

BROWN TOWNSHIP

Comprehensive Plan 2001



Adopted July 10, 2001 by Brown Township Trustees

**Larry Carper, Chairman
Richard Fleming, Vice Chairman
Merlin Sheets**

2000/01 Brown Township Zoning Commission

Stephen Cole, Chairperson
Sharon Bacastow, Vice Chairperson
James Andres
Neil Orahood- term expired (12/00)
Timothy Picard
David Williamson – term began (01/01)

Zoning Inspector

Robert Hedrick

Brown Township Comprehensive Plan Steering Committee

Marlene Sheets
Joe Mendel
Gregg Dufort
Mandi Dufort
Randy Fuller
Sharon Fuller
Kim Picard
Ed Miller
Charles Miley
Mike Noterman
Dwight Miller
Melissa Miller

Members of the Brown Township Zoning Commission (5)

Delaware County Regional Planning Commission Staff

Philip C. Laurien, AICP, Executive Director
Stephanie J. Matlack, Executive Administrative Assistant
Jiyeong Lee, MCP, GIS Manager
Paul A. Deel, AICP, Planner II
Michael Bissett, Planner I
Da-Wei Liou, MCP, Planner I, GIS Operator
Joseph Clase, Student Intern

Table of Contents

Executive Summary		Page 7
Chapter 1 Introduction		Page 15
	<ul style="list-style-type: none"> • Why Plan? • How Planning Relates to Zoning and the Community Vision • The DCRPC 1993 Comprehensive Plan-Effect on the Township • DALIS – How digital information affects the township’s ability to plan • The Intent of the Brown Township Comprehensive Plan 	
Chapter 2 Population and Growth		Page 18
Chapter 3 Development and Change 1980-1999		Page 25
	<ul style="list-style-type: none"> • Development Indicators from 1980-1999 • Summary on Development Indicators in Delaware County/Brown Township • Effects of Growth- Community Perception 	
Chapter 4 Issues and Opportunities		Page 37
	<ul style="list-style-type: none"> • Citizen Participation in the Decision Making Process • Citizens’ Likes and Dislikes Regarding Current Development of Brown Township • Issues regarding the township’s current development <ul style="list-style-type: none"> • Strengths • Weaknesses • Opportunities • Threats • Goals for Brown Township • The Essence of Brown Township • Vision Statement for Future Development 	
Chapter 5 Existing Land Use		Page 43
Chapter 6 Natural Resources and Conservation		Page 49
	<ul style="list-style-type: none"> • Topography (DALIS contours) • Slopes Greater than 20% • Floodplains, bodies of water • Wetlands • Prime Agricultural Soils • Soil suitability for septic systems 	

	<ul style="list-style-type: none"> • Combined Critical Resources 	
Chapter 7	Housing	Page 62
	<ul style="list-style-type: none"> • Existing housing stock • Housing needs • Open Space “Golf Course” Developments • Zero Discharge On-Site Centralized Sanitary Sewer Systems • Future Housing needs • Housing Policies 	
Chapter 8	General Economic Conditions	Page 72
	<ul style="list-style-type: none"> • Employment by Industry in Delaware County • Brown Township Economy 	
Chapter 9	Roads and Transportation	Page 82
	<ul style="list-style-type: none"> • General Information • Road Maintenance • Federal and State Roads • County Roads • Township Roads • Functional Classifications • Traffic Counts • General Access Management Principles • Future Roads 	
Chapter 10	Utilities	Page 99
	<ul style="list-style-type: none"> • Water • Sanitary Sewer • Electric • Gas • Telecommunications / Cellular • Storm Water Management 	
Chapter 11	Community Facilities	Page 111
	<ul style="list-style-type: none"> • Schools • Historic Sites • Libraries • Hospitals 	

	<ul style="list-style-type: none"> • Fire protection • Police • Cemeteries • Other Township Facilities 	
Chapter 12	Open Space and Recreation	Page 122
	<ul style="list-style-type: none"> • Open Space Defined • Recreation in Brown Township • Future Recreational Needs 	
Chapter 13	Development Patterns	Page 130
Chapter 14	Goals and Objectives	Page 146
Chapter 15	Recommendations	Page 151
	<ul style="list-style-type: none"> • Intent of the Brown Township Comprehensive Land Use Plan • Sub-Area texts to support Comprehensive Plan 	
Appendices		Page 162
	A. History of Planing: A New Planner's Timeline	
	B. Ohio planning Enabling Legislation	
	C. Common Elements of Great Communities	
	D. Delaware County Sewer Capacity Study	
	E. Delaware County Sewer Drainage Areas	
	F. NRPA Recreational Standards	
	G. Model Planned Residential Development Resolution	
	H. Permanently Sited Manufactured Housing Zoning Definitions	
	I. Acronyms	
	J. Model Conservation Subdivision Regulations	
	K. Glossary	

Maps

Map 5.1 Existing Land Use.....	Page 48
Map 6.1 Digital Elevation.....	Page 52
Map 6.2 Slopes.....	Page 53
Map 6.3 Flood Plains.....	Page 54
Map 6.4 Wetlands.....	Page 55
Map 6.5 Prime Agriculture.....	Page 56
Map 6.6 Soil Suitability for Septics.....	Page 57
Map 6.7 Combined Critical Resources.....	Page 58
Map 6.8 Brown Township Soils Map.....	Page 59
Map 7.1 Potential Developments Served by Alternative Central Sewer.....	Page 66
Map 9.1 Brown Township Roads.....	Page 82
Map 9.2 MORPC Bikeway System Draft.....	Page 83
Map 9.3 Brown Township Traffic Counts (MORPC 2000).....	Page 92
Map 10.1 Water Lines.....	Page 102
Map 10.2 1996 Delaware City Comprehensive Plan Growth Area.....	Page 104
Map 10.3 Sanitary Service Area.....	Page 105
Map 10.4 Electrical Service Boundary.....	Page 108
Map 10.5 Gas Service Area.....	Page 109
Map 12.1 Alum Creek Lake Opportunities.....	Page 129

Plans

Comprehensive Land Use Plan	Page 14
Delaware County Functional Classifications	Page 90
Delaware City Functional Classifications.....	Page 91
Delaware County Thoroughfare Plan	Page 95
Delaware City Thoroughfare Plan	Page 96
Comprehensive Land Use Plan Sub Area plan.....	Page 153

Executive Summary

According to the U.S. Bureau of Census, Delaware County is the fastest growing county in Ohio by percentage of growth and the 25th fastest growing county in the USA from 1990-99. Brown Township has experienced modest growth of 1.75% per year from 1990-2000, putting its current projected population at 1,396.

Berlin Township, Brown Township's neighbor to the south, has grown at a 5.11% annual rate from 1990-1999. Orange Township, south of Berlin Township, has grown at 12.74% annually from 1990-99. This growth wave is pushing north.

Brown Township is likely to remain a single family residential rural area due to a lack of sanitary sewer service and large areas of poorly drained soils unsuitable for septic tanks and leach fields. With the eastern expansion of Delaware City, the western portion of the Township may encounter suburban growth pressures in the next 10 years. The natural resources in the eastern portion of the township are recommended for conservation through lower densities and encouragement of conservation subdivision design. The unincorporated Village of Kilbourne is a traditional grid pattern neighborhood with a unique character that the township would like to preserve through appropriate architectural and spatial standards for new development if sewer were to become available.

A. Findings of the 2001 Comprehensive Plan:

1. To date, the township has lost 127.84 acres by annexation. (total)
2. 172 new homes have been built in the last 20 years.
3. Population has grown from 1,174 in 1990 to 1,396 (DCRPC projected) at the end of 2000, an increase of 18.89%.
4. From January 1987 to December 1999, 67 new lots were reviewed by the DCRPC, of which less than 30 were platted/recorded. This means 37 lots still can not receive building permits.
5. Agricultural and undeveloped acreage is still approximately 85% of the township, and the number one land use by acreage.

6. Traffic is not yet a significant problem on most township roads, residents have concerns that traffic along SR 521 and County Home Road will increase if a new interchange is constructed at SR 521 and I 71 and other proposed roads are built.
7. The local farm-to-market roads were not built to sustain their new functional roles as collector and arterial streets. Most collector roads need to be widened, but some narrow roads are considered part of the scenic character.
8. Brown Township has significant natural beauty in its ravines, which need protection.
9. There are 471 total housing units within Brown Township, all of which are single family homes. 89% of all housing is new, or in very good condition.
10. Delaware County is in good economic condition. The current unemployment rate is 1.7-1.9%. The current inflation rate is less than 2%. If anything, economists worry that the low unemployment rate may deter new industry from locating in the county.
11. The Polaris area eight miles south of US 36, has been a huge job and traffic generator for Delaware County. As land becomes more scarce and expensive there, northerly commercial expansion up the US 23 corridor, along the US 36 corridor, and at the US 36-SR37/ I-71 interchange becomes more likely. The US 36/SR 37 corridor represents an opportunity for commercial tax base.
12. US 36 is losing its ability to move through-traffic as it becomes a commercial frontage road. Access management principles to limit curb cuts can help prevent the deterioration of this important highway.
13. There is adequate potable water supplied by the Del Co Water Company, but summertime lawn watering taxes their ability to maintain treatment and pressure. A year round alternate-day watering ban was instituted in July 1999.
14. Brown Township is currently outside of the Delaware County sanitary sewer service district.
15. Buckeye Valley Schools, which serves all of the township, has experienced modest growth in its student population and has stabilized in the last 3 years.
16. Fire protection is provided by the Tri-Township Fire District, staffed by on-call paid volunteers and four full-time personnel.
17. Brown Township generated 276 of 14,366 or 1.9% of the Sheriff's complaints in 1999.
18. There is one township park, and Alum Creek State Park provides passive open space and recreation. There may be a need for additional active recreation such as baseball and soccer fields, tennis and basketball courts, and a public swimming pool in the future.

Vision Statement

When Brown Township is completely built out, we would like it to be a community with a rural feel and character. Roads should remain somewhat narrow, but safely carry the traffic. Rural roads would have a rough edge, with fencing and mature landscaping that reminds us of the rural past. We would like most residential areas to remain low-density large lots with deep setbacks.

We would like agriculture and/or green spaces throughout the community. We would like to preserve unique scenic views and our critical natural resources such as ravines, floodplains, wetlands, forests and Alum Creek Lake. We would like limited planned commercial and planned industrial uses, with attractive landscaping to balance the tax base. We would like to have a variety of land uses with controlled densities of population dependent upon the locations, natural features, and availability of utilities.

As we grow, we would like to see a center of the township in Kilbourne, where a traditional village with neighborhood shops would be an attractive location. We would like to retain the small town feel in the human scale of structures, the use of natural materials and traditional structural colors.

We want to live in a community where growth is balanced with the conservation and enhancement of rural landscapes, agriculture, cultural and heritage resources, and the environment.

B. Goals and Objectives of the Brown Township Comprehensive Plan

1. Community Vision

Goal - To retain economically viable agriculture.

Objectives

- a) Classify the most important farmland by soil type, location, productivity and proximity to development using the USDA Land Evaluation Site Assessment model (LESA).
- b) Preserve viable farmland as part of Planned Residential Developments (PRDs) by transfer (sale) of development rights from farmland to adjacent PRDs in return for a permanent easement for open space and/or agriculture on the remaining adjacent farmland.
- c) Keep Farm-Residential zone densities low at one unit per two acres.

Goal – To Retain Rural Character**Objectives**

- a) Retain lands in Farm-Residential zoning status where no sanitary sewer is expected.
- b) Encourage Conservation subdivision design

Goal - To ensure significant and diverse citizen input into the planning process.**Objectives**

- a) Use the 17 member steering committee as the primary citizen input to the Zoning Commission in amending the Comprehensive Plan.
- b) Advertise an open informational meeting to discuss and review the recommendations of the plan prior to public hearings.
- c) Use a township newsletter or weekly newspaper insert to publish and mail a synopsis of the plan to every household in Brown Township.

Goal – To prevent undue congestion on narrow county and township roads.**Goal – To protect rural real estate values****Objectives**

- a) Maintain a minimum lot size in areas with sanitary sewer service that emulate suburban densities within Planning Areas 1 and 3 (not to exceed 1.25 du/acre).
- b) Maintain a rural lot size adequate to safely utilize on-site water supply and sewage disposal systems where no sanitary sewer service is available.

2. Environment

Goal - To preserve natural beauty, wildlife, quietness and open space.**Objectives**

- a.) Amend the zoning text to require a green way link between adjacent PRD subdivisions.
- b.) Create a landscape detail for greenway paths.
- c.) Retain wooded green ways along ravines, waterways and project perimeters in reviewing Planned Developments and conventional subdivisions.
- d.) Set landscape and architectural design standards for planned developments that stipulate the kinds of centralized green spaces envisioned.

- e.) Require the linkage of planned developments by bike paths or walking paths in green ways so that new neighborhoods are all pedestrian oriented and children can move safely between neighborhoods without having to be driven by automobile.
- f.) Create a landscape detail or “look” for new developments that front on township roads.
- g.) Amend the zoning text to require the appropriate landscaping buffer detail between certain residential and non-residential land uses. Create a landscaping detail(s) to be used between incompatible land uses.

Goal - To avoid inappropriate sprawl and retain critical resource areas and wildlife corridors

Objectives

- a) Retain natural vegetation and use existing topography as buffers where they exist.
- b) Protect critical resources including floodplain and slopes over 20% with adequate buffer distances and corresponding densities.
- c) Encourage the use of conservation design in site development to protect natural resources and unique areas in the township.
- d) Request the county amend its subdivision regulations to protect 100-year floodplains
- e) Amend the zoning resolution to identify and protect floodplains, jurisdictional wetlands, and slopes over 20% in planned residential developments (PRD).

Goal – To conserve surface and ground water quality

Objectives

- a) Require minimum 2 acre lot size in areas without sanitary sewer, require larger lot sizes within close proximity to the Alum Creek drinking water reservoir.
 - 1. 1000’ from edge of Alum Creek 100 year flood plain – density of 1 unit per 5 acres
 - 2. 1000’ from top of Alum Creek bank slopes 20% or greater - density of 1 unit per 5 acres

3. Land Use

Goal - To retain a primarily single family residential housing mix, but offer diversity of housing when needed services are available.

Goal - To retain an overall low density.

Goal – To protect sensitive surface and ground water aquifers

Objectives

- a.) Retain single family densities of at least one unit per 2 acres where there is no centralized sanitary sewer provided by Delaware County or Delaware City and emulate surrounding densities when sewer is available.
- b.) Use the width of roads, the capacity of water and sewer systems, and the soil characteristics to regulate development, using the densities and land uses on the comprehensive plan map as a guide.
- c.) Avoid development of uses or densities that cannot be serviced by currently available or imminently planned infrastructure, unless such development mitigates its unplanned infrastructure impacts.
- d.) Permit single family housing in standard subdivisions with 20,000 square foot lots with centralized sanitary sewer and water, adequate fire protection and road access. (within Planning areas 1 and 3)
- e.) Permit multi family units as part of Planned Residential Developments, approved per the development plan. (Within Planning areas 1 and 3)
- f.) Permit flexible lot sizes as part of Planned Residential Developments.
- g.) Maintain the area at the borders of Delaware City between US 42 and US 36/SR 37 as a suburban residential heart of the township, with water and sewer provision there before any further expansion to the remainder of the township. Maximum gross PRD density of 1.25 units per acre for Planned Residential (cluster) developments.
- h.) Develop policies for service provision that relate to the comprehensive plan

Goal - To provide appropriate recreation and managed open space

Objectives

- a) Acquire 25-50 acres of land for a future Township park with active recreation (playing fields for organized sports).
- b) Create a series of mini-parks (less than 1 acre) with ¼ mile spacing as part of Planned Residential Developments where densities are greater than 1 unit per acre. Create a series of neighborhood parks of 15 acres with active recreation with ½ mile spacing in PRD neighborhoods.

Goal - To determine and implement an appropriate land use mix

Objectives

- a) Direct Planned Commercial and Industrial growth along US 36/SR 37 corridor.
- b) To create architectural guidelines for a Brown Township “look” for commercial, industrial and

office development; avoid “franchise architecture” that has no community architectural syntax.

- c) Acquire new sites for township facilities, including fire, police, road maintenance, etc.
- d) Avoid prematurely zoning land beyond the reasonable needs of the real estate market.
- e) Use the Comprehensive Plan as the guideline in zoning.
- f) Use the 15 member steering committee as the primary citizen input to the Zoning Commission in amending the Comprehensive Plan.
- h) Advertise an open informational meeting to discuss and review the recommendations of the plan prior to public hearings.
- i) Avoid strip commercial development by addressing the proposed access management policies.
- j) Provide for 5 year updates and revisions to the plan.

Goal – Discourage Annexation into the City of Delaware

Objectives

- a) Offer Development alternatives to annexation
- b) Work with City of Delaware to possibly create a Joint Economic Development District (JEDD) for commercial and industrial uses, or a cooperative agreement for residential uses.

Goal - To use access management controls to limit key access points to minimize traffic congestion.

Objectives

- a) Require commercial parallel access roads and connections between planned commercial developments on major arterial streets.
- b) Space new signals on US 42 and US 36/SR 37 with at least one half-mile separation.
- c) Adopt the appropriate ODOT Access Management recommendations; work with ODOT to prevent the deterioration of US 42 and US 36/SR 37.

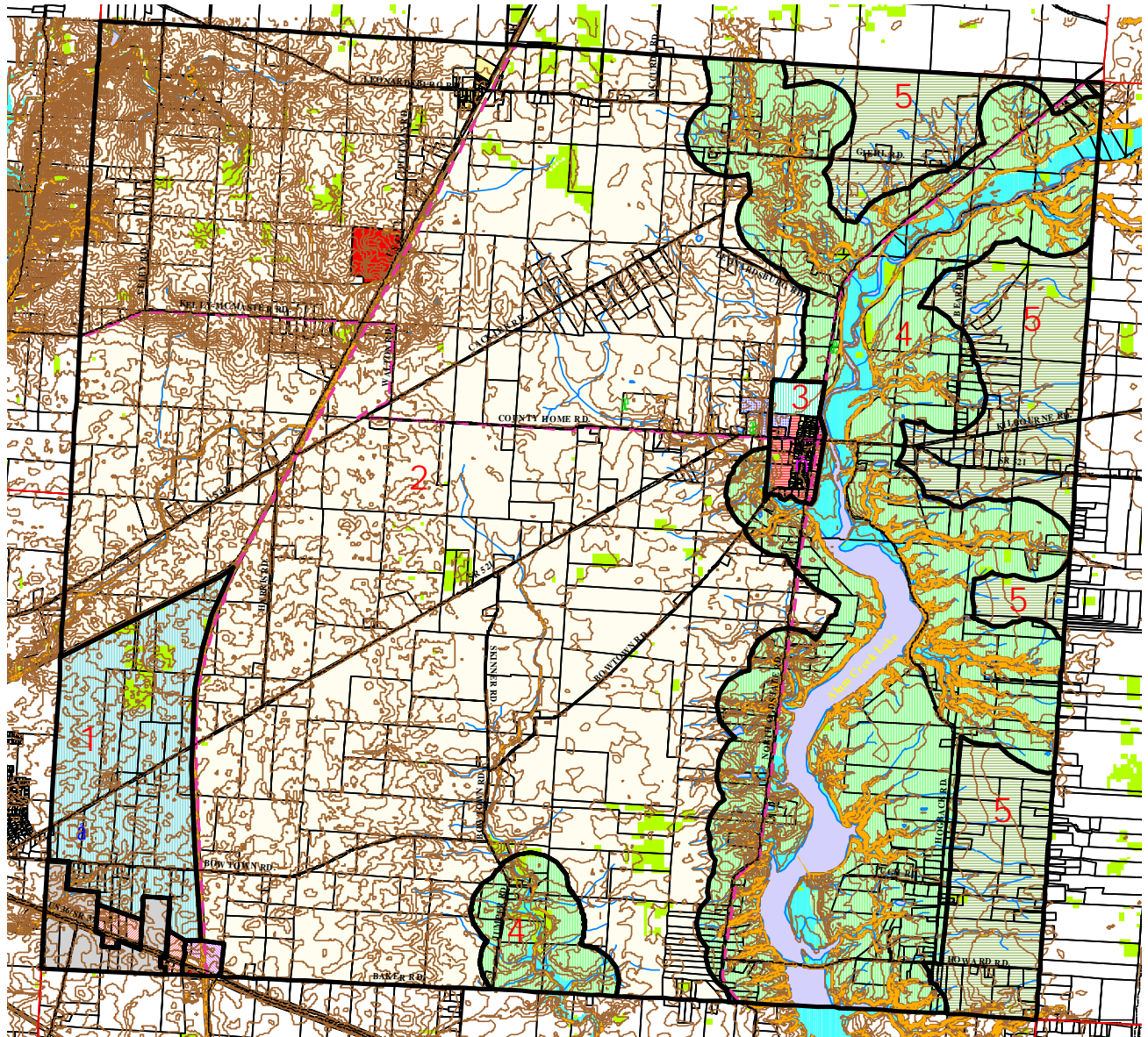
C. Recommendations

- Chapter 15 includes detailed Sub Area recommendations that relate to the 2000 Comprehensive Plan Map (please turn to Chapter 15 for those details).

Please see the foldout 2000 Comprehensive Plan Map (next page).

Comprehensive Plan Map

Brown Township Comprehensive Plan, Adopted 7/10/2001



	Township Boundaries		Existing Zoning
	Township Hall		Farm Residence District
	Schools		Low Density Residential District
	Cemeteries		Medium Density Residential District
	Centerlines of Roads		Planned Residential District
	Proposed Bikeway (MORPC Draft Sept 2000)		Neighborhood Office District
	Slopes		Neighborhood Commercial District
	Slope < 20%		Planned Commercial and Office District
	Slope > 20%		Industrial District
	Topography		Planned Industrial District
	Property Lines		City of Delaware
	Road ROW		River
	Streams		Road
	Water		Planning Areas and Proposed Land Use
	Township lands		Planned Commercial and Office district (39 Acres)
	Wetlands		Planned Industrial District (23 Acres)
	Wetland (ODNR)		Delaware City (138 Acres)
	Farmed Wetlands (ODNR)		1- Suburban Growth District (1du/2ac w/o san sewer or 1.25du/1ac w san sewer (778 Acres)
	Potential Top. Park Rec. Area		2- Agricultural Heartland (1du/2ac) (10002 Acres)
	Phosphorus		3- Old Kibbourne Village District (1du/2ac w/o san sewer or 2du/1ac w san sewer) (107 Acres)
	100-YEAR FLOOD PLAIN		4- Critical Resource District (1du/5ac) (4068 Acres)
	500-YEAR FLOOD PLAIN		5- Estate Conservation District (1du/5ac) (1474 Acres)

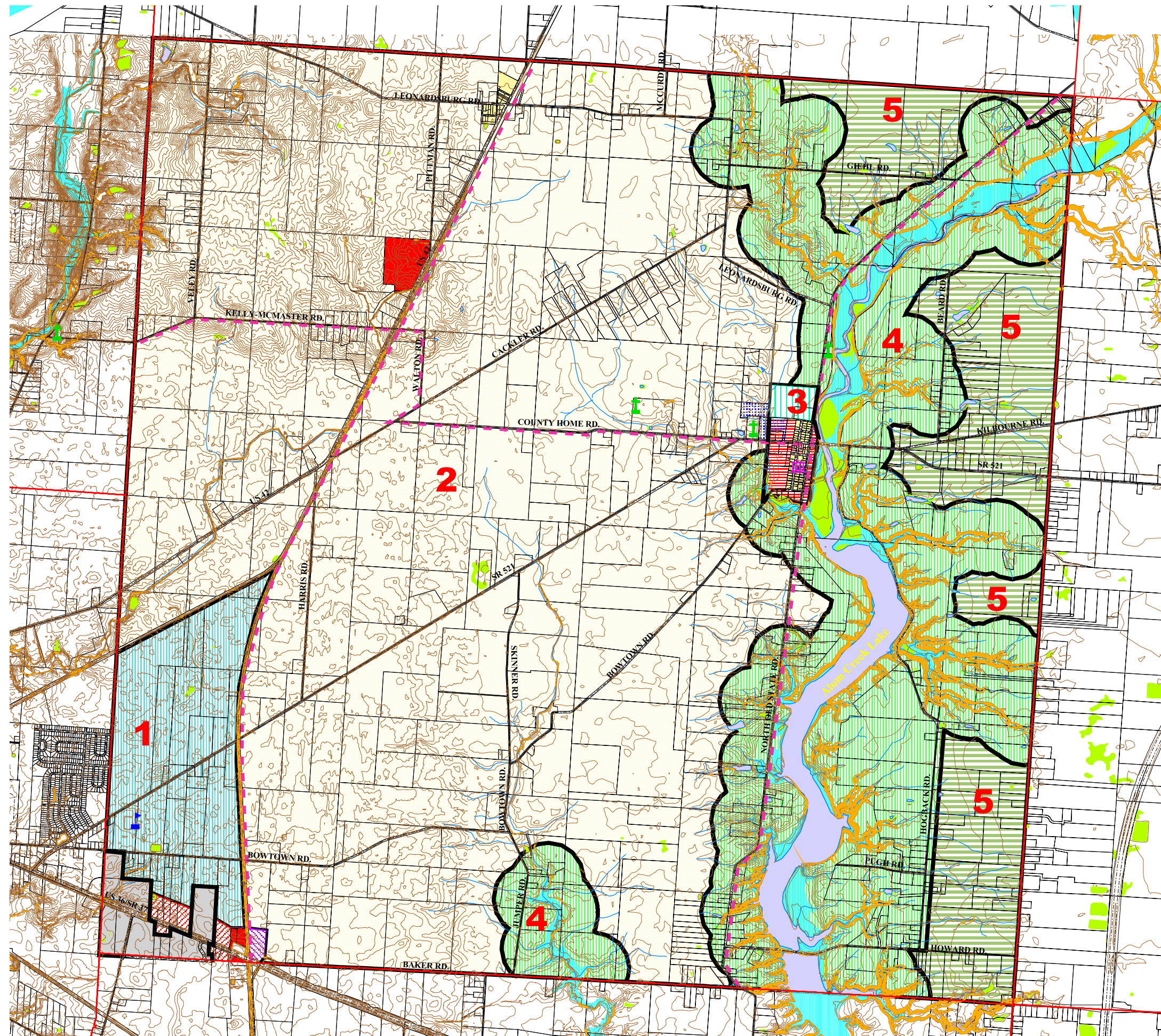


0 1000 2000 3000 4000 5000 6000 7000 Feet

Scale: 1" = 4000'

Prepared By: Delaware County Regional Planning Commission (740-833-2260)
Topo & Parcel Information Provided by DALIS project (740-833-2070)
<http://www.dcrpc.org>

Brown Township Comprehensive Plan Adopted 7/10/2001



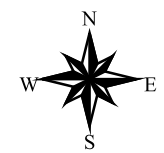
- Township Boundaries
- Township Hall
- ▶ Schools
- + Cemetery
- Centerlines of Roads
- Proposed Bikeway (MORPC Draft Sept. 2000)

- Slopes**
- Slope < 20%
- Slope > 20%
- Topography
- Property Lines
- Road ROW
- Streams
- Water
- Township lands
- Wetlands (NWI)
- Potential Twp. Park/Rec. Area

- Floodplain**
- 100-YEAR FLOOD PLAIN
- 500-YEAR FLOOD PLAIN

- Existing Zoning**
- Farm Residence District
- Low Density Residential Distri
- Medium Density Residential District
- Planned Residential District
- Neighborhood Office District
- Neighborhood Commercial Distri
- Planned Commercial and Office
- Industrial District
- Planned Industrial District
- City of Delaware
- River
- Road

- Planning Areas and Proposed Land Use**
- Planned Commercial and Office district (39 Acres)
- Planned Industrial District (23 Acres)
- Delaware City (138 Acres)
- 1 - Suburban Growth District (1du/2ac w/o san sewer or 1.25du/1ac w san sewer) (778 acres)
- 2 - Agricultural Heartland (1du/2ac) (10002 Acres)
- 3 - Old Kilbourne Village District (1du/2ac w/o san sewer or 2du/ac w san sewer) (107 Acres)
- 4 - Critical Resource District (1du/5ac) (4068 Acres)
- 5 - Estate Conservation District (1du/3ac) (1474 Acres)



0 1000 2000 3000 4000 5000 6000 Feet

Scale: 1" = 3000'

Prepared by: Delaware County Regional Planning Commission (740-833-2260)
Topo & Parcel information provided by the Delaware County Auditor's Office DALIS project
further information is available by contacting the
DALIS project Office (740-833-2900)
(Printed 12/15/2004)

Chapter 1

Introduction

1.1 Why Plan?

“Make no small plans; they have no magic to stir men’s blood and probably will not be realized. Make big plans; aim high in hope and work, remember that a noble logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itself with ever growing insistency. Remember that our sons and grandsons are going to do things that would stagger us. Let your watchword be order and your beacon beauty.”

Quote: Daniel Hudson Burnham, Father of the American City Planning Movement

City and community planning in the United States is a fairly young child, birthed in the city beautiful movement of the turn of the century. Open space was the deliverance from the stuffy, overcrowded and disease filled tenements of American cities in the late eighteen hundreds. The city beautiful movement used parks and public open spaces as centerpieces of the future city, oases of respite from the hustle and bustle. After the First World War, the movement evolved from its landscape architecture revitalization roots to a legal instrument for planning for orderly future growth.

The intent of the city planning movement was to plan for the future. At first this was done by the creation of zones with separate land use regulations attached to each zone. In some communities, there was a plan, which was the basis for the zoning map and resolution. However, in most communities, zoning itself was seen to be the plan. Zoning was tested immediately, and found to be an appropriate legislative power.

Ohio has never taken the additional step to require land use planning as a mandatory underpinning of zoning or other land use controls. It is recommended by the American Planning Association, and the American Institute of Certified Planners. It is suggested by the Ohio Revised Code, and it is bolstered by Ohio and United States Supreme Court cases that a comprehensive plan strengthens a community’s police power to zone and control its growth.

1.2 How Planning relates to zoning and the community vision

The comprehensive plan is a set of policies, goals and recommended land use map for the future development of the township. However, as a plan, it has no direct power under Ohio law. The township must adopt zoning, which implements these policies and visions. Zoning is the police power that guides and enforces the township's development. It is the intention of the township to adopt a comprehensive plan that is descriptive of its vision of the future. The township must subsequently amend its zoning to implement these policies and visions.

The Brown Township Zoning Commission convened on June 8, 2000 for the purpose of initiating the 2000 Brown Township Master Plan.

The Zoning Commission is responsible (Ohio Revised Code 519.05) for the submission of a plan to the Township Trustees to achieve the purposes of land use regulation under zoning powers (ORC 519.02). At-large residents and landowners of the township were encouraged to participate in the planning process.

1.3 The DCRPC 1993 Comprehensive Plan-The Effect on the Township

In 1993 the Delaware County Regional Planning Commission contracted with Frank Elmer and Assoc., Wilbur Smith and the SWA Group to prepare a Regional Comprehensive Plan for the entire Delaware County Planning Area. Brown Township falls within the Central Planning Area.

The 1993 DCRPC Regional Comprehensive Plan overlays data to create a land suitability map which, in conjunction with development policies for each planning area represents the best guidelines possible at the macro scale of the study. It is suggestive, not prescriptive.

The 1993 DCRPC Plan is the adopted Regional Plan. The 2000 Brown Township Comprehensive Plan will be the vision, goals and objectives determined by the Township. If these plans differ in their recommendations, the Township plan takes precedence.

1.4 DALIS – How digital information affects the township's ability to plan

The Delaware County Auditor developed a Geographic Information System (GIS) for the primary purpose of accurately mapping tax parcels. DALIS stands for Delaware Area Land Information System. It is an

accurate computer mapping system that offers both tabular and graphic real estate data about each of 50,000 tax parcels.

This mapping system has a cadastral (property line) layer and topography layer. Topography is available in 2', 5', and 10' contours depending upon which area of the county is viewed. In addition, the Auditor has also created revised soil maps and digital ortho photos with structures.

DALIS mapping is used as the base map for the 2000 Brown Township Comprehensive Plan. The software used is Arc/Info and ArcView, by ESRI. Planners may now view each parcel in a site-specific manner. This allows the Comprehensive Land Use Plan to be site specific.

1.5 The Intent of the Brown Township Comprehensive Plan

The 2000 Brown Township Comprehensive Land Use Plan is intended to:

- 1.) Review land use, population, utility services, roads, and boundaries for 2000.
- 2.) Review the economic, legislative, judicial and regulatory conditions present in 2000.
- 3.) Establish goals and policies that are representative of the community's values and visions of its future, and determine if they conform to current federal and state land use legislation and court decisions.
- 4.) Compliment the goals with specific objectives for the growth in the ensuing five to ten years.
- 5.) Create a text and map for the recommended land use of each parcel on a site-specific basis to guide future growth of the township.
- 6.) Recommend amendments to local zoning, and the adoption of development policies to assure that the township will be what it has envisioned when it is all built out.

The 2000 Comprehensive Land Use Plan is intended to be site-specific, with land use and/or density classification attached to each parcel, and viewed from an environmental standpoint with policies to protect critical resource areas.

Chapter 2

Population and Growth

According to the US Bureau of the Census, Population Division, Delaware County is the fastest growing county by percentage growth rate in Ohio, both for the period 1990-99 and July 1, 1998- July 1, 1999. Delaware County is also the 25th fastest growing county in America by percentage growth rate. Most of this growth has occurred in Orange, Genoa, and Liberty Townships.

Table 2.1 US Bureau of Census, Ohio Population Estimates, Six Fastest Growing Counties

(Source, US Bureau of Census, Internet Release Date: March 9, 2000; Statistical Information, Washington D.C, (301)-457-2422).

County	1990 pop	1998 est. pop	1999 est. pop	90-99 % growth rate	90-99 rank in Ohio , % growth	98-99% growth rate	98-99 rank in Ohio, % growth	98-99 rank in USA, all counties, % growth
Delaware	66,929	98,208	103,679	54.9 %	1	5.6 %	1	25
Warren	113,909	146,027	153,292	34.5 %	2	5.0 %	2	38
Medina	122,354	143,855	147,277	20.4 %	6	2.4 %	3	278
Union	31,969	39,883	40,776	27.5 %	4	2.2 %	4	314
Fairfield	103,461	123,949	126,723	22.5 %	5	2.2 %	5	315
Morrow	27,749	31,448	32,146	15.8 %	10	2.2 %	6	321

The Delaware County growth rate has continued to increase as people pushed north from Franklin County (Columbus) into the “country” for larger lots or more “rural character”. To put Delaware County’s rate of growth into national perspective, consider the state and national annual growth rates.

Table 2.2 Comparison of Delaware County Annual Growth Rate with Ohio and USA

(Source, US Bureau of Census, Internet Release Date: March 9, 2000; Statistical Information, Washington D.C, (301)-457-2422).

Area	1990 population	1999 population (estimated)	Growth Rate 1990-99	Growth Rate 1998-99
USA	248,709,873	272,690,813	8.79 %	.9 %
Ohio	10,847,115	11,256,654	3.8 %	.2 %
Central Ohio	1,377,419	1,530,263	11.09 %	1.46 %
Cincinnati Metro	1,421,803	1,505,970	5.91%	.04 %
Cleveland Metro	2,759,823	2,807,002	1.7 %	-.01 %
Franklin Co.	961,437	1,027,821	6.9 %	.6 %
Delaware Co.	66,929	103,679	54.9%	5.6 %

From 1998-99, the US Census Bureau's estimated rate of growth for Delaware County is:

- 4 times faster than Central Ohio
- 6 times faster than the USA
- 9 times faster than Franklin County
- 28 times faster than the state of Ohio
- 140 times faster than the Cincinnati Metro area
- 600 times faster than the Cleveland Metro area

The Delaware County Regional Planning Commission also makes population projections based upon the housing unit method. The formula works as follows:

- 1.) Last (1990) Census used as a base year.
- 2.) Number of residents per dwelling unit for each jurisdiction is calculated based upon the last census information.
- 3.) Number and type of dwelling unit is tracked by month for all jurisdictions.
- 4.) A time lag factor anticipates the occupancy date of new housing after building permit issuance.
- 5.) New population is projected for each jurisdiction based on the number of building permits issued times the number of residents per dwelling unit type, after the lag factor.
- 6.) New population added to last census data to create projected population.

Because of Delaware County's rapid growth, all recent population projections by the county and the Bureau of Census have proven to be low. The Population by Housing Unit Method Projections table contains population projections by township, village and city for Delaware County. Brown Township's population has grown from 1,164 in 1990 to a (projected) 2000 year-end 1,396. This modest population growth has primarily been due to the lack of centralized sewer service. Brown's (projected) annual growth rate (1.75%, 1990-2000) is only one third the growth rate of its southern neighbor Berlin Township (5.11%).

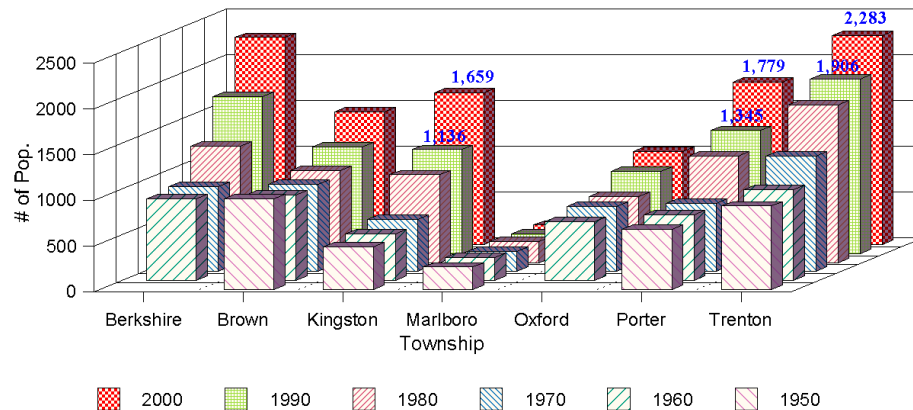
The location of Brown Township next to the City of Delaware offers many amenities that attract higher density development. The township could be facing possible future annexations, as growth extends along SR 521, SR 42 and US 36/SR 37.

