic design standards, and mixed-use re-development for under-developed parcels in the borough, or those which revitalization is reasonably expected to occur.

- i. Establish reasonable design standards consistent with smart growth principles to provide for pedestrian accessible site design, reduction in the amount of off-street parking inventory required to only that which is necessarily required, and use of ‘green’ site design techniques which preserve natural environs.
- ii. Establish reasonable design standards that set forth incentives and regulations for new developments to include bicycle facilities such as bike racks.
- iii. Establish a trust account for developers to contribute to a shared biking facility in exchange for reduced parking requirements where such practice is reasonable and warranted.
- iv. Identify technical and financial assistance available to support Smart Growth initiatives in the borough.
- v. Enact zoning standards to minimize street length by concentrating development in the least environmentally sensitive areas of a development site.

- vi. Enact zoning or design standards which will permit a developer to reduce parking lot size by encouraging shared parking among adjacent businesses.

B. Develop and maintain a sufficient open space system that balances efforts to enhance biodiversity, natural preservation, and both passive and active recreation opportunities with commercial and residential development and redevelopment throughout the community.

- i. Conduct consistent open spaces review during the permitting process for development projects to incorporate public open space into project design.
- ii. Provide incentives for planting trees above and beyond stated design requirements and creating additional green space open to the public as part of new development and major renovation projects.
- iii. Provide a means for the creation of appealing small-scale public gathering spaces with well-adapted vegetation as part of development and redevelopment projects.
- iv. Create vibrant, well-used public places and public gathering spaces that serve as the framework around which housing, retail and commercial buildings are planned and designed.
- v. As part of a municipal capital improvement program, establish a policy by which unnecessary pavement is removed and replaced with vegetative surfaces or landscaping.
- vi. Prepare a cluster development ordinance that allows developers to increase the construction density on a portion of the buildable property in exchange for preserving open space on another portion of the tract.
- vii. Continue to enforce the landscape ordinance requirements, and establish a trust fund for the creation of off-site landscaped areas whenever a developer requests a waiver from landscape requirements due to limited site area.

C. Consider the adoption of “green” building and development practices in development projects, including appropriate consideration of aesthetics, design opportunities and community standards. Promote awareness, disseminate information and provide incentives to encourage green building in all development and re-development projects.

- i. Adopt LEED green building standards and green building criteria for evaluating new development projects and major renovations of commercial or residential structures.

- ii. Promote LEED certification and through zoning incentives, expedited permit reviews, and local education.
- iii. Develop and disseminate information on green building and remodeling practices on Borough website.
- iv. Encourage or require essential services and facilities, such as gas stations, public safety facilities, shelters, and government offices to be outfitted with alternative energy components such as photovoltaic arrays to provide a means to maintain electrical power in the event of cataclysmic natural phenomenon and consequential utility infrastructure collapse.
- v. Encourage the use of shade canopies with solar panels at parking lots where this practice is feasible and may be incorporated into a sound civic design.
- vi. Provide streamlined permitting processes to encourage solar photovoltaic installations in the community.
- vii. Consider a requirement that electric vehicle recharging facilities be provided as part of any new development that will contain large parking facilities, such as shopping centers or multi-family residential developments.

II. Sustainable Circulation

The overall character of the Borough of Shrewsbury is shaped by the transportation infrastructure in and around it. The majority of the Borough dwelling units are post-war era homes constructed in developments utilizing interconnectivity within the local roadway network amassed around county and state highways.

The geographic location and commercial element of the borough results in a convergence of arterial county and state highways, thus warranting a highlighted focus on strategies reduce the borough's carbon footprint by improving the sustainability of the transportation network.

Outlined below are specific strategies to accomplish the stated goal of transforming the borough into a more sustainable community.

A. Reduce dependence on the automobile and increase Sustainable Transportation Options and Mass Transit Ridership. Create parking incentives, improve transportation services and accessibility, and provide education and outreach.

- i. Encourage the installation of aesthetically pleasing shelters or benches at transit stop locations where same has a reasonable expectation of increasing ridership.
- ii. Promote the use of staggered working hours to modify traffic peak hours and reduce traffic congestion on Broad Street (NJSH Route 35).
- iii. Consider sustainability criteria when determining parking standards for new developments or significant re-development projects.