DELAWARE COUNTY REGIONAL PLANNING COMMISSION																
POPULATION PROJECTION (HOUSING UNIT METHOD)																
1990 THROUGH 2020																
YEAR	1990 CENSUS	POPULATION	H. UNITS	END OF 1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	ANNUAL GROWTH R. (90-2000)	GROWTH RATE (2001-2010) (2011-2020)
(APRIL OF 1990) INDEX VACANCY R. (ESTIMATED)																
TOWNSHIPS																
BERKSHIRE	1,713	3,002	4.10%	1,751	1,816	1,864	1,929	1,980	2,012	2,062	2,108	2,143	2,195	2,272	29.77%	26.4%
BERLIN	1,978	2,666	3.90%	1,989	2,017	2,064	2,124	2,203	2,239	2,463	2,468	2,765	3,013	3,274	64.63%	51.1%
BROWN	1,164	2,989	6.40%	1,174	1,189	1,203	1,223	1,250	1,279	1,308	1,341	1,359	1,378	1,396	18.89%	17.5%
CONCORD	3,363	3,171	4.10%	3,394	3,437	3,512	3,595	3,692	3,790	3,870	3,951	4,107	4,381	4,637	36.63%	31.7%
DELAWARE	1,607	2,567	4.70%	1,610	1,625	1,634	1,640	1,666	1,619	1,717	1,723	1,752	1,792	1,810	12.46%	11.8%
GENOA	4,033	2,966	2.20%	4,107	4,332	4,414	4,779	5,362	6,086	6,977	7,944	9,148	10,792	12,163	196.14%	11.47%
HARLEM	3,391	2,945	2.50%	3,402	3,432	3,472	3,547	3,622	3,676	3,731	3,796	3,854	3,902	3,960	16.40%	1.53%
KINGSTON	1,136	2,975	4.30%	1,147	1,178	1,213	1,277	1,349	1,397	1,442	1,486	1,535	1,606	1,693	47.58%	39.7%
LIBERTY	3,790	2,890	4.20%	3,874	4,066	4,352	4,768	5,201	6,219	7,220	7,817	8,435	9,159	9,949	156.80%	9.89%
MARLBORO	213	3,242	18.90%	212	210	210	210	209	209	210	211	210	212	213	0.72%	0.07%
ORANGE	3,789	2,920	4.30%	3,903	4,128	4,416	4,793	6,067	7,601	8,390	9,274	10,222	11,461	12,950	231.83%	12.74%
OXFORD	901	2,735	3.10%	905	921	934	945	938	968	972	983	992	1,000	1,017	12.32%	11.7%
PORTER	1,345	3,001	3.20%	1,360	1,390	1,442	1,484	1,521	1,572	1,599	1,630	1,668	1,703	1,729	27.12%	2.43%
RADNOR	1,136	2,874	3.30%	1,163	1,179	1,195	1,221	1,233	1,279	1,306	1,328	1,348	1,375	1,399	20.32%	1.87%
SCIOTO	1,688	2,752	0.50%	1,715	1,738	1,790	1,835	1,898	1,963	2,036	2,091	2,139	2,209	2,294	33.76%	2.5%
THOMPSON	582	3,279	13.00%	585	586	591	594	592	592	591	597	605	613	621	6.06%	0.99%
TRENTON	1,906	3,147	0.70%	1,920	1,943	1,968	1,998	2,032	2,049	2,085	2,143	2,181	2,208	2,238	16.99%	1.5%
TROY	1,632	2,777	4.20%	1,659	1,681	1,687	1,704	1,732	1,762	1,781	1,809	1,832	1,849	1,860	12.07%	11.1%
TOTAL UNINC.	35,437	2,919	3.69%	35,870	36,889	37,962	39,666	42,527	46,383	49,709	52,860	56,297	60,819	65,475	82.53%	6.20%
INCORPORATED AREAS																
DELAWARE	20,030	2,886	6.80%	20,229	20,327	20,410	20,530	20,849	21,406	22,204	23,120	23,719	24,849	26,435	27.1%	27.1%
GALENA	361	2,807	11.30%	360	357	355	353	351	349	348	350	349	352	355	-1.13%	-0.11%
SUNBURY	2,046	2,705	3.40%	2,069	2,093	2,095	2,110	2,282	2,462	2,511	2,593	2,659	2,719	2,777	34.22%	2.99%
SHAWNEEHILLS	423	2,597	9.00%	430	438	445	449	449	456	466	466	467	467	467	8.30%	0.82%
POWELL	2,154	3,044	5.90%	2,330	2,561	2,767	3,072	3,532	3,929	4,224	4,599	5,083	5,608	6,009	157.93%	9.94%
ASHLEY	1,039	2,666	5.20%	1,129	1,200	1,270	1,262	1,256	1,254	1,252	1,247	1,243	1,236	1,232	9.16%	0.83%
OSTRANDER	431	2,961	9.60%	429	428	426	424	423	428	448	459	459	457	461	7.37%	0.71%
DUELIN	3,811	3,208	7.20%	3,823	3,839	3,954	4,019	4,054	4,088	4,125	4,161	4,197	4,232	4,253	11.24%	1.07%
WESTERVILLE	1,177	3,341	10.80%	1,291	1,484	1,705	1,960	2,252	2,588	2,974	3,418	3,927	4,513	5,186	301.64%	14.92%
COLUMBUS		2,920	4.30%					69		331	1,020	2,229	3,320	4,891		
TOTAL INC.	31,492	2,869	6.76%	32,090	32,778	33,426	34,179	35,447	37,029	38,882	41,431	44,333	47,653	52,067	62.25%	4.96%
T. INC.&UNINC.	66,929	2,896	5.20%	67,960	69,586	71,388	73,845	77,974	83,412	88,591	94,290	100,630	108,472	117,542	72.96%	5.63%
THIS FIGURE CONSIDERS: 1) ANNEXATION																
2) SINGLE F. AND MULTI F. OR CONDOMINIUM BUILDING PERMITS																
3) VACANCY RATE																
4) 8 MONTHS CONSTRUCTION TIME AFTER GETTING BUILDING PERMIT																
5) ANNUAL DECLINE RATE (0.60738% (90-95), 0.53832% (96-2000))																
DELAWARE COUNTY POPULATION IN THE JULY OF 1999 (U.S. CENSUS BUREAU); 103,697																
DELAWARE COUNTY REGIONAL PLANNING COMMISSION																

Figure 2.1 Population Projections in Northern Delaware County

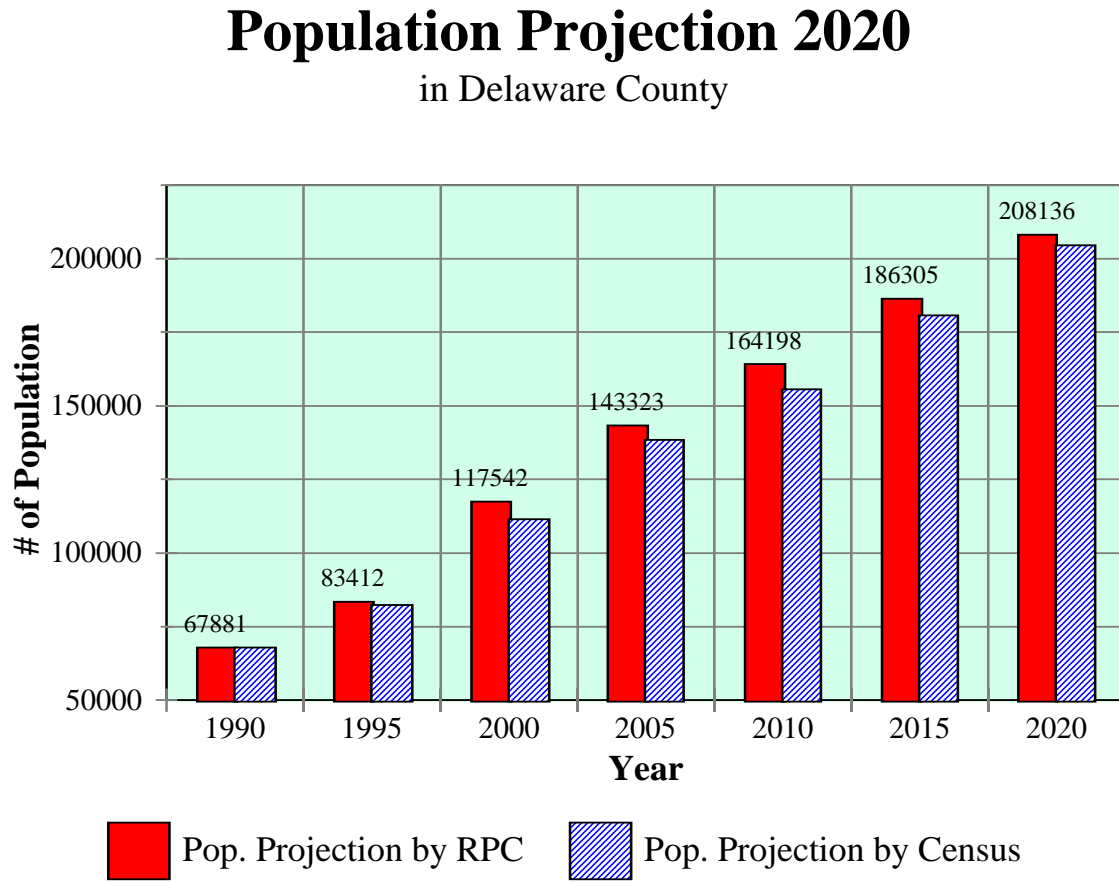
Population Projection

In Northern Delaware County



The Delaware County Regional Planning Commission tracks population growth by census and new building permits. DCRPC uses the “Housing Unit Method” (approximate new population based on occupancy of new housing unit type) to project current population (see previous table). Based upon its current growth rate, Brown Township could have a population of 1,534 in 2010.

Figure 2.2 Delaware County Population Projections to Year 2020



**DELAWARE COUNTY REGIONAL PLANNING COMMISSION
NUMBER OF BUILDING PERMITS
1980 THROUGH 1999**

YEAR	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	Total (1980-99)
TOWNSHIPS																					
BERKSIDE	0	3	2	0	0	13	30	28	56	55	30	18	27	23	13	21	32	18	17	58	310
BELEN	8	11	4	0	11	19	19	34	32	17	13	22	26	35	10	65	68	54	38	117	698
BERRY	2	2	2	0	3	3	5	10	15	19	4	7	8	12	14	11	17	7	17	8	112
CONCORD	16	18	4	11	14	26	42	48	52	27	30	22	35	36	40	39	35	49	38	103	723
DELAWARE	3	3	2	2	3	3	6	4	0	0	11	9	5	10	12	3	4	12	23	11	160
GENOA	0	3	10	21	30	27	66	32	38	40	33	54	114	163	217	243	343	342	422	301	3,035
HARLEM	13	8	4	10	19	18	33	33	36	19	18	17	32	37	27	25	30	31	23	27	463
KINGSTON	0	2	2	1	0	0	6	14	13	7	14	12	22	32	20	19	18	19	24	91	287
LIBERTY	20	18	0	19	35	31	60	38	95	37	42	50	164	193	252	169	202	235	262	332	2,371
MAELBORO	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	1	0	1	1	7
ORANGE	11	5	3	26	57	43	110	150	139	80	94	100	135	178	180	108	238	302	319	437	1,319
OXFORD	0	1	2	3	4	1	2	4	2	4	9	8	6	5	7	3	9	6	4	0	88
POHLE	10	5	7	0	4	4	14	11	17	17	10	20	20	12	20	12	13	16	17	11	214
RAIDEN	1	3	0	4	3	2	1	3	1	8	9	7	11	15	12	13	13	9	13	11	157
SCOTTS	16	8	4	12	14	22	17	36	20	11	22	15	17	28	26	33	18	30	27	37	469
THORNTON	1	0	1	2	1	1	6	3	2	7	1	3	5	0	2	0	3	3	3	4	49
THORNTON TERRY	6	7	3	7	3	4	5	17	15	16	11	42	12	17	9	11	35	17	13	12	281
TRIO	0	0	1	27	4	6	5	18	13	7	15	3	0	13	18	0	13	13	12	6	196
TOTAL LINCOLN	138	184	78	214	223	241	409	418	614	362	448	428	646	792	919	866	3,138	1,409	1,646	1,894	12,777
INCORPORATED AREAS																					
DELAWARE	152	164	4	58	46	103	80	180	150	322	89	76	87	111	205	305	483	298	333	780	3,514
GALENA	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	2	0	2	2	9
BRIDGEVIEW	2	0	0	1	8	13	5	4	8	4	3	3	11	18	18	17	40	30	23	19	205
SEASIDE HILLS	9	0	1	1	24	36	102	202	137	129	42	13	89	168	166	103	130	163	227	141	2,028
POWELL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ASHLEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WESTMANOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BELEN WESTVILLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLLIER'S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL INC.	146	172	13	62	80	174	203	368	297	456	136	153	187	291	410	627	765	992	792	1,777	7,863
T. INCORPORATED	290	217	89	276	312	415	633	888	811	818	584	579	833	1,083	1,329	1,493	1,806	2,101	2,621	3,671	20,760

NOTE: 1) IN THE CITIES OF DELAWARE AND COLLETON, THERE WERE NO BUILDING PERMITS FOR RESIDENTIAL BUILDINGS UNTIL 1997.
2) PRIOR 1997, THORNTON AND DELAWARE WERE BUILT WITH FAMILY RESIDENTIAL BUILDING PERMITS IN TOWNSHIPS.

SOURCE: DELAWARE COUNTY REGIONAL PLANNING COMMISSION

Table 2.2 Central Ohio Population Growth

Population Information in Central Ohio

(Data source: 1999 U.S. Census Bureau)

Area Name	'90 Census	'99 Census	Changed # of Pop.	Total Growth R.	Births 1990-1998	Deaths 1990-1998	Natural G. # of Pop.	Int'l Migration	Domestic Migration
Franklin	961,437	1,027,821	66,384	6.90%	149,925	70,377	79,548	11,089	-21,749
Delaware	66,929	103,679	36,750	54.91%	9,856	4,515	5,341	440	25,347
Fairfield	103,472	126,723	23,251	22.47%	14,070	8,166	5,904	283	17,280
Licking	128,300	136,485	8,185	6.38%	17,230	11,100	6,130	285	8,103
Union	31,969	40,776	8,807	27.55%	4,685	2,498	2,187	75	6,576
Pickaway	48,244	53,431	5,187	10.75%	5,806	3,760	2,046	46	3,240
Madison	37,068	41,348	4,280	11.55%	4,803	2,843	1,960	77	2,349
Central Ohio	1,377,419	1,530,263	152,844 <i>11.10%</i>	11.10%	206,375	103,259	103,116 <i>7.49%</i>	12,295 <i>0.89%</i>	41,146 <i>2.99%</i>
Ohio	10,847,115	11,256,654	409,539 <i>3.78%</i>	3.78%	1,454,713	957,171	497,542 <i>4.59%</i>	52,922.00 <i>0.49%</i>	-166,200 <i>-1.53%</i>
United States	248,709,873	272,690,813	23,980,940 <i>9.64%</i>	9.64%	36,820,132	20,934,303	15,885,829 <i>6.39%</i>	7,478,078 <i>3.01%</i>	0 <i>0.00%</i>

Central Ohio's growth rate of 11.10% for the period 1990-99 almost triples the 3.78% growth for the State of Ohio during the same period. Delaware County, the fastest growing county in Ohio, experienced a 54.91% growth rate for this period, according to U.S. Census data. Delaware County is growing by immigration, both domestic (from other USA regions) and International (from outside the USA).

Chapter 3

Development and Change 1980-1999

3.1 Development Indicators from 1980-1999

From 1980-99, the township added 172 new single-family homes, or an average of 9 homes per year. Though modest, this growth is on a path to be within the 1993 Delaware County Comprehensive Plan's estimate of 131 - 239 new dwelling units in Brown Township for the 17-year period 1993-2010.

Delaware County is growing largely by immigration. 25,787 new residents moved into the county from 1990 to 1999. These were both domestic (from outside the county) and international (from outside the USA) immigration. By contrast, Franklin County experienced a net loss via outward migration from 1990-99 of (-10,660 people). People are moving out of Franklin and into Delaware County.

Figure 3.1 New Subdivisions

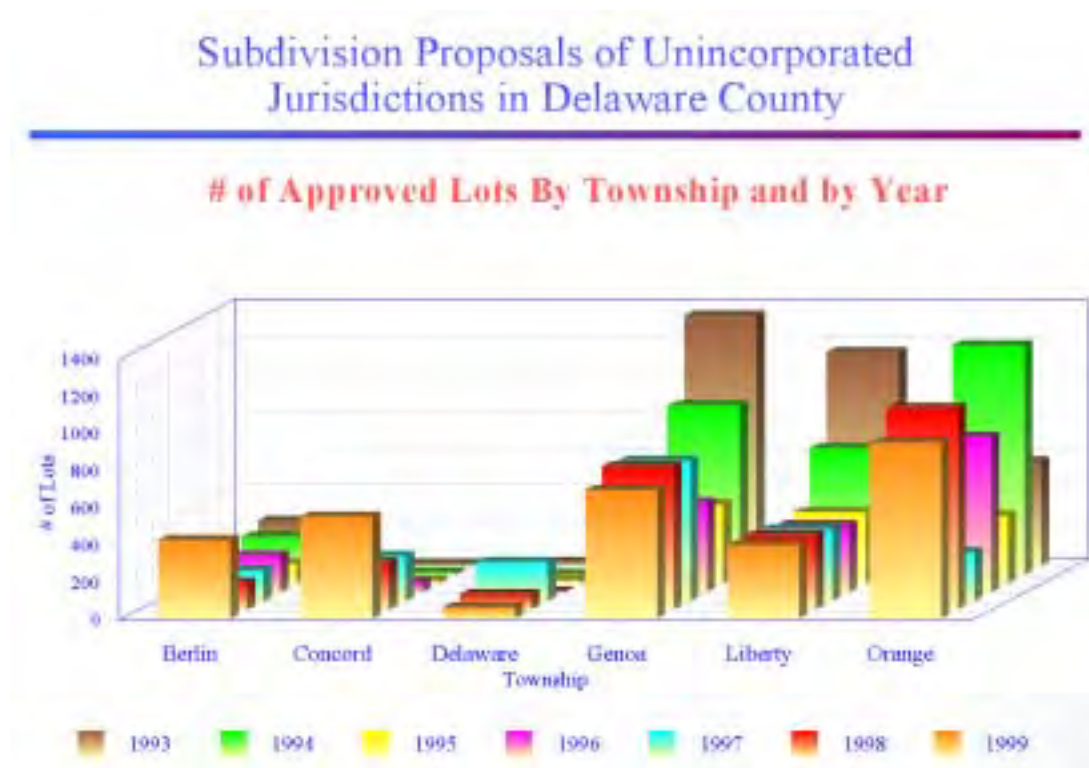


Table 3.1 Subdivisions in Delaware County 1/1/93- 12/31/99

SUMMARY STATISTICS OF SUBDIVISION DATA BASE FROM 1/1/87 TO 12/31/99							
TOTAL # OF LOTS APPROVED BY RPC							
TOWNSHIP	1993	1994	1995	1996	1997	1998	1999
BERKSHIRE	9	6	10	3	0	24	55
BERLIN	244	206	107	198	162	145	420
BROWN	6	0	0	8	0	2	4
CONCORD	15	11	19	52	241	254	548
DELAWARE	24	4	19	5	209	83	59
GENOA	1,346	912	425	483	753	771	690
HARLEM	11	11	26	9	4	3	31
KINGSTON	10	7	0	8	8	12	16
LIBERTY	1,149	679	386	358	386	398	391
MARLBORO	0	0	0	0	0	0	0
ORANGE	562	1,232	364	834	263	1,085	943
PORTER	4	2	2	2	3	0	2
RADNOR	8	0	0	0	0	0	5
SCIOTO	2	11	7	11	4	0	28
THOMPSON	0	0	0	3	0	0	21
TRENTON	7	9	23	0	0	0	19
TROY	8	3	0	11	0	4	4
TOTAL	3,405	3,093	1,388	1,985	2,033	2,781	3,236

* TOTAL # OF LOTS INCLUDE S-F & M-F SUBDIV. AND OTHER USE SUBDIVISION PROPOSALS

From January 1987 to December 1999, 67 new subdivision lots were reviewed by the DCRPC in Brown Township (Table 3.2). This number includes sketch plan, preliminary and final approvals; the actual number of new lots recorded is less than 30. Due to the lack of sanitary sewer, land in Brown Township has traditionally been developed as no-plat subdivisions (road frontage lot splits) or five acre subdivision-exempt lots.

Table 3.2 Residential Subdivision from 1987-99 in Delaware County

SUMMARY STATISTICS OF RESIDENTIAL SUBDIVISION DATA BASE FROM 1/1/87 TO 12/31/99											
TOWNSHIP	ACREAGE	NUMBER OF S-F LOTS							M_H_UNIT	BLDGPER	EXPIRED LOTS
		TOTAL*	RECORDED	FINAL APP'D	PREL. APP'D	OVERALL PREL.	TABLED	SKETCH REVIEW			
BERKSHIRE	387.38	163	137	0	0	0	3	23	0	108	8
BERLIN	1,037.61	1,042	627	38	356	0	21	0	0	453	71
BROWN	156.71	67	24	2	0	0	0	41	0	19	0
CONCORD	1,781.83	1,954	679	142	322	794	17	0	95	346	6
DELAWARE	206.50	199	135	24	40	0	0	0	48	51	2
GENOA	3,003.09	4,287	3,008	254	990	0	0	35	90	2,435	90
HARLEM	283.62	95	95	0	0	0	0	0	0	62	0
KINGSTON	257.26	76	67	0	2	0	0	7	0	46	0
LIBERTY	3,183.62	2,797	2,370	62	296	0	0	69	852	1,774	274
MARLBORO	2.63	2	2	0	0	0	0	0	0	1	0
ORANGE	2,790.43	4,443	3,056	207	1,177	0	0	3	1,144	2,460	318
PORTER	254.32	23	21	2	0	0	0	0	0	17	0
RADNOR	78.82	26	21	0	5	0	0	0	0	16	0
SCIOTO	173.93	63	35	0	10	0	0	18	0	24	2
THOMPSON	51.99	24	24	0	0	0	0	0	0	1	0
TRENTON	255.12	55	39	14	0	0	0	2	0	35	2
TROY	122.18	52	52	0	0	0	0	0	0	45	0
TOTAL	14,027.04	15,368	10,392	745	3,198	794	41	198	2,229	7,893	773

* Total # of lots include S-F and M-F Subdivisions and other use subdivision proposals

Figure 3.2

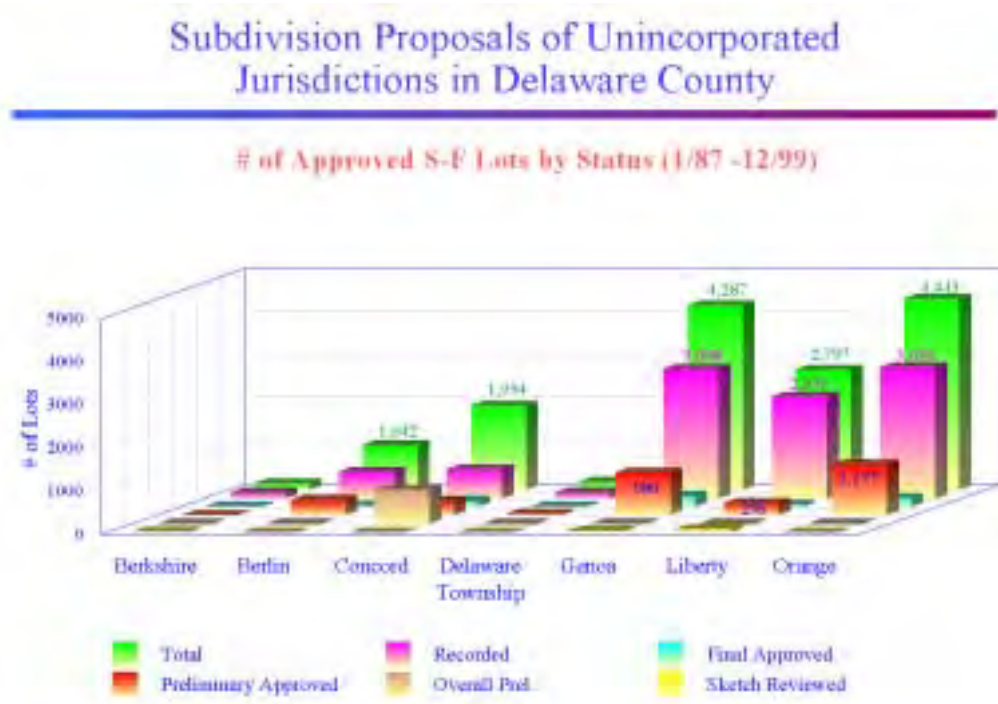


Figure 3.3

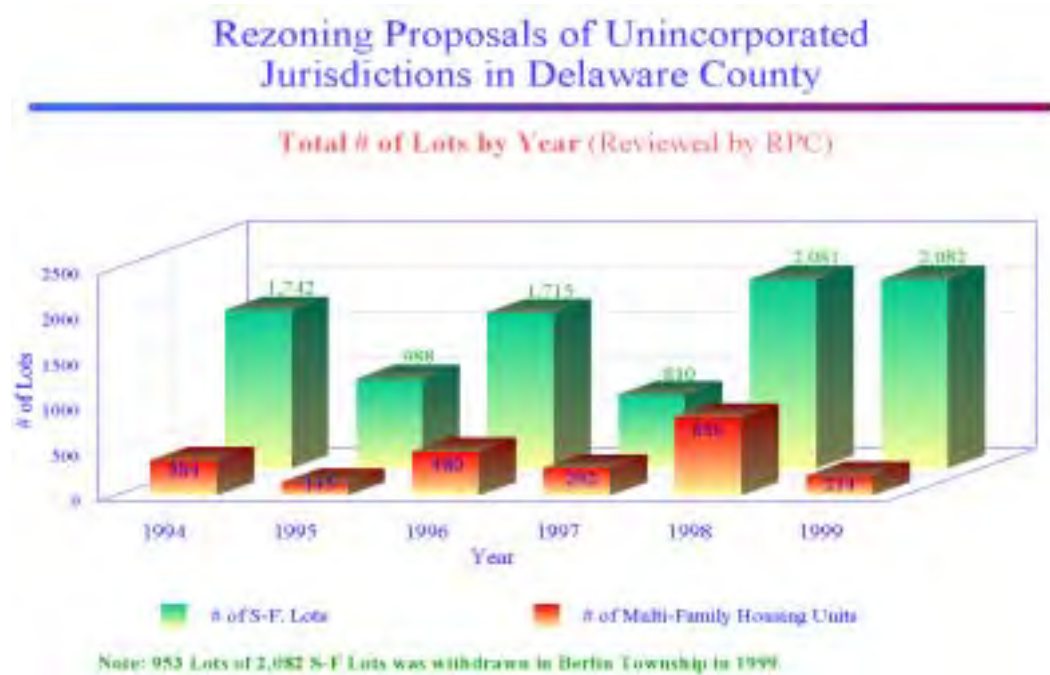


Table 3.3

SUMMARY STATISTICS OF REZONING DATA BASE FROM 1/1/96 TO 12/31/99								
ACTIVE REZONING PROPOSALS REVIEWED BY RPC								
TOWNSHIP	1996		1997		1998		1999	
	# LOTS	# M-F. HU	# LOTS	# M-F. HU	# LOTS	# M-F. HU	# LOTS	# M-F. HU
BERKSHIRE	9	0	32	0	31	0	24	0
BERLIN	0	0	164	0	124	50	1,211	0
BROWN	0	0	0	0	0	0	0	0
CONCORD	598	72	0	0	1,164	92	4	0
DELAWARE	203	0	0	0	0	0	0	0
GENOA	271	0	157	0	63	0	532	181
HARLEM	5	0	5	0	4	0	11	0
KINGSTON	0	0	0	0	0	0	0	0
LIBERTY	229	408	116	0	203	192	241	33
MARLBORO	0	0	0	0	0	0	0	0
ORANGE	396	0	333	292	486	522	20	0
OXFORD	0	0	1	0	0	0	0	0
PORTER	2	0	0	0	0	0	0	0
RADNOR	0	0	0	0	0	0	0	0
SCIOTO	0	0	0	0	0	0	0	0
THOMPSON	0	0	0	0	0	0	0	0
TRENTON	2	0	2	0	6	0	39	0
TROY	0	0	0	0	0	0	0	0

Table 3.4

SUMMARY STATISTICS OF REZONING DATA BASE FROM 1/1/89 TO 12/31/99						
REZONING PROPOSALS REVIEWED BY RPC AND TOWNSHIPS						
TOWNSHIP	TOTAL ACREAGE	RESIDENTIAL		NON-RESIDENTIAL		
		ACREAGE	# OF LOTS	#OF M-F. HU	ACREAGE	# OF SQ.FT
BERKSHIRE	820.61	663.97	667	384	156.64	468,280
BERLIN	1,393.62	1,243.07	1,916	50	150.55	325,940
BROWN	42.91	0.00	2	0	42.91	4,644
CONCORD	1,397.41	1,178.64	1,766	164	218.77	50,090
DELAWARE	225.44	223.28	300	0	2.16	7,560
GENOA	2,600.63	2,507.70	6,601	181	92.93	308,300
HARLEM	464.06	290.05	102	0	174.01	0
KINGSTON	13.32	0.00	0	0	13.32	0
LIBERTY	2,661.49	1,800.52	3,372	780	860.97	2,346,194
MARLBORO	2.10	0.00	0	0	2.10	4,280
ORANGE	4,334.64	2,561.38	4,248	1,869	1,773.26	4,394,644
OXFORD	6.02	0.00	0	0	6.02	12,420
PORTER	4.50	4.50	2	0	0.00	0
RADNOR	6.24	0.00	0	0	6.24	0
SCIOTO	594.12	0.00	0	0	594.12	0
THOMPSON	0.00	0.00	0	0	0.00	0
TRENTON	212.08	202.81	89	0	9.27	23,600
TROY	38.40	0.00	0	0	38.40	19,250

Figure 3.4

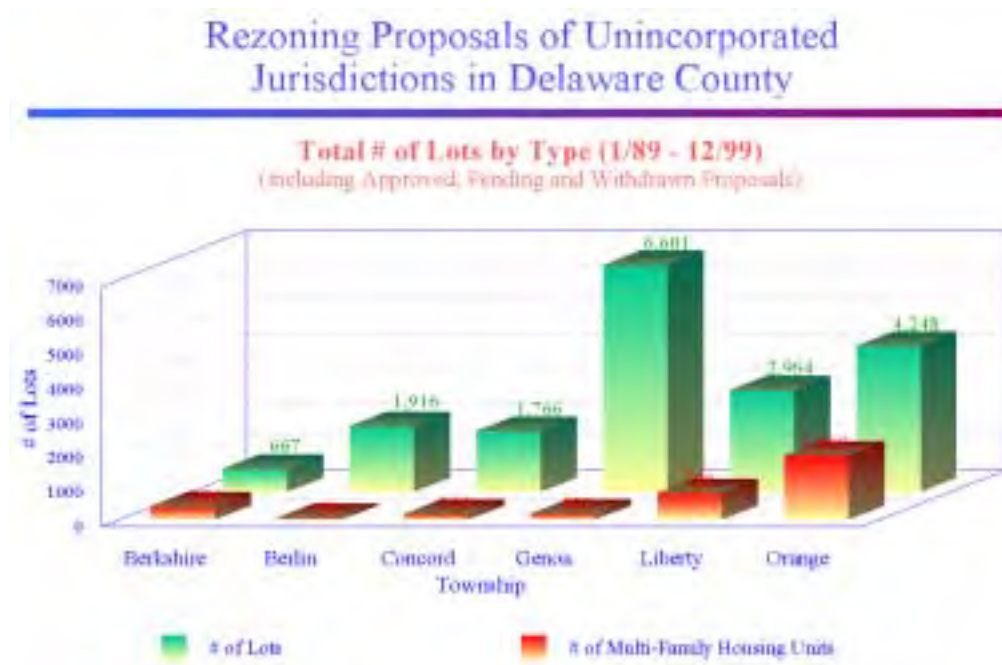
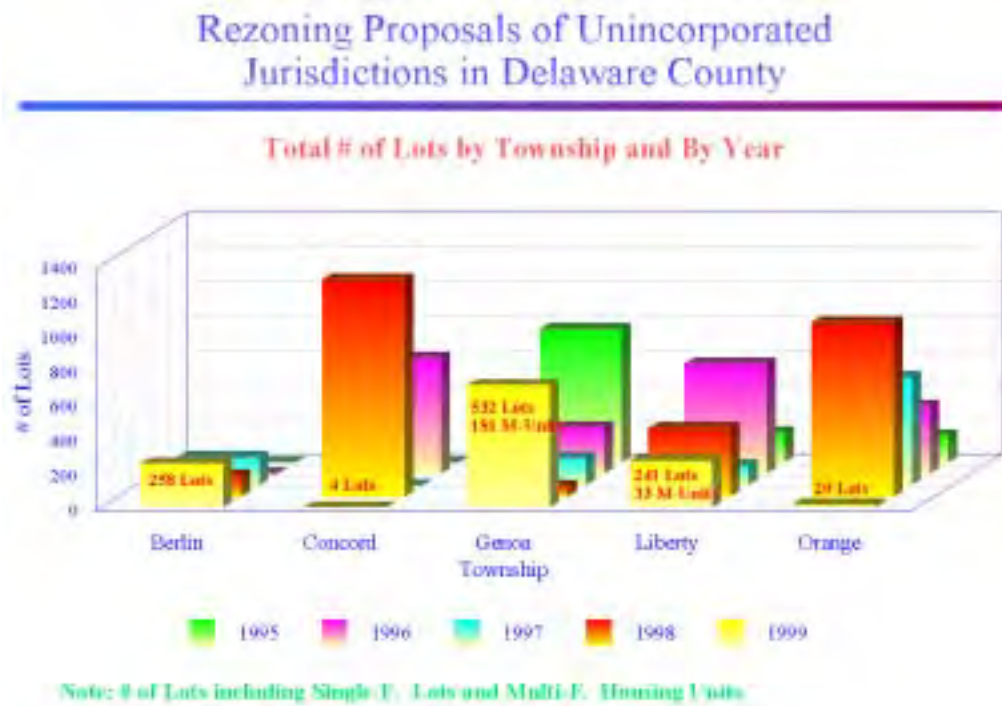


Figure 3.5



6.1.1.1 Figure 3.6



Table 3.5

SUMMARY STATISTICS OF REZONING DATA BASE FROM 1/89 TO 12/99				
ACTIVE REZONING PROPOSALS APPROVED BY RPC AND TOWNSHIPS				
TOWNSHIP	# OF LOTS & HU*			PLATTING RATE
	REZONED	PLATTED	NON-PLATTED	
BERKSHIRE	166	99	67	59.64%
BERLIN	963	963	0	100.00%
BROWN	2	0	2	0.00%
CONCORD	1,930	1,929	1	99.95%
DELAWARE	299	296	3	99.00%
GENOA	6,446	5,519	927	85.62%
HARLEM	96	85	11	88.54%
LIBERTY	3,383	3,224	159	95.30%
ORANGE	5,921	5,180	741	87.49%
PORTER	2	2	0	100.00%
TRENTON	87	57	30	65.52%
TOTAL	19,295	17,354	1,941	89.94%
NOTE: # OF LOTS* IS INCLUDING SINGLE-F AND MULTI-F. HOUSING UNITS				

Figure 3.7

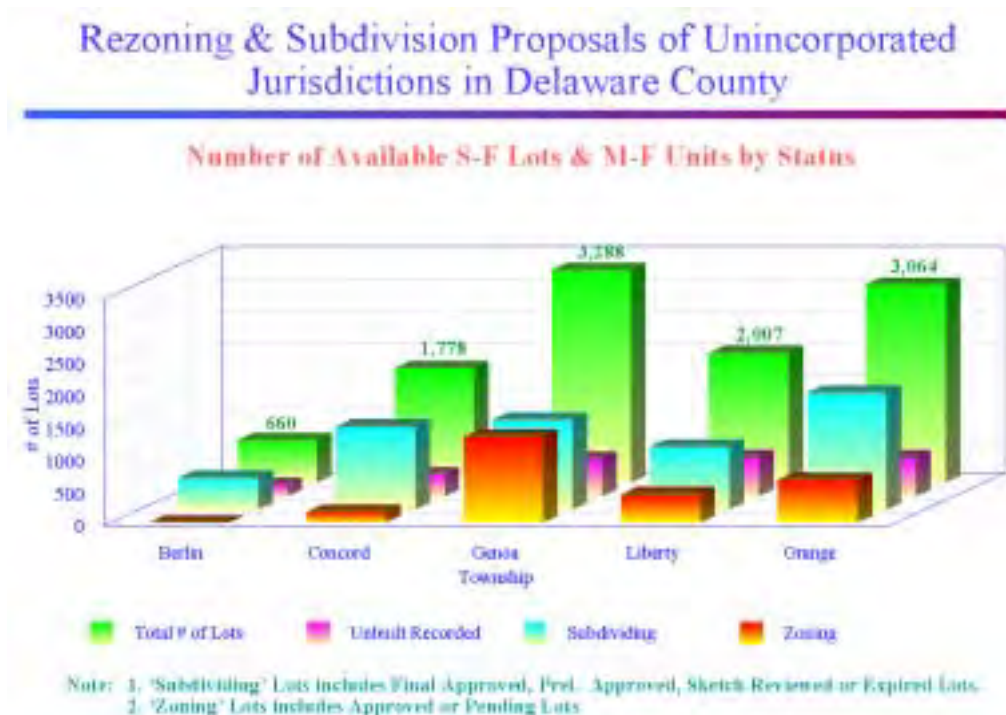


Table 3.6

SUMMARY STATISTICS OF REZONING AND SUBDIVISION													
ACTIVE PROPOSALS APPROVED BY BPC AND TOWNSHIPS													
TOTAL NUMBER OF AVAILABLE LOTS AND HOUSING UNITS ISSUED NEW BUILDING PERMITS													
TOWNSHIP	*TOTAL	NUMBER OF AVAILABLE SUBDIVIDED S-F. LOTS					M-F. UNIT			NUMBER OF ZONING LOTS			
		SUBTOTAL	UNBUILT RECORDED	FINAL APPD	PREL. OVERALL APPD	TABLED PREL	SKETCH REVIEW	APPROVED BY SUBDIV	EXPIRED S-F. LOTS	**APPROVED BY ZONING S-F. LOTS	M-F. UNITS	PENDING IN TOWNS S-F. LOTS	M-F. UNITS
BERKSHIRE	139	32	29	0	0	0	3	23	0	67	0	0	0
BEHLIN	889	189	174	38	356	0	23	0	79	0	0	0	0
BROWN	48	45	5	2	0	0	0	41	0	0	0	0	0
CONCORD	1,778	1,606	213	142	332	794	17	0	0	0	164	0	0
DELAWARE	153	148	84	34	40	0	0	0	2	5	0	0	0
GENOA	3,288	1,832	571	254	900	0	0	35	18	977	68	225	112
HARLEM	49	33	13	0	0	0	0	0	0	11	0	3	0
KINGSTON	38	36	23	0	2	0	0	3	0	0	0	0	0
LIBERTY	2,097	1,033	596	62	296	0	0	69	272	159	0	246	33
MARLBORO	1	1	1	0	0	0	0	0	0	0	0	0	0
ORANGE	1,064	1,047	595	307	5,177	0	0	3	182	118	198	275	8
PORTER	6	6	0	2	0	0	0	0	0	0	0	0	0
RADNOR	19	19	5	0	3	0	0	0	0	0	0	0	0
SCOTO	41	39	19	0	10	0	0	18	0	0	0	0	0
THOMPSON	23	23	23	0	0	0	0	0	0	0	0	0	0
TRENTON	54	26	4	14	0	0	0	2	0	30	0	2	0
TROY	7	7	7	0	0	0	0	0	0	0	0	0	0
TOTAL	11,549	7,435	3,891	743	3,196	794	41	198	489	1,393	903	484	216

NOTE: * TOTAL NUMBER OF AVAILABLE S-F. LOTS AND M-F. HOUSING UNITS
 NOTE: ** TOTAL LOTS APPROVED BY ZONING, BUT NOT SUBDIVIDED YET (NON-PLATTED LOTS)
 NOTE: SUBDIVISION PROPOSALS DATA FROM 1987 TO 12/99
 NOTE: REZONING PROPOSALS DATA FROM 1/89 TO 12/99

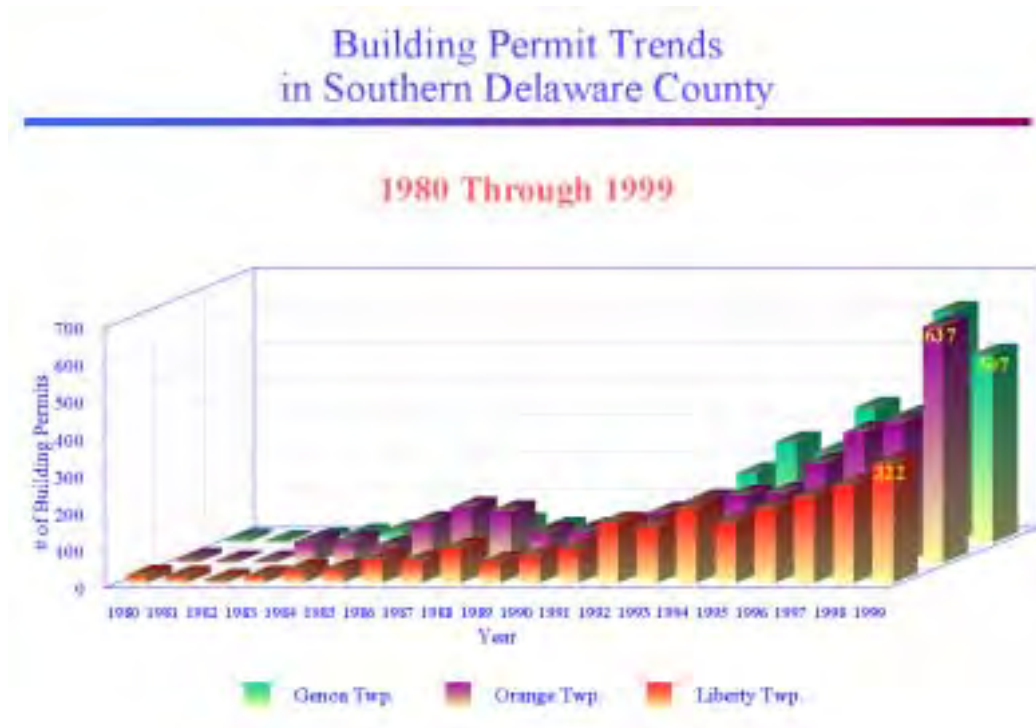
Figure 3.8

Building Permit Trends in Delaware County

1980 Through 1999



Figure 3.9



3.2 Summary of Development Indicators in Delaware County/Brown Township

Brown Township has experienced only a small amount of growth in the last 10 years due to lack of sanitary sewer. Brown Township's residential growth may increase as a result of Land Application System technology (centralized sanitary sewers provided on site pursuant to OEPA approval) as well as the potential for annexations into the City of Delaware where sewer is available.

**Table 3.7 Observed trends in single family subdivision activity in Delaware County
Townships (1/1/99)**

I.	Non-Platted, Zoned lots	
	Zoning Approved in the Townships	1,902 lots
	Potential Rezoning Pending in the Townships	860 lots
II.	Subdivision Sketch Plan Reviewed Lots	198 lots
III.	Overall Preliminary Subdivision Approved	794 lots
IV.	Expired subdivision (can be restored)	773 lots
V.	Preliminary Approved Subdivisions	3,198 lots
VI.	Final Subdivision Approved (not recorded)	911 lots
VII.	Unbuilt, Recorded lots	2,771 lots
	SUB TOTAL	11,349 lots
	Multifamily lots (unbuilt as of 1/1/99)	989 lots
	TOTAL	12,338 lots

The DCRPC tracks all subdivision, zoning and building permit activity on its Geographic Information system from 1987 to the present. The 989 units of multi family housing zoned, but unbuilt in the townships plus the 11,349 potential single family house lots comprise over 12,000 potential housing units. At a three-year average (1997-1999) growth rate of 1,578 building permits per year in the townships, this is an eight-year supply. If the growth rate of the county continues to increase these 12,000 units may in fact be only a 5-6 year supply.

3.2 Effects of Growth- Community Perception

A. The BIA Survey

The Building Industry Association (Columbus and Franklin County) conducted a Delaware County survey in June 1998 to gauge sentiments about the effects of growth. 400 likely voters were canvassed for 18 minutes apiece about various growth concerns. The data was county wide.

- Of the most important issues facing the community today, Development/Loss of land, Growth Planning, and Traffic/roads were #2, #4, and #6, and comprised 33% of the votes.
- County government was generally rated as good (69.7%), but 18.3% said not so good/poor.
- 40.8% said we are doing a poor/not so good job of managing growth and development.
- 55.8% said we are doing poorly to reduce traffic congestion
- Amenities/access were the top vote-getter (20.2%) in the positive aspects of growth.
- 18.9% said there was nothing positive about growth.
- Only 3% said there were positive aspects to well planned growth
- 42.8% said that traffic was the most unfavorable aspect of growth
- 53.9% said they want growth to continue, but the pace is too fast.
- 19.8% said they wanted no more growth.
- 49.4% said government should encourage planned growth.
- #1 and #2 priorities on managing growth were keeping up with school construction and protecting the environment and open spaces.

B. The Protocol for Assessing Community Excellence in Environmental Health (PACE-EH) Survey

A second detailed survey was performed in Delaware County in 1998 relative to the environmental health of the county. Unlike the BIA survey, which asked questions related to growth, this survey asked questions relating to the community's perception of its environmental health. This survey was performed in person and by mail. Trained volunteers surveyed 500 students in five local high schools and 200 county fair attendees. In addition, the survey questions were mailed to 40,000 households.

The top five environmental concerns were:

1. Need for more parks, green space, wildlife habitats (733 responses)
2. County development, zoning, annexation out of control (721)
3. Surface water pollution from sewage systems (686)

4. Surface water pollution from factories, agriculture (685)
5. Environmental Education (660)

C. Summary- The Effects of Growth

It may be observed that in Southern Delaware County, there is an opinion that growth has many negative attributes:

- too much traffic,
- unplanned neighborhoods,
- lack of environmental and open space protection,
- inadequate new school construction, and too rapid pace of growth.

Brown Township has not yet experienced the rapid pace of growth that is seen in Genoa, Orange, Liberty, and Berlin Townships. Nonetheless, within the 5-10 year horizon of this comprehensive plan the pace of growth is likely to pick up and development in larger tracts will be requested. The Township must prepare to meet its future development with a plan for action and preservation.

Chapter 4

Issues and Opportunities

The Comprehensive Planning process is a forum for development issues and opportunities. A full accounting of the forces pressing and pulling at the township fosters debate regarding these issues. The issues are categorized as strengths, weaknesses, opportunities, or threats (SWOTs). The township's response to these issues shapes the future vision for the township's development.

4.1 Citizen Participation in the Decision Making Process

A. Need for Citizen Participation

The Comprehensive Plan is intended to be a reasonable vision of how the township will look when it is all built out. Plans typically look 5-10 years into the future, with the understanding that unforeseen circumstances may change the vision.

The planning process demands broad representation of the populace to ascertain current issues, and to set goals for the future. Each community may take a slightly different approach to involving the public, but a citizen participation element is the backbone of the process; it provides legitimacy to the resulting plan.

In general, the citizen participation should be:

- Representative of the population and land ownership of the township
- More broad based than just elected and appointed officials
- Long term and open to continuing debate
- Influential in the recommendations made to appointed and elected officials

B. Open Invitation to the Process

The Brown Township Zoning Commission took steps to open the discussion to the community.

1. They posted legal advertisements at the Kilbourne Post Office for the public meetings to discuss the plan.
2. The Zoning Commission requested a core group of citizens to join a Comprehensive Plan Steering Committee, which would work on the plan update and forward the final draft to the Zoning Commission for consideration.

C. Commencement of the Planning Process

A group of approximately 30-40 Brown Township residents and landowners attended the initial meeting of February 10th, 2000, at which time they discussed the following items:

1. Why do we need a Comprehensive (Master) Plan for future land use?
2. What do we like/dislike about Brown Township?
3. What do we want the township to look like when it is all built out?
4. What is the essence of Brown Township?
5. What is our Vision for the development of the township for the next 5-10 years?

4.2 Citizens' Likes and Dislikes Regarding Current Development of Brown Twp.

The likes and dislikes can be reformulated into a vision statement and goals for future development of Brown Township.

Likes	Dislikes
Natural Beauty	Speeding on Country Roads
Quietness	Reservoir Trash and Traffic
Open Space	Don't Want to Look Like Powell
Wildlife	Don't Want to Look Like Orange Township
See farming	Don't Want to Look Like Liberty Township
No Traffic Jams	Don't Want to Look Like Berlin Township
People Seem to Care for One Another (Here to Stay)	Don't Want to be Commercialized
People Are Nice	Don't Want High Density
No Smog from Big Business	Don't Want Subdivision
Alum Creek Reservoir	Don't Want to Lose Rural Atmosphere
Lack of Crime	Don't Want Anymore Abandoned Schools Converted to Housing
Township Roads Are Not Super Highways	Don't Like the Current Politics of the School System
Electric Service	Don't Like Light and Noise Pollution
Grazing Animals	Long Response Time for Fire, Police, EMS
	Infrastructure is Limited

4.3 Issues regarding the township's current development

On February 10th, 2000, Brown Township addressed the threat of high-density development utilizing land application systems by initiating a Planned Residential Development (PRD) amendment that reduced their PRD density from 6-8 units per acre to 2 units per acre. The township does not have services or infrastructure to serve high densities. By a quirk of antiquated zoning laws and modern technology, urban densities in rural areas were possible. This action was finalized on March 29, 2000 and was one of the first steps in maintaining the rural character that the Township now enjoys.

Issues that face the community today and down the road can be determined in the strengths, weaknesses, opportunities and threats strategic planning exercise. The following list and table is a result of the exercise performed on July 6th, 2000 with the steering committee, zoning board members and residents of the township present.

Strengths

1. Good Location – Proximity to Delaware City and I-71.
2. Utilities in place include water, electric, gas and some areas have cable.
3. Zoning in place; PRD ordinance updated; have a zoning inspector.
4. Prime farmland, very large amount of Pewamo soils.
5. SR 37/US 36, SR 521 and SR 42 corridor benefits.
6. Contract with DCRPC to create comprehensive plan.
7. Village of Kilbourne – Homey feel with narrow streets and closeness of residents.
8. Alum Creek State Park Recreational and business opportunities.
9. Low densities. Quiet, and low crime rate.
10. Homes are a good value compared to south of I-270.
11. Proximity to Columbus.

Weaknesses

1. Proximity to Delaware City and Columbus.
2. No sewer; a portion of the Township is still not served by Del-Co water.
3. No comprehensive plan to guide zoning and direct growth (How do we want to look?)
4. Pewamo soils are undesirable for leach fields.
5. Increased traffic along corridors due to increased growth of County. Roads/Infrastructure can't handle traffic.

6. Cost of contracting for planning assistance etc.
7. Proximity to I-71 and Columbus.
8. Not adequate planning regarding elementary school district boundaries.

Opportunities

1. Possibilities for commercial and residential development in the Township.
2. Close to amenities offered by Delaware City (Convenience).
3. No sewer in the township may decrease the probability of high density development.
4. On site central sewers with land application of treated effluent are available options to allow cluster developments.
5. Zoning can be further supported and understanding will increase through comprehensive planning process.
6. Development will be limited without sewer due to poor soils; Better probability that farming will remain a mainstay of Township.
7. Opportunity to use commercial districts to grab through traffic generates tax base.
8. Professional help to set future course of growth; Site specific recommendations for the entire Township; Become educated stewards of the Township's future.
9. Potential to create local commercial district that may grab some traffic from SR 521 within the Village of Kilbourne, not dominated by "big box" retail; Closeness of residents may increase participation in local planning.
10. Public access locations in Township to Alum Creek State Park.

Threats

1. Annexation and possible increased traffic from further growth into the township.
2. Lack of sewer service may initiate annexations into City; Higher densities could be considered a loss of 'rural character'.
3. Perception the government is big brother, heavy handed.
4. Large lot subdivisions in areas with only small amounts of good soil may still cut into the farmland.
5. Traffic may put pressure on infrastructure and the Village of Kilbourne.
6. Potential for infill housing within the Village of Kilbourne on existing platted lots if sewer becomes available.
7. Demand for housing near park may increase runoff into Alum Creek Lake.

4.4 Goals for Brown Township

- To retain economically viable agriculture
- To retain rural character.
- To preserve natural beauty, wildlife, quietness and open space.
- To conserve surface and ground water quality
- To retain an overall low density.
- To provide appropriate recreation and managed open space.
- To protect sensitive surface and groundwater aquifers.
- To avoid inappropriate sprawl and retain critical resource areas and wildlife corridors
- To determine and implement an appropriate land use mix
- To offer development alternatives to annexation
- To retain a primarily single family residential housing mix, but offer diversity of housing choices when needed services are available.
- To use access management controls to limit key access points to minimize traffic congestion.
- To ensure significant and diverse citizen input into the planning process.

4.5 The Essence of Brown Township

The essence of Brown Township is:

1. Open spaces
2. Rural feel as characterized by:
 - Traditional and historic buildings.
 - Beauty of natural resources, wooded areas, green spaces, ravines and Alum Creek State Park.
 - Large lots.
 - Mature trees on scenic roads; rough road edge, farm fences, and split rail.
 - Large agricultural areas, retention of open space along roads to remind of the former agricultural land.
 - Wildlife corridors/habitats
3. Unique diverse housing (not production subdivisions)
4. The Village of Kilbourne is a unique heart of the township
5. Safe community with moderate traffic that flows freely

Vision Statement

When Brown Township is all built out, we would like it to be a community with a rural feel and character. Roads should remain somewhat narrow, but safely carry the traffic. Rural roads would have a rough edge, with fencing and mature landscaping that reminds us of the rural past. We would like most residential areas to remain low-density large lots with deep setbacks.

We would like agriculture and/or green spaces throughout the community. We would like to preserve unique scenic views and our critical natural resources such as ravines, floodplains, wetlands, forests and Alum Creek Lake. We would like limited planned commercial and planned industrial uses, with attractive landscaping to balance the tax base. We would like to have a variety of land uses with controlled densities of population dependent upon the locations, natural features, and availability of utilities.

As we grow, we would like to see a center of the township in Kilbourne, where a traditional village with neighborhood shops would be an attractive location. We would like to retain the small town feel in the human scale of structures, the use of natural materials and traditional structural colors.

We want to live in a community where growth is balanced with the conservation and enhancement of rural landscapes, agriculture, cultural and heritage resources, and the environment.

Chapter 5

Existing Land Use

5.1 Existing Land Use Update

The 1999 Existing Land Use map shows the extent of development and its types. A comparison was made with the DCRPC data for 1979 and 1990. Based upon current information from the DALIS, it appears that the following breakdowns in land use acreage exist:

Table 5.1 Comparison of Existing Land Use Acreage 1979-1999

	1979 (raster)	1990 (raster)*	1999**
Acreage in Township	16,569.31	16,569.29	16,441.46 (after annexation)
Residential (SF +MF)	703.1	817.29	1,107.49
Single Family	703.1	817.29	1,107.49
Multi family	0	0	0
Commercial & Services (Commercial + Industrial +Institutions)	69.01	72.01	45.05
Commercial	7.69	6.33	45.05
Industrial	27.12	0.45	0
Institutions	34.20	65.23	N/A
Agriculture & Undeveloped	14,258.28	14,146.65	13,919.96 (5,057.45, active ag.)
Water	618.05	617.30	567.96***
Highway/Rail/Utility	587.89	564.83	429.44****
Parks/open space	332.98	332.98	332.98
Vacant residential (residentially zoned, but not developed)	N/A	N/A	37.99

- * This is the raster acreage from the 1993 DCRPC (Frank Elmer plan), which is less accurate than vector data.
- ** The 1999 DALIS Geographic Information System acreage calculation, based on the land area shown by the Auditor's maps. DALIS data for 1999 is vector data and considered more accurate.
- *** Water area was created as follows: Lakes, ponds and rivers exist as polygons in the GIS and can be calculated. Lakes and pond area, plus streams (including seasonal swales on the USGS maps) were given a width of 20 feet, and multiplied times the number of lineal feet.
- **** Railroads were calculated by lineal feet x 120' ROW = # acres.

5.2 Findings of the DALIS Existing Land Use Map, December, 1999

- 1.) The township has lost 127.84 acres to annexation.
- 2.) Residential land has increased from 817.29 acres in 1990 to 1,107.49 acres in 1999.
- 3.) Agricultural and undeveloped land (excluding Alum Creek State Park) has remained approximately the same since 1979 (approximately 85% of the Township).
- 4.) There is no multifamily housing in Brown Township. Commercial, industrial and institutional activity remains low, only 45.05 acres as of 1999.
- 5.) The Alum Creek State Park (land and water) comprises 651.48 acres (4%) of the township.

5.3 2000 Windshield Survey of Existing Land Use

An existing land use field or “windshield” survey was taken in March 2000. While the DALIS land use categories are based on Auditor’s tax data, the field survey is intended to:

- a.) update the Auditor’s data to the present
- b.) record the actual land uses (Auditor’s data gives general categories and the owner, but not the actual land use name)
- c.) record housing conditions from a basic exterior view on a scale of 1-5

DCRPC staff performed the survey using 1997 aerial photos at a scale of 1”=400’. The results are compiled in the following table.

Existing Land Use (unit count) in Brown Township.

March 2000

Section	Single-Family	Two-Family		Multi-Family MH		Housing Conditions*							Commercial**	Institutional
	Units	Units	Res.	Units	Res.	1	2	3	4	5	None			
1 of 16	18	0	0	0	0	0	12	3	2	1	0	0	0	0
2 of 16	43	0	0	0	0	0	17	17	8	0	1	0	4	0
3 of 16	23	0	0	0	0	0	13	7	1	2	0	0	1	0
4 of 16	16	0	0	0	0	0	5	7	3	1	0	0	0	1
5 of 16	16	0	0	0	0	0	9	4	3	0	0	0	0	0
6 of 16	14	0	0	0	0	0	11	3	0	0	0	0	0	0
7 of 16	80	0	0	0	0	0	13	59	5	3	0	0	6	8
8 of 16	42	0	0	0	0	0	36	5	1	0	0	0	1	0
9 of 16	7	0	0	0	0	0	1	4	2	0	0	0	1	0
10 of 16	11	0	0	0	0	0	4	6	1	0	0	0	0	0
11 of 16	25	0	0	0	0	0	13	9	3	0	0	0	0	0
12 of 16	23	0	0	0	0	0	13	7	3	0	0	0	0	0
13 of 16	35	0	0	0	0	0	17	13	4	0	1	0	1	1
14 of 16	16	0	0	0	0	0	3	6	6	0	1	0	0	0
15 of 16	38	0	0	0	0	2	28	7	1	0	0	4	0	1
16 of 16	60	0	0	0	0	2	48	14	0	0	0	0	0	0
Totals	467	0	0	0	0	4	243	171	43	7	3	4	14	11

Source- Field Survey completed, checked and compiled by DCRPC.

- 1.) Excellent: Sound, no defects, a meticulously maintained structure, or recently completed structure.
- 2.) Good: Sound, slight defects- structure in which defects were correctable by normal maintenance.
- 3.) Fair: Sound, deteriorated- an intermediate defect, for example, a roof sagging, a wall unit warped, a foundation settled unevenly or a chimney eroding.
- 4.) Poor: Critical defects- a structure in a state of disrepair to the extent that the present condition might impose a threat to the health and safety of its occupants but which was still considered inhabitable.
- 5.) Very Poor: Uninhabitable: extensive critical defects- structure in a state of disrepair to the extent that the unit is not suitable for habitation.

* Housing Conditions

**Commercial count includes three public utility towers (2 cellular and 1 water)

5.4 Results of the Field Survey

Brown Township is still a primarily single family residential township. There are 467 single-family dwelling units, 4 mobile homes (as defined in appendix H), 14 commercial uses, 11 institutional uses and no industrial uses in 2000. The condition of the housing stock is good to excellent. Of 471 units of housing, 243 or 52% were rated excellent by exterior survey, 36% were rated good, and only 2% were rated as poor or very poor. Three homes were deteriorated to the point of being considered uninhabitable and requiring demolition. These results will be discussed further in Chapter 7, Housing.

5.5 Percentages of Current Land Use Mix

The 1993 Delaware County Master Plan recommended a land use mix for townships in the Central Planning Area, which includes Brown Township. These mixtures appear to reflect a composite of conditions in 1990 in the City of Delaware, and Village of Sunbury. Table 5.2 shows the existing land use mix in 1990.

Table 5.2 Existing Land Use Percentage Mix, 1990

Source: Frank Elmer 1993 Delaware County Master Plan, Central Planning Area, p 10.

Land Use	Sunbury- %	Delaware City-%	Central Area-%
Residential	30	28	6.22
Commercial/Services	5	6	.025
Institutions	5	4	.48
Recreation	.3	2	1.75
Industrial	5	7	.04
Agriculture/Forest	46	45	79.93

Note: Totals do not add to 100% as water, transportation, and utilities figures are not included.

The 1993 Delaware County Master Plan created a Land Suitability Map and a Land Use Plan. Neither of these maps were intended to be site specific. Neither one was based on an in depth review of the community's vision for its future. As such their recommendations may differ from the Brown Township Comprehensive Plan. The DCRPC recommended land use mix also does not relate to a fiscal impact analysis that attempts to balance land use types with property tax revenues and equal the cost of all development. The 1993 Master Plan percentage of land use recommendations should be taken as a very preliminary land suitability analysis, which will be superseded by the recommendations of this plan.

Table 5.3- Percentage Land Use Mix, 1999 versus 1993 Master Plan Recommendations

	1999 Existing Land Use**	% total acres	1993 DCRPC Plan % recommended
Residential (SF +MF)	1,107.49	6.7%	4-5%
Single Family	1,107.49	6.7 %	
Multi family	0	0%	
Commercial + Indus. + Institution)	45.05	0.2%	
Commercial	45.05	0.2%	<1%
Institutions	N/A	N/A	<1%
Industrial	0	0 %	<1%
Agriculture/Undev.	13,919.96 (5,057.45, active ag.)	84.66 %	71-87%
Water	567.96	3.45 %	
Highway/Rail/Utility	429.44	2.6 %	
Parks/open space	332.98	2.02 % (4% incl. Water)	0-3%
Vacant residential (lots recorded,not developed)	37.99	0.2%	
Totals Acreage	16,441.46 (after annexation)	100 %	

** The 1999 DALIS Geographic Information System acreage calculation, based on the land area shown by the Auditor's maps. DALIS data for 1999 is vector data and considered more accurate.

5.6 Notable Land Use Pattern Mix Indicators, 1999

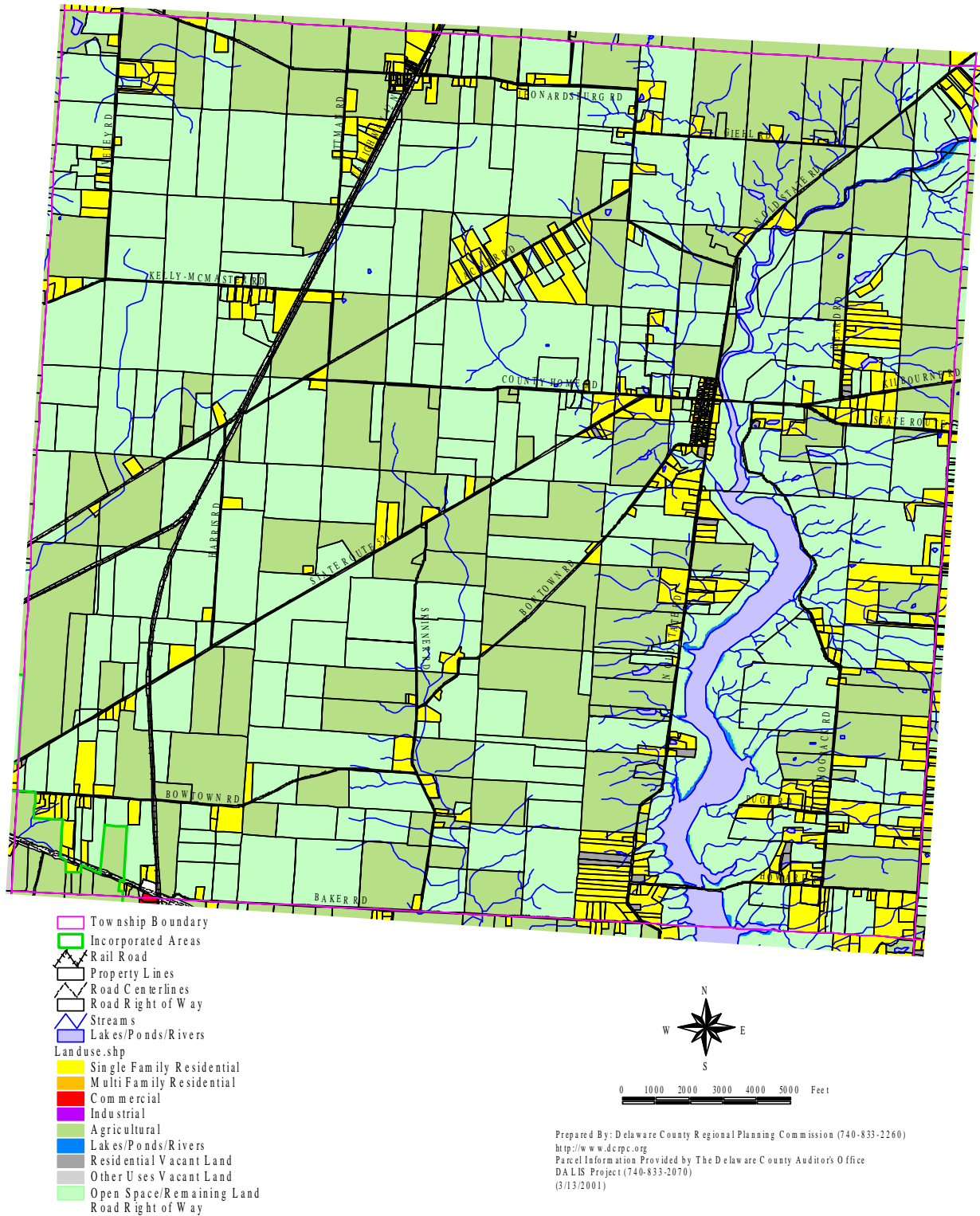
- The residential percentage already exceeds the 1993 Delaware County Master plan suggestion. This is not an indication of a problem, but is an indication that the future development patterns for the township are changing.
- The agricultural and undeveloped lands are within the 1993 Delaware County Master Plan suggested range. However, the category was not broken down into percentages allocated to agriculture and undeveloped lands.

Comment: The 71-87% agricultural acreage was an ideal estimate unsupported by fiscal impact analysis or community goals. It should be seen from the results here that, agriculture has not decreased dramatically since 1979.

- Commercial and industrial growth is within the recommended range, but is not likely a supported percentage to balance the cost of services from residential development. Additional commercial and industrial acreage will be needed for community services and to bolster the tax base as the residential growth continues.
- The township contains a portion of the Alum Creek State Park , a regional park. The park area including the water exceeds the 3% recommended.

Map 5.1 Brown Township Existing Land Use

Existing Land Use 1999, Brown Township, Delaware County, Ohio



Chapter 6

Natural Resources and Conservation

Brown Township has a mixture of rolling and flat terrain, as well as, creeks that connect to Delaware and Alum Creek Lakes. It has floodplains, wetlands, woods and abundant wildlife. It has a large amount of farmland with good agricultural soils. These soils present opportunities and constraints in relation to future growth, as well as, agricultural preservation. The rural attributes are the main reason why people have moved to Brown Township.

Brown Township has beauty in its natural resources. If these resources are not conserved and protected, then the vision of the township to preserve its rural character and its natural resources will not be achieved and the principal attribute of the township will be diminished.

6.1 Topography- (DALIS contours)

Brown Township has relatively mild differences in elevations and slopes. The elevation map (Map 6.1) indicates a 100 foot difference in elevation from the highest point in the northwest portion of the township near Leonardsburg to Alum Creek Lake in the southeast corner of the township.

6.2 Slopes Greater than 20%

The township set a goal to preserve its natural beauty. One of the most important elements of the Townships natural beauty is its ravines. Retaining slopes greater than 20% for open space as the township develops will be very important in achieving this goal. The steep slope map (Map 6.2) indicates slopes over 20%. Generally, roads do not exceed 10% slope, and houses with walkout basements can typically be built on slopes up to 20%, or slightly greater. In Brown Township, the steep slopes are mainly located in the Alum Creek Lake area in the eastern portion of the Township.

6.3 Floodplains, bodies of water

Alum Creek Lake is a significant natural resource area. The National Flood Insurance Program, (includes Brown Township) discourages development in the 100 year floodplain and prohibits development in the 100 year floodway. These areas are mapped in detail by the US Army Corps of Engineers for the Federal Emergency Management Agency (FEMA). The floodplain map (Map 6.3) gives a general location of the floodplains. For specific information see the FEMA maps at the Delaware County Building Department, 50 Channing Street, Delaware Ohio (740-833-2200).

Floodplains perform several critical functions in their undisturbed state (adapted from Protecting Floodplain Resources, A Guidebook for Communities, Federal Interagency Floodplain Management Task Force and FEMA, June 1996):

A. Water Resources

1.) Natural flood and erosion control

- Provide flood storage and conveyance
- Reduce flood velocities
- Reduce peak flows
- Reduce sedimentation

2.) Water Quality Maintenance

- Filter nutrients and impurities from runoff
- Process organic wastes
- Moderate temperature fluctuations

3.) Groundwater recharge

- Promote infiltration and aquifer recharge
- Reduce frequency and duration of low surface flows

B. Biological Resources

1.) Biological Productivity

- Rich, alluvial soils promote vegetative growth
- Maintain biodiversity
- Maintain integrity of ecosystems

2.) Fish and Wildlife habitats

- Provide breeding and feeding grounds
- Create and enhance waterfowl habitat
- Protect habitats for rare and endangered species.

C. Societal Resources

1.) Harvest of wild and cultivated products

- Enhance agricultural lands
- Provide sites for aquaculture
- Restore and enhance forest lands

2.) Recreational Opportunities

- Provide areas for passive and active uses
- Provide open space

- Provide aesthetic pleasure
- 3.) Areas for Scientific Study and Outdoor Education
- Contain cultural resources (historic and archeological sites)
 - Provide opportunities for environmental and other studies

For all these reasons, the 100-year floodplains in Brown Township should be protected. Some counties, such as Franklin, have large meandering flat floodplains, which comprise a great deal of the developable area of the county. In an urban county, where such land is precious, it is understandable, but not advisable, that some conversion to urban uses based on fill or elevated pilings may occur. In Delaware County, the floodplains are narrow and limited. They comprise a very small portion of the land area, and they occur on four rivers which are state scenic (Olentangy), drinking water sources (Alum Creek, Scioto, Big Walnut), or recreational (all four).

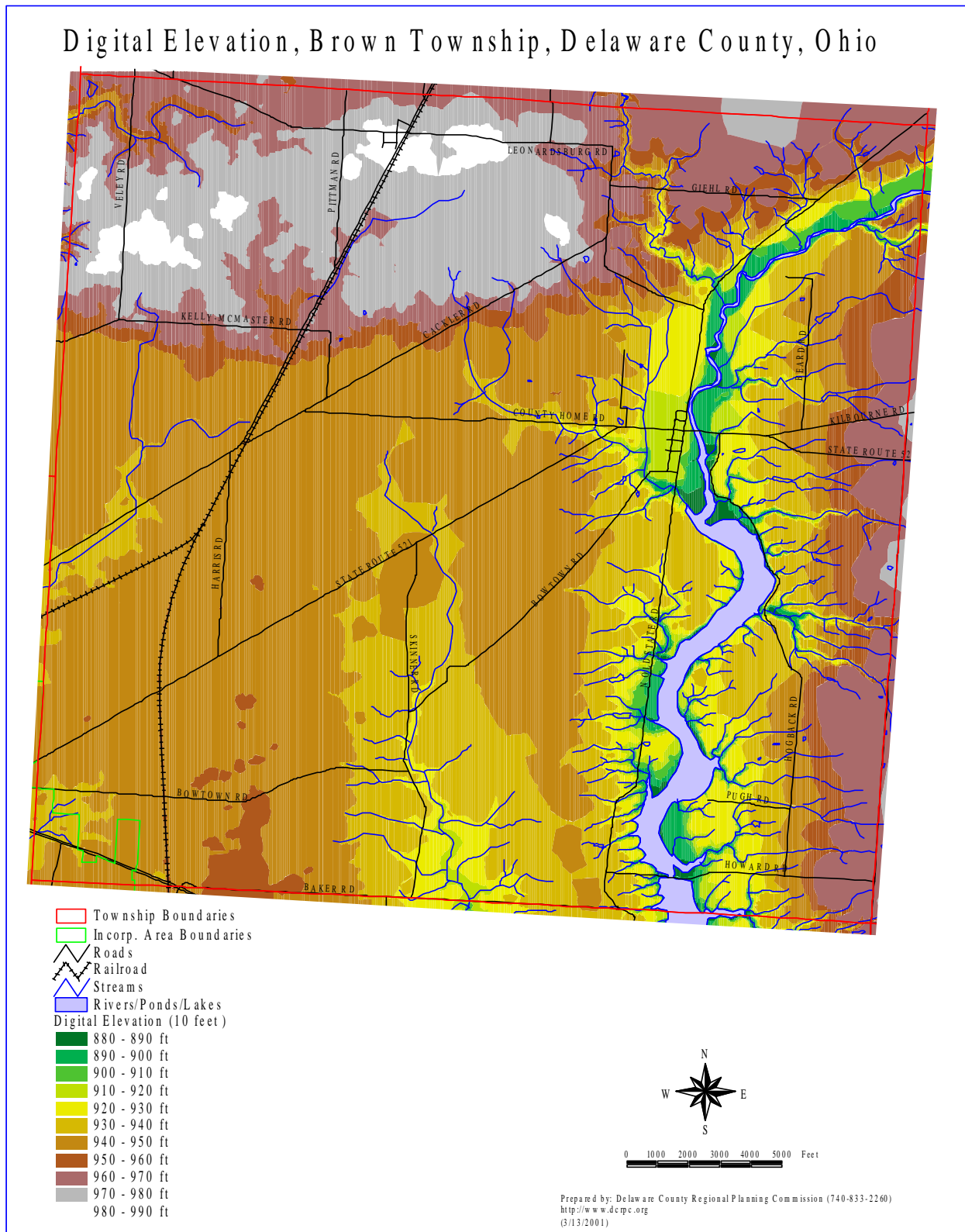
The Delaware County FEMA floodplain maps have been revised in 1999. Floodplain elevations in some areas have risen for the 100-year flood as suburban development increases runoff into the waterways after storms at a greater rate than before.

With floodplains rising, and all the natural benefits of floodplains listed previously, it is foolish to permit residential development in the 100-year floodplain at or slightly above the current 100-year floodplain elevation. The subsidy for the low cost national flood insurance comes from federal taxes. Each land use decision to permit development in the 100 year flood plain not only puts people in harm's way, but also potentially burdens all American taxpayers with the cost of continuing to bail out bad development after a flood.

Alum Creek Lake and Reservoir

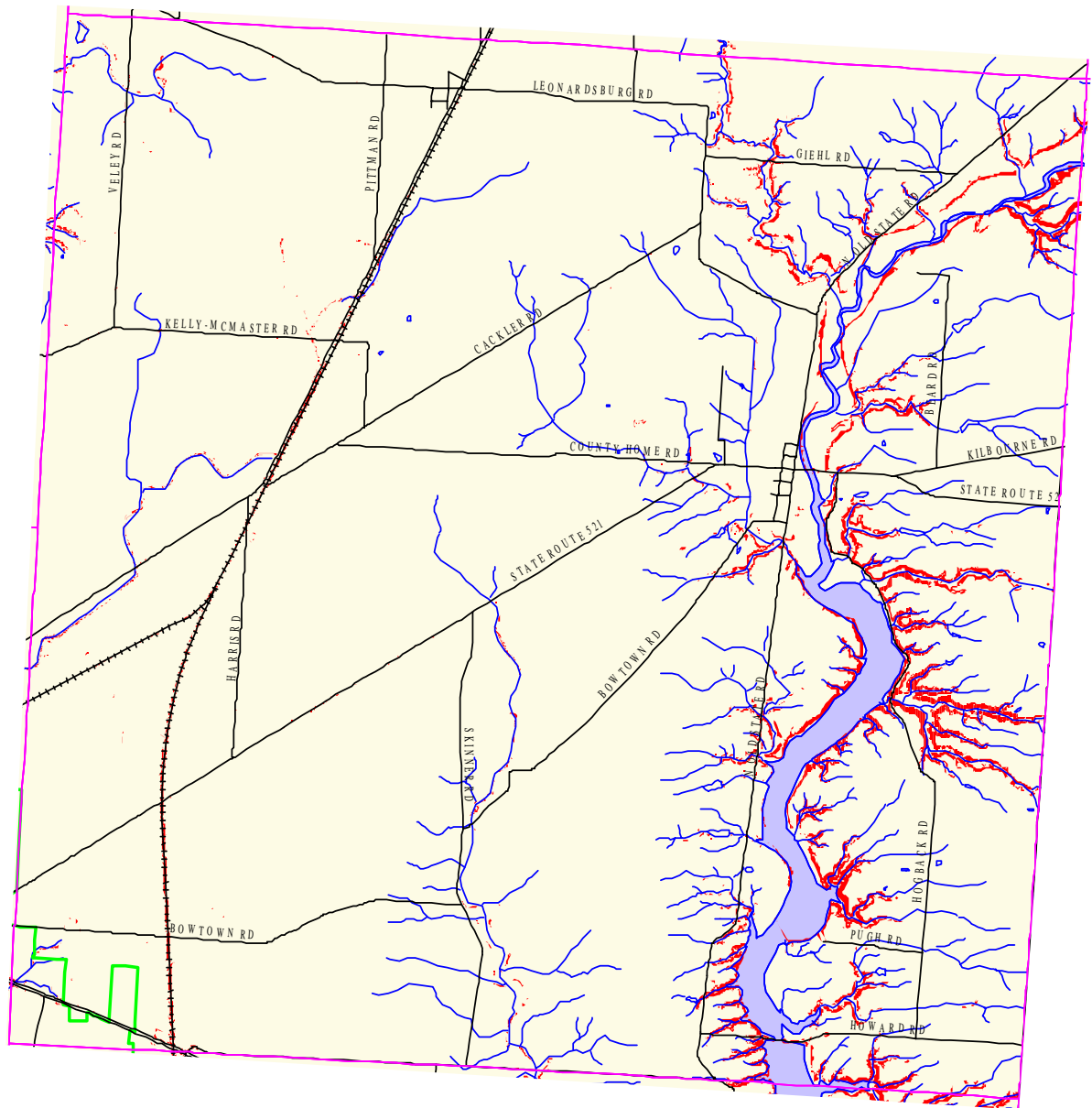
The Alum Creek Lake is the most dominant physical feature in Brown Township, occupying over 4% of the land area. The lake is a recreational mecca, drawing over 4 million visitors per year for fishing, boating and swimming at Ohio's largest inland beach. Alum Creek is also a major drinking water reservoir for the City of Columbus, Del-Co Water Co., and the City of Westerville. For these reasons, the preservation of surface and ground water quality around the reservoir is critical to public health and safety. The Alum Creek Watershed is large, and encompasses most of the easterly half of the township. The combination of the steep slopes surrounding ravine tributaries results in the rapid delivery of surface water to the lake. Great care must be taken to preserve the surface and ground water in this watershed to protect this critical resource.

Map 6.1 Digital Elevation, Brown Township



Map 6.2 Slopes

Slope Map, Brown Township, Delaware County, Ohio



- Township Boundaries
- Roads
- Railroad
- In corp. Area Boundaries
- ~ Streams
- ~ Slope
- Slope > 20%
- Slope < 20%
- Ponds/Rivers/Lakes

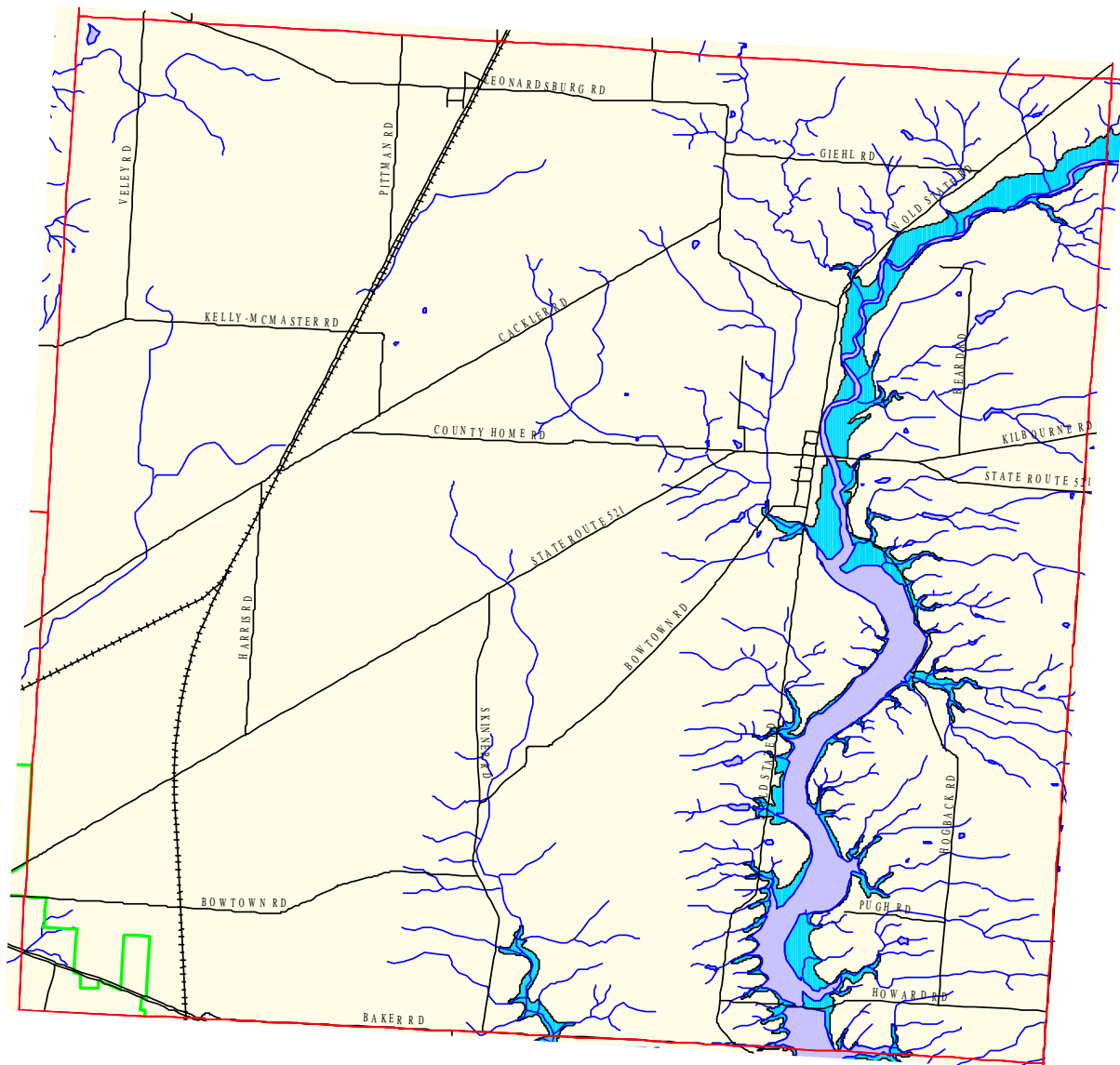


0 1000 2000 3000 4000 5000 Feet

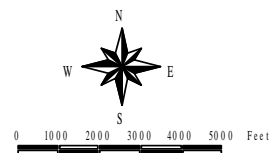
Prepared by: Delaware County Regional Planning Commission (740-833-2260)
<http://www.dcrpc.org>
 (3/13/2001)

Map 6.3 Flood Plains

Flood Plains, Brown Township, Delaware County, Ohio



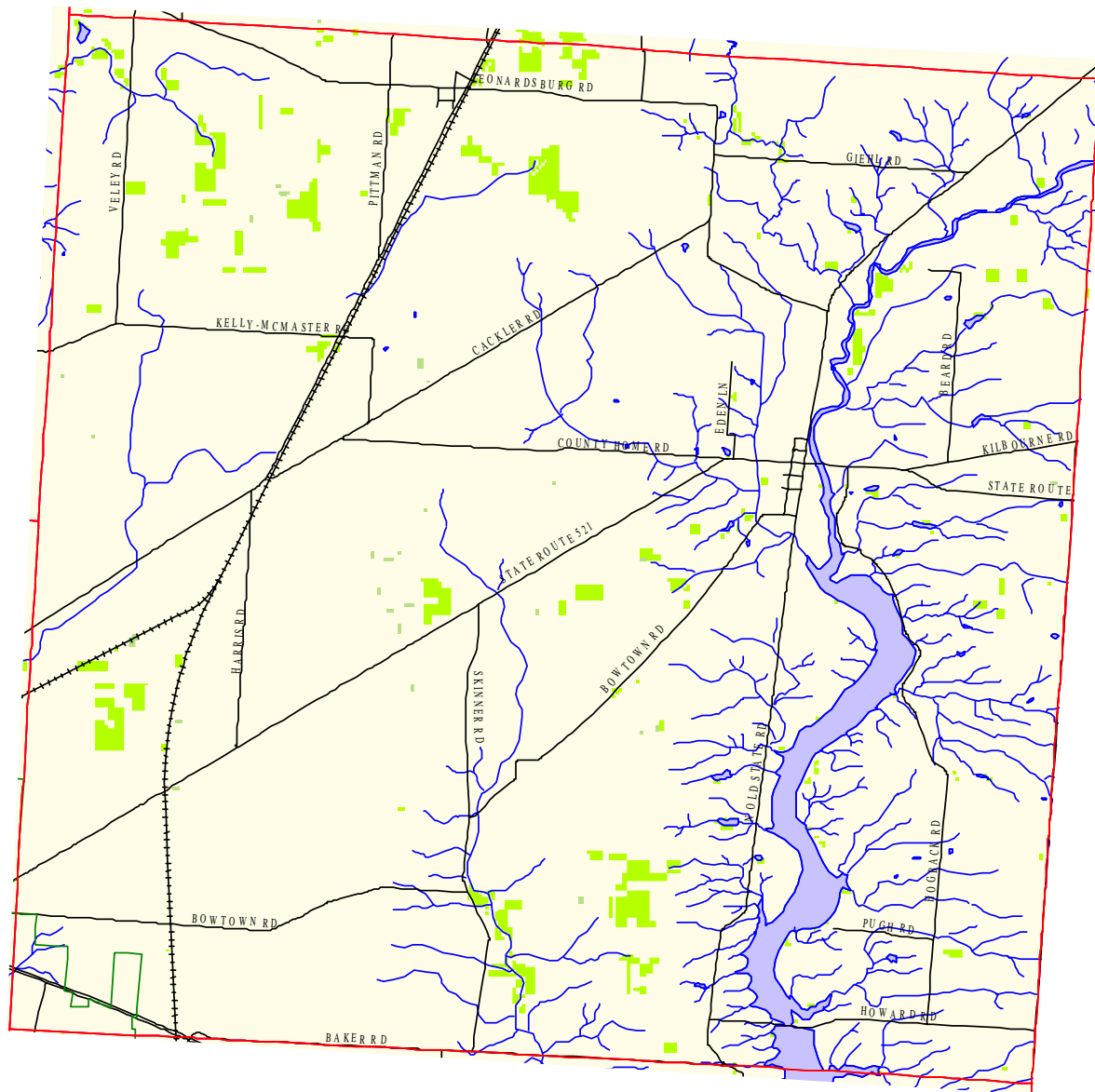
- Township Boundary
- Road Centerlines
- Railroad
- Incorporated Areas
- ~ Streams
- Rivers/Lakes/Ponds
- 100 Year Flood Plains
- 500 Year Flood Plains



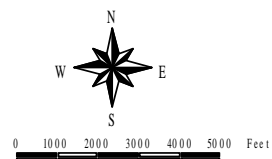
Prepared By: Delaware County Regional Planning Commission (740-833-2260)
<http://www.dcrpc.org>
 Source: Del-Co Water Company
 (3/13/2001)