- iv. Publicize proximity to transit as a reason to shop in local stores, and encourage local businesses such as 'The Grove' to offer incentives to shoppers who choose public, or alternative modes of transportation.
- v. Encourage local businesses to develop an alternative transportation program that encourages to employees utilize alternatives to the automobile for commuting. This may include altering work schedules to match drop-off and pickup times, subsidizing of transportation costs, and may also be considered for government employees.

B. Develop and implement initiatives that improve access to and safety for pedestrian and bicycle circulation.

- i. Encourage community groups and the borough public and private schools to promote walking and biking for health education programs.
- ii. Promote the use of traffic calming features within existing and future roadways, such as widening of sidewalks; installation of curb bulb-out extensions, center islands and plantings; roadway narrowing; and use of high visibility or textured crosswalks at priority locations such as schools, high-density commercial areas and at transit stops to enhance pedestrian safety and encourage the use of alternative transportation modes to reduce automobile dependency.
- iii. Consider bicycle facility planning consistent with the 'Complete Streets' principle when planning upgrades to municipal roadways or developing new streets as part of an overall site development project.
- iv. Formulate a pedestrian program and encourage developers to install benches, and make aesthetic improvements to borough pedestrian routes, such as trees, flowers, and other streetscape treatments.
- v. Create incentives for private/public bicycling facilities to developers and businesses.
- vi. Install additional bicycle parking at commercial areas, parks, and schools and look for new opportunities to install bicycle lanes or guidelines and improve intersections for cyclists.
- vii. Encourage the development of an educational program within the Shrewsbury Elementary School to promote the use of walking and bicycling as an alternative to parent drop-off and pick up.
- viii. Prepare a borough-wide walkability and bikeability assessment geared to improving pedestrian and bicycle access for existing neighborhoods to public facilities, major commercial areas and schools.

C. Develop programs designed to reduce motor vehicle emissions through use of alternative fuel vehicles (AFVs), incentives for parking and alternative transportation, and public education.

- i. Undertake an 'anti-idling' campaign and enforce State code on anti-idling of trucks, buses and cars outside of schools and businesses. Provide education about idling through signs, targeted mailings to the borough school, parents, bus companies; and follow up with enforcement.
- ii. Develop an educational program to identify automobile and truck tire pressure for optimum energy efficiency.
- iii. Promote the use of alternative fueled vehicles for police cars, and municipally owned vehicles, if and where practical.
- iv. Establish a trip reduction program with local businesses. Voluntary (and mandatory) programs may be developed with local businesses to establish carpooling incentives.

III. Public Education and Outreach on Sustainability

The effectiveness of any public policy or initiative is directly dependent upon the plan's ability to engage the public as a whole. Public outreach efforts should span all age and socioeconomic groups, and be uniquely focused for each targeted audience. Sustainability objectives will be most effective when incorporated into daily living with subtle changes in lifestyle activities.

To achieve this goal several strategies are outlined below.

A. Formulate public education programs to raise awareness of the importance of sustainability and foster sustainable living.

- i. Design and administer a comprehensive annual sustainability survey that assesses resident awareness, knowledge and participation in both Borough-wide and individual sustainable activities and that gathers information that is not readily available by other methods of data collection.
- ii. Create educational displays in municipal facilities and promotion of same during community events such as 'Shrewsbury Day'.
- iii. Promote residents or local businesses that have helped raise awareness or taken actions to promote sustainability within Shrewsbury through public recognition.
- iv. Encourage "Local Garden Tours" of area homes, businesses, and organizations that have such sustainable features as organic fruits & vegetables, natural vegetation, wildlife habitat gardens, water efficient landscaping, green roofs, and organic lawn & gardens.

- v. Encourage community groups such as the EC to create demonstration gardens or displays to promote sustainable practices. A rain garden could be developed at the Shrewsbury Community Garden as an example.
- vi. Prepare and distribute environmental guidelines or owner's manuals for residents which could be distribute to interested residents, or included in Certificate of Occupancy packets for new residents.
- vii. Establish a municipal awareness campaign using messages in local newspapers and borough newsletters about sustainability issues such as local air quality, water quality, and sustainability efforts.
- viii. Create a 'Sustainable Business' recognition program that distinguishes sustainable businesses throughout Shrewsbury with identifiable stickers to be placed on storefront/business windows.
- ix. Develop an information kit for distribution to local schools and community groups regarding participation in sustainability efforts in Shrewsbury.
- x. Create and implement a professional development program for school teachers to give them the tools to incorporate everyday sustainability in the classroom.

IV. Natural Resource Conservation

A cornerstone of sustainable living is natural resource conservation, which is the most traditional among the sustainability concepts contained in this plan. While more widely known and accepted, the migration of resource conservation from a stand-alone practice to an element of a more widely encompassing sustainability plan shall serve to further strengthen the effectiveness of this element of the masterplan.

Targeted steps to facilitate the convergence of resource conservation and a sustainable community are outlined below, and intended to be undertaken by community groups such as the Environmental Commission.

A. Reduce Energy Consumption and Improve Energy Efficiency among Shrewsbury businesses through educational workshops, information campaigns, partnerships and incentive programs.

- i. Encourage local businesses to promote Energy Star products and educate consumers about the Energy Star label. Provide links to ENERGY STAR's product locator and buyer's guide on the Shrewsbury municipal website.
- ii. Conduct informational workshops to raise awareness about the Energy Star business partnership programs and the Energy Star Home program.

- iii. Recruit businesses and organizations into the federal Energy Star program. Utilize pledges, peer exchanges, and public recognition programs to sustain involvement.

B. Encourage Shrewsbury residents to conserve energy through education, incentives, campaigns and programs.

- i. Launch an “energy efficiency challenge” campaign for community residents.
- ii. Provide information for residents on the Shrewsbury Borough website on how to reduce energy use and GHG emissions. The web site should include background information, instructions on how to receive rebates and federal tax credits, a home energy and GHG calculator, and links to other resources.
- iii. Promote energy and climate change awareness through a newsletter column written by staff or a local energy/GHG expert; case studies of local homes and households that have reduced emissions by a large percentage.
- iv. Implement a Winter Energy Savings Program for residents. This shall include posting suggestions on how to save money and reduce energy consumption on Borough web site or through mailings or other means of distribution.

C. Optimize Use of Vegetation to Shade Buildings and Reduce the Urban Heat Island Effect.

- i. Coordinate tree planting and care education programs such as neighborhood tree walks and Arbor Day celebrations in local schools, which feature tree identification and tips on caring for trees.
- ii. Provide landscaping workshops for residents on how to use vegetation to shade buildings and to reduce the urban heat island effect.
- iii. Provide landscaping manuals and tips on borough website.

D. Reduce the Urban Heat Island Effect through Design of the Built Environment.

- i. Provide developers and property owners with information about using green roofs or high reflectance roofs on buildings and other reflectance and shading techniques for parking lots and impervious surfaces.
- ii. Provide incentives for new construction and renovations to meet reflectance and shading standards under LEED NC 2.2 SS Credit 7.1 & 7.2 Heat Island Effect.

E. Develop and implement strategies that utilize renewable energy sources and encourage the development and use of renewable energy technologies and green power.

- i. Establish and publicize a renewable energy strategy to assist in achieve the goal of 20 % of the electricity consumed within the borough being produced by renewable sources by 2020, consistent with Governor Corzine's State Renewable Energy Targets which call for twenty percent of the electricity consumed in New Jersey by 2020 to come from renewable sources, such as wind and solar.
- ii. Encourage community participation in the *Clean Power Choice Program* through incentives, education and awareness.
- iii. Promote the use of and conversion to solar power generation on private buildings, offices, residential complexes, retail establishments, multi and single-family homes.

F. Develop and implement efforts that improve the quality of the community water resources and reduce water use.

- i. Require the use of Low Impact Development technologies and use alternative surfaces and nonstructural techniques to reduce imperviousness and promote infiltration, thereby reducing pollutant loadings and increasing ground water recharge.
- ii. Encourage the use of grid pavers and porous pavement in retail and private driveways and parking lots.
- iii. Require or promote use of stormwater best management practices such as rain gardens, vegetated swales, and rainwater recycling by providing guidelines and incentives for developers and residents.
- iv. Provide guidance and encourage design of integrated natural and non-structural treatment systems such as constructed wetlands, vegetated filters, and open channels to treat stormwater runoff among developers and residents.

G. Prevent pollutants from reaching waterways by regulating the source of Non-Point Source Pollutants.

- i. Continue to implement the Borough's Municipal Stormwater Management Plan, and make revisions thereto periodically to enhance its effectiveness.
- ii. Ensure enforcement of pet curbing ordinances.
- iii. Restrict residential use of pesticides and chemical fertilizers and encourage Integrated Pest Management (IPM) techniques.
- iv. Develop and publish guidelines for organic yard care and sustainable landscape construction.