Map 6.4 Wetlands

Wetlands, Brown Township, Delaware County, Ohio



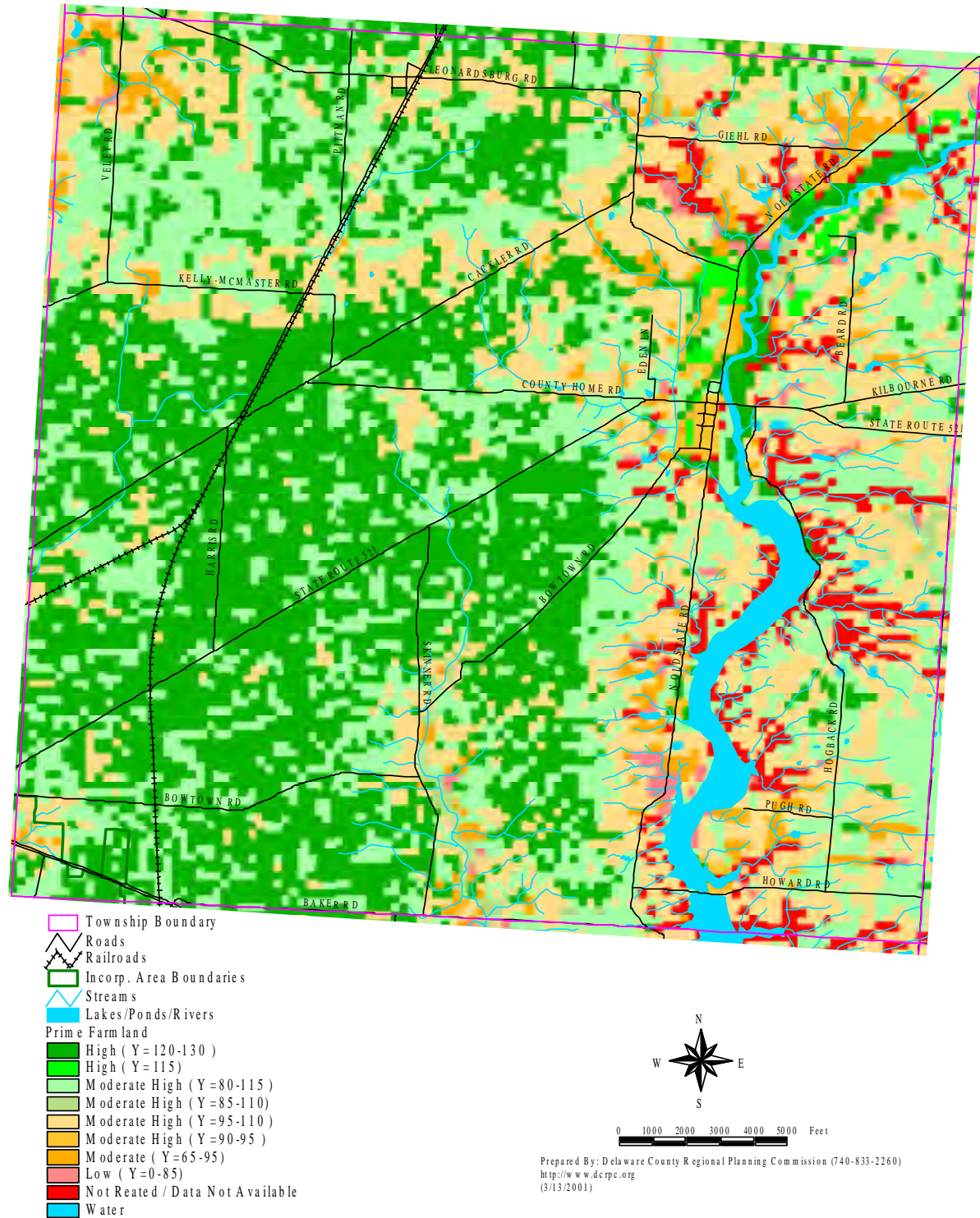
- Township Boundary
- Incorporated Areas
- Road Centerlines
- Railroad
- ~ Streams
- Rivers/Lakes/Ponds
- Wetland
- Wetland (ODNR)
- Farmed Wetlands (ODNR)



Prepared by: Delaware County Regional Planning Commission (740-833-2260)
<http://www.dcrpc.org>
 (3/13/2001)

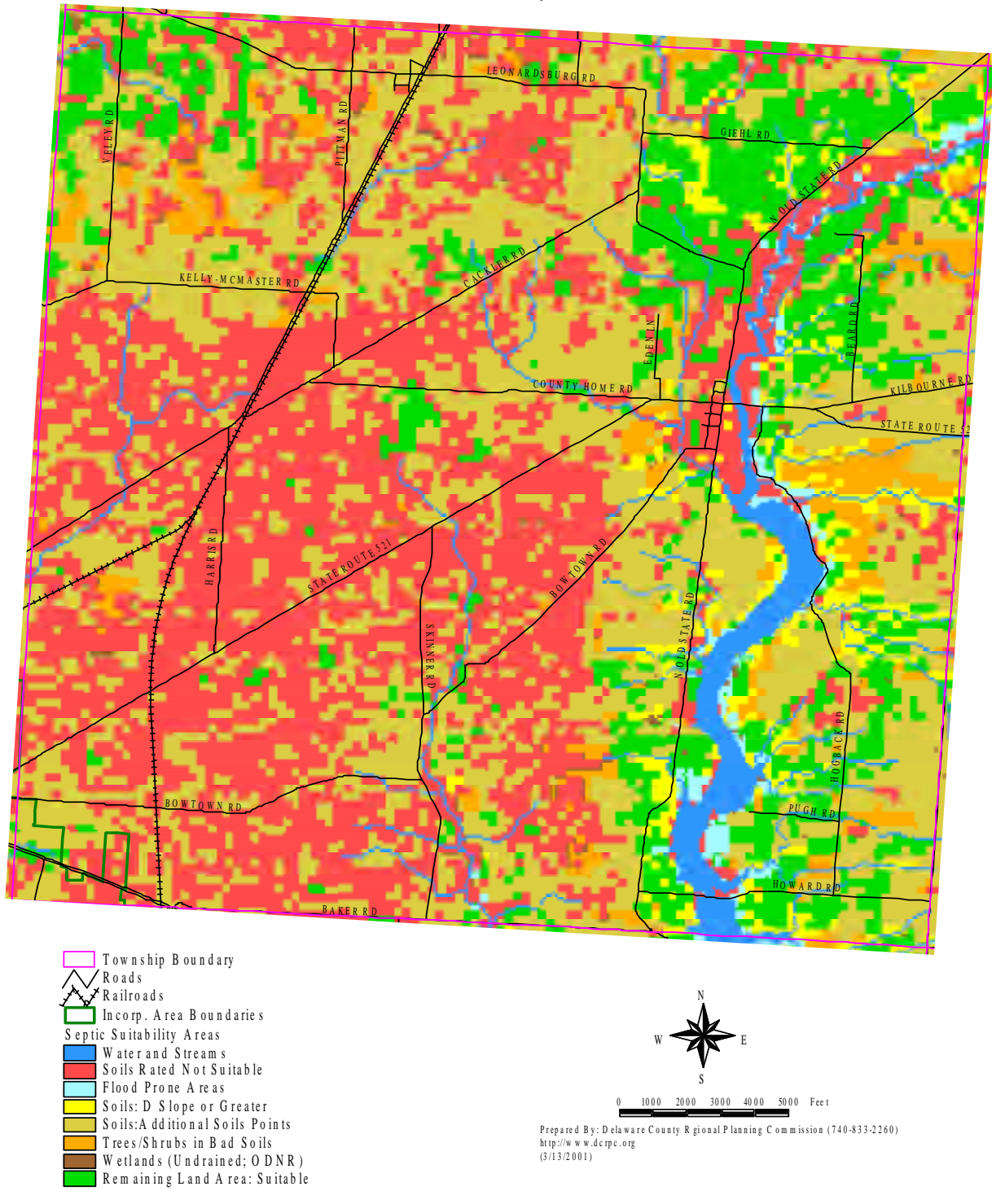
Map 6.5 Prime Agriculture

Prime Agriculture, Brown Township, Delaware County, Ohio



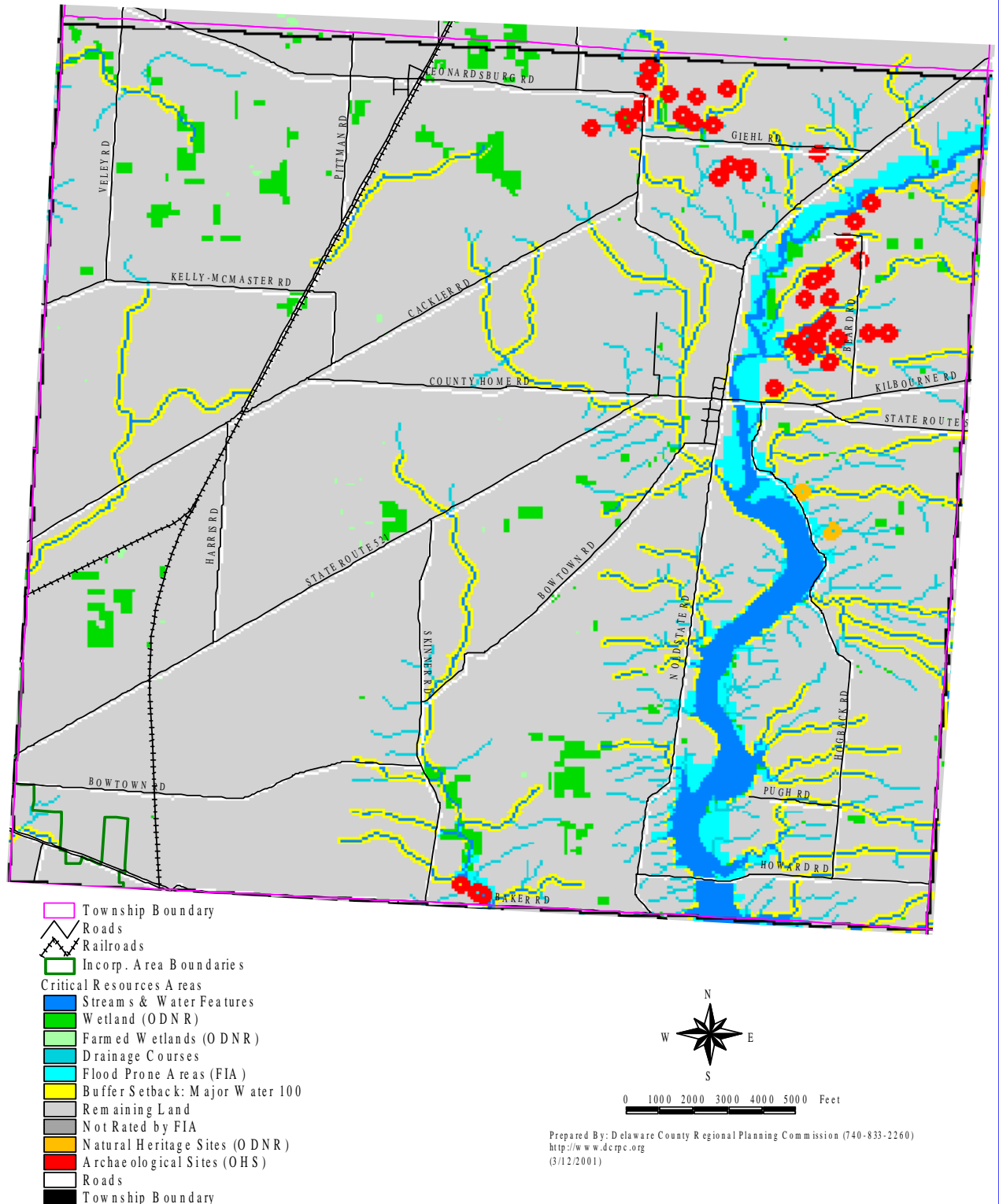
Map 6.6 Soil Suitability for Septics

Soil Suitability for Septic Systems, Brown Township, Delaware County, Ohio

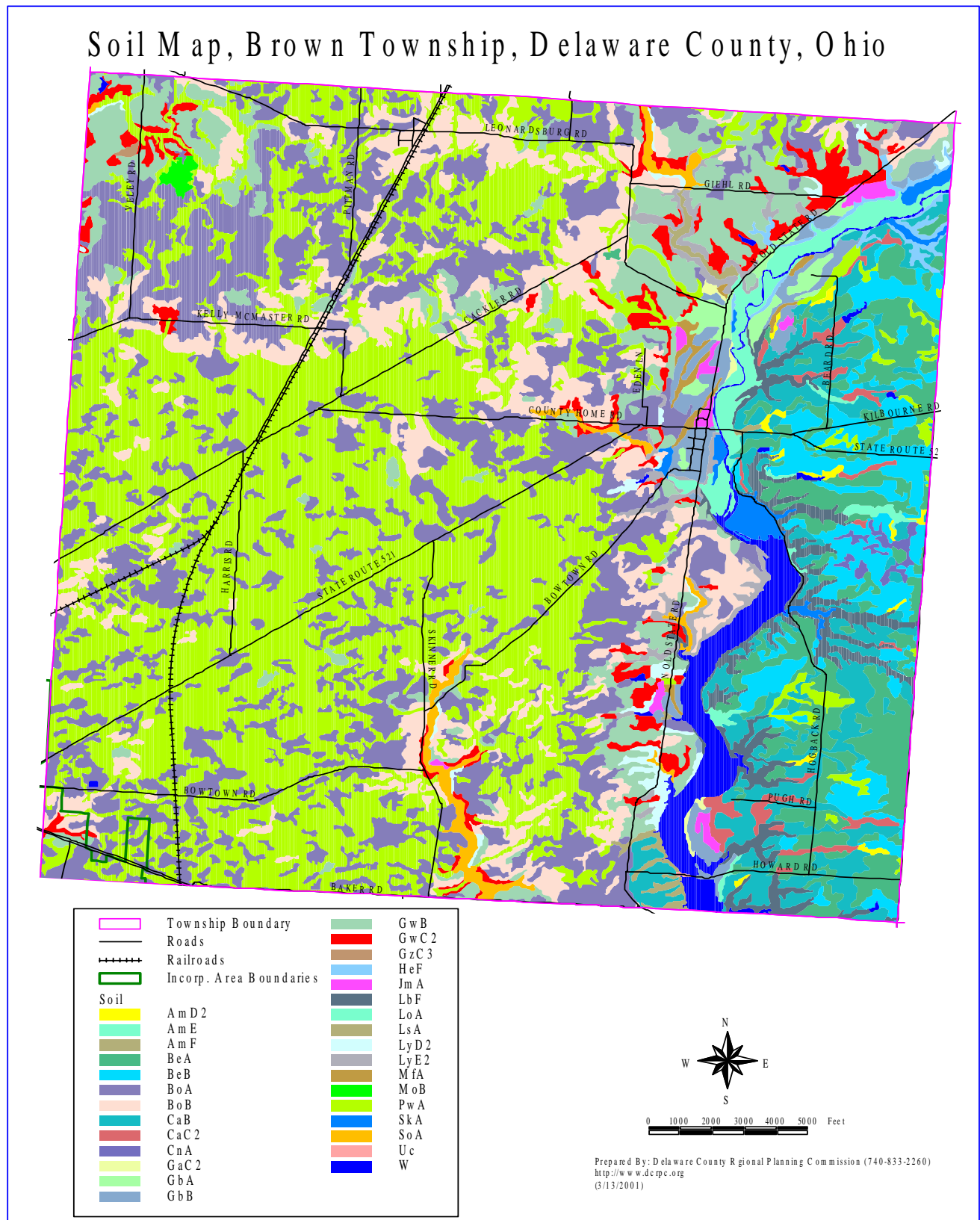


Map 6.7 Combined Critical Resources

Critical Resources, Brown Township, Delaware County, Ohio



Map 6.8 Brown Township Soils Map



6.4 Wetlands

Wetlands are generally defined as soils that support a predominance of wetland (hydrophytic) vegetation, and/or are under water at least two weeks per year. The more specific definition to wetlands under the jurisdiction of the US Army corps of Engineers is found in the Corps of Engineers Wetlands Delineation manual Technical Report Y-87-1, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Jurisdictional wetlands are regulated by the Clean Water Act of 1972, Section 404. They consist of:

- 1.) hydric soils,
- 2.) hydrophytic vegetation,
- 3.) wetland hydrology (this means they support more than 50% wetland vegetation, are poorly drained, and are periodically inundated or saturated).

Jurisdictional wetlands serve many of the same functions as floodplains, and deserve to be protected for the same reasons. Much of Brown Township's wetlands are tilled agricultural fields, which if tilled before 1985, are exempt from regulation unless they revert back to their natural state. Others are in low lying ravine areas. Wetlands can be enhanced to be an attractive and functional part of the storm water detention system in developments. They work better than man-made basins, since their wetland vegetation serves to trap, filter and break down surface runoff pollutants, as well as, assist in groundwater recharge acting as habitat for a wide variety of plant and animal species.

The wetlands map (Map 6.4) shows the location of potential wetlands from OCAP satellite imaging. These locations are raster data, meaning they have square edges in their computer images. They should not be too closely relied upon, but may indicate the locations of potential jurisdictional wetlands.

A recent U.S. Supreme Court ruling has restricted the Clean Water Act's use in regulating isolated pockets of wetlands. These may be regulated by other state agencies, but for Ohio the exact delineation of wetlands is now unclear.

6.5 Prime Agricultural Soils

The prime agriculture map (Map 6.5) shows the location of soils suited to high yields in Brown Township. From an economic standpoint, it is questionable whether the land value for development will exceed that for agriculture in Brown Township. The large amount of Pewamo soil may decrease the likelihood of developments in the township utilizing alternative sewage disposal systems with land application. Without

sewer, the most likely alternative is that agricultural land will be converted to large lot developments with septic.

It is the agricultural flavor of the township that makes it so desirable and it should be protected, particularly from annexation. Therefore, if there are proposals to use creative zoning and development techniques to use agriculture as open space, those areas with the highest yield soils might be given the most favorable consideration. The US Department of Agriculture has a ranking system, Land Evaluation Site Assessment (LESA) for such lands.

6.6 Soil suitability for septic systems

Sanitary sewer service is not yet available to the township. Therefore, it is useful to evaluate the soil capability for septic systems. Land with very poor suitability for septic should await centralized sanitary sewer, or use alternative sewage disposal systems. The Soil Suitability for Septic Systems Map (Map 6.6) displays this information. Much of Brown Township has Pewamo soil, which has a high amount of clay and is poorly drained. This soil is unacceptable for leach fields due to the health risks involved. As a result, lot sizes must be large enough to locate suitable soil for a leach field and reserve leach field. Furthermore, overall density must remain low due to saturation of these soils. The Ohio EPA has suggested a 3 acre minimum lot size for Delaware County's somewhat poorly drained soils with on site water supply and sewage disposal. Soils are a major consideration on density of population in unsewered areas.

6.7 Combined Critical Resources

The Combined Critical Resources map (Map 6.7) displays generalized floodplains, water, wetlands, prime agricultural soils and 100 foot suggested setbacks from major watercourses. Since it is a goal to preserve the natural resources of the township, this map should be used as an evaluation tool when land is developed.

Chapter 7

Housing

Housing has been the primary index of growth in Brown Township. The township is a rural community with no central sewer, but with Del-Co water service, extending along most roadways.

The township has maintained low residential densities because of its lack of urban services and reliance on wells and septic systems. Providing a range of housing in a developing rural community is a complex planning issue. Brown Township's zoning provides for a variety of housing types, (single family detached, single family attached, modular, cluster manufactured homes, patio homes and common wall homes and multi-family housing). Minimum square footages for single family houses are only 1,200 square feet except within Kilbourne and Leonardsburg where the minimum is 800 square feet in the low density residential district. Multi-family minimum square footages are 750, 850, and 900 square feet for 1, 2, or 3 bedroom apartments respectively.

As the township works through the planning process, consideration has been given to the appropriate timing and location of housing types based upon the inventory of existing housing, conditions and relationship to the housing needs of the area. The recently amended Planned Residential Development (PRD) permits a variety of housing types and an overall maximum gross density of 2 units/acre.

7.1 Existing housing stock

A house-to-house windshield survey was conducted in March, 2000. An exterior condition of each house was given based upon five criteria. The housing survey results are in Table 7.1.

Table 7.1 Brown Township Housing Survey Results, March 2000, field survey

Housing Type	Total # Units	#Units new,/well maintained	# Units need normal repair	# Units somewhat dilapidated	# Units possible health threat	# Units appear condemnable
SF	467	243	171	43	7	3
TF	0	0	0	0	0	0
MF	0	0	0	0	0	0
Mobile Homes	4	1	3	0	0	0
Totals	471	244	174	43	7	3
% Totals	100%	52%	37%	9%	1%	1%

Findings

Based upon the housing survey, several points about housing may be made:

- There is no significant problem with deteriorated housing stock in Brown Township.
 - 1.) 52% of all housing is either new or maintained like new.
 - 2.) 37% of all housing is in good condition.
 - 3.) Only 9% of all housing appeared to be somewhat dilapidated.
 - 4.) Only 1% (7 units) appeared to be a possible health threat.
 - 5.) 3 units appeared so bad as to be condemnable from an exterior survey.
- Housing in the township is entirely single family. This is largely due to the lack of sanitary sewers and other services that multi-family housing demand.
- Brown Township may someday wish to adopt a housing code to assure the constant maintenance of its housing stock, to retain property values and stable neighborhoods.

7.2 Housing needs

Brown Township has been the seventeenth-largest provider of new housing stock in Delaware County from 1980 to 1999 (172 units), ranked by building permits issued (Table 7.2, DCRPC Number of Building Permits 1980-1999). Brown Township has provided 0.83% of the total new housing in Delaware County in the last 20 years. The top five communities have provided 70% of all the housing in Delaware County during the same period.

Table 7.2 Housing Providers in Delaware County, by Reported Building Permits 1980-99

6.1.1.2	Rank, Name of Community	# building permits 1980-99	% total permits issued 1980-99, Delaware County
1.	Delaware City	3934	19.00
2.	Orange Township	3151	15.22
3.	Genoa Township	3051	14.73
4.	Liberty Township	2271	10.97
5.	Powell Village	2028	9.79
6.	Columbus	1708	8.25
7.	Concord Township	723	3.49
8.	Berlin Township	699	3.37
9.	Harlem Township	463	2.24
10.	Scioto Township	409	1.97
11.	Berkshire Township	370	1.79
12.	Kingston Township	297	1.43
13.	Porter Township	254	1.22
14.	Trenton Township	231	1.11
15.	Sunbury Village	225	1.08
16.	Troy Township	196	0.95
17.	Brown Township	172	0.83
18.	Radnor Township	157	0.76
19.	Delaware Township	149	0.71
20.	Oxford Township	88	0.42
21.	Thompson Township	49	0.23
22.	Ostrander Village	36	0.18
23.	Shawnee Hills	14	0.07
24.	Ashley Village	9	0.04
25.	Galena Village	9	0.04
26.	Marlboro Township	7	0.03
Total All Reporting Inc. and Unincorp. in Delaware County		20,700	100 %

7.3 Open Space “Golf Course” Developments

The Delaware County townships that have experienced the most growth (Liberty, Orange, and Genoa) have access to County sanitary sewer systems.

A change in sewer policy by the Ohio Environmental Protection Agency (see Chapter 9) allows on-site centralized sewage disposal systems (treatment plants) with land application of the treated effluents. This has led to a surge in “golf course” development in townships that previously had no sanitary sewer service. The developments use the golf course as an irrigation area for the treated wastewater. Houses are placed around the golf course, which enhances house lot prices. This form of cluster housing may be appropriate, depending on the gross overall density and other service demands.

These golf course communities, with their on site centralized sewer facilities, may shift housing starts to rural, non-urban service areas, which could redistribute the housing geography in Delaware County. This type of development may not be as likely in Brown Township due to the large amount of poorly drained soils that are unsuitable for irrigation. However, the possibility should not be ignored in the township’s planning. Many other townships have been approached with such developments, some are in the preliminary stages of discussion and others in the final development phase. (See map and table 7.3)

Map 7.1 Potential Developments served by Alternative Central Sewer

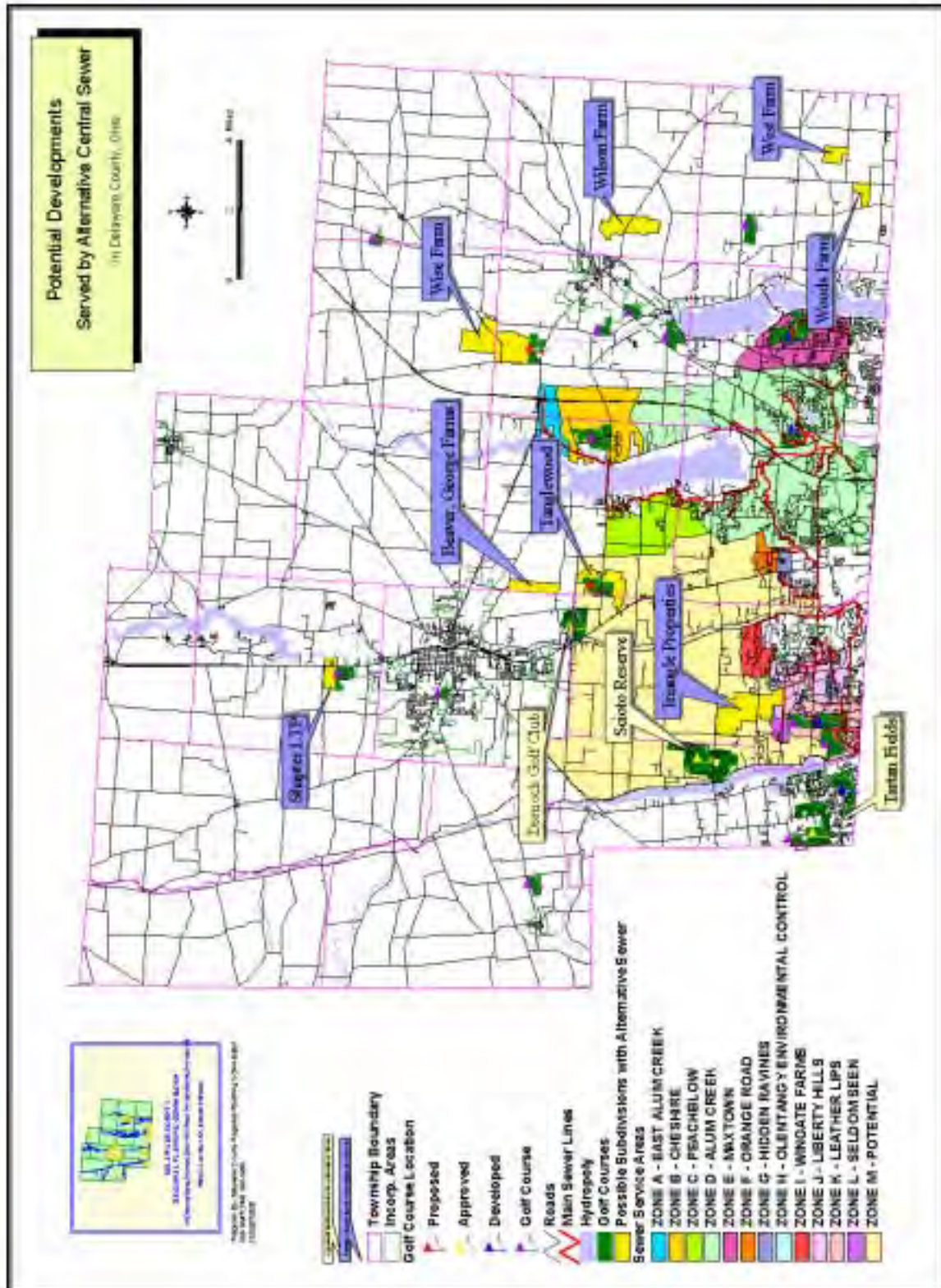


Table 7.3

Potential Developments in Delaware County with Alternative Centralized Sanitary Sewage Disposal Provided On-Site (as of September 1, 2000)

<u>Development</u>	<u>Location</u>	<u>Township</u>	<u>Acres</u>	<u># Units Approved</u>	<u># Units Proposed</u>	<u>Potential Density</u>	<u>Status</u>
Tartan Fields	Concord Rd.	Concord	302	449		1.49/ac	Approved
Dor Knoch	US 23	Liberty/Delaware	282	393		1.39/ac	Approved
Scioto Reserve	Home Road, Riverside Drive	Concord	695	1250		1.8/ac	Approved
Tanglewood	Cheshire Road	Berlin/Liberty	573		1035	1.8/ac	Withdrawn
North Star	N. Galena Road	Kingston/Berkshire	965		1500	1.55/ac	Pending
West Farm	Robins Road	Harlem	175		540	3.1/ac	Optioned
Woods Farm	SR 605	Harlem	128		260?	2/ac	Optioned
Totals				2,092	3335		

Economics drive the Land Application System equation in Delaware County.

- Land prices for land with water and county sewer in Delaware County townships are approximately \$20,000 per raw acre for large tracts, which yield densities of 2 units per acre. Finished lot prices are \$40-50,000 in such developments.
- Land prices in agricultural areas of the county are \$2,500 to \$6,000 per acre for large tracts. Existing PRD Zoning permits cluster densities of 2-8 units (varies by township) per acre with “centralized” water and sewer, even in rural areas. This zoning was written 20 years earlier, when centralized sewer meant public sewer extended by the county. Such sewer extensions followed the major roadways where services and infrastructure could be provided.
- Land Application Systems can allegedly be constructed for \$5,000/unit on a large-scale basis (500 units or more). Delaware County sewer tap fees are \$5,900/unit. 1,000 units of housing on a Land Application System potentially saves the developer \$1 million in Delaware County sewer tap fees.
- If developers can convince homebuyers to drive farther into the country and buy into a Land Application development, the developer can potentially pay less for land, save on sewer installation costs, and receive equivalent or greater densities, while marketing the “rural character” buyers demand.

7.4 Zero Discharge On Site Centralized Sanitary Sewer Systems - Opportunity or Threat to Planning?

For Ohio Townships, Land Application Systems can be both an opportunity and a threat.

- **Opportunity #1-** If cluster developments with Land Application Systems are proposed in areas anticipated to be served by county sewer, the Land Application Systems can augment the county's sewer capacity. This means additional areas for sewer users may be accommodated without future upgrades to the treatment plant. This can be a benefit.
- **Opportunity # 2-** Agricultural (non-urban service) areas can use properly worded cluster development (such as the Farm Village Concept adopted by portions of Delaware and Franklin Counties) to transfer development rights from working farmland to adjacent cluster developments. The key to success of this concept is low density (one unit per two acres might be an appropriate gross density). Homes in such areas may be tightly clustered on smaller lots; the Land Application System can be used as irrigation on appropriate set-aside areas for agriculture and managed open space. This preserves farmland.
- **Opportunity # 3** Land application systems can also augment the water capacity of the potable water supply by reducing the summer lawn watering peak usage. By using a parallel gray water system to irrigate open space, lawns and golf courses, potable water demand could be reduced during droughts. Check with the OEPA on permitting lawns to be gray watered. This may not be allowed.
- **Threat # 1-** Ohio townships should be cautious when using alternative sanitary sewer systems to achieve urban densities (greater than one unit per acre) in rural areas. These areas typically have no broad base of community services available to them (i.e. fire and police protection, public transportation, shopping, recreation, entertainment, and cultural activities). Every demand for such services requires trips in cars. Local roads typically cannot support significant trip increases for high density, large-scale development. The cost of upgrading farm to market roads to accommodate leapfrog development would likely exceed the benefits of the development.
- **Threat # 2 -**If gross densities of more than one unit per acre are allowed in rural (non urban service) areas, more farms become targets for golf course development, and existing golf courses become

targets for effluent irrigation easements. This does not preserve farmland, which has been identified as a legitimate government interest by the Ohio Legislature.

- **Threat # 3** -Most municipal or county sewage treatment plants are built using general obligation bonds. Sewer tap fees typically make the bond payments. If developments construct their own treatment plant and avoid sewer tap fees, they may compete with a municipal or county sewer system. Property owners may incur increased taxes if a shortfall in tap fees occurs. Note: This does not appear to be a threat in Delaware County because there is more demand for county sewer than supply, so tap fees should continue to be collected regardless of Land Application System developments.
- **Threat #4**– If the county does not maintain the Land Application System treatment plant, it may be prone to failure. These LAS systems should be considered permanent. Delaware County prefers county ownership of the plant (by dedication) to assure proper design and maintenance. Home Owners Associations are notoriously under-financed and ill equipped to maintain or oversee maintenance of sewage treatment plants.

To prepare for potential suburban-density developments using Land Application Systems or other approved “centralized” on-site sewage disposal systems, Ohio townships should:

1. Adopt up-to-date land use plans with recommended densities as the basis for their zoning.
2. Permit Land Application Systems as accommodations to development only when the use and density conform to the comprehensive plan.
3. Avoid gross tract densities greater than one unit per acre in truly rural areas. Even lower gross densities are appropriate in prime agricultural areas.
4. Encourage county ownership and maintenance of the sewage system as a consideration in rezoning.

7.5 Future Housing Needs

In order to make future housing projections, a community might anticipate what services they can, or should, provide for what kinds of housing. The community should also anticipate further their share of the future population of the area and allocate the distribution of housing types.

Few rural communities attempt such an analysis, leaving the housing mix up to the real estate market and traditional power of zoning, which is seldom so analytical. In a high-growth area such as Delaware

County, where all recent population projections have been low, it is impossible to anticipate what the county's share of the state's population will be, and distribute that amount among the townships, villages and cities. Furthermore, this is not a centralized economy, but a free market economy.

Ohio annexation law favors the cities. If landowners wish to annex and are contiguous, annexation is generally approved. Zoning battles occur along the edges of cities over density, which translates to land value, with developers sometimes playing one jurisdiction against the other to get the most density. Where the possibility of annexation exists, townships cannot be certain of their future boundaries. For that reason, it is impossible to assess fair share allocations of housing to be provided by the township when a city or village, which may offer superior services, may annex some of that land and provide housing at a higher density. In Brown Township, the City of Delaware provides sanitary sewer service that the township does not. Therefore, higher density housing and a wider range of housing types can be provided in Delaware City than in the township.

A more pragmatic approach to housing distribution is to determine:

- How the community wants to look when it is all built out (vision);
- what services it can reasonably provide;
- what its reasonable and fair share of the mix of population would be.

Brown Township's future housing mix and densities will be shaped by the vision of the community when it is all built out. Decision-making will be influenced by the available utilities, natural resources and limited services the township can economically provide. This is reflected on the Comprehensive Land Use Plan in Chapter 15.

7.6 Housing Policies

Brown Township has established goals of maintaining a mostly single family residential housing mix due to its lack of sanitary sewer and the township's desire to maintain a sense of rural character. Brown Township's share of the Delaware County housing starts is likely to remain small. The Township should continually evaluate its housing mix as new developments are proposed.

Columbus and Delaware City are the primary multi-family providers in the Delaware County housing market. They offer higher densities than the townships. The City of Delaware has recently passed a high-density apartment district that will compete with Columbus for land yield (approximately 15 units per acre). The townships cannot compete in the range of urban services with the three cities in Delaware

County (Delaware, Columbus and Westerville), which have the economic and service clout to provide the larger share of the multi-family market.

For this reason, the townships should not be expected to provide large percentages of their future land use mix in multi-family housing. In those areas where there is access to major road networks, in transition to commercial uses, or as part of large planned developments, multi-family housing can and will occur in the townships. Brown Township could receive multi-family housing requests as part of larger planned developments. It must evaluate its housing mix in light of all state and federal housing laws, and binding court decisions.

Chapter 8

General Economic Conditions

Land development depends upon a sustained positive economy. Within the national economy there are regional economies moving forward or slumping due to local conditions. Delaware County is one of Ohio's most affluent counties, with the lowest unemployment rate, and a perennially strong economy. The central Ohio and Delaware County economies drive Brown Township's economy.

In September 2000, The United States economy remained strong. Merrill Lynch said that "despite the lowest unemployment rates in three decades, wage pressures are being contained by advances in productivity" (Source: August 9, 2000 page H1, Columbus Dispatch).

- National unemployment rate remained unchanged at 4% (August 19, 2000 Columbus Dispatch).
- Annual (US) Inflation Rate was 1.5 % in 1999 (Business First, 8/25/00).

The State of Ohio economy is also strong, as reported by the following indicators:

- Ohio unemployment rate - 4.2 % in July 2000 (Columbus Dispatch, 8/19/00).
- Index of leading indicators Ohio-116.3, May 2000, (vs. 104.8, May 1999) (Business First, 7/28/00)

Central Ohio and Delaware County economies have been stronger than the state of Ohio:

- Delaware County unemployment rate- 1.9% (Columbus Dispatch, AP 8/19/00)
- Delaware Co. June, 2000 unemployment claims - 101, down from 124 in March.
- Delaware County Per Capita Income- \$30,252 in 1997, 11.29% increase from 1994-96, 52nd on USA, the fastest growing per capita income of any county in Ohio according to Ohio Development Department web site)

Delaware County continues to maintain the lowest unemployment rate in Ohio. According to an article in the March 3, 2000 Business First, some central Ohio employers "are changing tactics by trying to spend their way out of the labor shortage. Some businesses are shelving hiring plans while significantly increasing their capital spending programs. Greater spending on equipment and other capital outlays can translate into increased productivity from an existing worker base."

8.2 Employment by Industry in Delaware County

Delaware County has a broad-based economy. The 1998 annual average civilian labor force estimates for Delaware County: Total labor force- 48,800; Employment- 47,800;Unemployment- 1,000

Table 8.1 Employment by (covered) Industry in Delaware County, 1998

(Source: Ohio Development Department, OBES/LMI place of work data) *This does not include all employment

Employment Category	1998 Employees
1. Wholesale and Retail Trade	7,600
2. Services	6,608
3. Manufacturing	5,085
4. Government	4,288
5. Finance, Insurance Real Estate	1,608
6. Construction	1,751
7. Transportation/Utilities	691
8. Agriculture (nursery workers)	443
9. Mining	74

Table 8.2 Major Employers, Delaware County (Source: Delaware County Chamber of Commerce)

Employer	Employment Sector	# Employees
ATS Ohio	Manufacturer, automated assembly systems	170
American Showa	Manufacturing (vehicle suspensions)	425
Bank One (Columbus)	Finance	2,500
Delaware City BD of Education	Government	525
General Castings	Manufacturing	425
Grady Memorial Hospital	Service (medical)	450
Liebert	Manufacturer, cooling systems	300
Mid West Acoust-A-fiber	Manufacturing	160
Nippert	Manufacturing (Copper processing)	300
Ohio Wesleyan University	Service (Higher Education)	500
PPG Industries	Manufacturing (paint)	600
Sarcom	Service (Information Technology)	300
State of Ohio	Government	891
Western Auto	Trade (vehicle parts)	400
Willamette Industries	Manufacturing	150
Worthington Cylinders	Manufacturing	200
Delaware County	Government	816

In 1997, the total value of all non-farm sector sales/receipts/shipments in Delaware County was \$3,506,597,000 (Source: Delaware County Economic Development/US Census Bureau County Business Patterns and Economic Conditions).

8.3 Agricultural Component of the Delaware County Economy

Agriculture is still the largest land use (by acreage) in Delaware County.

Delaware County- Total Acreage	283,700
Delaware Co. Agricultural Acres (1998-Ohio Dept. Dev.)	179,000
Percent of Delaware County Acres in Agriculture	63%
Ohio Acreage in Agriculture, 1998	15,100,000 acres
Delaware County's Share of Total Ohio Agr. Acres	1.2 %

Agricultural acreage has been converting to other land uses since the end of World War II.

Table 8.3 Census of Agriculture, Change in Land in Farms in Delaware County

Source: 1995 Ohio Dept. of Agriculture Annual Report

Period	Land in Farms
1982-92	-10 %
1974-92	-11 %
1964-92	-18 %
1954-92	-31 %
1945-92	-39 %

Agriculture (farming, as reported by the Delaware County Farm Bureau) represents 770 farms. These employees (most are family farmers) represent about 3% of the total Delaware County labor force (770 farms, @ 2 full time workers/farm = 1440 farm workers; 1440/47,800 total employment = 3%).

Total 1998 cash receipts for all agricultural production in Delaware County in 1998 was \$55,195,000. This represented 1.6% of the total sales/receipts for the county. It may be observed that in 1998, 63% of the land was in agriculture, an estimated 3% of the labor force was in agriculture, and 1.6% of the total cash receipts for productions of goods and services was in agriculture. Clearly, agriculture is still an important land use in Delaware County, but it is becoming a smaller portion of the local economy.

Table 8.4 Delaware County Agricultural Comparison: 1994 &1998

	1994	1998
Number of Farms	710	770
Average Farm Size	254 ac	230 ac
Total Land in Farms	180,000 ac	177,000 ac
Fertilizer Deliveries	10,615 tons	20,827 tons
Commercial Grain Storage Capacity	562,000 bushels	317,000 bushels

Source: 1995 and 1999 Ohio Department of Agriculture Annual Report

Table 8.5 Delaware County Agricultural Production: Comparison, 1994 & 1998

Crop	1994 Acres	1998 Acres	1994 Production	1998 Production
Corn (grain)	43,300	41,000	5,000,600 Bu	5,246,800 Bu
Soybeans	72,200	75,000	2,255,700 Bu	2,832,000 Bu
Wheat	18,800	12,300	969,100 Bu	929,000 Bu
Oats	-	-	-	
Hay	8,300	8,100	21,100	21,800 ton

Source: 1995 and 1999 Ohio Department of Agriculture Annual Report

Table 8.6 Delaware County Cash Receipts from Marketing of Farm Commodities

Crop	1994	1998
Corn	\$13,921,000	\$12,820,000
Soybeans	21,208,000	18,986,000
Wheat	3,353,000	2,203,000
Oats and Hay	633,000	819,000
Other Crops	14,393,000	12,573,000
Dairy and Milk	2,687,000	2,706,000
Cattle and Calves	1,828,000	1,352,000
Hogs and Pigs	2,808,000	3,162,000
Poultry and other Livestock	953,000	573,000
Total	\$61,784,000	\$55,195,000
Average per farm	\$84,635	\$75,609

Source: 1995 and 1999 Ohio Department of Agriculture Annual Report

8.4 Local Housing and Real Estate Market

Compared to the Midwest region, the Central Ohio housing market is healthy, but not super “hot”.

Whereas the Midwest was up 18% for single and multi-family units in 1998, Central Ohio was up only 8.6% overall (Source, *Business First*). This was still down 8.9% from the 1996 high of 12,147 total units for Central Ohio. The number of closings in February 1999 was 1097, versus 1174 in February 1998, a 6.5% decrease. Interest rate increases of 2% from 1999 to mid 2000 have slowed sales somewhat.

For the second quarter of 2000, *Business First* reported (8/25/00) a “Market Hotness” index of 10.6 for the Columbus MSA. This compared to a high of 36.2 (Naples, Florida) and a US rate of 6.0. For comparison, Cincinnati MSA was ranked a 6.9, and Cleveland MSA 3.9.

Delaware County’s housing market has been strong for two decades and is getting stronger (see building permits figure in Chapter 2, and subdivision data in Chapter 3). The townships have primarily provided upscale single family housing, while the cities of Delaware and Columbus have provided more moderate income and middle class housing.

The Mid Year Greater Columbus Blue Chip Economic Forecast (August 16, 2000, Greater Columbus Chamber of Commerce) warned that the declining ability of residents to find affordable housing threatens the Greater Columbus economic expansion. As reported in *Business First* (8/25/00) “even with high average incomes and large down payments, the majority of newly built homes in Greater Columbus are economically out of reach for most regional residents. A household making \$40,300, the average income for the region, and placing a 20 percent down payment on a home could afford only 4 percent of the area’s new houses.”

Preliminary review of available housing lots in the townships of Delaware County (see Observed Trends, Chapter 3, after Table 3.7) suggests that a glut of supply may be building. It is very difficult to interpret this trend, or to call the moment when oversupply occurs.