- v. Coordinate with the Office of Emergency Management to develop strategies for the removal of pollutants from floodwaters which may result from natural disasters.

H. Reduce amount of water used for borough-wide landscaping and lawn maintenance practices.

- i. Develop a program to promote and provide guidelines for “rain gardens to residents and businesses.
- ii. Provide information and guidance to residents and local business owners on using a rainwater collection system to reduce or eliminate the quantity of potable water used for irrigation.
- iii. Provide information and guidance to residents and local business owners on re-using stormwater volumes generated for non-potable uses such as landscape irrigation.
- iv. Provide information and guidance to residents and local business owners on using high-efficiency irrigation strategies such as drip, micro misters, and sub-surface irrigation systems and smart irrigation controllers such as moisture sensor, rain shut-offs, and weather-based evapotranspiration controllers where applicable.
- v. Formulate a handout or other guidance document on reducing water use through grass cutting height adjustment.

I. Develop and implement efforts that maintain and expand the community’s biodiversity and foster protection or expansion of native habitat for flora and fauna.

- i. Enhance municipal ordinance mandating the protection of existing trees as part of development or re-development projects.
- ii. Develop and install appropriate interpretative signs and information brochures on biodiversity values at publicly owned wetland sites such as the Esther Hymer Nature Preserve and Buttonwood Drive Open Space.
- iii. Provide information and guidance on Integrated Pest Management Practices (IPM) on the Borough website for local residents and businesses.
- iv. Establish a public outreach program to educate residents of the significance of wetland areas and conservation easements.
- v. Modify borough landscaping ordinances to prohibit the use of plant materials listed as invasive or noxious weed species.

- vi. Provide information and guidance to residents and local business owners on how to maintain lawns and landscaping in natural state with native trees, shrubs and wildflowers.
- vii. Provide resources to community garden organizations such as compost and native plant seeds.
- viii. Establish an “adopt a block” program that allows small business owners to sponsor tree planting along a roadway in return for public recognition.
- ix. Require that new construction adopt sustainable landscaping techniques.
- x. Establish a significant tree registry for individual exotic and native specimens and protect through planning regulation.
- xi. Encourage local schools to plant organic gardens, and participate in the Shrewsbury Community Garden.

J. Develop and implement the strategies for waste management. Provide incentives, convenient programs and easy to follow guidelines for local business and residents to reduce, reuse and recycle.

- i. Formulate ordinance standards which require all businesses to maintain clearly marked, multiple recycling receptacles at private establishments such as restaurants, shops and local businesses. Clearly marked receptacles for trash should be available as well to discourage commingling of waste with recyclables. Use standardized shapes, colors, and signage to help promote public awareness and encourage proper use.
- ii. Host a community-wide yard sale at the Municipal Complex to reduce waste disposal.
- iii. Provide residents with information bulletins on ways to reduce waste and on how to be more environmentally-friendly consumers.
- iv. Promote the use of websites such as ‘freecycle.org’ as a means to further enhance recycling efforts and reduce solid waste generation.

V. Sustainability in Government

In similar fashion to the sustainable initiatives for borough residents and businesses outlined herein, an opportunity exists for municipal government to undertake certain steps to achieve a higher degree of sustainability, and provide a leadership role to its departments and committees.

Outlined below are suggested strategies to accomplish this goal, bearing in mind that fiscal impacts must be tempered to achieve a balance in budgeting.

A. Develop and implement environmental initiatives that are resource efficient and cost-effective and that help to stabilize the municipal budget.

- i. Implement an Environmentally Preferable (i.e., Green) Purchasing (EPP) policy.
- ii. Conduct an internal review of purchasing policies to establish where enhancements in sustainable purchasing can be effected, such as purchasing products made from recycled materials.
- iii. Investigate the opportunity to implement bulk EPP among municipal departments and with other entities such as Rutgers University or other communities.
- iv. Develop an educational program in EPP for municipal staff.
- v. Establish municipal procurement guidelines directing that all applicable electrical equipment be ENERGY STAR-rated.
- vi. Conduct routine energy audits on all borough-owned facilities to ensure the maximum efficiency is being maintained.
- vii. Consider the installation of photovoltaic panels on borough facilities to offset energy costs and champion the use of renewable energy sources.