- Based upon a five-year average township lot absorption, the 11,349 single family house lots in the development (subdivision plat) pipeline as of 1/1/99 would be an 8.5 year supply.
- Based on 1999 township building permit data, (1,894 total permits), this is only a 6 year supply.

- Due to the length of time it takes to get lots through the development process and available for construction, a three-year supply is considered healthy. The largest production builders use a five-year planning horizon. Seen in a five year horizon, the current available supply may not be excessive.
- The key is future demand. The Delaware County housing market remains strong.

8.5 Other Economic Indicators

Delaware County's poverty rate was 6.4% in 1993, or half that of Franklin County. All other central Ohio counties have higher poverty rates than Delaware (Source: Business First, 12/11/98)

Delaware County has the highest educational attainment rate of any central Ohio county. 84.4% of the population is a high school graduate. 9.3% of the population has a Master's or higher college degree. 17.1% have a Bachelor's degree (total combined college degree- 27%). By comparison, combined college level attainment in other counties is: Franklin: 26.6%; Fairfield: 15.5%; Licking: 13%; Madison: 9%; Pickaway: 9%; and Union: 12%. (Source: Business First, 12/11/98).

Delaware county ranks third in the state of Ohio's 88 counties in the highest per capita property taxes, with 1997 revenues of \$1,063.86 per capita.

8.6 Brown Township Economy

Brown Township's economy has historically been based on agriculture.

Table 8.7 Businesses in Brown Township noted by Windshield Survey, March 2000:

Business Name	Business Type
Rolling Acres Farms	Agriculture and Stable
Cackler Farms	Ag./retail
McCarty's Grocery	Grocery store
Rogers Pizza	Take out restaurant
LJL Horse Farm	Horse stables
Legend Horse Stables	Horse stables
Harps Metal Work	Metal Shop
Oak Creek Gymnastics	Gymnastics School

There is the possibility for additional economic development along the Delaware City border between SR 36/US 37 and US 42 within Brown Township. With no sanitary sewer service available in the township,

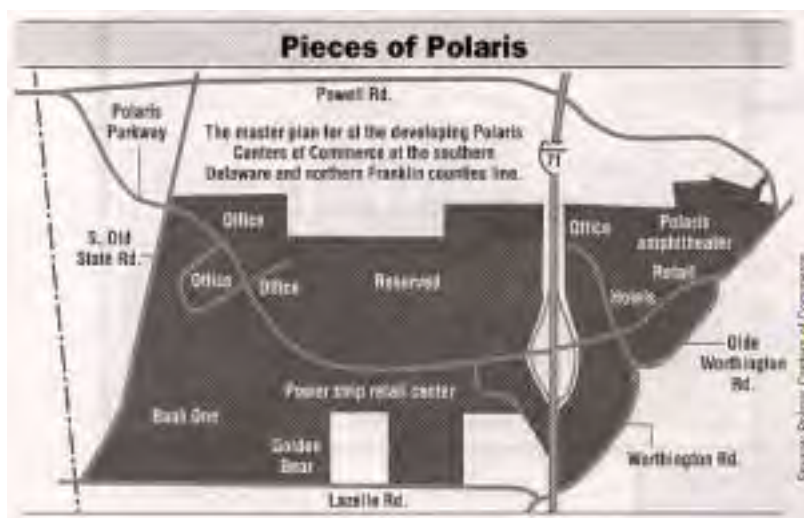
annexation of these lands to Delaware is possible. However, if the township can offer commercial, office or industrial uses that do not require sewer service, then the economy of the township could be strengthened.

8.7 Economic Development in Delaware County

Traditionally, economic development in Delaware County focused on the city of Delaware. In the last twenty years, as water and sewer systems branched out into the townships, economic development has followed. For example, the Polaris I-71 interchange and the extension of Polaris Parkway to US 23 at Powell Road created an economic engine in Orange Township.

Polaris

A 1200-acre Polaris annexation from Orange Township to Columbus occurred in January 1991. Private and city funds were used to construct the interchange and Polaris Parkway.



(Image from Business First, 2/5/99, special supplement)

NP Limited was the master developer of Polaris. According to a special supplement to Business first 2/5/99, the following economic development has occurred in the last eight years at Polaris Centers of Commerce (Polaris is about 55% complete).

Polaris facts:

- 1.68 million square feet of Class A office space are already constructed and occupied.
- An additional 1.62 million square feet of office space are under construction by Bank One. In all, Bank One will occupy 2 million square feet of Class A office space.

- Smaller office, medical and office warehouse projects account for another 132,000 square feet of current space.
- Polaris Towne Center opened in the fall of 1998 with 115,000 square feet of retail development.
- 600,000 square feet of additional retail is proposed, plus 1.5 million square feet of retail mall.
- A full service hotel and conference center are planned.
- The Polaris Amphitheater has been a financial and marketing success, but has created unwanted noise problems with its residential neighbors.
- Polaris and the Polaris Parkway have spawned spin-off economic development on the east-side of Alum Creek in Westerville (Liebert, Meijer Store, Kroger.)
- Affluence is the mark of the Polaris region. Within a 10 mile radius of Polaris are 200,000 households with a median household income of \$54,400. The upscale Easton Mall/office park, by comparison, counts 300,000 homes with a \$40,600 household median.

Polaris Expansion

A second phase of Polaris, Polaris Fashion Place Mall, will include 150 stores comprising 1.3 million square feet of retail space. A Tax Increment Financing deal between the City of Columbus, Delaware County, the Olentangy School District and Glimcher Development Corp. was a key to the Fashion Mall development. Local road widening plus a second, northerly I-71 interchange were part of the design. Cost for infrastructure was estimated at \$37 million according to Glimcher.

Enterprise Zones

Delaware County's established enterprise zone program provides tax abatements in return for guaranteed job creation. The enterprise zone program has been successful in creating 1,392 new jobs at 28 of 30 firms receiving abatements as of 12/31/99 (source, Delaware Gazette, 4/12/00). The four enterprise zones in Delaware County are in Orange Township, city of Delaware, Westerville, and the village of Sunbury.

Table 8.8 Delaware County Enterprise District: Orange Township (1999)

Firm	# jobs created	Real Property	Personal Property	Base payroll	Projected Payroll
Airwaves Inc	30	2,700,000	3,450,000		500,000
BKP BT USA	30	2,550,000	3,700,000		600,000
Digital Storage	30	2,000,000	11,000,000	1,371,000	750,000
Colorifics	8	600,000	197,600	496,454	162,240
Fisher Backup us	8	536,000	50,000		100,000
Sarcom #1	10	1,875,000	18,700,000		200,000
Sarcom #2	225	2,700,000	11,750,000		6,750,000
Sheridan Ass.	4	525,000	0		46,000
Volvo Parts	50	300,000	22,400,000		2,000,000
Totals	395	\$13,786,000	\$71,247,600	\$1,867,454	\$11,108,240

Table 8.9 Summary of Enterprise Zone Data, 2000

Enterprise Zone	New Jobs	New Annual Payroll	New inventory and Equipment
Delaware	757	\$17 million	\$105.4 million
Orange Township	494	\$14 million	\$90.3 million
Westerville	146	\$3.8 million	\$15.2 million
Sunbury	305	\$10.6 million	\$30 million

Source: Delaware Gazette, 4/12/00

8.8 Delaware City

Delaware City's plan projects growth into a significant portion of the southwestern corner of Brown Township by the year 2020. The growth projected includes residential, manufacturing & office, as well as commercial. Brown Township must be proactive and work with the city in order to discourage future annexations and the potential loss of tax base..

8.9 Brown Township Economic Development

Brown Township should plan for future economic development by:

- Working with the City of Delaware to investigate a Joint Economic Development District (JEDD) with a commercial base utilizing city sewer service.
- Considering additional land for future commercial development served by on-site (i.e. septic and leach or zero discharge, land application sewer systems) at key locations, provided the

systems are approved by the OEPA, and preferably are dedicated to the County for ownership and permanent maintenance.

- Avoiding over-zoning property before there is an apparent market need, to avoid oversupply, and the possibility of price deflation in a real estate recession. Phasing of large projects helps the incremental absorption of the land costs to the developer and avoids oversupply of product.
- Considering possible Future local commercial growth for Kilbourne, capturing through traffic along SR 521.

Chapter 9

9.1 General Information

Brown Township roads were originally laid out for farm access in the early nineteenth century. These original township roads continue to be the only avenue for local transportation. With the exception of a few small residential subdivisions, all development in the township has taken place along these original farm-to-market roads. As the area develops, these historic roads are changing function. What were once unpaved, narrow horse and buggy tracks are now paved, narrow, township and county roads used as collector and arterial streets. As traffic counts increase, roadway improvements and new roads will be needed.

Map 9.1 Brown Township Roads



Brown Township has no regularly scheduled public transportation. Automobiles are the primary means of transportation. The Delaware Area Transportation Authority (DATA) offers an on-call non-scheduled bus service from point-to-point in the county. A DATA bus will deliver passengers to Crosswoods at I-270 and US 23. A COTA linkage from Crosswoods delivers bus riders to any COTA stop in Franklin County.

Bikeways - No bikeways exist in the township. The Mid Ohio Regional Planning Commission (MORPC) is preparing a regional bikeway plan for Franklin and Delaware Counties, in hopes of obtaining Transportation Equity Act 21 funding. The draft bikeway plan recommends three bikeways along traditional roads and rail rights-of way in Brown Township.

- ***North South #5***, which follows Conrail right-of way from Berlin Township and along SR 42 to Oxford Township.
- ***North South #6***, which follows North Old State Road from Berlin Township north to Oxford Township.
- ***East West #2***, which follows Kelly McMaster Road from Troy Township, south of Walton Rd and then East on County Home Road exiting the into Kingston Township along Kilbourne Road.

Map 9.2 MORPC Bikeway System Draft



9.2 Road Maintenance

Brown Township roads are maintained by various authorities:

- Federal and state roads are maintained by District 6, Ohio Department of Transportation.
- The Delaware County Engineer maintains county roads.
- The Township maintains township roads.
- Homeowner associations maintain private subdivision roads.
- Common Access Driveways (CADs) are 12- foot wide private streets used in small subdivisions, which are maintained by the lot owners. (note: a conditional use permit must be acquired for a CAD subdivision in Brown Township and is limited to two lots)

9.3 Federal and State Roads

- a.) U.S. 42** – Brown Township has approximately 4 miles of U.S. 42 passing through its northwest corner. This is a two-lane highway, with mostly agricultural uses adjacent to it. It is heavily traveled with trucks carrying interstate commerce and passenger vehicles. Traffic flow is currently smooth and pavement conditions are very good.
- b.) S. R. 521**- Approximately 6 miles of S. R. 521, a 2 lane state highway, runs from the southwest corner to Kilbourne and then directly east to Kingston Township. Except in Kilbourne, this road is surrounded predominately by agriculture and large lot single family residences.
- c.) U.S. 36/S.R. 37** – Brown Township has approximately ½ mile of U.S 36 (which is also State Route 37) passing through its southwest corner from the City of Delaware to Berlin Township. This 4 lane divided highway is heavily traveled with trucks carrying interstate commerce and passenger vehicles.

Inappropriate strip commercial development with multiple access points could damage these highway's ability to function. Proper access management practices should be used to preserve the function of these roads.

9.4 County Roads

The Delaware County Engineer maintains five county roads in Brown Township (see Table 9.1).

Table 9.1 County Roads and Conditions in Brown Township, 1998

#	7	Road Name	Surface Width	Road Width	Surface Type	Road Length (miles)
10		North Old State Road	20	26	G2	5.60
35		North 3B's & K Road	17	21	H2	3.27
65		County Home Road	18/20	22/24	G2/H2	4.18
84		Bowtown Road	12/14/24	18/22/26	H2	4.96
80		Leonardsburg Road	18,20,22	24,26,28	G2	2.72
221		Leonardsburg Road	18	22	G2	1.48

Road carrying capacity is determined by the width of the paved surface and the number of lanes. The speed of the road is generally determined by such factors as road width, pavement conditions, curve radii, topography, number of driveways and cross traffic movements.

Future land development will lower the level of service (LOS) of county roads. Upgrades will be needed to keep pace with the increased traffic counts. The DCRPC has estimated future population per square mile based on densities (see Table 9.2).

Table 9.2 Dwelling Unit Density Per Acre and the Equivalent Population per Square Mile

# Units/acre x	#Persons/unit x	% Developable/ac x	Acres/ Square Mile =	Population/ Square Mile
.2	2.7	95 %	640	328
.5	2.7	90 %	640	778
1	2.7	90 %	640	1555
1.25	2.7	85 %	640	1836
1.5	2.7	85 %	640	2203
2	2.7	85 %	640	2938
3	2.7	80 %	640	4147
4	2.7	80 %	640	5530
5	2.7	80 %	640	6912
6	2.7	80 %	640	8294

Based upon a similar analysis, engineers can anticipate the size of road needed to serve a calculated density of population. A generalized table for road size versus population density at full build-out is provided in Table 9.3 (Author: Scott Pike, Delaware County Engineer's office).

Table 9.3 Road Size and Type Needed to Serve Specific Population Density/Square Mile

Density (# Units/ac)	Average Annual Daily Trips/ Square Mile	Directional Design Hour Traffic	Level Of Service	Road Class Required	Calculation # lanes each direction	Actual # lanes	Width Needed (feet) *
.2	1,220	139	A C E	Local	0.24 0.11 0.08	2 2 2	38' 38' 38'
.5	2,880	328	A C E	Collector	0.56 0.27 0.19	2 2 2	38' 38' 38'
1	5,760	655	A C E	Arterial	1.12 0.54 0.38	2 2 2	38' 38' 38'
1.25	6,800	774	A C E	Arterial	1.32 0.64 0.45	4 2 2	62' 38' 38'
1.5	8,160	928	A C E	Arterial	1.58 0.76 0.54	4 2 2	62' 38' 38'
2	10,880	1,238	A C E	Arterial	2.11 1.02 0.72	4 2 2	62' 38' 38'
3	15,360	1,747	A C E	Arterial	2.98 1.43 1.02	6 4 2	86' 62' 38'
4	20,480	2,330	A C E	Arterial	3.97 1.91 1.36	8 4 4	110' 62' 62'
5	25,600	2,912	A C E	Arterial	4.96 2.39 1.70	10 6 4	134' 86' 62'
6	30,720	3,494	A C E	Arterial	5.96 2.87 2.04	12 6 4	158' 86' 62'

***With 12' lanes and 7'shoulder each side**

Assumptions:

1. 8% trucks
2. Level terrain
3. # vehicles per hour per lane = SFL:
LOS A 650
LOS C 1,350
LOS E 1,900

9.5 Township Roads

The Township currently maintains seventeen local roads. According to the Delaware County Engineer, all township and county local and collector roads should be at least 20 feet of surface width with an additional shoulder of five to seven feet. Many county and township roads do not meet this standard.

Table 9.4 Brown Township Roads 1998

#	8 Road Name	Surface Width	Road Width	Surface Type	Road Length (miles)
76	Hogback Road	16,18,20	20,32	G2*	3.14
77	Howard Road	18,20	20,22,36	H2,I	1.65
81	Cackler Road	19	23	H2	2.17
82	Giehl Road	14,16	20,22	H2	1.29
85	Jumper Road	16	22	H2	1.22
85	Skinner Road	14	20	H1	1.11
86	Baker Road	18	22	G2,H2	1.43
87	Harris Road	16	22	G2	1.32
219	Kelly McMaster Road	14,16	20	G2,H1	1.47
247	McCurdy Road	12	18	G2*	0.25
252	Beard Road	16	20	I,X	1.24
253	Pugh Road	15	19	H2	0.15
263	Pittman Road	14	22	G2,I	0.87
265	Walton Road	14	22	I	0.60
276	Veley Road	20	26	I	1.54
290	Pittman Road	08	14	H2	0.33
1019	Kilbourne	14,16	22,32	H2*	0.34
1020	Kilbourne	12	20	H2*	0.06
1021	Kilbourne	14	22	H2*	0.06
1022	Kilbourne	14	22	H2*	0.06
1023	Leonardsburg	08	28	G2*	0.08
1024	Leonardsburg	10	20	G2*	0.06
1025	Leonardsburg	10,12	16,30	G2*	0.14
1026	Leonardsburg	12	27	G2*	0.08

Source: ODOT Road Inventory 1999

* Field checked 02/28/01

Notes: Surface Types

A	Primitive Road
B	Unimproved Road
C	Graded and drained earth road
E2	Gravel or stone road
F	Bituminous surface treated road
G1	Mixed bituminous combined base with surface under 7"
G2	Mixed bituminous combined base with surface 7" or more
H1	Bituminous Penetration combined base under 7"
H2	Bituminous penetration combined base 7" or over
I	Bituminous concrete sheet asphalt or rock asphalt road
J	Portland Cement Road
K	Brick Road
L	Block Road
X	No Surface

9.6 Functional classifications.

Roads have functional classifications. The Delaware County Engineer has created categories for roads in their 1999 Design Standards. The 2000 Delaware County Thoroughfare Plan identifies arterial and collector streets (see foldout map titled Delaware County and City Thoroughfare Plan Proposed Functional Classification of Roadways and Alternatives).

- a.) **Arterial streets** – Arterial Streets have the primary purpose of carrying through traffic to and from residential, commercial, and industrial areas and the secondary purpose of providing access to abutting property. It is usually a continuous route carrying heavy loads and a large volume of traffic. Average Daily Traffic (ADT) is usually in excess of 3,500 vehicles.

Existing

- Arterials: US 36/37, US 42

Proposed (2001 Thoroughfare Plan)

- Major arterial roads in Brown Township: US 42, County Home Rd/SR 521, US36/37
- Minor arterial roads in Brown Township: SR 521

- b.) **Collector Streets**- Collector Streets have the primary purpose of intercepting traffic from intersecting local streets and handling this movement to the nearest major collector or arterial street. ADTs typically range from 1,500 to 3,500 vehicles, with AM peak hour traffic about 7-8% and PM peak hour of 10%.

Existing

- Collectors: SR 521

Proposed (2001 Thoroughfare Plan)

- Major collector roads in Brown Township: Bowtown Rd., Baker Rd. Leonardsburg Rd., North Old State Rd., North Three B's and K Rd., Kilbourne Rd.
- Minor Collector Roads in Brown Township: Cackler Rd., Velely Rd., Harris Rd., Howard Rd., Giehl Rd., Skinner Rd., Kelly McMaster Rd., Walton Rd.

- c.) **Local Streets-** Local streets represent the lowest category. Their primary function is to serve abutting land use. Typical ADT's range from 100 to 1,500 vehicles. Local streets are further classified as Loop, Through and Cul-de-sac.
- Examples: Hogback Rd. and Beard Rd.

The historic county and township roads, built as local farm to market roads, are being pressed into service as collectors, major collectors, or even minor arterial streets, yet they are often narrower than new subdivision streets, and sometimes built to a lighter load bearing standard.

The cost of upgrading county and township roads to collector or arterial standards can be prohibitive. In each planning sub-area, the ability of the road to carry the traffic, its functional classification, and the cost of upgrading it can be factors in determining the timing of land use and density changes. Excess traffic, by itself, is not grounds in Ohio to justify denying a zoning change.

COUNTY THOROUGHFARE PLAN (Functional classifications)



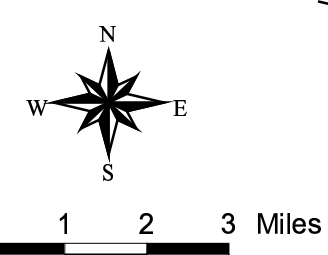
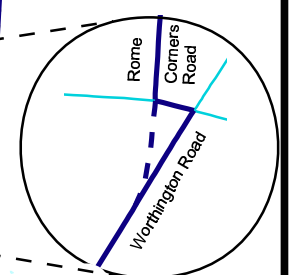
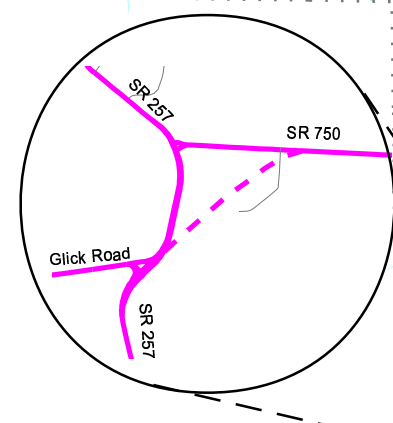
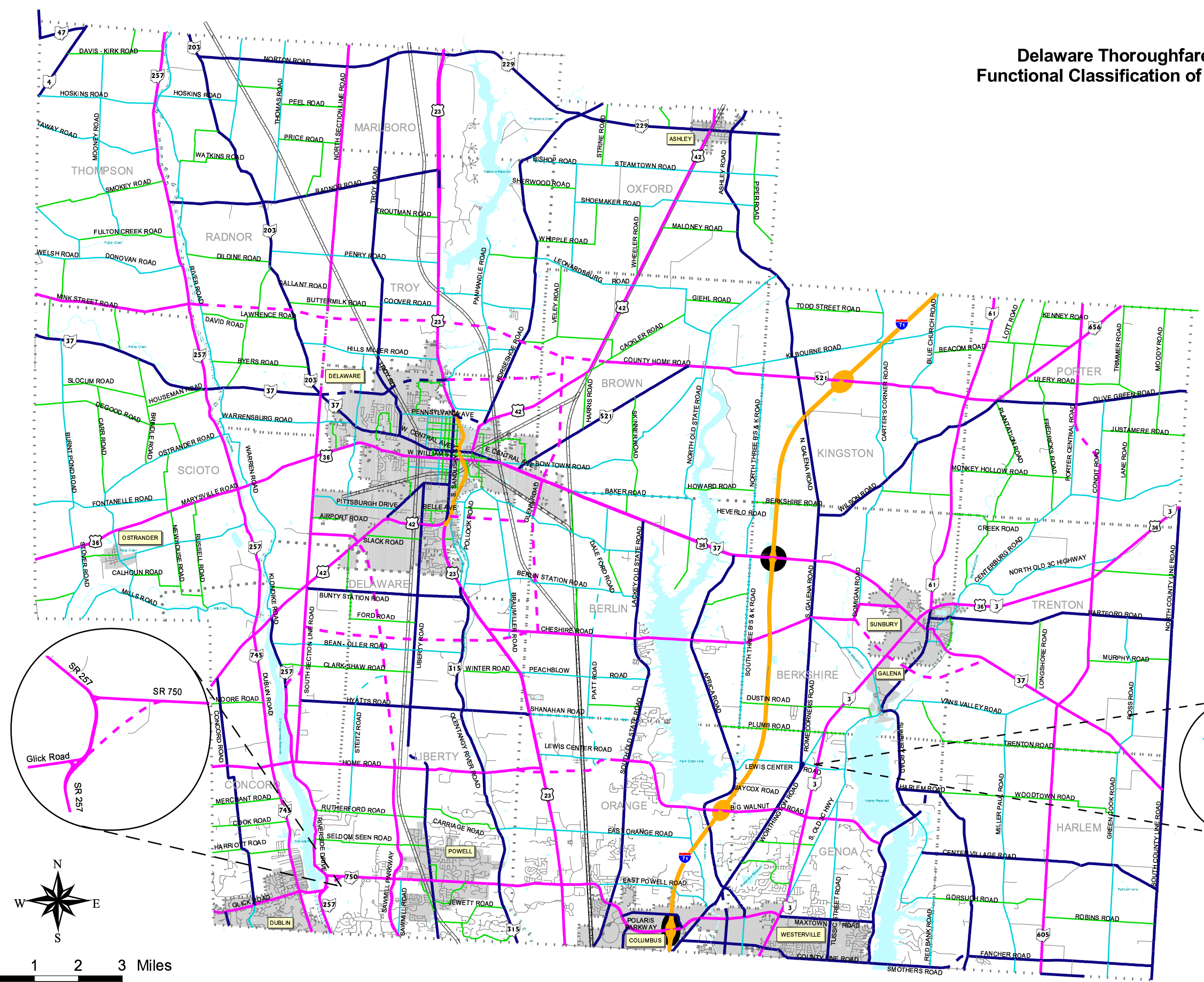
Delaware Thoroughfare Plan Functional Classification of Roadways

Functional Classification

- Freeway
- Major Arterial
- Major Arterial (New Road)
- Minor Arterial
- Minor Arterial (New Road)
- Major Collector
- Major Collector (New Road)
- Minor Collector
- Minor Collector (New Road)

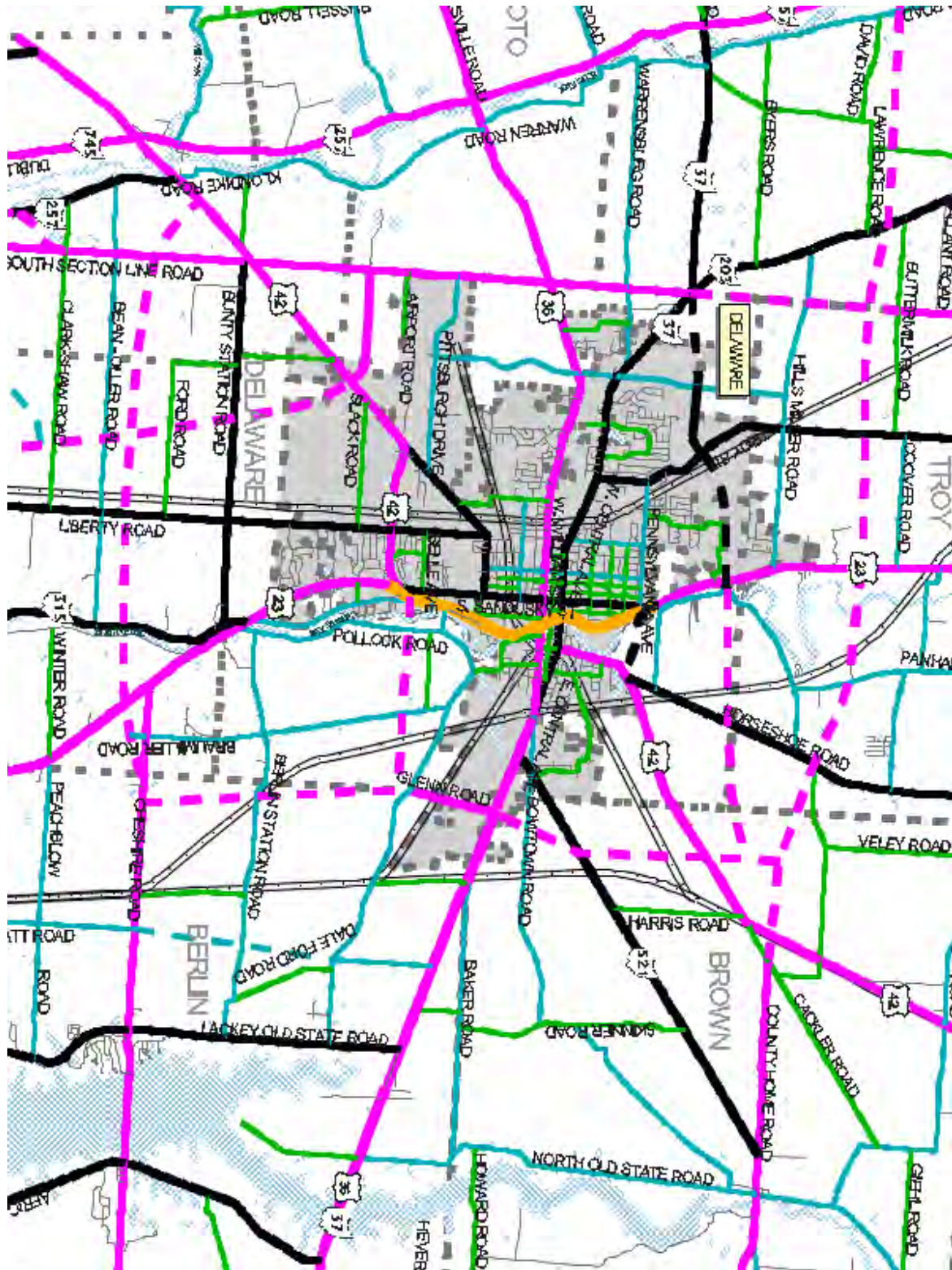
New roads are conceptual and shown for planning purposes only. Specific alignments will be determined in future studies.

- Interchange
- Interchange (New)
- Railroad
- Water
- Municipal Boundaries
- Township Boundaries



PREPARED BY
ms consultants, inc.
CONSULTING ENGINEERS & PLANNERS
2201 SOROKA ROAD, COLUMBUS, OH 43260

CITY THOROUGHFARE PLAN (Functional classifications)



Delaware Thoroughfare Plan Functional Classification of Roadways City of Delaware Region

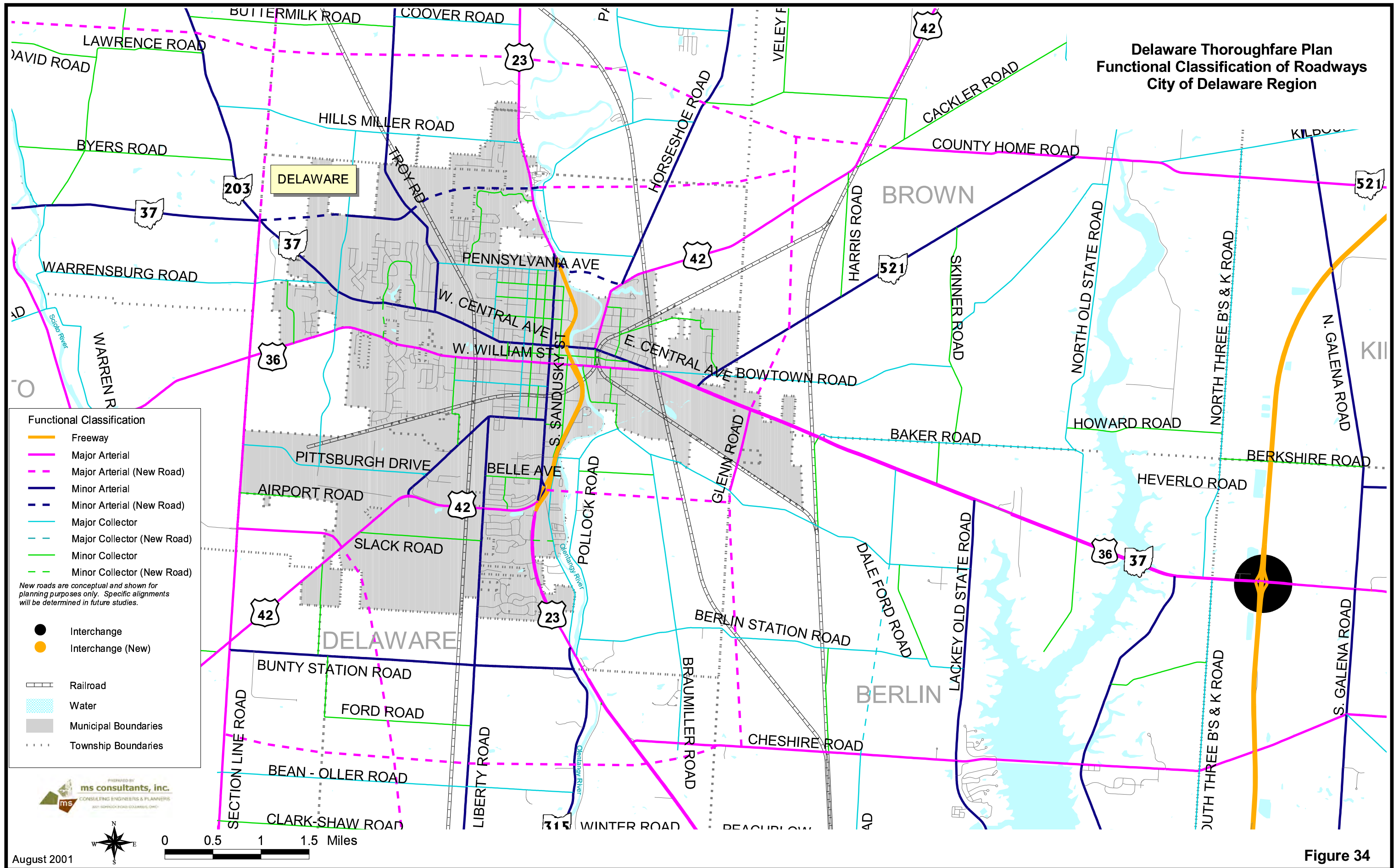


Figure 34

9.7 Traffic Counts

Map 9.2 shows the latest traffic counts taken as part of the 2001 Thoroughfare Plan. The count for US 36/SR 37 is 19,209 vehicles/day just east of the City of Delaware.

Map 9.3 Brown Township Traffic Counts (MORPC 2000)



9.8 General Access Management Principles

The US 36/SR 37 corridor offers potential commercial tax base to Brown Township. Any such commercial use should be subservient to the needs for US 36/SR 37 to carry high speed through traffic. Access management principles should be followed.

If commercial development along arterial streets is desired, it must be a part of a planned network of:

- Limited access points and/or shared access points.
- Right turn in and right turn out except at key locations for left turns, optimally at traffic signals.
- Traffic signals placed no more frequently than one-half mile spacing, with one mile spacing being more desirable.
- Parallel access roads (backage roads) to provide rear access to commercial lots and interconnect such lots, and to outlet left turns across traffic.

ODOT Access Management Principles

- Regulate the location, spacing and design of drives.
- Space access points so they do not interact with each other.
- Provide adequate sight distance for driveways.
- Use appropriate curve radius, lane widths, driveway angle.
- Provide turn lanes to separate conflict points for acceleration, deceleration, & storage lanes.
- Prohibit some turns in critical areas; relocate that activity to a less conflicted point.
- Restrict driveways to fewer than 30 per mile (every 350 lineal feet maximum).
- Use feeder roads to relocate critical movements and to handle short trips parallel to the main road.
- Locate driveways away from intersections to reduce conflicts (corner clearance).
- Use right in, right out drives to prevent unwanted left turns across traffic.
- Use zoning with access management to develop good site plans.
- Connect parking lots; share driveways.
- Use frontage roads to connect commercial traffic, and keep it parallel to the main road.
- Connect frontage roads to collector streets at properly spaced intersections.
- Use “backage” roads as rear access roads connecting commercial uses.
- Avoid individual, closely spaced curb cuts to “bowling alley” lots.
- Use the 30-curb cuts/mile standard, or maximum of one access each 350 feet.
- Avoid disconnected street systems.
- Encourage internal access to out-parcels.
- Minimize the number of traffic signals. Two per mile is ideal (half mile spaced).
- Use medians to separate traffic flows.
- Coordinate access permit review between ODOT, local zoning and building departments

9.9 Future Roads

The Southern Delaware County Thoroughfare Plan was adopted in 1988. It incorporates a map and a series of standards and policies regarding roads in the southern half of Delaware County. The Plan is being updated by MS Consultants and should be completed in January 2001. It will include the entire Delaware County Planning Area. Upon the adoption of the 2001 Thoroughfare Plan, Brown Township will need to examine the recommendations for new roads and improvements to existing roads in the township.



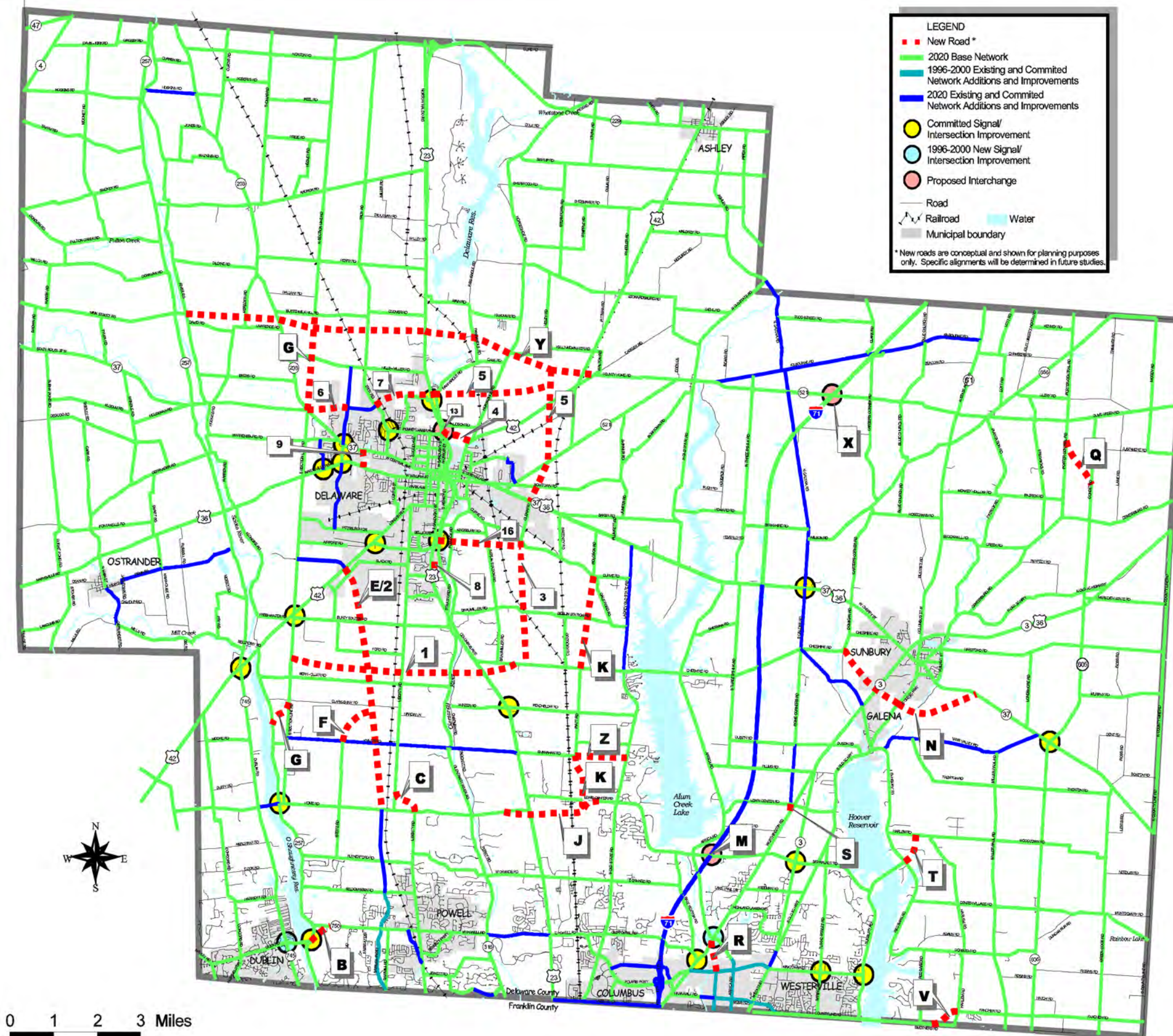
Delaware Thoroughfare Plan

2020 County Road Network Alternatives

- B. Extension of Glick Road east from SR 257 to connect with Powell Road west of Wellington Boulevard.
- C. Relocate Liberty Road north of Home Road southeast to align with Liberty Road south of Home Road.
- E. Extension of Sawmill Parkway from Home Road north past Bunty Station Road, continuing northwest to intersect with US 42 between Owen-Fraley Road and Slack Road.
- F. Extension of Steitz Road north from Hyatts Road to connect with the extension of Sawmill Parkway (Alternative E/2) between Hyatts Road and Clark-Shaw Road.
- G. Extension of South Section Line Road north from SR 37 to align with North Section Line Road at Buttermilk Hill Road and a connection between South Section Line Road and SR 257 south of Bean-Oiler Road.
- J. Extension of Home Road east from US 23, crossing the railroad tracks and connecting to Lewis Center Road east of Lewis Center and west of South Old State Road.
- K. Extension of Platt Road north from Cheshire Road to align with Roloson Road at Curve Road and extension of Platt Road south from Shanahan Road, intersecting Lewis Center Road east of the railroad.
- M. New interchange with IR 71 at Big Walnut Road.
- N. Extension of Cheshire Road east from Domigan Road, intersecting SR 3 between Sunbury and Galena, and continuing east to connect with SR37 between Walnut Road and Longshore Road.
- Q. Realignment of SR 605 northwest from Centerburg Road connecting with Porter Central Road south of Olive Green Road.
- R. Extension of Cleveland Avenue north from Maxtown Road to connect with Worthington Road.
- S. Extension of Rome Corners Road south to connect with Worthington Road.
- T. Extension of Sunbury Road from Red Banks Road, east of Hoover Reservoir, northeast to connect with Harlem Road.
- V. Extension of Fancher Road from Harlem Road southwest to Smothers Road.
- X. New Interchange at IR 71 and SR 521.
- Y. Extension of Mink Street from River Road east to County Home Road at its intersection with US 42 and a new interchange at IR 71 and SR 521.
- Z. Extension of Shanahan Road from Platt Road to South Old State Road.

2020 City Road Network Alternatives

- 1 East/west connector road beginning at South Section Line Road, connecting with Cheshire Road at its intersection with US 23.
- 2 Extension of Sawmill Parkway from Home Road north to US 42.
- 3 Connector road extending from the intersection of Glenn Road and Curve Road south to Cheshire Road.
- 4 Extension of Pennsylvania Avenue east from US 23 to the intersection of US 42 and Horseshoe Road.
- 5 North/south route extending from the intersection of Alternative Y between Horseshoe Road and US 42 south to intersect with US 36/SR37 at Glenn Road and the extension of Panhandle Road east to connect with the north/south route between Horseshoe Road and US 42.
- 6 East/west connector road from the existing intersection of SR 37/SR 203 and South Section Line Road east to the committed Houk Road extension.
- 7 Extension of the committed connector road between Houk Road & Troy Road east to align with the existing intersection of US 23 & Panhandle Road.
- 8 Extension of River Oaks Drive west from Stratford Road, aligning with the intersection of US 23 & Cottswold Drive.
- 9 Extension of Lexington Boulevard south to US 36.
- 13 Modification of the US 23 & Pennsylvania Avenue interchange to provide for all the movements.
- 16 Extension of US 42 east from US 23 to Alternative 3, the extension of Glenn Road.



0 1 2 3 Miles

November 2002

Figure 31

[illegible]

Delaware Thoroughfare Plan City of Delaware Region

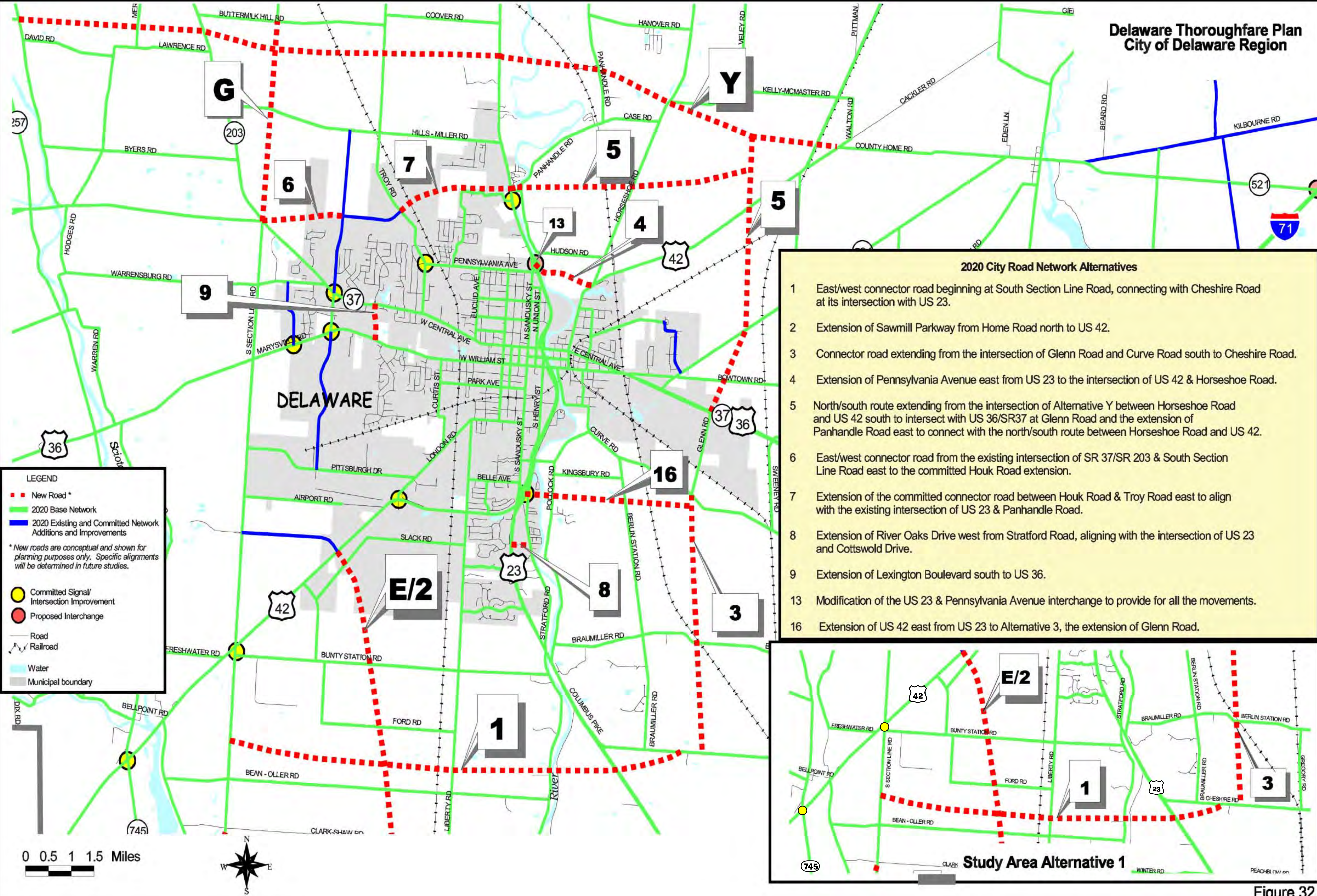


Figure 32

9.10 Other Road related Issues

As Delaware County grows, traffic increases. This decreases the quality of life that residents enjoyed or moved here to find.

Four traffic considerations to any re-zoning request:

- 1.) **Patterns of Development and “Induced Traffic”**-Traffic can be induced or reduced by the design of the development and the mix of land uses. When development is low density (typically one acre lots or larger), there is no opportunity for local commercial uses to be included in the mix. However, if large developments with densities greater than one unit per acre are proposed, there should be consideration for a mix of local convenience commercial uses and a network of sidewalks, trails and bike paths to avoid induced auto trips. Induced traffic is the result of development patterns with exclusive uses separated so that every household need results in an auto trip. A typical home in an exclusively residential area generates 10 or more trips per day. A home located in a neighborhood that is designed to be convenient for walking and biking with mixed commercial and service uses can reduce auto trips to as little as 4 trips per home per day.
- 2.) **Traffic Impact**- New development proposals should be assessed for their trip generation. An assessment using ITE trip generation rates should be submitted by the developer as part of any planned development. As a general rule, if the trip generation is more than 1000 vehicles per day, a full-fledged traffic study should be performed to determine the impact and mitigation measures needed. Current level of service (LOS) and post development LOS should be compared. Roads should not be degraded below LOS C on a scale of A-F. This should be considered as part of the zoning decision.
- 3.) **Impact Fees for Offsite Traffic Improvements**-Ohio planning and zoning legislation does not currently empower townships to charge impact fees to offset costs of service expansion (roads, schools, parks, etc.). Generally, road improvements immediately adjacent to the development can be attributable to the project as part of the subdivision and zoning process. If large impact development proposals do not reasonably offer to mitigate their significant off-site impacts, they may impose an undue burden on the township. In such cases the rezoning may be premature.
- 4.) **Air Pollution Standards**- Delaware County is one of 32 counties in Ohio where air pollution exceeded the 8-hour US EPA air quality standard for ozone. The 8-hour standard has been appealed to the US Supreme Court. If the 8-hour standard is supported by the Court, then there

may be substantial impacts on economic development and transportation. Some of the possible consequences:

- a.) loss of federal funding for state infrastructure (roads and other improvements)
- b.) requirement of potentially more expensive, cleaner burning fuels
- c.) use of vapor controls at fueling stations
- d.) emissions testing (E check) of tailpipes (not currently planned)
- e.) voluntary restrictions on travel with staggered work hours, etc.

Project CLEAR (Community Leadership to Effect Air Emission Reductions) is a community oriented partnership between the Columbus Health Department, The Ohio State University and the Mid Ohio Regional Planning Commission. Project CLEAR will evaluate and recommend strategies to reduce air emissions that contribute to smog and ground level ozone in Central Ohio. Even small details, such as providing tree islands in commercial parking lots, can reduce the incidence of ground level ozone, and should be a consideration in the zoning process when reviewing development plans.

Chapter 10

Utilities

10.1 Water

The Del-Co Water Company, a cooperatively owned private water company established in 1973, serves most of Brown Township with potable water. As the county has grown, Del-Co has expanded its service to provide larger diameter water lines for residential and commercial service as well as fire protection.

Supply

Del-Co has two current sources of supply. It draws surface water from the Olentangy River and from the Alum Creek reservoir. The water is treated and piped to up ground reservoirs on South Old State and Olentangy River Roads, and to elevated storage tanks.



Del-Co Water Headwaters and Up-Ground Reservoirs on State Route 315, Liberty Twp.

Del-Co has met its need for expanding water supply with aggressive planning for future growth. For example, in 1998 Del-Co added over 1,800 new customers and installed over 63 miles of new water lines. They constructed a new administrative office building, began construction of a million-gallon storage tank in Morrow County, and completed a 400,000-gallon storage tank at Tartan Fields subdivision and golf club.

The rapid growth of Delaware County has strained water supply and treatment capabilities. Del-Co has a current daily treatment and pumping capacity of 13.6 million gallons per day (mgd). In May of 1999, with a minor drought, they were pumping 13mgd, or approximately 272 gallons per person served at peak demand. Approximately 9 mgd was going to lawn watering; the demands for lawn sprinkling systems overtax the water system for supply and treatment. Because of this, Del-Co is currently maintaining a permanent odd/even day/address sprinkling regulation. It is clear that there are limits to water supply and this can affect the pace of growth.

Future supply locations are planned at the Whetstone River, northwest of Ashley, 400 acres on the Scioto River at SR257 and Donovan Road, and South Old State Road in Orange Township.

With these new facilities, a total of 38 mgd is the long term pumping and treatment capacity of Del-Co. While they have planned for future growth, they do not have unlimited supply options, since they compete with, or share supply with Westerville, Columbus, and Delaware City. Long term solutions to water needs in Delaware County will require careful land use planning so that water needs do not outstrip ability to serve.

Year 2000 service population for Del-Co was approximately 66,700 (59,099 in Delaware County). This is expected to double in twenty years. If water demand also doubles, the peak pumping of 13 mgd x 2 would require 26 mgd, which is within the realm of Del-Co's future planning. Growth beyond a service population of 140,000 (outside of the city of Delaware, Westerville and Columbus) in the villages and townships will require more far-reaching and expensive new sources of supply.

Water Lines

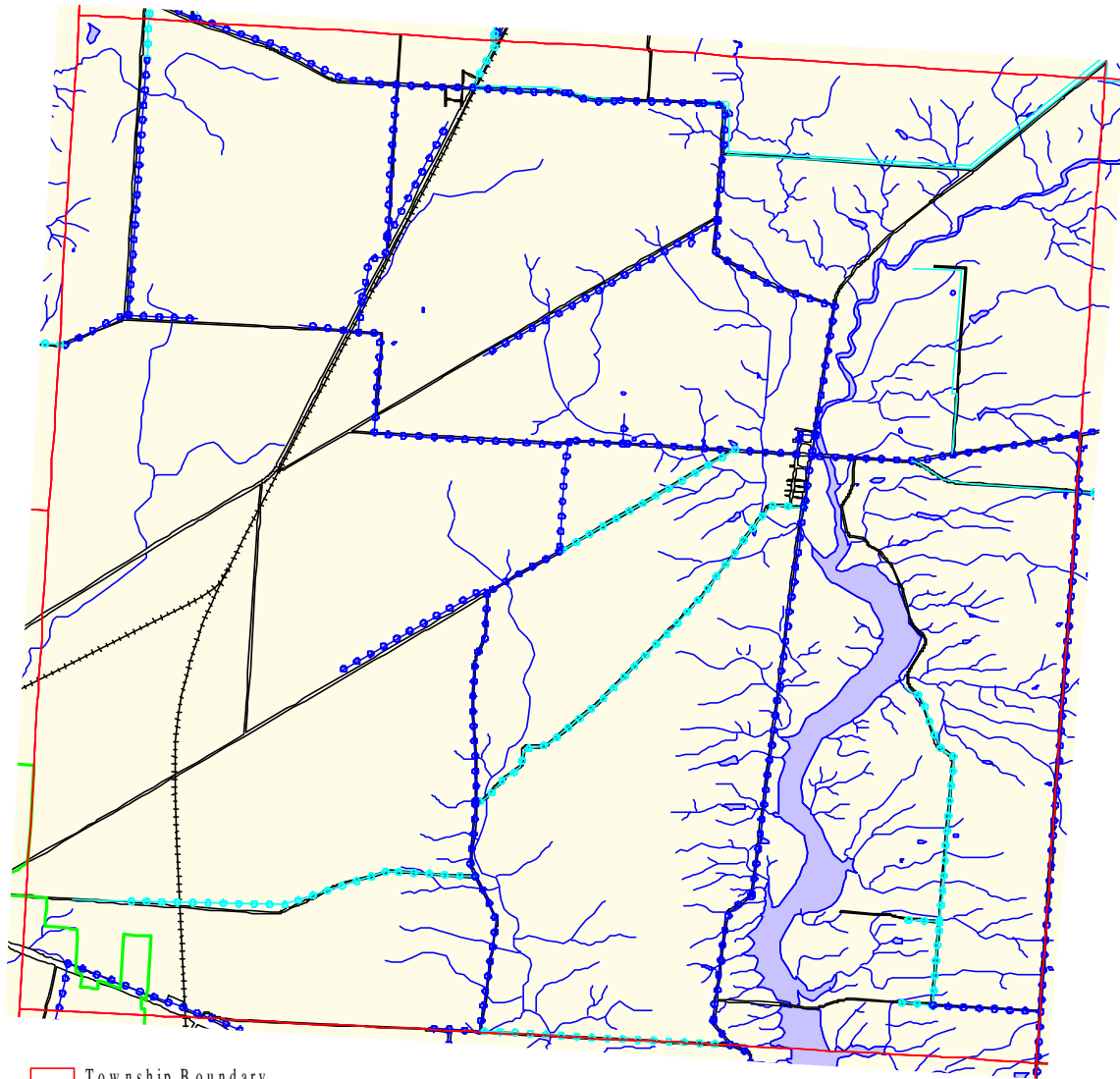
The Del-Co Water Lines map shows the location and diameters of water lines in Brown township. In general, those streets that have water lines of less than 6 inches in diameter will not offer fire hydrants. Fire hydrants are normally a requirement of development densities greater than one unit per acre.

Delaware City – Water Supply

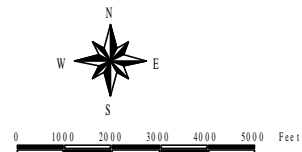
Delaware City's water system is publicly-owned and the treatment plant is located just north of the City along the Olentangy River where it draws water. The City also draws water from wells for additional supply and to reduce nitrate levels and other contaminants within the Olentangy River water. Discussions with Delaware City officials indicate that the city will be able to supply water to the planned growth area within their 1996 comprehensive plan.

Map 10.1 Water Lines, Brown Township

Water Lines, Brown Township, Delaware County, Ohio



- Township Boundary
- Incorporated Areas
- Waterline
 - 0" - 2" Pipe
 - - - 3" - 5" Pipe
 - - - 6" - 8" Pipe
 - - - 9" - 24" Pipe
 - - - 25" - 63" Pipe
- Railroad
- Road Right of Way
- Streams
- Rivers/Lakes/Ponds



Prepared By: Delaware County Regional Planning Commission (740-833-2260)
<http://www.dcrpc.org>
 Source: Del-Co Water Company
 (10/02/2000)

10.2 Sanitary Sewer

Brown Township currently has no centralized sanitary sewer service to the township, nor is any proposed anytime in the next 20 years.

Delaware County – Sanitary Sewer

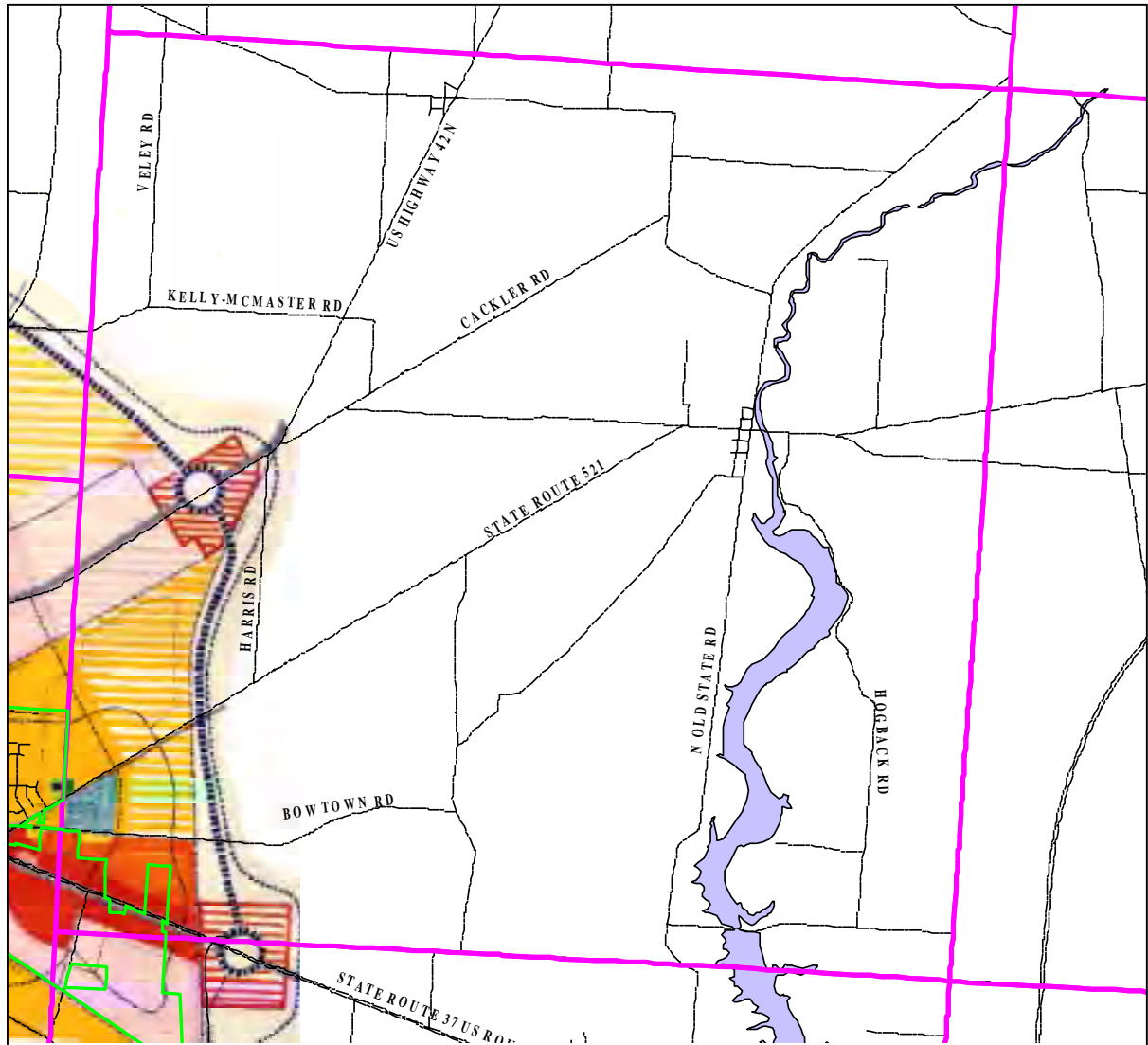
The Delaware County Sanitary Sewer Department, a division of the County Commissioners, provides sanitary sewer service in un-incorporated areas. There is currently one plant, the Olentangy Environmental Control Center, located on the West Bank of the Olentangy River at the Franklin County Line. Its current capacity is approximately 6 million gallons per day (mgd). A second sewage treatment plant, the Alum Creek Wastewater Treatment Plant will be opened in 2001 for the central and east side of the county. It will be located along the east side of Walker Wood Blvd., north of E. Powell Road and next to I-71. Its capacity will be 10 mgd, with an off site discharge to Alum Creek below the dam.

The Delaware County Sanitary Engineer has created sanitary sewer service areas (see map 10.3) based on lift stations. The service area also takes into consideration a large area that could potentially be served by the Olentangy Treatment facility, which is based on a facilities plan from 1975. Although Brown Township is currently outside of these service areas, future conditions are unpredictable, and county sewer could eventually be made available as far north as Brown Township.

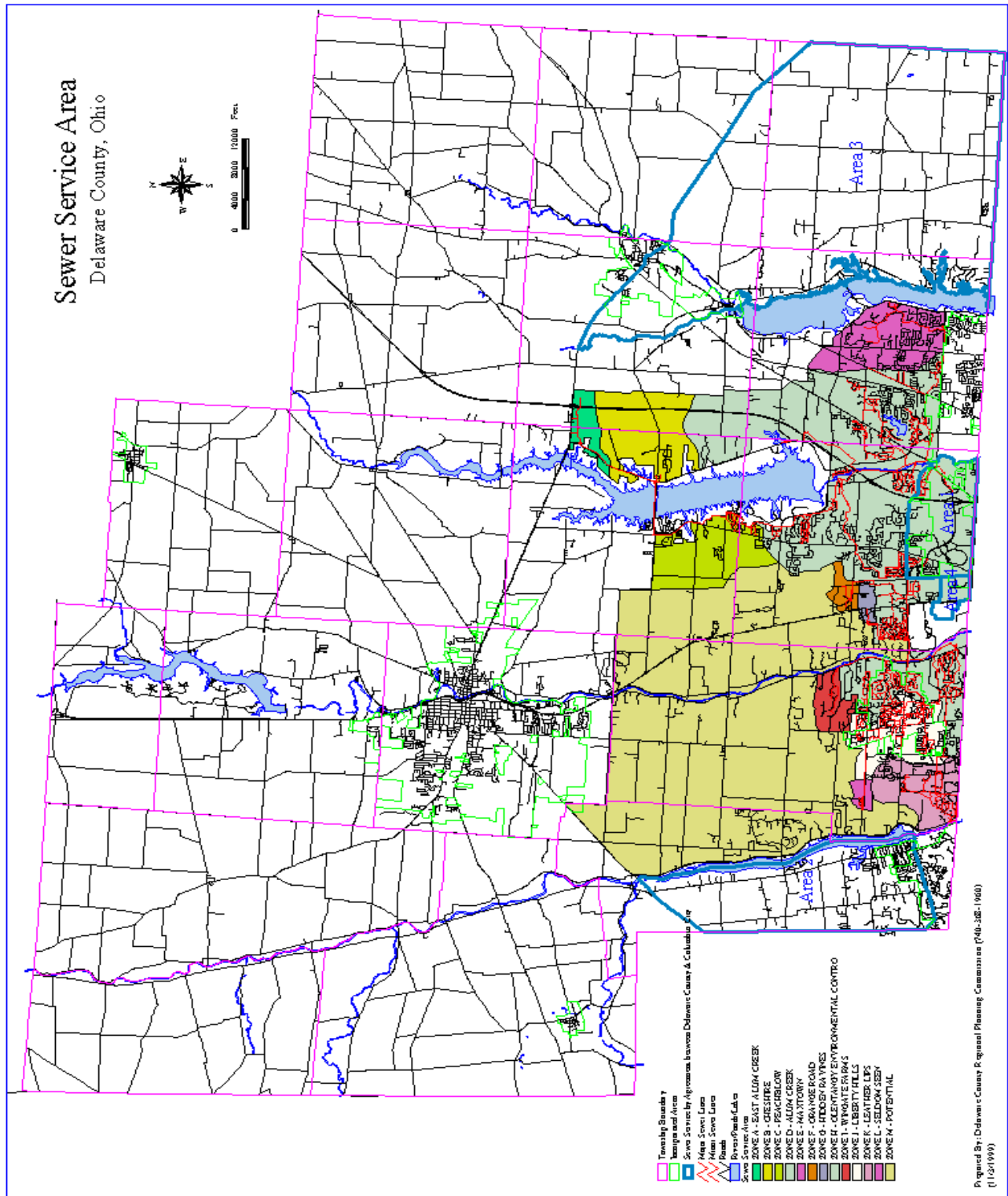
Delaware City –Sanitary Sewer

Delaware City's wastewater treatment plant is located southeast of downtown Delaware on the west side of the Olentangy River between US 23 and the river. According to the 1996 Delaware City Comprehensive Plan, the plant is designed for 5.5 mgd of wastewater with a maximum hydraulic capacity of the plant being 10 mgd. The 1996 Delaware City's Plan suggests that the city may be facing a capacity problem due to increased volumes from inflow and infiltration. However, recent discussions with city staff indicate that the City will have sufficient capacity to serve the projected growth within the planning areas of the 1996 Comprehensive Plan as well as future growth beyond that boundary. The City will soon be releasing a study regarding their future sewer plant capacities and future expansion options.

Map 10.2 1996 Delaware City Comprehensive Plan Growth Area



Map 10.3 Sanitary Sewer Service Area



Sewer Agreement – City of Columbus

Delaware County entered into an agreement with the City of Columbus to provide service to the Polaris development in 1991. In exchange, the City agreed to provide service to limited areas within the County currently not served, nor expected to be served by County Sanitary sewer. The area bounded on the west by Hoover Reservoir, on the east by the Licking County line, and the north by State Route 37 is in zone 3, with a density not to exceed 4 persons per acre regardless of whether the County or City provides service. Annexation is not a prerequisite for the City to provide service.

Since there is no new sewer capacity in the County system after currently zoned properties develop, Brown Township should not expect any centralized Delaware County sanitary sewer service in the foreseeable future.

Sewer Policy- OEPA

Centralized sewer systems historically meant placing sewage in a pipe, and sending it to a publicly owned sewage treatment plant. The plant discharged to a running stream or river with a dilution factor for any untreated sewage that might be accidentally released.

In 1996 the Ohio Environmental Protection Agency tightened its anti-degradation requirements for surface discharge from a wastewater treatment plant. This has prompted alternative sewage disposal systems such as treatment plants that use the clean water effluents to irrigate a golf course. Permits are issued by the OEPA.

With the OEPA now permitting alternative sewage disposal systems, those areas that do not have the traditional sewer systems available can promote cluster development in PRD zoning. In non-sewer service areas, cluster development could allow the transfer of development rights from working farmland to planned developments if the densities are kept low. These new technologies may also be utilized in areas along the City boundaries to offer suburban housing densities without annexing to the city. However, with the amount of poorly drained soil within Brown Township near Delaware City, systems that rely on land application of treated effluent may not be feasible.

Land application systems themselves are not a threat. However, using them for inappropriately high densities in areas without urban services (fire and police protection, public transportation, shopping,

entertainment, or cultural activities) can strain the existing services. The demand for services requires trips in cars, which many of the local roads cannot support. The cost of ultimately upgrading all the roads in the county for such leapfrog suburban development would likely exceed the revenues of such development. Furthermore, if densities of more than one unit per acre are allowed in clearly rural (non-urban service) areas, all farms become targets for “golf course” developments.

Recommendation for land application systems within Brown Township.

1. Brown Township should permit land application systems as accommodations to development only when the use and density conform to the Comprehensive Plan’s Land Use Map, and when it is satisfactorily demonstrated that there is adequate land area of suitable soils to accept the wastewater to be disposed.
2. Preferably land application systems and their sewage treatment plants should be deeded to the County Sanitary Engineer/County Commissioners to assure proper, permanent maintenance.

10.3 Electric

Consolidated Electric Company and American Electric Power provide electric service to Brown Township. The Electrical Service Provider Jurisdiction Map (10.4) shows the service area.

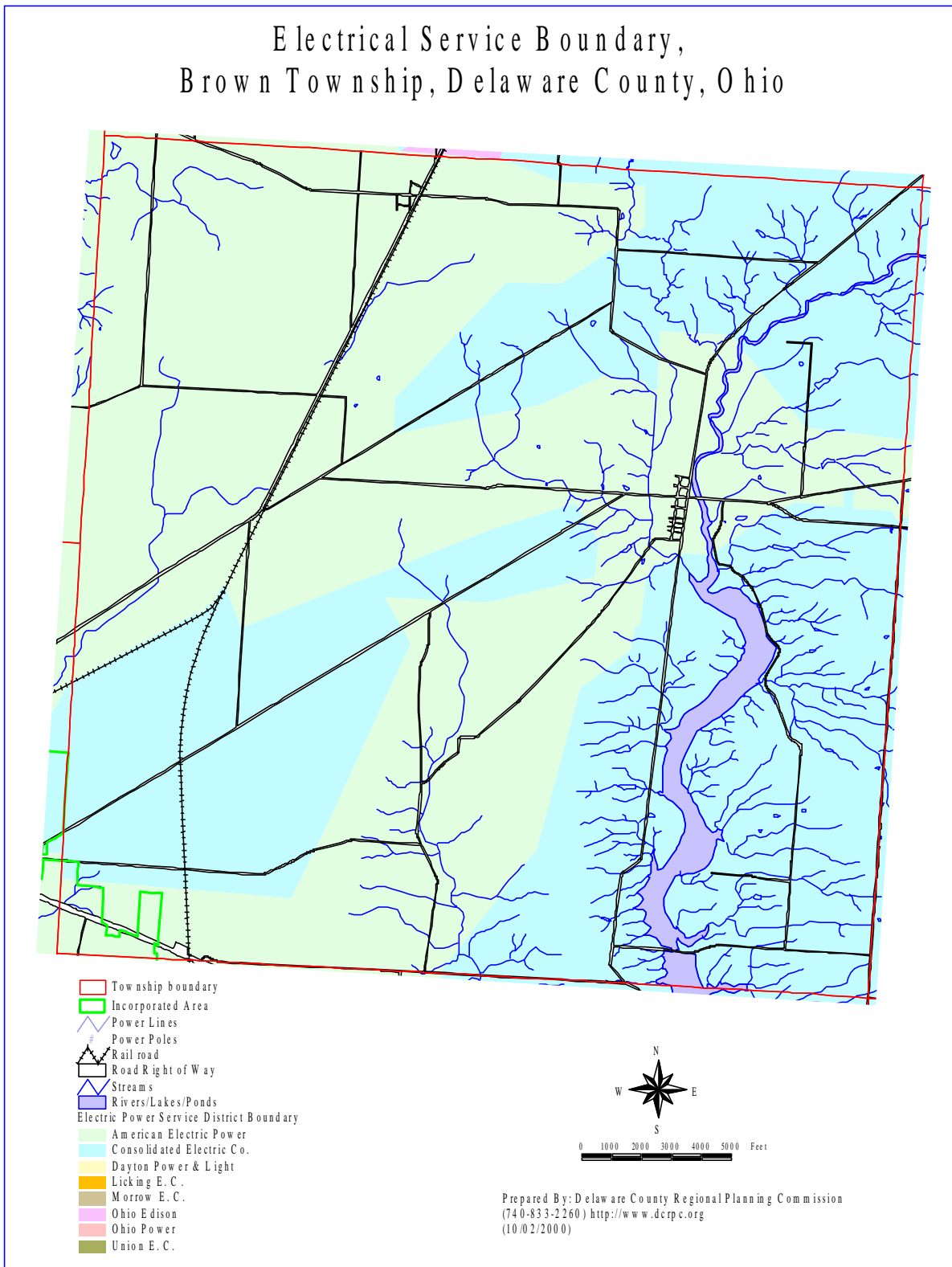
The nearest electric transmission line is just south of Brown Township. No structures are permitted within the rights of way and recorded easements for these transmission lines. The locations of these lines are shown on the Comprehensive Land Use Plan Map (Chapter 15).

There is presumed to be no limitation to growth of the Township because of shortage of electric power.

10.4 Gas

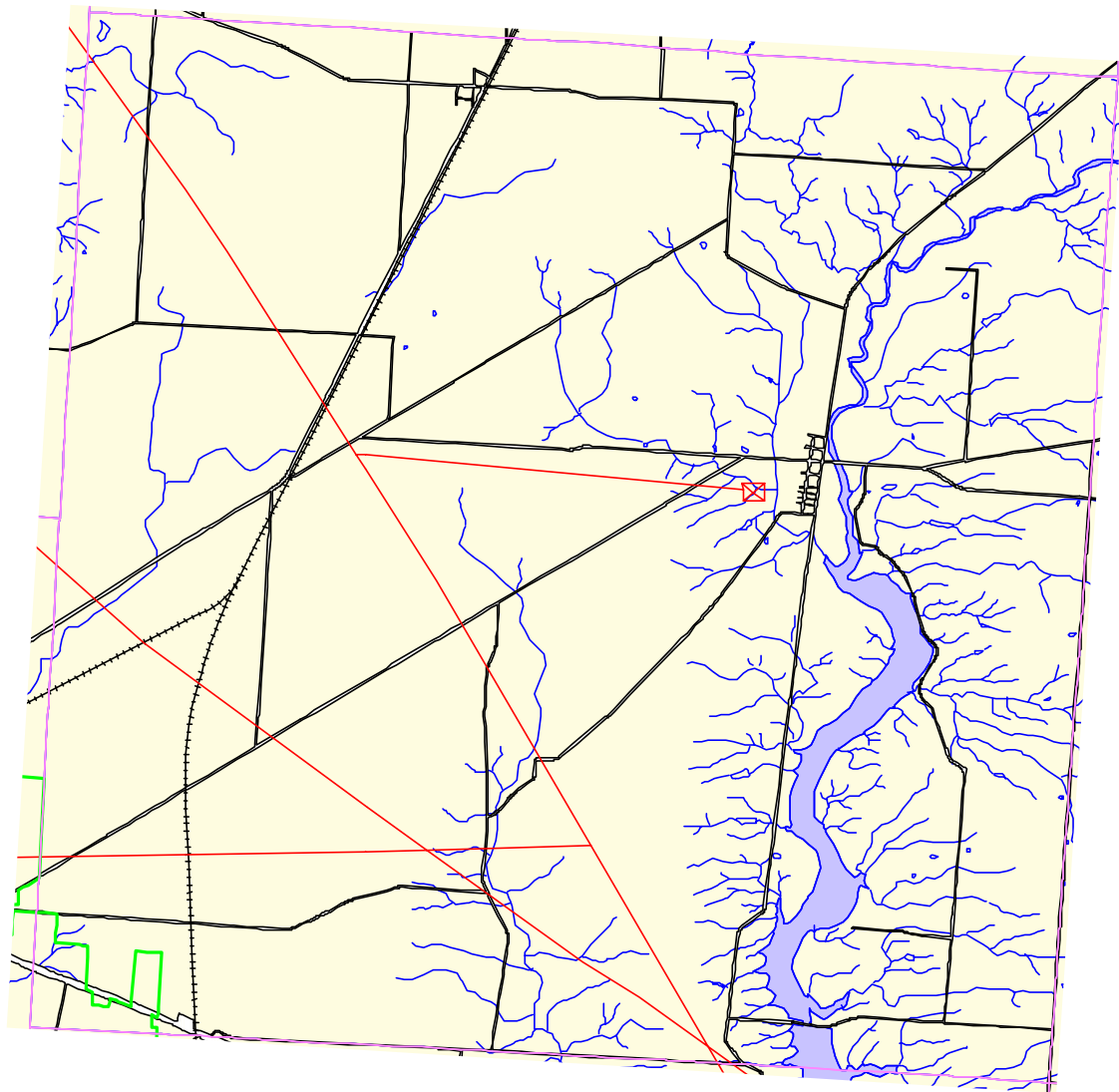
Columbia Gas and Ohio River Product provide Brown township with gas service. The service area is shown on the Gas Service Area Map (10.5).

Map 10.4 Electrical Service Boundary, Brown Township

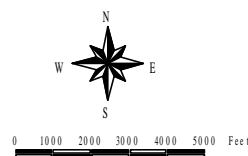


Map 10.5 Gas Service Area, Delaware County

Gas Service Area, Brown Township, Delaware County, Ohio



- Township boundary
- Incorporated Area
- Gas Lines
- Rail road
- Road Right of Way
- Streams
- Rivers/Lakes/Ponds



Prepared By: Delaware County Regional Planning Commission (740-833-2260)
<http://www.dcrpc.org>
(10/02/2000)

10.5 Telecommunications/cellular

Under current state and federal laws, telecommunications towers are permitted in any non-residentially zoned districts. Under Ohio law, townships can regulate telecommunications towers in residential districts if objections are filed by abutting property owners or Township Trustees.

10.6 Storm water management

Storm water management is reviewed by the Delaware County Engineer's Office for new subdivisions and road construction. The Delaware County Soil & Water Conservation District, which maintains ditches, also review storm water plans by agreement with the County Engineer's ditch maintenance program. As of December 31, 1999 there were 70 projects on county ditch maintenance, 46 of which were subdivisions.

Table 10.1 Drainage Structures on Maintenance in Delaware County

Open Ditch	38.26 miles
Tile drains	27.38 miles
Surface Drains	.62 miles
Retention/Detention Basins	44

Chapter 11

Community Facilities

11.1 Schools

Brown Township lies within the Buckeye Valley school district. The Buckeye Valley School District also includes most of Concord, Scioto, and Thompson, about half of Kingston and Troy, and all of Radnor, Marlboro and Oxford Townships.

A. Current Facilities

Buckeye Valley

The Buckeye Valley Local School District has a \$10 million operating budget including 26 voted mills and a 1% income tax. A \$14 million bond was also voted on by the community in 1995, which provided the following (source: Buckeye Valley web site - <http://www.buckeyevalley.k12.oh.us/>):

- a nine million dollar middle school for 750 students just southeast of the high school with efficient two-story design, featuring two computer labs, expanded media center, foreign language, two music studios, and a gymnasium with four locker rooms. This building opened for the 1997-98 school year.
- a new auditorium seating 800 in the high school building with a new auxiliary gymnasium, expanded library, a new art classroom with darkroom, two science laboratories, weight and exercise rooms. This addition opened in the fall of 1997.
- an addition of six new classrooms and an elevator at West Elementary School with a renovated library media center for the 1997-98 school year.
- an addition of eight new classrooms and an elevator at East Elementary School including a new library media center and student restrooms for the 1997-98 school year.
- converted the existing middle school at Radnor into a third elementary school with a new library, playground and an elevator.

Buckeye Valley High School is located at 901 Coover Road. **Buckeye Valley Middle School** is located at 683 Coover Road.

There are three elementary schools:

- East Elementary located at 522 E. High St., Ashley.

- North Elementary located at 4230 St. Route 203., Radnor.
- West Elementary located at 61 North 3rd., Ostrander.

The Buckeye Valley Local School District facility plan from 1989 is now being updated by Planning Advocates, Inc. Many of the recommendations of the 1989 facilities plan have been realized. With the growth over the last ten years, this update is necessary to ensure that the district continues to provide the best educational opportunities for it's students.

B. Enrollment Growth

Buckeye Valley

The following tables show the current enrollment numbers as well as the trend over the last ten years.

Table 11.3 shows the projections performed by Planning Advocates in 1996-97 for enrollment growth to 2006-07. Planning Advocates, Inc. is now updating the enrollment projections.

Table 11.1 2000-01 Buckeye Valley Local School District Enrollments

Grade	East Elementary	North Elementary	West Elementary	Middle School	High School	JVS	Total
P*	23						23
MH**		9					9
K***	64	44	49				157
1-5	332	226	251				809
6-8				516			516
9-12					658	81	739
Total	419	279	300	516	658	81	2253

(source: Buckeye Valley Local School District, 2000)

* P – Preschool

** MH – Multiple Handicap

*** K- Kindergarten

Table 11.2 Buckeye Valley Enrollment 1991-01

Grade	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
K* - 5	1053	1017	1023	1023	998	1009	993	973	969	966
6 – 8	474	515	535	578	552	538	553	504	522	516
9 – 12	593	621	648	702	752	785	799	788	744	739
K - 12	2120	2153	2206	2303	2302	2332	2345	2265	2235	2221

(source: Planning Advocates, 2001)

*K- Kindergarten

Enrollment over the last 10 years has increased slowly, dropped slightly, and stabilized in the 2200's in the last 3 years. Projections done by Planning Advocates in 2001 show that the enrollments will again begin to rise.

Table 11.3 Most Likely Enrollment Projections, Buckeye Valley Local School District

Grade	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
K* – 5	966	1009	1076	1167	1234	1427	1412	1473	1508	1551	1617
6 – 8	516	532	554	539	546	522	537	575	670	749	782
9 – 12	739	708	718	747	753	783	781	770	762	756	810
K - 12	2221	2249	2348	2453	2533	2732	2730	2818	2940	3056	3209

(source: Enrollment Projections by Planning Advocates, Inc. 2001)

* K- Kindergarten

The enrollment projections for the Buckeye Valley School District calculated in 2001 by Planning Advocates, Inc. show a most likely 44% enrollment increase by 2010-11, or 988 new students. This is a drastic change from the slow growth of the last 10 years.

The “most likely projection” reflects a growth of approximately 3.7 percent per year on average, higher than the annual population growth rate projections made by the Delaware County Regional Planning Commission (approx. 2% for Buckeye Valley School District). The future trend indicates an overall steady growth with small dips in certain grade groups at different times (see Table 11.3).

C. Funding for Schools

Buckeye Valley

The cost of educating a student in the Buckeye Valley School District was \$6,169 in 1999-2000. This is slightly above similar districts (\$6,137) but below the state average (\$7,057). However, Buckeye Valley's revenue sources per pupil were \$6,377 of which 54.4% were generated locally in the Buckeye Valley District compared to 43% in similar districts and 50.4% generated locally statewide. Other sources of revenue included 42.2% from the state and 3.4% from the federal government. There is a \$208 surplus per pupil.

Buckeye Valley is an average district in terms of revenue sources and real estate valuation. The median household income was \$34,565 in 1999-2000 compared to \$29,411 statewide.

The Buckeye Valley Local School District currently does not have a funding problem.

D. Effect of Land Use Planning on School Planning

When schools become overcrowded due to rapid growth, there may be call for growth controls, or limitations on residential building permits (moratoriums). A series of 1970's cases regarding growth rate limitations, the most famous of which is *Golden v. Ramapo* (409 US 1003, 93 S. Ct. 440 34 L. Ed. 2d 294 (1972)) suggested that communities could control growth to allow new infrastructure to be built at a reasonable, attainable rate. Where upheld, moratoriums have been temporary, based on a critical shortage of a basic community service. The community must work to provide that service, at which time the moratorium must be removed.

Ohio law does not provide for building moratoriums in townships (see Meck and Pearlman, Ohio Planning and Zoning Law, 2000 Edition, The West Group, Section 11.27-11.28). Cities and villages in Ohio have home rule authority which "provides the flexibility to experiment with different types of planning programs to respond to the issues of rapid growth" (Meck and Pearlman, *ibid.*, p. 529)

Since townships do not have the authority in Ohio to control their growth by moratoriums, and they do not have the authority to impose impact fees, their only recourse to overly rapid growth is to control the timing of zoning.

Brown Township may wish to use the schools as one additional indicator of critical facilities that need to be monitored in making zoning decisions.

11.2 Historic Sites

Brown Township was established between 1816 and 1822. The Village of Kilbourne (originally called "Eden") was settled around a salt lick and was referred to as the "salt section". The production of salt was the main enterprise of the early settlers, with the federal government creating a salt reservation. Small numbers of new residents moved into the township until it was discovered that the salt was limited. The Government sold off the salt reservation lands in 100 acre parcels. The sale of this land brought many new settlers to the township. The Village of Leonardsburg (originally "Eden Station") was settled along a railroad and was named after A. Leonard, the first merchant and Postmaster.

The Village of Kilbourne



Facing east on SR 521 in Kilbourne

There are no sites in Brown Township listed on the National Register of Historic Places. There are however historically significant structures. Some of these include the following:

The Delaware County Home



Located on the north side of County Home Road between Cackler Road and SR 521. This large building that was once called the Delaware County Infirmary was used to care for many of the County's elderly citizens. The building was erected in 1854 and an addition was built in 1856 as an asylum for the insane. The original building was small at 40' by 140' and another larger building was constructed in 1874-75. Today the building lies vacant with another building on the property serving as a dog shelter. There is also an unmarked cemetery located in the field behind the County Home.

The Brown Presbyterian Church



The Brown Presbyterian Church was organized in 1831 and is located on Main Street in the Village of Kilbourne across from the Township Hall. Improvements were made to the building in 1943 through a gift from an anonymous donor. The building ended its use as a church in 1966 and is now home to the “Knights of Pythias”.

Brown Township Hall



The Brown Township Hall was erected in 1874 and is believed to be the site of the first Grange Hall built in Ohio. It is located on Main St. in the Village of Kilbourne across the street from the old Presbyterian Church.

Kilbourne Post Office



The Kilbourne Post Office was opened in 1837 when the federal government commissioned C. M. Thrall postmaster. Before that time, residents received their mail at Berkshire and Delaware. The Post Office is located on Main Street in Kilbourne just north of the Township Hall.

The Critical Resources Map in Chapter 6 indicates possible archeological sites. These sites are mapped by the State of Ohio OCAP data available from the Ohio Department of Natural Resources. The DCRPC has no information regarding any materials found at any of these sites.

11.3 Libraries

Currently there are no public libraries in Brown Township. However, residents can obtain a library card at any of the following libraries.

The Delaware County District Library has its downtown library at 84 East Winter Street, Delaware, and branch libraries in the Village of Powell at 460 S. Liberty Street, and Ostrander at 75 North 4th Street.