B. Develop and implement Borough policies that improve the resource efficiency and cost-effectiveness of municipal services.

- i. Research potential grants, certifications or awards that provide a benchmark or recognition for each new environmental conservation program or project implemented by the Borough.
- ii. Publicize each grant, certification or award achieved or maintained by the Borough by a press release, posting of a plaques or certificate in the municipal building and posting an announcement on the Borough web site.
- iii. Create a Borough staff level position for a Sustainability Coordinator, or assign this role to existing personnel. This person shall be the primary point of contact within the borough for employees and volunteers to obtain information related to sustainability policies.

C. Develop and implement strategies that reduce municipal fleet emissions and provide sustainable transportation options for municipal employees.

- i. Reduce municipal government motor vehicle emissions through use of Alternative Fuel Vehicles (AFVs), incentives for employee carpooling and alternative transportation, and education & promotion.
 - ii. Reinforce New Jersey's existing Anti-Idling Laws with signage and enforce with penalties for drivers of municipal vehicles and vehicles contracted to do work for the municipality.
 - iii. Retire old and under-used municipal vehicles.
 - iv. Establish a program on driving and maintenance practices that reduce fuel use and emissions for employees who use borough vehicles as well as for the community.
 - v. Adopt a Borough green fleet policy that incorporates energy efficiency criteria for acquiring municipal vehicles, including sizing of vehicles appropriate to their tasks and giving preferences to alternative fuels (ethanol, natural gas, propane, hydrogen, biodiesel, electricity, methanol) and hybrid vehicles where possible.
 - vi. Acquire AFV's and badge them to publicize the Borough's focus on sustainability.
- D. Develop and implement energy initiatives that conserve energy and that encourage the use of cleaner energy sources and technologies which will help to stabilize the municipal budget through resource efficiency and oil independence.**

- i. Perform an audit of energy consumption by the Borough. The audit should include specific observations and recommendations regarding present practices and Facilities and Assets that could be modified to improve conservation or convert to renewable electrical energy sources.
- ii. Based on results of energy audit, implement retrofits, conservation measures, and behavior change programs regarding the physical plant as well as operations and management of existing township facilities and assets.
- iii. Institute a "lights/computers out/off at night" policy.
- iv. Institute a "lights/computers out/off when not in use" policy.
- v. Perform energy-efficient lighting retrofits for exterior lights, exit signs and office/task lighting.

E. Develop and implement water conservation initiatives that reduce potable water use and increase the percentage of water used from non-potable sources at all Municipal facilities and assets.

- i. Perform an audit of potable water consumption by the municipal government facilities and services. The audit should include specific recommendations regarding present operations, facilities and assets that could be modified to

improve conservation or to convert potable water uses to non-potable or recycled sources.

- ii. Based on results of water consumption audit, implement water system retrofits and conservation measures regarding the physical plant as well as operations and management of new and existing Borough facilities and assets.
- iii. Require rain sensors when new irrigation systems are installed on municipal lands.

F. Design, operate, manage, and maintain municipal facilities and assets in a manner that preserves and enhances the quality of local natural resources.

- i. Perform an audit of existing Borough Facilities and Assets, regarding conditions and actions that are presently degrading natural resources.
- ii. Develop programs, policies and projects to mitigate impacts upon natural resources associated with the design, operation, management, maintenance and expansion of Borough facilities and assets. (i.e., Woodland, Wildlife, Greenbelt, Air Quality, Water Quality, Noise, Glare and Odor shall be included.)
- iii. Require that all municipal lands adopt sustainable landscaping techniques and Integrated Pest Management (IPM) practices.
- iv. Maintain clearly marked, multiple recycling receptacles at municipal sites and throughout town, on sidewalks, pedestrian malls, and parks. Clearly marked receptacles for trash should be available as well to discourage commingling of waste with recyclables. Use standardized shapes, colors, and signage to help promote public awareness and encourage proper use.

G. Consider green building technology for all new construction and major renovations of municipal facilities.

- i. Develop green standards or adopt LEED standards for renovation and new construction of all Borough-owned properties (including appropriate consideration of aesthetics, design opportunities and community standards.
- ii. Incorporate LEED standards for reflectance and shading in all Borough and private parking lots and in new construction and major renovations.
- iii. Provide developers, citizens, and borough staff with information to assist them in applying LEED standards.