The District Library employs 30 people or 24 full time equivalents. Its annual budget is approximately \$2 million, which is used for staff salaries and materials, maintenance, and operating expenses. 94 % of the budget comes from state income tax and the remaining 6 % is generated by overdue fines.

There are 75,000 residents in the Delaware District Library service area and 42,000 registered borrowers (borrowers can be outside of the district). School districts that are in the service area include Olentangy, Delaware City, Buckeye Valley, Elgin Local (in Delaware County), Dublin (in Delaware County), and North Union (within Delaware County). Currently, the District has 145,000 volumes. The “old” rule of thumb is that there should be 3 volumes per capita. This shortfall of 5,000 is not considered a problem because libraries in general have evolved to offer other resources for patrons.

The District’s long range plan is to monitor the growth area and provide service to the expanding population, expand facilities if necessary, and promote home based programs.

The Sunbury Community Library is located at 44 Burrer Drive in Sunbury. It is funded by state income tax set aside for libraries. Its primary mission is to serve the Big Walnut School District, but any resident of the State of Ohio may obtain a library card and use the library. Their building was constructed in 1994, and was constructed to be expandable. The library currently has books in circulation, reference materials, audio and video cassettes, and 8-10 public access computers with on-line Internet services. They employ 18 full and part time staff. Hours of operation are Monday –Thursday, 9:00 a.m. to 8:00 p.m., and 9:00 to 5:00 on Fridays and Saturdays.

Ohio Wesleyan University, Beeghley Library located at 43 University Ave., Delaware extends borrowing privileges to all residents of Delaware County.

Ashley Wornstaff Library is located at 302 E. High St., Ashley.

As the population of Brown Township and Delaware County increases, there may be a need for expanded library service.

11.4 Hospitals

There are no hospitals located within Brown Township. Grady Memorial Hospital is located on Central Avenue in the City of Delaware. Grady Hospital provides 125 beds for general surgery, and orthopedics, urology and ophthalmology, as well as Emergency care. Cardiac surgery and neuro surgery are referred to other hospitals. Grady recently expanded its emergency room and constructed a helicopter pad for incoming life flights.

Grady competes with northern Franklin County Hospitals such as Riverside Methodist Hospital, Olentangy River Road in Columbus, and St. Ann's in Westerville.

Two outpatient facilities serve southern Delaware County. Grady at Wedgewood and Mt. Carmel Out-Patient, both on Sawmill Parkway in Liberty Township. Both centers provide medical services that do not require an overnight stay.

11.5 Fire Protection

The Tri-Township Fire District provides fire protection to Brown, Delaware and Troy townships and is located at 495 Sunbury Road in Delaware City. The Fire Department consists of 4 full time personnel, including a Fire Chief and three Fire Captains as well as 25 volunteers. The Fire Chief works the typical forty hour week, Monday through Friday and the Fire Captains work a 24 hour on, 48 hour off shift. According to Chief Troy Morris of the Tri-Township Fire Department, the average response time to Brown Township is 6 minutes.

Staff is dispatched on all EMS runs in Brown Township as a first responder with a transporting medic unit. In addition, the department has mutual aid contracts with all Delaware County Fire Departments, including automatic response on all structure fire assignments. All firefighters are CPR and AED trained.

The Fire Department has the following equipment for emergency responses:

- 1997 Engine/Rescue – Initial response unit on any rescue situation or fire response. (purchased from Sutphen Corporation)
 - Seating for five firefighters
 - 1250 gallon per minute pumps
 - Carries 1000 gallons of water
 - Minimum of 1000 feet of 4 inch supply line and 500 feet of 2 ½ inch fire hose.
 - Minimum of 200 feet pre-connected attack lines.
- 1991 Engine – “Second out” engine. Has seating for six firefighters (purchased from the KME Company)
 - Seating for six firefighters
 - 1250 gallon per minute pumps
 - Carries 1000 gallons of water
 - Minimum of 1000 feet of 4 inch supply line and 500 feet of 2 ½ inch fire hose.
 - Minimum of 200 feet pre-connected attack lines.
- 1995 International Tanker to transport water from source to the scene (Purchased from Monroe equipment)
- 1999 Ford F-350 four wheel drive grass-fire unit with a 250 gallon tank. First responder and responds to all medical assist calls.
- 1987 Jeep Wrangler with a 100 gallon tank with a pump. This unit pulls a Suzuki Quadrunner to the scene. The Quadrunner carries a fifty gallon tank.

The Tri-Township Fire Department is planning on purchasing another Rescue Engine with a 500 gallon tank and possibly another grass truck.

The Insurance Services Office (ISO) grading in Brown Township is 6 for areas within 1000-ft of a fire hydrant (village areas) and Class 9 for areas outside of the 1000-ft radius (rural areas). The rating is based on how well the department receives and handles fire alarms; fire department equipment, staff, and training; and water supply. ISO gradings determine fire insurance premiums. Higher gradings (lower the number) may result in lower insurance premiums.

11.6 Police

Brown Township is policed by the Delaware County Sheriff’s Office, (DCSO) which is headquartered in Delaware on S.R. 42. In 2000 the department has 4 Sergeants, 1 Colonel, and 33 Deputies and 3 K9 units. Each patrol covers 459 square miles 24 hrs a day 365 days a year and each patrol is divided into three

shifts. According to the Sheriff, the DCSO had enough vehicles in 1998 to come close to the International Association of Chiefs of Police standards. He believes that the number of deputies patrolling per shift has fallen short of IACP standards. It is unclear whether this accounting includes jurisdictions with police departments.

Table 11.4 Sheriffs Complaints

Sheriffs Complaints for 2000 by Geographic Code			
Orange Township	3525	Marlboro Township	58
Liberty Township	2618	Genoa Township	51
Berkshire Township	884	Thompson Township	45
Concord Township	759	Sunbury	745
Berlin Township	823	Ashley	283
Harlem Township	719	Delaware	176
Delaware Township	518	Alum Creek State Park	97
Troy Township	429	Shawnee Hills	87
Scioto Township	383	Galena	53
Trenton Township	315	Other (out of County)	44
Brown Township	287	Ostrander	39
Radnor Township	208	Powell	20
Kindston Township	202	Columbus	19
Porter Township	185	Delaware State Park	18
Oxford Township	141	Dublin	7
		Westerville	5

Source: Delaware County Sheriff Office web page <http://www.delawarecountysheriff.com/patrol.htm>

Brown Township represented 2.1% of the Sheriff's complaints in 2000, but represented only 1.3% of the county population in 1999 (2.1% estimated for 2000). It should be noted, however, that Genoa Township, City of Delaware, Dublin, Shawnee Hills, Westerville, the City of Columbus and the Village of Powell provides their own police protection.

11.7 Cemeteries

Green Mound Cemetery – North side of SR 521 just west of the Village of Kilbourne.

Kilbourne Cemetery – East side of North Old State Road just north of the Village of Kilbourne.

County Home Cemetery – North side of County Home Road, behind the County Home

11.8 Other Township Facilities

A. Brown Township Hall

The Brown Township Hall is located at 3832 Main Street in the Village of Kilbourne. (site of first Grange hall in Ohio)

B. Brown Township Maintenance Building

The maintenance building is located in the Village of Kilbourne on North Old State Road

Chapter 12

Open Space and Recreation



Township Park – Kilbourne



Alum Creek State Park

12.1 Introduction

The Ohio Revised Code acknowledges the importance of open space and recreation in both the zoning and subdivision enabling legislation. RC 519.02 states that the trustees may regulate by [zoning] resolution “sizes of yards, courts, and other open spaces...the uses of land for...recreation.” RC 711 states that “a county or regional planning commission shall adopt general rules [subdivision regulations]... to secure and provide for ...adequate and convenient open spaces for...recreation, light, air, and for the avoidance of congestion of population.”

The importance of open space and recreation has been recognized for hundreds of years. Planners acknowledged the importance of open space in America since the 1850's, when the city beautiful movement resulted in parks as retreats from the congestion and overcrowding of city life. New York's Central Park (1856, Frederick Law Olmstead, Sr.) is the best known American example. Every desirable community in America has a significant park and recreation system as one of its building blocks.

The Subdivision and Site Design Handbook (David Listokin and Carole Walker, 1989, Rutgers, State University of New Jersey, Center for Urban Policy Research) is considered a planner's bible for many accepted standards in subdivision review. In their chapter on open space and recreation, they relate the following critical functions of open space:

- Preserves ecologically important natural environments
- Provides attractive views and visual relief from developed areas
- Provides sunlight and air
- Buffers other land uses

- Separates areas and controls densities
- Functions as a drainage detention area
- Serves as a wildlife preserve
- Provides opportunities for recreational activities
- Increase project amenity
- Helps create quality developments with lasting value

12.2 Open Space Defined

Listokin and Walker define open space as:

“Essentially unimproved land or water, or land that is relatively free of buildings or other physical structures, except for outdoor recreational facilities. In practice, this means that open space does not have streets, drives, parking lots, or pipeline or power easements on it, nor do walkways, schools, clubhouses and indoor recreational facilities count as open space. Private spaces such as rear yards or patios not available for general use are not included in the definition either.”

“Open space is usually classified as either developed or undeveloped. Developed open space is designed for recreational uses, both active and passive, whereas undeveloped open space preserves a site’s natural amenities.”

12.3 Recreation in Brown Township

Most of the recreation opportunities within Brown Township fall into the passive category. There is one developed “active” recreation site with ball-fields and a playground area on the north side of SR 521 in Kilbourne behind the old schoolhouse. There is a long history of use of private lands for hunting, fishing, bird watching, cross- country skiing and hiking. Some residents ride bikes, horses or walk on a daily basis on the roads. There is seasonal use of both the roads and off-road trails by dirt bikes, ATV’s and snowmobiles.

Deer hunting, and bass fishing in the many private farm ponds are probably the most popular outdoor sports. The Alum Creek Lake is fished for bass, bluegill, crappie and walleye, while deer and squirrels are hunted. Further details regarding Alum Creek Lake will be discussed later.

12.4 Land Area Required

The National Recreation and Park Association (NRPA) has developed a set of standards for local developed open space (See Appendix F). Although these standards have been promoted as goals, they are not universally accepted. Recreational needs vary from community to community, and desires for recreation vary also. Listokin notes that:

“Ideally the national standards should stand the test in communities of all sizes. However, the reality often makes it difficult or inadvisable to apply national standards without question in specific locales. The uniqueness of every community, due to differing geographical, cultural, climatic, and socioeconomic characteristics, makes it imperative that every community develop its own standards for recreation, parks, and open space.”

12.5 Location of Parcels

Listokin notes what has been the subject of much debate in Delaware County, namely that:

“Open space parcels should be easily accessible by development residents. In smaller developments, one large, centrally located parcel may suffice; but a large development may require several parcels, equitably distributed. Linking open space parcels is a good strategy, because it enlarges the area available for recreation. Parcels containing noise generators, such as basketball courts or playgrounds, should be sited to minimize disturbance to residents.”

12.6 Undeveloped Open Space

Listokin suggests that “No general standard can specify the amount of open space that should remain undeveloped: a determination will depend on the particular development site.”

Preservation Parks has 31 acres on the east side of Hogback Road south of SR 521 that is completely wooded. In addition, there is the Alum Creek State Park, which is a regional park that serves all of Delaware County. The portion of the park within Brown Township may satisfy much of the requirement for passive open space.

Alum Creek State Park

Alum Creek State Park comprises 8,874 acres principally within Orange, Berlin, and Brown townships. Smaller portions of the park are located in Kingston and Genoa Townships. There is access to the park in Brown Township from Hogback Road, Howard Road, SR 521 and North Old State Road.



Alum Creek Lake north of Howard Road

The lake was created by impoundment of Alum Creek behind an earthen levy and concrete flood control dam built by the U.S. Army Corps of Engineers from 1970-73. The dam is 93 feet high and 10,500 feet long between the levies. The minimum outflow of the dam is 60 gallons per second, with a maximum outflow of 12,216 gallons per second. The lake ranges from 65-78 feet deep.

Today, Alum Creek Lake serves five purposes:

- Flood control
- Water supply (40 million gallons per day)
- Fish and wildlife enhancement
- Water Quality
- Recreation

Recreational opportunities at Alum Creek are shown on the US Army Corps of Engineers Map, and may be itemized as follows:

Land (entire park)

- 5,213 acres
- Hiking Trails – 9.5 miles
- Bridal Trails- 50 miles
- Mountain Bike / Horse Trails-7 miles

Campground

- 297 sites



Alum Creek State Park

- 5 rent-a- camp sites 5 rent-an-RV sites

Lake

- 3,387 acres
- Boat Launching Ramps-5
- Unlimited horsepower for boats (speed limits enforced in designated areas)
- Swimming Beach- 3000 feet (largest inland beach in Ohio's state park system)
- Easement-239 acres
- Drainage Basin- 123.4 square miles

Park personnel estimate that 4,000,000 annual visitors use the park. While the park serves a regional function, it is also serving as a de facto township park.

12.7 Future Recreational Needs

As Brown Township grows it may wish to use the NRPA model, "which surveys the service area population to determine demand for different activities. Demand is then converted to facilities needs and then to land requirements." (Listokin and Walker, *ibid.* page 222).

To assist in this effort, this plan will attempt to make some suggestions based on the knowledge already gathered.

Undeveloped Open Space-Regional and Township

Suggestion: The large amounts of undeveloped Alum Creek State Park should largely fulfill the need for undeveloped (passive) open space and a portion of developed (active) open space on a township-wide basis. They do not replace the need for neighborhood parks and township-wide parks with athletic fields for organized sports.

Undeveloped Open Space- Neighborhood

Suggestion: The open space requirement for new Planned Residential Developments should be used to provide centrally located undeveloped and developed (useable) open space within residential neighborhoods of suburban densities (generally greater than 1 unit/acre). These would be either mini parks of one acre or less within a ¼ mile radius of all portions of such neighborhoods, or 15 acre joint neighborhood parks that provide athletic fields for neighborhoods within ½ mile radius. The open space requirement in the PRD zones may be inadequate unless undevelopable land (slopes greater than 20%,

power line easements and storm water detention basins) is either excluded, or reduced in their contribution to the open space requirement.

Developed Open Space- Township wide

Suggestion: The township should provide active recreational areas for its ultimate population. Use the NRPA Standards as a guide. [See NRPA Recommended Standards for Local Developed Open Space, Appendix F]

Recommendations at Build-Out

- Overall active recreational area required - NRPA recommends 6.25-10.5 acres /1000 population. Use the lower ratio because of the existence of Alum Creek State Park.
- Establish mini parks of one acre or less within neighborhoods, serving the population within ¼ mile radius (these should be developer dedications as part of the PRD zoning).
 1. Establish neighborhood parks of 15 acres, with field games, play ground apparatus, serving the population within ¼ to ½ mile radius.
 2. Establish a community park of 25-50 acres (when built out) with an athletic complex, large swimming pool, and recreational fields.

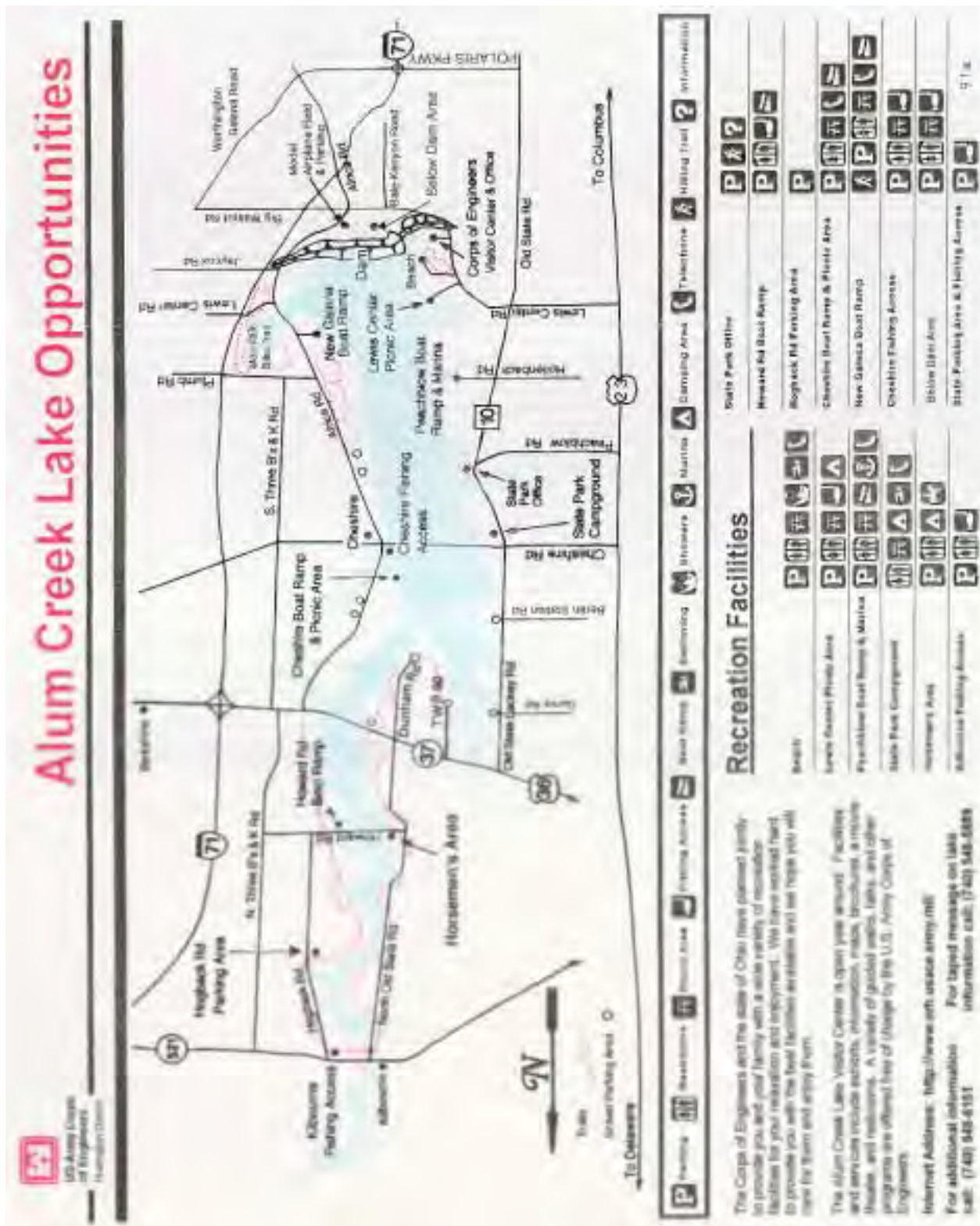
Within these parks consider the need for the following facilities (some of which can be provided by the school facilities):

- tennis courts
- basketball courts
- volleyball courts
- baseball fields (this may be reduced according to the popularity of baseball versus soccer)
- softball fields
- football fields
- field hockey field
- soccer fields (this number may rise according to the popularity of soccer versus baseball)
- ¼ mile running track
- Swimming Pool (normally should be large enough to accommodate 1000 people; with Alum Creek beach, make large enough to accommodate 200 people).

12.8 Green ways

An inexpensive way to provide undeveloped open space is to assure the linkage of neighborhoods by green ways, or corridors of natural or man made landscaped paths, and trails. These can be easily placed along drainage ways, creeks, sewer easements, rail rights-of-way and portions of the land that cannot be otherwise developed. These paths can maintain undisturbed wildlife habitat, or create new habitat through plantings and creative use of stormwater retention and detention facilities. These areas of developments are often afterthoughts in the design and planning process. They should be viewed as opportunities to improve the value of the development and link developments. The Mid Ohio Regional Planning Commission (MORPC) has developed a set of suggested standards for green ways, which the Park and Recreation Committee may wish to consider. (Franklin County Greenways Plan, 1995 - available at www.morpc.org/greenways/).

Map 12.1 Alum Creek Lake Opportunities



Chapter 13

Future Development Patterns

13.1 Preserving Rural Character- The Community's Choice

The number one goal of the community is to preserve its rural character. This rural character is expressed as an overall low density, and the preservation of natural resources including ravines and trees as well as fence-lines, wildlife corridors and traditional and agricultural buildings.

Clearly, part of what makes the township desirable is the vision there will always be some permanent, interconnected open space and natural lands throughout. When agriculture changes to other land uses, this rural character will be lost unless conservation areas are preserved by future development patterns.

In 2000, Brown Township is still a rural community with 85% of its acreage in agriculture and undeveloped land. However, agricultural lands are converting to large-lot residential uses, which account for 7% of all acreage.

Brown's vision to remain a low-density residential community seems understandable and defensible for the scope of this comprehensive plan (2000-2010) because no areas are serviced by public centralized sanitary sewer. However, Delaware City has plans to grow into Brown Township over the next 20 years.

13.2 Development pattern options to consider

1. Rural Large Lot Development

Most residential development has taken place along township roads via lot splits (minor no plat subdivisions) on lots larger than one acre to accommodate an on-site sewage disposal system. This large lot development, as long as it is surrounded by open space, has been accepted as retaining rural character, but if all rural lands were developed for one-acre house lots, there would be no interconnecting open space, and the rural character would be destroyed. Development of large lots everywhere on township roads would actually lead to "rural sprawl". Such development also contributes to "induced" traffic, since all household needs require an automobile trip in exclusively residential areas.

For Brown Township, large lot splits along township roads will be a viable alternative so long as state law permits such “no plat” subdivisions, but they do not preserve connected open space.

2. Conventional Subdivisions

As road frontage is used up by “no plat” lot splits, subdivisions with new streets will be platted. Brown Township has no conventional subdivisions to date. Conventional subdivisions create nothing but lots and streets. There are no nice places to walk, no central green or woods, no riverbank or lakeshore because all the land has been parceled out to all landowners. There are no playing fields for children, no common area to throw a frisbee, to meet your neighbors, to walk the dog. Conventional subdivisions do not create permanent, interconnected open space. They do not preserve conservation areas, so they do not retain rural character when the township is all built out.

3. Cluster Subdivisions

For thirty years, cluster subdivisions, or “Planned Residential Developments” have been touted as an improved alternative to the conventional subdivision. In PRDs, greater design flexibility is obtained by reducing lot size, and width.

The absence of comprehensive standards for quantity, quality and configuration of open space has permitted many uninspired designs. The notable exception to the general failure of PRD’s is the “golf course” development. However, the success of golf course developments only underscores the desire for people to live on or near permanent open space. Furthermore, golf course developments typically do not provide public open space. The open space is not available to non-golfers and young children.

To date, no cluster subdivisions have been approved in Brown Township under the Planned Residential District. The PRD requires a minimum lot size as approved per the development plan.



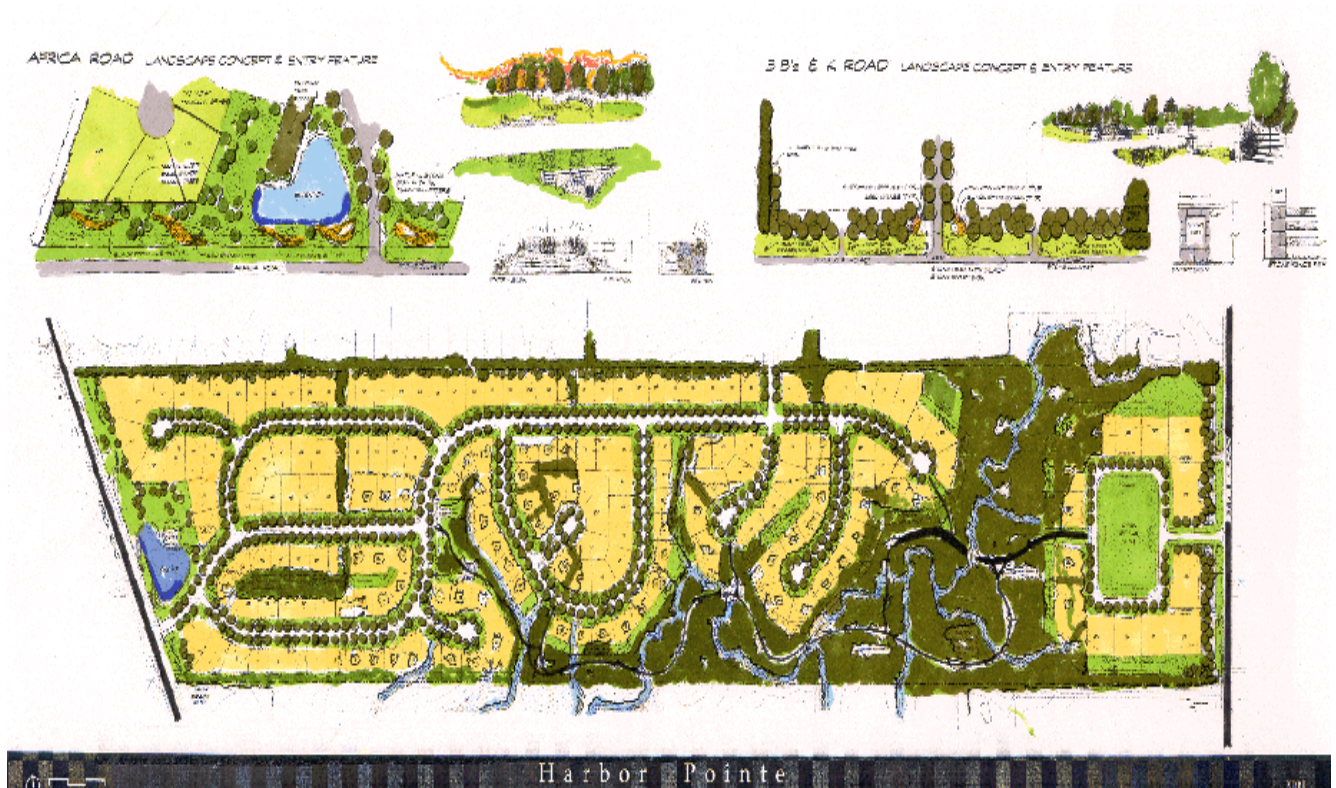
Typical Delaware County Planned Residential Development

The PRD has resulted in developments that did not fulfill community expectations for:

- a.) Open Space- required open space is only fifteen hundredths (0.15) of an acre per dwelling unit. It is not specified how much unusable or environmentally sensitive area (wetlands, steep slopes, floodplains, storm water detention basins and utility easements) count towards the 0.15 acres per unit of open space. As a result, cluster PRD subdivisions with small (7,200-10,000 square feet) lots have been created without any useable open space
- b.) Density-Any property owner in the township may request a PRD at densities of up to 2 units per acre. Densities greater than one unit per acre may not conform to the comprehensive plan.
- c.) Community focus- large (300 units or more) PRDs need a local pedestrian oriented design, with a possible local commercial and service core, active recreation area, and sidewalks/bikepaths to avoid induced traffic. Many Delaware County villages are actually smaller than 300 homes (Shawnee Hills is currently 208 homes) and they provide such local services and pedestrian scale.
- d.) Architectural Design Criteria- in order to make higher density cluster subdivisions work, considerable thought needs to be given to the architecture, materials, facades, detailing, colors and landscape features that will bind the neighborhood into a cohesive unit. Such criteria are generally required. Seldom does a land developer, who intends to sell the subdivision to a builder or builders, bother to provide significant criteria. The result is often a jarring hodge-podge of different builder's standard production houses with no continuity of material or architectural syntax. Without specific standard criteria, the zoning commissions must negotiate these details on

an inconsistent basis. Cluster housing demands greater advance planning and significant landscape architecture and architectural design elements.

Harbor Pointe is a Berlin Township Planned Residential Development (cluster subdivision) designed to new open space and environmental protection standards. With an overall density of 1.25 units per acre, and 22% open space. Harbor Pointe saves sensitive areas, preserves useable open space, and connects neighborhoods with trails.



4. Conservation Subdivisions

Conservation Subdivisions are a form of cluster subdivision where natural features and environmentally sensitive areas (conservation areas) are excluded from development and preserved, with homes clustered in the remaining areas.

Conservation subdivisions are typically located in areas without sanitary sewer service, at densities of less than one unit per acre. If the conservation subdivision concept is proposed to be used for higher densities with sewer service, the amount of open space may need to be adjusted to less than 50%, or lot sizes may be severely reduced.

Conservation areas are divided into two types:

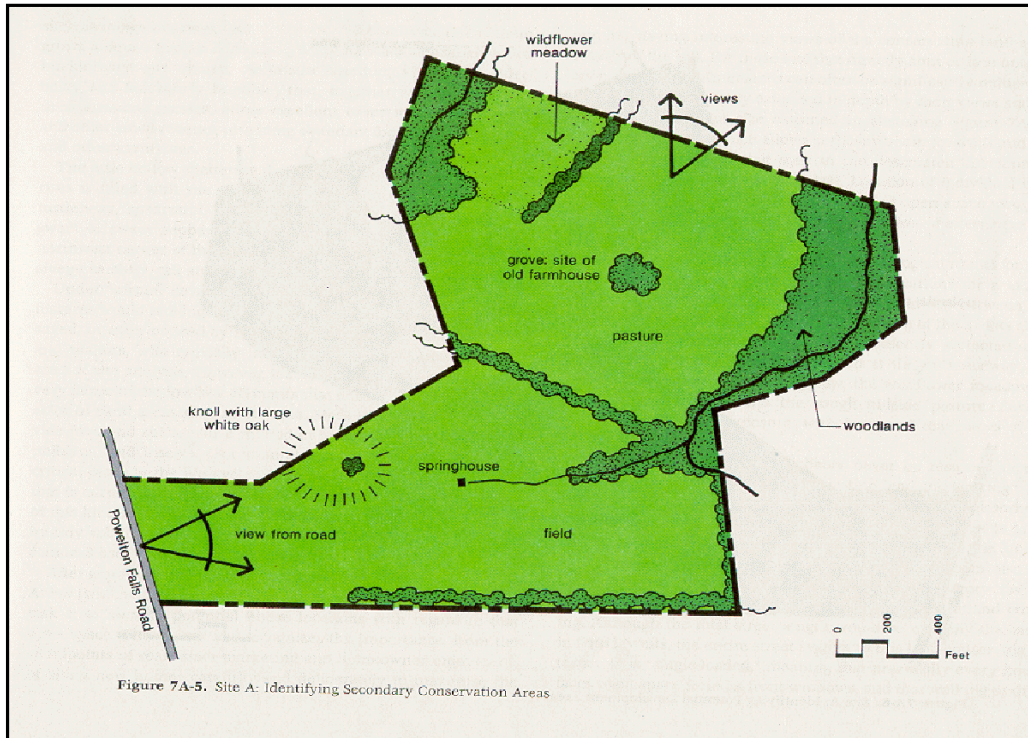
- Primary conservation areas are highly sensitive resources that are normally unusable, such as wetlands, steep slopes, and floodplains.
- Secondary conservation areas are natural resources of lesser value such as woodlands, prime farmland, significant wildlife habitats, historic archaeological or cultural features, and views into or out from the site.

The term Conservation Subdivision, as coined by author Randall Arendt (Conservation Design for Subdivisions, 1996, Island Press) requires the following elements:

- 50% or more of the buildable land area is designated as undivided permanent open space.
- The design is density-neutral. The overall number of dwellings allowed is the same as would be permitted in a conventional subdivision layout.
- Primary Conservation Areas [PCAs] are protected as open space and deducted from the total parcel acreage, to determine the number of units allowed by zoning on the remaining parts of the site.
- Secondary Conservation Areas [SCAs] are preserved to the greatest extent possible.
- Reduced size house lots are grouped around the open space.
- Streets are interconnected to avoid dead ends and cul de sacs wherever possible.
- Open space is interconnected and accessible by trails or walkways.

For Brown Township the Conservation Subdivision offers tremendous potential for retaining rural character and maintaining an overall low density.

The following graphics are presented with permission of Randall Arendt, from his book *Conservation Design for Subdivisions* (1996, Island Press,).



(above) Traditional subdivision of large lots, leaving no common open space

(below) Identifying Secondary Conservation Areas





Same yield, but with conservation subdivision, above and below



5. New Urbanism - Traditional Neighborhood Development (TND)

The New Urbanists (Andres Duany, Elizabeth Plater-Zybeck, Peter Calthorpe and others) are a school of architects and planners (The New Urbanism, Toward an Architecture of Community, Peter Katz, 1994, McGraw Hill). The hallmarks of TNDs are formal design, a dense core, grid streets, mixed uses, and strict guidelines for architecture, materials, and common open space. TNDs emulate successful older neighborhoods such as German Village in Columbus and the north end of Delaware City from William St. on to south Pennsylvania Ave on the north and Sandusky St. on the east to Euclid St. on the west . TNDs typically require public sanitary sewer.

The following TND graphics are reproduced from Rosemary Beach sales literature. Rosemary Beach is a TND located on the Gulf of Mexico in the Florida Keys, designed by Andres Duany and Elizabeth Plater-Zyberk.





Proposed civic buildings and shops, downtown Rosemary Beach



Beach house fronting a public green, Rosemary Beach

For Brown Township, the TND will be difficult to develop because of the lack of sanitary sewer service. Furthermore, a TND with a dense core and mixed uses may not comport with the township's vision of retaining an overall low density and retaining rural character. A TND in Brown Township might only be appropriate in a corridor location as a new node, perhaps as part of a large planned development with mixed uses, where a higher density central core could be surrounded by a lower density residential outer edge. Another possibility may be for the Village of Kilbourne. Non-conforming platted lots within Kilbourne may be entitled to a building permit if sewer becomes available. Architectural design standards should be in place in order to ensure the Village will have attractive high density development along its grid street pattern, and that growth surrounding the Village will match that character.

6. Farmland Preservation

The Delaware County Commissioners appointed a Farmland Preservation Task Force in 1998. The Task Force issued a Farmland Preservation Plan in June 2000 with 12 recommendations for action.

Recommendation number 4 is to "Support and encourage any township that seeks to protect its agricultural industry through zoning codes."

With 85% of Brown Township land still in agriculture/undeveloped land, and a goal to retain rural character, agricultural preservation strategies in zoning should be considered.

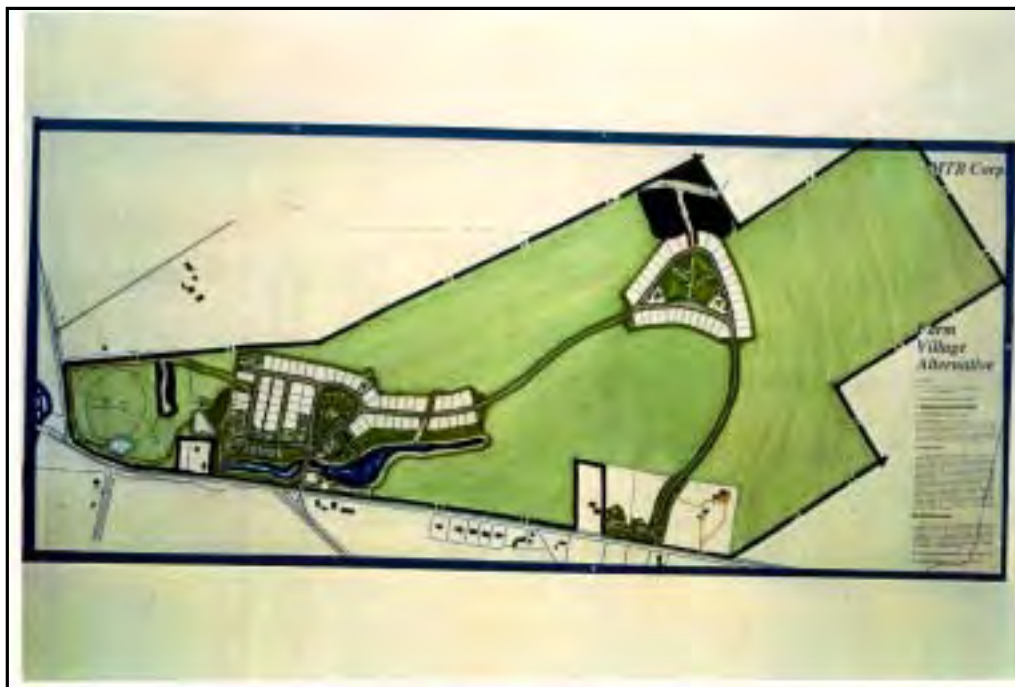
- a.) The township should consider delineating areas it wishes to see remain agricultural. Map 6.5 is a good indicator of prime agricultural soils. Using the L.E.S.A. system of the U.S.D.A., Brown Township could further refine the most desirable farmland.
- b.) The township should determine what densities can reasonably be served with roads, sewer, water, fire, schools, etc, and plan for only those densities. When farm land is assembled by developers in these identified farming areas, rezoning to suburban densities (one unit per acre or greater) should be discouraged as not being in compliance with the comprehensive plan and the farmland preservation plan.
- c.) In the Agricultural Zone, five-acre lots could be changed to a conditional use, permitted if it can be shown there is no reasonably viable use as a Farm Village. If five-acre lots were proposed as a conditional use, the maximum area of use for the house lot should be limited to one acre, with an easement to preserve agriculture on the remainder.
- d.) The Farm Village is a conservation subdivision where the secondary conservation area is farmland. The Delaware County Regional Planning Commission wrote a version of this zoning text that was adopted in Trenton Township. The Farm Village could be used to preserve farmland

in farming areas not served by public sanitary sewer, where the comprehensive plan identifies farmland as a resource to be preserved. For example, in the Agricultural zone, five acre lots are currently a permitted use, which wastes farmland. As an alternative, the Farm Village subdivision could be a permitted use at one unit per five acres overall density, but with clustering of smaller lots to preserve large amounts of open space as agriculture.



Conventional subdivision 104 lots, 2.5 acres per lot, total 320 acres. Wet soils shown in green.

Farm Village, 120 lots in cluster, 240 acres in permanent easement for open space/farmland, 320 acres total



7. Smart Growth

Maryland enacted “Smart Growth” legislation in 1997. Since then, Smart Growth has been a topic for planners nationwide. Maryland directs state growth related expenditures into locally designated compact growth areas.

The American Planning Association (APA) defines Smart Growth as “a collection of planning, regulatory, and development practices that use land resources more efficiently through compact building forms, infill development and moderation in street and parking standards.” For APA, one of purposes of Smart Growth “is to reduce the outward spread of urbanization, protect sensitive lands and in the process create true neighborhoods with a sense of community.”

Smart Growth encourages the location of stores, offices, residences, schools and related public facilities within walking distance of each other in compact neighborhoods.

The popularity of many smart growth concepts has captured the interest of the press as well. Smart growth incorporates many of the concepts of conservation subdivisions in rural areas and TNDs in urban areas.

13.3 Which Development Pattern for Brown?

Brown Township should consider the benefits of some Smart Growth principles in its future land use.

1. Identify critical resource areas that should be given primary or secondary conservation area status.
2. In rural areas, permit a mixture of road frontage lot split development and Conservation Subdivisions.
3. Permit Farm Villages as Conservation Subdivisions to preserve farmland while allowing farmers to divide residential lots.
4. Permit residential subdivisions that best utilize the available buildable land, protect the environmentally sensitive areas, retain open spaces maintain maximum vegetation and tree cover, and assure the protection of surface water and groundwater.
5. Consider a TND as a possible expansion of Kilbourne, or potentially as a large mixed use development “node” on the outskirts of the City of Delaware. (Define enforceable structural and architectural site design standards.)
6. Combine commercial development to share parking and access to arterial streets. Consider mixed uses of commercial and residential as part of a large scale planned unit development that creates a sense of community rather than strip the commercial along arterial roads.

13.4 Development Patterns and Cost of Services

Many growing communities struggle with the cost of providing new services, especially when their property tax base is primarily residential. Depending on the development pattern chosen, Brown Township has the potential opportunity to develop some commercial property tax base on US 36. This commercial tax base could help pay for new services and support the school district.

Every community must determine what land use mix provides an appropriate balance of commercial versus residential property tax base. Single family residential development is often suspected of not paying its fair share of its costs because of school costs for children. As noted in Chapter 11, the revenues collected from the school district were lower than the amount used for funding. In order to ascertain what land use mix might be optimal, it is necessary to analyze the fiscal impacts of development to determine the costs versus revenues to the community.

Models for estimating the fiscal impact of new development were developed by Robert Burchell, David Listokin and William Dolphin in The New Practitioner's Guide to Fiscal Impact Analysis, (Center for Urban Policy Research, Rutgers University, 1985). and the Development Assessment Handbook, Urban Land Institute, 1994). They define development impact analysis.

“Development impact analysis is the process of estimating and reporting the effects of residential and nonresidential construction on a host political subdivision, usually a local community, school district, special district and/or county. The effects take several forms:

- a.) physical
- b.) market
- c.) environmental
- d.) social
- e.) economic
- f.) fiscal
- g.) traffic

Development impact assessment may be either prospective or retrospective; it may be short term or long term; it may be an in depth or abbreviated study.”

Burchell and Listokin have created “Preview” and “Quickway” models to approximate development impacts. These models use derived multipliers from regional or national standards to gauge impacts. For example, a single family home with four bedrooms in Central Ohio would be expected to generate 1.428 school age children. These may be further broken down to .9866 school age children in grades Kindergarten–Sixth; .2475 in Junior High School, and .1906 in High School.

13.5 The Ohio State University Study

The DCRPC is interested in knowing the true cost of growth, especially residential growth in Delaware County. A fiscal impact analysis can be a useful tool to anticipate the costs versus revenues of a project before it is zoned or built. A fiscal impact analysis (cost of services needed versus revenues generated) may help determine one aspect of how the development might affect the general welfare of the township.

The DCRPC is cooperating with the Ohio State Extension Service to review the fiscal impacts of four typical developments in Delaware County. Developments may need to adjust their land use mix to reduce negative impacts upon the community, and to permit the township to provide services at reasonable costs.

13.6 Impact Fees and Ohio Law

The Community Vision for Brown Township will be represented by its Comprehensive Plan. The potential fiscal impacts of this plan may wish to be determined on a project basis for projects of large magnitude.

Some states permit impact fees based upon a fair share allocation of the costs of new development. Ohio planning and zoning legislation does not currently empower townships to charge impact fees that offset costs of service expansion (roads, schools, parks, etc.). It has been generally held, however, that road improvements immediately adjacent to the development can be attributable to the project as part of the subdivision and zoning process. If large impact development proposals do not reasonably mitigate their impacts, they may impose an undue burden on the township. In such cases the rezoning may be premature, or not in conformance with the Comprehensive Plan.

An Ohio Supreme Court case (Home Builders Association of Dayton and the Miami Valley et al v. City of Beavercreek, 89 Ohio St 3d 121; decided June 14, 2000) held that a municipal impact fee imposed on real estate developers is constitutional if:

- 1.) the impact fee bears a reasonable relationship between the city's interest in constructing new roads and the traffic generated by new developments, and
- 2.) there is a reasonable relationship between the fee imposed and the benefits accruing to the developer as a result of the construction of new roads.

Clearly Ohio cities and villages may now adopt impact fees that conform to the Supreme Court's Beavercreek ruling in Ohio. Whether this power will extend to townships is unclear, and should be discussed with township legal counsel before a township attempts to legislate impact fees.

Chapter 14

Goals and Objectives

14.1 Goals and Objectives for Future Development

On July 6, 2000 a citizens group of approximately 10 people derived goals statements from the “likes” and “dislikes” outlined in Chapter 4. These goals were incorporated into a vision statement for future development.

1. Community Vision

Goal - To retain economically viable agriculture.

Objectives

- a) Classify the most important farmland by soil type, location, productivity and proximity to development using the USDA Land Evaluation Site Assessment model (LESA).
 - b) Preserve viable farmland as part of Planned Residential Developments (PRDs) by transfer (sale) of development rights from farmland to adjacent PRDs in return for a permanent easement for open space and/or agriculture on the remaining adjacent farmland.
 - c) Keep Farm-Residential zone densities low at one unit per two acres.
-

Goal – To Retain Rural Character

Objectives

- a) Retain lands in Farm-Residential zoning status where no sanitary sewer is expected.
 - b) Encourage Conservation subdivision design
-

Goal - To ensure significant and diverse citizen input into the planning process.

Objectives

- a) Use the 15 member steering committee as the primary citizen input to the Zoning Commission in amending the Comprehensive Plan.
- b) Advertise an open informational meeting to discuss and review the recommendations of the plan prior to public hearings.
- c) Use a township newsletter or weekly newspaper insert to publish and mail a synopsis of the plan to every household in Brown Township.

Goal – To prevent undue congestion on narrow county and township roads.

Goal – To protect rural real estate values

Objectives

- a) Maintain a minimum lot size in areas with sanitary sewer service that emulate suburban densities (not to exceed 1.25 du/acre).
- b) Maintain a rural lot size adequate to safely utilize on-site water supply and sewage disposal systems where no sanitary sewer service is available.

2. Environment

Goal - To preserve natural beauty, wildlife, quietness and open space.

Objectives

- a) Amend the zoning text to require a green way link between adjacent PRD subdivisions.
- b) Create a landscape detail for greenway paths.
- c) Retain wooded green ways along ravines, waterways and project perimeters in reviewing Planned Developments and conventional subdivisions.
- d) Set landscape and architectural design standards for planned developments that stipulate the kinds of centralized green spaces envisioned.
- e) Require the linkage of planned developments by bike paths or walking paths in green ways so that new neighborhoods are all pedestrian oriented and children can move safely between neighborhoods without having to be driven by automobile.
- f) Create a landscape detail or “look” for new developments that front on township roads.
- g) Amend the zoning text to require the appropriate landscaping buffer detail between certain residential and non-residential land uses. Create a landscaping detail(s) to be used between incompatible land uses.

Goal - To avoid inappropriate sprawl and retain critical resource areas and wildlife corridors

Objectives

- a) Retain natural vegetation and use existing topography as buffers where they exist.
- b) Protect critical resources including floodplain and slopes over 20% with adequate buffer distances and corresponding densities.
- c) Encourage the use of conservation design in site development to protect natural resources and unique areas in the township.
- d) Request the county amend its subdivision regulations to protect 100-year floodplains

- e) Amend the zoning resolution to identify and protect floodplains, jurisdictional wetlands, and slopes over 20% in planned residential developments (PRD).

Goal – To conserve surface and ground water quality

Objectives

- a) Require minimum 2 acre lot size in areas without sanitary sewer, require larger lot sizes within close proximity to the Alum Creek drinking water reservoir.
 - 1. 1000' from edge of Alum Creek 100 year flood plain – density of 1 unit per 5 acres
 - 2. 1000' from top of Alum Creek bank slopes 20% or greater - density of 1 unit per 5 acres

3. Land Use

Goal - To retain a primarily single family residential housing mix, but offer diversity of housing when needed services are available.

Goal - To retain an overall low density.

Goal – To protect sensitive surface and ground water aquifers

Objectives

- a) Retain single family densities of at least one unit per 2 acres where there is no centralized sanitary sewer provided by Delaware County or Delaware City and emulate surrounding densities when sewer is available.
- b) Use the width of roads, the capacity of water and sewer systems, and the soil characteristics to regulate development, using the densities and land uses on the comprehensive plan map as a guide.

- c) Avoid development of uses or densities that cannot be serviced by currently available or imminently planned infrastructure, unless such development mitigates its unplanned infrastructure impacts.
- d) Permit single family housing in standard subdivisions with 20,000 square foot lots with centralized sanitary sewer and water, adequate fire protection and road access.
- e) Permit multi family units as part of Planned Residential Developments, approved per the development plan.
- f) Permit flexible lot sizes as part of Planned Residential Developments.
- g) Maintain the area at the borders of Delaware City between US 42 and US 36/SR 37 as a suburban residential heart of the township, with water and sewer provision there before any further expansion to the remainder of the township. Maximum gross PRD density of 1.25 units per acre for Planned Residential (cluster) developments.
- g) Develop policies for service provision that relate to the comprehensive plan

Goal - To provide appropriate recreation and managed open space

Objectives

- a) Acquire 25-50 acres of land for a future Township park with active recreation (playing fields for organized sports).
- b) Create a series of mini-parks (less than 1 acre) with ¼ mile spacing as part of Planned Residential Developments where densities are greater than 1 unit per acre. Create a series of neighborhood parks of 15 acres with active recreation with ½ mile spacing in PRD neighborhoods.

Goal - To determine and implement an appropriate land use mix

Objectives

- a) Direct Planned Commercial and Industrial growth along US 36/SR 37 corridor.
- b) To create architectural guidelines for a Brown Township “look” for commercial, industrial and office development; avoid “franchise architecture” that has no community architectural syntax.
- c) Acquire new sites for township facilities, including fire, police, road maintenance, etc.
- d) Avoid prematurely zoning land beyond the reasonable needs of the real estate market.
- e) Use the Comprehensive Plan as the guideline in zoning.
- f) Use the 15 member steering committee as the primary citizen input to the Zoning Commission in amending the Comprehensive Plan.
- g) Advertise an open informational meeting to discuss and review the recommendations of the plan prior to public hearings.

- h) Avoid strip commercial development by addressing the proposed access management policies.
- i) Provide for 5 year updates and revisions to the plan.

Goal - Offer development alternatives to annexation

Objectives

- a) Work with City of Delaware to possibly create a Joint Economic Development District (JEDD) for commercial and industrial uses, or a cooperative agreement for residential uses.

Goal - To use access management controls to limit key access points to minimize traffic congestion.

Objectives

- a) Require commercial parallel access roads and connections between planned commercial developments on major arterial streets.
- b) Space new signals on US 42 and US 36/SR 37 with at least one half-mile separation.
- c) Adopt the appropriate ODOT Access Management recommendations; work with ODOT to prevent the deterioration of US 42 and US 36/SR 37.

Chapter 15

Recommendations

15.1 Intent of the Brown Township Comprehensive Land Use Plan

The 2000 Brown Township Comprehensive Land Use Plan is the sum of all the chapters and appendices. Chapters 15 is intended to be read and viewed in conjunction with the Comprehensive Land Use Plan (map) in this chapter.

15.2 Sub Area I – Suburban Growth District

Boundaries: *West:* Delaware Township/City; *East:* Conrail Railroad tracks; *North:* Conrail Railroad tracks; *South:* Berlin Township/Delaware City.

Land Area: Approximately 778 acres

A. General Facts and Findings

Sub-area I has access to US 36/SR 37 and SR 521 and is adjacent to the City of Delaware. The Suburban Growth district is intended to provide a transition from the high densities of Delaware City to the lower densities in the rural agricultural heartland.

The sub-area is generally flat, with Pewamo soils mostly suitable for high yield agriculture but unsuitable for septic systems. However, if the Township were to be served by the City's sewer in the future, a somewhat higher density would be appropriate. Public water is only available on most of US 36 and a portion of Bowtown Road. There is no sanitary sewer service and none planned.

The area is characterized by large tracts of land still engaged in farming. To take advantage of the township's proximity to Delaware City, planned commercial and planned industrial should be developed and encouraged along US 36/SR 37. This area is regarded as a source of much needed commercial/industrial tax revenues. Appropriate access management principles restricting left turns across traffic should follow ODOT standards.

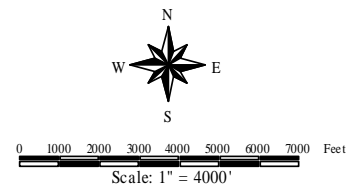
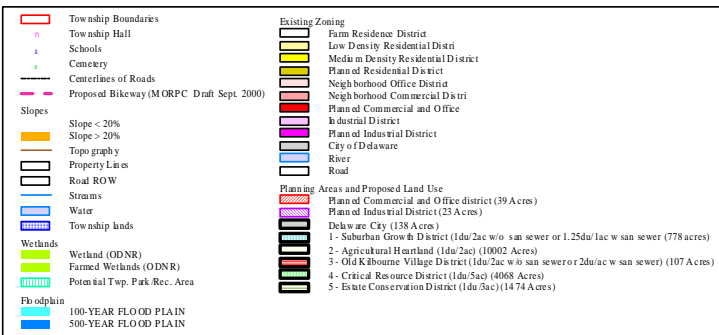
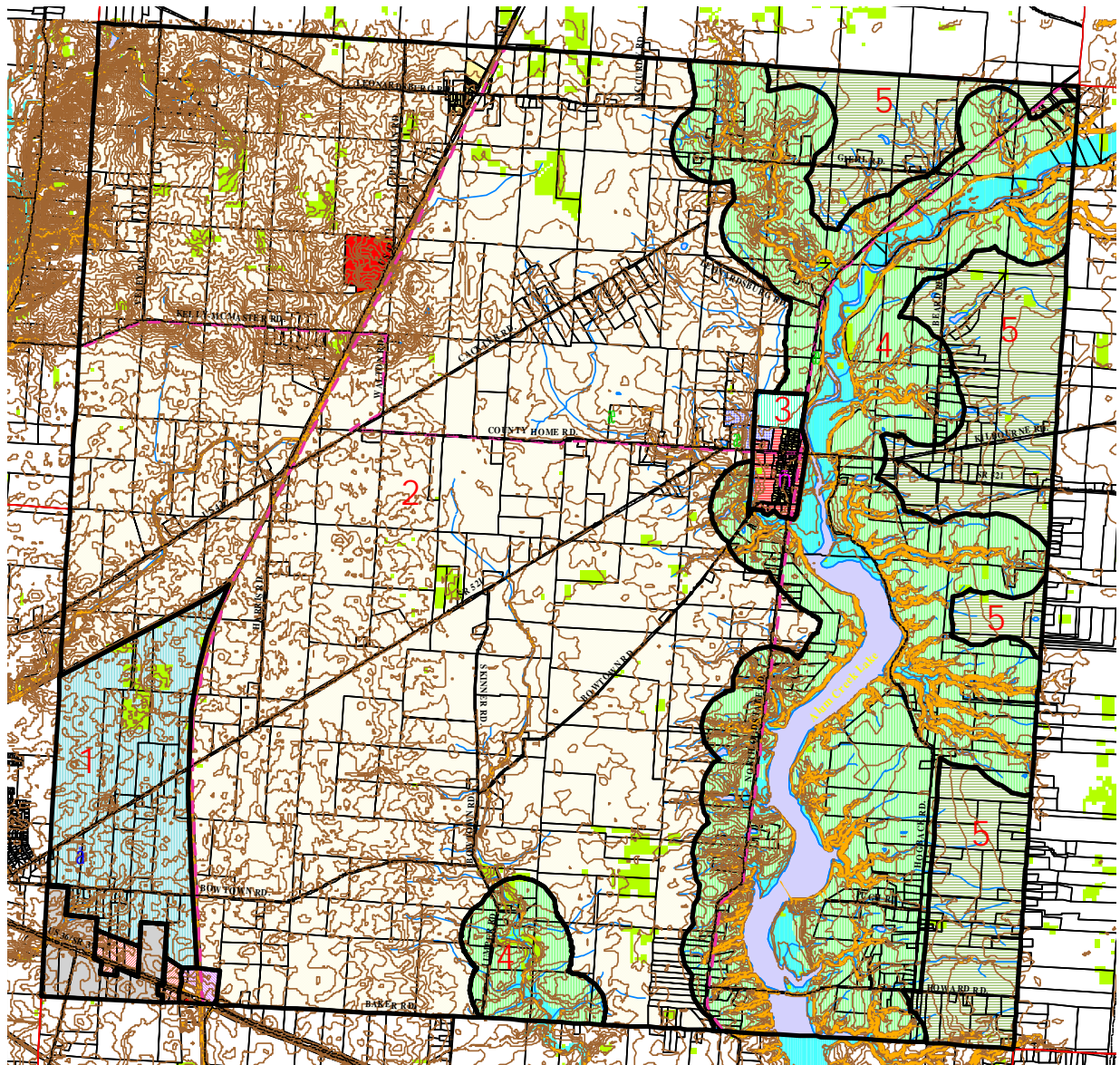
The 2000 Delaware County Thoroughfare Plan shows new road extending north and south from US 36/SR 37 east of Delaware City. This road is intended to act as an alternate route around the

city, most likely as a limited access highway. The township should designate this as a limited access highway to protect its intended use as a by-pass. City, county, and developer funds might potentially fund the road. The intersection of this new road at Glenn Road and US 36/SR 37 is an appropriate location for new commercial and office activity. However, rear access roads should be utilized to limit curb cuts along the proposed new road and US 36/SR 37.

The MORPC 1999 Proposed Regional Bikeway Corridors Upsate shows a path along the railroad continuing from the southern boundary of Brown Township to the northern boundary. This bikeway is intended to be located along the eastern boundary of Planning Area I. If new developments are proposed along this path, bikeway increments should be part of their subdivision design.

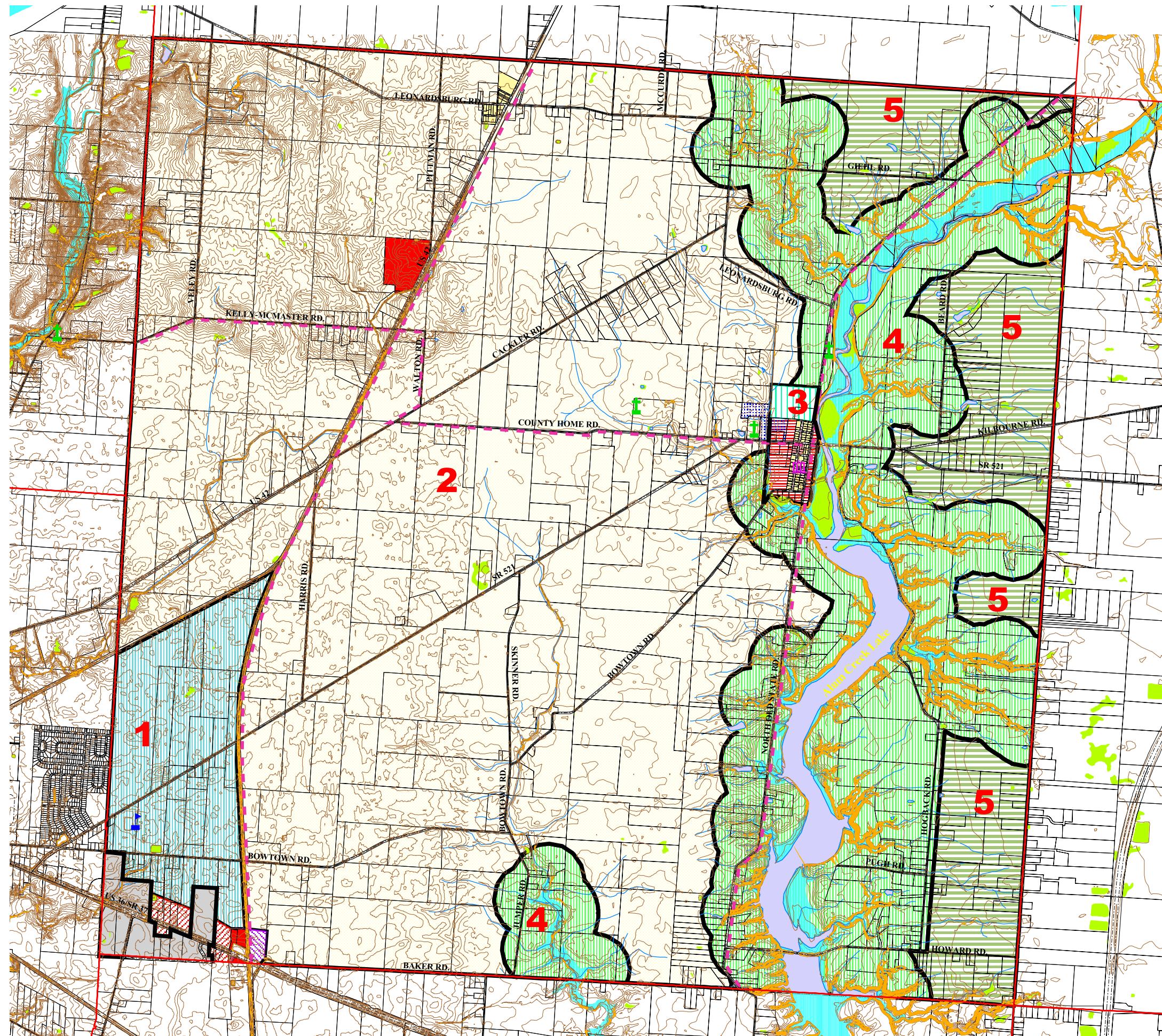
Comprehensive Plan MAP

Brown Township Comprehensive Plan, Adopted 7/10/2001



Prepared By: Delaware County Regional Planning Commission (740-833-2260)
 Topo & Parcel Information Provided by DALIS project (740-833-2070)
<http://www.dcrpc.org>

Brown Township Comprehensive Plan Adopted 7/10/2001



- Township Boundaries
- Township Hall
- ▶ Schools
- ✚ Cemetery
- Centerlines of Roads
- Proposed Bikeway (MORPC Draft Sept. 2000)
- Slopes**
 - Slope < 20%
 - Slope > 20%
- Topography
- Property Lines
- Road ROW
- Streams
- Water
- Township lands
- Wetlands (NWI)
- Potential Twp. Park/Rec. Area
- Floodplain**
 - 100-YEAR FLOOD PLAIN
 - 500-YEAR FLOOD PLAIN
- Existing Zoning**
 - Farm Residence District
 - Low Density Residential Distri
 - Medium Density Residential District
 - Planned Residential District
 - Neighborhood Office District
 - Neighborhood Commercial Distri
 - Planned Commercial and Office
 - Industrial District
 - Planned Industrial District
 - City of Delaware
 - River
 - Road
- Planning Areas and Proposed Land Use**
 - Planned Commercial and Office district (39 Acres)
 - Planned Industrial District (23 Acres)
 - Delaware City (138 Acres)
 - 1 - Suburban Growth District (1du/2ac w/o san sewer or 1.25du/1ac w san sewer) (778 acres)
 - 2 - Agricultural Heartland (1du/2ac) (10002 Acres)
 - 3 - Old Kilbourne Village District (1du/2ac w/o san sewer or 2du/ac w san sewer) (107 Acres)
 - 4 - Critical Resource District (1du/5ac) (4068 Acres)
 - 5 - Estate Conservation District (1du/3ac) (1474 Acres)



0 1000 2000 3000 4000 5000 6000 Feet

Scale: 1" = 3000'

Prepared by: Delaware County Regional Planning Commission (740-833-2260)
 Topo & Parcel information provided by the Delaware County Auditor's Office DALIS project
 further information is available by contacting the
 DALIS project Office (740-833-2900)
 (Printed 12/15/2004)

B. Sub Area I Recommendations

Planned Commercial

Continue planned commercial development of the US 36/SR 37 frontage to a depth of approximately 700 feet north as well as the portion south of US 36/SR 37 (39 acres total) from the City of Delaware to a line approximately 500 feet west of the Conrail tracks, provided that:

- 1.) Parcels have limited access to US 36/SR 37 and are linked with parallel rear access roads built in increments by developers. Left turn movements across traffic should be at controlled locations at least ¼ mile spaced, as approved by ODOT. Most access points should be right turn in and right turn out only.
- 2.) Any development in this area should take into consideration the proposed road alignments and recommendations of the Delaware County 2001 Thoroughfare plan.
- 3.) Only low level, downward-cast lighting should be encouraged to prevent a halo effect on the night sky in deference to the Perkins Observatory, and to reduce light pollution as noted in dislikes by residents.
- 4.) To avoid sign clutter, ground signs should be the only commercial sign type permitted along US 36/SR37. Billboard and pole signs should be prohibited.
- 5.) A Brown Township “look” or architectural sign syntax should be developed.
- 6.) Extensive landscaping should be required in parking lots to avoid the “sea of asphalt” to reduce runoff and temperatures (and thus ozone levels). Use landscaping to divide parking areas by using islands at reasonable spacing, at ends of rows, and along US 36 frontage. A standard landscape detail should be adopted.

Planned Industrial

Allocate 23 acres of Planned Industrial development on the north side of US 36/SR 37 along the east and west side of the railroad tracks in the southeastern corner of sub-area I. There is an existing commercial and industrial use in Berlin Township on the south side of US 36/SR 37 (Carpet Factory and glass manufacturing) with access to US 36/SR 37 in Brown township. This area is desirable due to its proximity to the railroad tracks and its accessibility to US 36/SR 37.

Residential

The remainder of Sub area I (716 acres) is recommended for single family development at 1 unit per 2 acres without sanitary sewer service. If centralized sanitary sewer becomes available, the plan recommends densities up to 1.25 units per acre. This area has natural boundaries of the

Conrail tracks to the north and east, with the planned commercial and industrial development along US 36/SR 37 to the south and Delaware City to the west. PRD/Cluster development with densities of up to 1.25 du/acre shall include open spaces to adequately serve the residents of the development (see NRPA standards in Appendix F)

15.3 Sub Area II – Agricultural Heartland



Boundaries: *West:* Planning area I, Delaware and Troy Townships; *North:* Oxford Township; *East:* A line 1000' from the floodplain and/or the top of 20% slopes on the west side of Alum Creek Lake.

Land Area: Approximately 10,002 acres

A. General Facts and Findings

The area is characterized by generally flat topography with prime agricultural soils in large undivided tracts of land. There is no central sewer, none proposed by the county, nor is it anticipated that Delaware City could provide sewer service in the planning period 2000-2010. Soils are generally unsuitable for on site treatment plants with land application systems. There is water service for most of this planning area. There is little likelihood of annexation within the 2000-2010 period.

B. Sub Area II Recommendations

The plan recommends this area to be the agricultural heart of the township. Due to the impermeability of soils and lack of sanitary sewer, the minimum lot size for single-family

residences should be 2 acres. To preserve agriculture, conservation subdivisions such as the Farm Village Planned Developments could be encouraged at 1 unit per 2 acres gross density with 15,000 square foot lots in cluster developments and contiguous open space preserved for agriculture. Development rights could be transferred from agricultural lands to directly abutting, adjacent tracts for Farm Village developments, thus saving this area as a permanent agricultural and low-density core of the Township.

- The 2001 draft Delaware County Thoroughfare Plan shows a new road as a northern east-west connector to aid in regional traffic movements. This road would initially extend west from County Home Road toward Mink Street in Thompson Township.
- A second east-west road would connect with a new north-south road and aid in bypassing traffic from Delaware City.
- The primary use for the Agricultural Heartland will be for farm and accessory uses within the 2000-2010 time period.
- Leonardsburg is located in the northern part of this sub-area and is not anticipated to grow significantly during the planning period. It could serve as a center for a traditional neighborhood development if sanitary sewer were provided.

Future Considerations

If the proposed “Thoroughfare Plan” roads are constricted within the planning period, there may be an opportunity for limited planned commercial at the new intersection with US 42 to serve area residents and traveling public.

15.4 Sub Area III – Old Village of Kilbourne District



Boundaries: North: A line approximately 1600' north of SR 521; South: South boundary of lots on the south side of Bowtown Road; East: East boundary of the lots on the east side of North Old State Road; West: A line approximately 850' west of North Old State Road.

Land Area: 107 acres

A. General Facts and Findings

This sub area includes the unincorporated Village of Kilbourne and additional land to the south, located in the center of the Township. The old Village of Kilbourne is a high density traditional neighborhood development with mixed uses on the west bank of Alum Creek Lake. Kilbourne's traditional character could be threatened if adjacent development does not take into consideration its unique architectural and spatial features. The Village is defined by skinny streets arranged in a grid pattern with small setbacks, and many historic buildings.

Sub-area III includes the existing Village and also encompasses enough land to the west to double its size. Sub-area III also includes 30 acres for a possible Township park that is currently part of a large agricultural tract located directly to the north of the existing village. The Old Kilbourne Village Center would be at the heart of the township's small town commercial activity with small shops mainly catering to local residents. Commercial and residential development should meet architectural standards and setback requirements to maintain the traditional pedestrian oriented character of the Village.

Kilbourne was originally platted as the town of Eden with additional land added to extend the village south to Bowtown Road. The lots were platted prior to the adoption of zoning. Some of the small platted lots may be able to obtain building permits as non-conforming lots of record. Since many of the lots are less than 10,000 square feet this scenario is only feasible with central sewer.

B. Recommendations for Sub Area III

Any growth within the Kilbourne area is recommended to retain and even promote elements of a traditional, walkable mixed use neighborhood. To achieve this, a gross density of 2 units per acre is recommended if central sewer becomes available. Without sewer, development is recommended at a density of 1 unit per 2 acres.

Architectural standards should be developed to retain the traditional neighborhood character. Below are some examples of architectural features that can preserve a traditional neighborhood character (ie. see Appendix C, elements of great communities.)



Kinnelon Commons, NJ



Kinnelon Commons, NJ

If sewer becomes available, both infill development, and new development on approximately 22 acres west of the existing village is likely to occur

A 30 acre tract directly north of the Village of Kilbourne along North Old State Road should be considered as a possible location for a Township park. The tract is centrally located, large enough and flat enough for active recreation facilities and is easily accessible. The Township has two baseball fields to the south on the old school grounds and this new 30 acre tract would be an extension of this use.

- Streets should be designed to balance traffic between pedestrians, bicycles and automobiles

by connecting jogging/bicycle paths, village green and pocket parks.

- Garages should be located behind houses, and houses and porches moved closer to street to maintain the historic grid design from the street entrance.
- Shops and offices could use rear parking lots to encourage shopping and browsing.
- Complimentary mixed land uses all within ¼ mile walking distance, center to the edge of the village.
- Surface water runoff must be carefully planned to avoid pollution of the Alum Creek Reservoir.

15.5 Sub Area IV – Critical Resource District



Alum Creek Lake

Boundaries: 1000' from floodplains and/or the top of 20% or greater slopes surrounding the Alum Creek Lake, and 200' east of Hogback Road in the southeastern portion of the sub-area.

Land Area: 4068 acres

A . General Facts and Findings

This sub area contains the most rugged topography in the township. It is heavily wooded and consists of large ravines that drain into Alum Creek Lake, a public drinking water reservoir. Steep slopes, scenic views, vistas, wildlife and even scenic roadways typify the landscape. These elements are all critical to the environmental stability, natural beauty, and culture enjoyed by

Brown Township. Roads are narrow, curving with low speed limits, following the Creek and terrain. An extensive veined pattern of deep ravines delivers surface water rapidly to the reservoir.

There is no sanitary sewer and none proposed. The townships intent for this area is to limit the population density to protect surface and ground water quality to prevent pollution of Alum Creek Lake, to prevent undue congestion of the primitive rural road network, to protect floodplains and to protect the real estate values of large lot residential neighborhoods.

B. Recommendations for Sub Area IV

The plan recommends a gross density of 1 unit per 5 acres for all lands within 1000 feet of the 100 year floodplain and/or top of 20% or greater slopes as well as 200 feet east of Hogback Road. This lower density of development is intended to limit the disturbance to the natural ecosystem and the preservation of groundwater.

A streamside “No-build” buffer is also recommended within the district for the protection of the Alum Creek Lake and its wildlife. This buffer would extend 120’ from the normal high water line.

The district should encourage conservation subdivision guidelines that promote natural landscapes (see Chapter 13). Tree preservation is encouraged to reduce stormwater runoff and protect surface and ground water quality.

Hogback Road’s scenic qualities should be protected by limiting future curb cuts where feasible and preserving existing trees as part of future subdivisions.

Further preservation of natural areas in the township could be achieved through any or all of the following: (Source: Model Watercourse Protections MORPC 1999)

1. Identify and catalog the community’s environmentally sensitive areas.
2. Establish a land trust to acquire and accept development rights and easements to unique natural areas such as scenic views, woodlands, wetlands.
3. Co-operate with other public and private agencies interested in protecting the critical resources of the township.

15.6 Sub-Area V – Estate Conservation District



Boundaries – Areas to the north and east of Planning Area 4.

Area – 1474 acres

A. General Facts and Findings

Planning Area 5 lies in the far eastern portion of the township. It is isolated from the west side of the township by Alum Creek Lake. Soils are generally suitable for leaching and the topography is more conducive to development than Planning Area 4. The land is flatter, and surface water is not discharged as directly to Alum Creek Lake. This sub-area has accessibility to major thoroughfares (US 36/SR 37-SR 71 interchange and potential SR 521- US 71 interchange). Therefore, densities can be higher than the Critical Resource District. However, since Planning Area 5 is separated from the west side of the Township by Alum Creek Lake and no sanitary sewer service is available or proposed. Therefore an overall low density is appropriate.

B. Recommendations

The plan recommends a gross density of 1 unit per 3 acres. To help preserve open space, Conservation Developments with an overall density of 1 unit per 3 acres and lot sizes of 15,000 square feet with contiguous open space should be a permitted use.

Appendices

- A. History of Planning- a New Planner's Timeline**
- B. Ohio Planning Enabling Legislation**
- C. Common Elements of Great Communities**
- D. Delaware County Sewer Capacity Study**
- E. Delaware County Sewer Drainage Areas**
- F. NRPA Recreational Standards**
- G. Model Planned Residential Development Resolution**
- H. Permanently Sited Manufactured Housing Zoning Definitions**
- I. Acronyms**
- J. Model Conservation Subdivision Regulations**
- K. Glossary**

Appendix A

History of Planning: A New Planner's Timeline

Philip C. Laurien, AICP

1189- England, required stone party walls 1 & 1/2 feet thick each side, 16' tall on houses.

1214- Magna Carta, King John of England, prevented the seizure of land by the King without compensation. First land use regulation, restricting forests for hunting.

1297- England- Front yards to be cleared and maintained

1400's- England- all roofs in urban areas to be stone, lead or tile (fire protection)

1565- St. Augustine, Florida, first American planned city, Spanish Law of the Indies

1666- Great fire of London, England- An Act for the Rebuilding of the City of London, divided city housing into 4 classes, required uniform roof lines and balconies, established front setbacks, mandated 3 year reconstruction or seizure by the city for the public good.

1690 - Annapolis, Maryland, Sir Francis Nicholson, designed it as a new town, with radial spokes

1692- Philadelphia, first major city built on land speculation, used grid pattern for the layout. 1st neighborhood park system.

1692- Boston ordinance restricted slaughter, still, curriers and tallowchandler's houses to areas of the city less populous and offensive to the public.

1699- Williamsburg, Virginia, Sir Francis Nicholson, designed grid with green mall, central avenue.

1733- Savannah, Georgia, General James Ogelthorpe, 24 squares, 40 families per square, grid.

1777- Vermont, 1780 Massachusetts, 1789 North Carolina Constitutions prevent taking of land without compensation.

US Constitution, Article V of the Amendments- "no person shall ...be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use without just compensation."

Land Act of 1785- Established survey grid 36 square mile townships, NorthWest territories, (includes Ohio)

1789- Washington D.C. Pierre Charles L'Enfant combined the radial spokes of Annapolis and the green mall of Williamsburg.

1811- 25 x 100 standard New York City lot

1856- Central Park, New York City, Frederick Law Olmstead, Sr.

1860's Public Health Movement- New York, San Francisco, regulating tenements and slaughterhouses.

1869- Riverside, Illinois, English garden style city by Frederick Law Olmstead Sr. Used curving, tree-lined streets, deep setbacks, single family detached houses, exclusively residential neighborhoods. Became the standard for FHA in the 1930's, thus copied in virtually every major city and community in the US. Still the standard suburban style of land plan used today.

- 1871-** Pumpelly V. Green Bay 80 US 166 (1871)-Established a taking by flooding of private property.
- 1890-** Jacob Riss writes How the Other Half Lives, depicts slum conditions in New York.
- 1893-** Chicago, Colombian Exposition, “White City”, Daniel Hudson Burnham, beginning of City Beautiful movement.
- 1898-** Ebenezer Howard writes Tomorrow, a Peaceful Path to Real Reform, beginning of Garden City movement.
- 1903-** Cleveland Plan, Daniel Burnham, civic center, first master plan for an American city to be realized.
- 1904-** San Francisco Plan, Daniel Burnham, based on City Beautiful principles.
- 1909-** Chicago- first regional plan in US, Daniel Burnham.
- 1909-** Wisconsin passed first state enabling legislation permitting cities to plan
- 1909-** Los Angeles, first zoning ordinance
- 1909-** Harvard, first course in city planning
- 1915-** Hadacheck V. Sebastian- 239 US 394 (1915) Determined that a local government can prohibit land uses in certain areas it deems inappropriate, even though this significantly reduces land value.
- 1916-** New York adopts first comprehensive zoning ordinance, no mention of master plan.
- 1917-** ACPI established, Kansas City
- 1919-** Ohio Planning Conference, precursor of APA established, first citizen based planning organization in US.
- 1920's-** City Beautiful gives way to legalistic, “city efficient” emphasis on administration, lawyers, and engineers
- 1922-** Standard State Zoning Enabling Act issued by the US Department of Commerce. Mentions a plan as a separate study, but most communities do not realize its importance. Zoning seen as planning. Flawed.
- 1922-** Pennsylvania Coal v. Mahon, 260 US 393 (1922) Supreme Court rules that if a regulation goes too far, it will be recognized as a taking. The determination as to whether a taking has occurred rests on the facts of the case. Still the basic taking case today.
- 1925-** Cincinnati, Ohio, first comprehensive city land use plan in America. Not the New York model. Alfred Bettman.
- 1926-** First capital budget, Cincinnati, Ohio
- 1927-** Village of Euclid (Ohio) V. Ambler Realty, 272 US 365 (1926)-upheld zoning as constitutional under the United States Constitution, as a police power of the state. If zoning classifications are reasonable, they will be upheld.
- 1928-** Standard City Planning Enabling Act issued by the US Department of Commerce. Enter the modern planning age, where a comprehensive plan is the intended basis of zoning, the implementing tool. Act flawed, not largely followed; most major cities already regulating land use under standard zoning act.
- 1930's-** Greenbelt cities, including Greenhills, Ohio, Greenbelt, Maryland, Greendale, Wisconsin.
- 1935-** Frank Lloyd Wright's Broadacre City, A New Community Plan, lot size varied with family. Did not

consider the broad economic spectrum, elitist.

1941- Ladislav Segoe, Cincinnati, Ohio writes Local Planning Administration, (the “Green “book). The Planning “bible” still used and updated today as the basic manual for planners. Segoe is one of the giants of planning. (Note: Ladislav Segoe and Assoc. authored the first regional Plan for the Delaware County Regional Planning Commission in 1964.)

1961 -Jane Jacobs writes The Death and Life of Great American Cities

1964-T.J. Kent writes The Urban General Plan. Noted Std. City Planning Act of 1928 was faulty. Said the plan should be:

- 1.) long range and general
- 2.) one comprehensive document adopted at one time with all elements integrated
- 3.) focused on the physical development implications of socio-economic policies
- 4.) be identified as the city council’s (elected official’s) plan

1969- Design with Nature, Ian McHarg, brings environmental sensitivity to planning movement with overlay of land capability and critical resources.

1970’s- Citizen participation and advocacy planning movements bring power back to the people from the inception of the plan.

1970’s-90’s- Land use law cases; Appellate and Supreme Court decisions regarding

- Growth management (Golden v. Planning Board of Ramapo, 30 NY 2d 339, 285 N.E. 2d (1972); also Construction Industry Association of Sonoma County (California) v. City of Petaluma, 522 F2nd 897 (9th Cir. , 1975), cert. Denied 424 US 934 (1976).
- Affordable Housing and the fair share analysis (Southern Burlington County NAACP v. Township of Mount Laurel, 67 N.J. 151, 336 A. 2d 713, 1975)
- Takings and exactions;
 1. Penn Central Transportation Company et al v. City of New York, 1978. No taking occurred as a result of the Grand Central Station being placed in a Landmark Preservation District. The use of the terminal was unimpeded, and useful governmental purpose (landmark preservation) was vindicated. The fact that the landmark Preservation commission recommended denial of a 53 story tower over Grand Central Station did not in itself assure that the tower would be denied zoning, nor was it a taking.
 - a.) First English Evangelical Lutheran Church v County of Los Angeles 482 US 304 (1987). The court rejected as a full remedy the declaration of invalidity of the zoning ordinance. Plaintiff could be compensated for time the use of the land was lost due to zoning.
 - b.) Nollan v. California Coastal Commission 483 US 825 (1987) Court held that development exaction’s are valid so long as there is a reasonable relationship between the imposed exaction and the impact on property. The requirement of an easement for public walkway

along the beach was not related to the issuance of a building permit on private property.

- c.) *Lucas v. South Carolina Coastal Council* 505 US 1003 112 S. Ct. 2886 (1992) Court held that when a regulation goes too far to deny all economic use of a property, it will be considered a taking.
- d.) *Dolan v. Tigard* 114 S. Ct. 2309, 2315 (1994) City requirement to dedicate land in a floodplain for a bike path as a condition to approval of expansion of an existing hardware store was not reasonable. Must be an essential nexus between the exaction and the use. The benefit to the landowner must be roughly proportional to the impact of the development. The burden is on the community to create this nexus.

1990s- desktop geographic information systems (GIS) allow for inexpensive sophisticated land capability and land use analysis, court decisions relate to reasonableness of environmental preservation (aquifers, endangered species, floodplains, wetlands).

Appendix B

Ohio Planning Enabling Legislation

- **Ohio Enabling Legislation: Township Planning and Zoning (ORC 519)**

Current Ohio enabling legislation treats the need for a comprehensive plan the same in townships and counties. The ORC does not specify for Counties or Townships what must constitute a Comprehensive plan. This stems from the 1922 Standard Zoning Enabling Act, which was passed prior to the Standard City Planning Enabling Act, both released in the 1920's by the US Department of Commerce. Ohio began planning by zoning, and has left the cart before the horse ever since.

"For the purpose of promoting the public health, safety, and morals, the board of county commissioners [township trustees] *may, in accordance with a comprehensive plan*, regulate the location, height, bulk, number of stories, and size of buildings and other structures, including tents, cabins, and trailer coaches, percentages of lot areas which may be occupied, setback building lines, sizes of yards, courts, and other open spaces, the density of population, the uses of buildings and other structures including tents, cabins, and trailer coaches, and the uses of land for trade, industry, residence, recreation, or other purposes...and for such purposes may divide all or any part of the ... territory into districts or zones of such number, shape and areas as the board determines. All such regulations shall be uniform for each class or kind of building or other structure or use throughout any district or zone, but the regulations in one district or zone may differ from those in other districts or zones."

Columbia Oldsmobile Inc v. City of Montgomery (1990, 56 Ohio St. 3d 60)

"R.C. 303.02, regulating rural land use in counties and R.C. 519.02 regulating land use in townships *require* [court emphasis] that zoning regulations promulgated by counties and townships be in accordance with a comprehensive plan. However, there is no statutory requirement that cities such as Montgomery enact a comprehensive community plan pursuant to its power to zone under R.C 713.06 et seq." **Therefore, a comprehensive plan is required in Township and county zoning according to the Ohio Supreme Court.**

The voluntary (but recommended) nature of planning in municipalities in Ohio was stated in the case of City of Pepper Pike (Ohio App. 1979) 63 Ohio App. 2d 34, 409 N.E 2d 258, 13 O.O. 3d 347, 17 O.O. 3d 240). "Because Ohio law does not require a municipality to adopt a comprehensive zoning plan as a condition precedent to the enactment of zoning legislation, a municipality has the discretion as to whether it will adopt a

comprehensive zoning plan; failure to have a zoning plan which is separate and distinct from a zoning ordinance does not render a zoning ordinance unconstitutional." It should be noted that this is for cities, which have greater authority than townships, but the with regard to the lack of a requirement for planning, the resultant legal conclusion is the same.

- **Township Authority**

Brown Township has taken the authority given by Ohio Revised Code Section 519 to adopt a comprehensive plan as a basis for zoning, and to adopt township zoning. Township zoning was first adopted in 1989.

Appendix C

Common Elements of Great Communities

Philip C. Laurien AICP

1. Central public open spaces (park, square, greenbelt, and water) in every neighborhood as its centerpiece.
2. Variety of architectural styles, with compatible elements
3. Retention of history through reinvestment and restoration of structures
4. Fine grained downtown or village centers
 - a.) Intimate, human scale
 - b.) Angle parking, with 2-3 lanes of traffic
 - c.) Street trees/planters
 - d.) Decorative/historic street lighting (at human scale)
 - e.) High quality, permanent, natural materials (stone, brick, stucco, real wood)
 - f.) Classic architectural elements, pillars, cornices, quoins, deep overhangs. No plain boxes.
 - g.) Wide sidewalks, with colored paver accents
 - h.) Retention of public and cultural buildings as anchors
 - i.) mixed uses (residential, commercial, office)
 - j.) Compact blocks with no rapid through traffic. Block design purposefully interrupted. Where through streets exist, make tree-lined boulevards.
 - k.) Fine grained signage with theme. No pole signs. Extensive use of painted window signs, labeled awnings, fascia signs, none internally lit. Small hanging signs from buildings.
 - l.) Large glass area on first floor to invite the outside in. Divided by vertical posts or pillars as support and design element.
 - m.) Narrow streets
 - n.) Restrained color palette. No clashing garish colors.
 - o.) "0" setbacks or minimal; (10' setbacks from the right of way). Commercial uses on ROW with paved sidewalk up to storefronts. House with 10-20' courtyards, fenced at ROW.
 - p.) Grid pattern streets, short blocks, with low speeds, stop signs at intersections.
 - q.) Wall graphics in classic style, restrained palette. Historic murals or advertising.
 - r.) Small shops, narrow structures, with greater depth. Parking to rear and angle parking in street.
 - s.) Landscape end islands to protect angle parking and provide location for street trees.
5. Highway Commercial Uses with the following attributes:
 - a.) Greenbelts along roadway
 - b.) Access management, controlled access points, adequate setback for parallel access roads.
 - c.) Ground signs rather than pole signs. High (100') pole signs only permitted within certain distance of major interstate interchanges for on-premise advertising of highway related services (motel, food, auto).
 - d.) Prohibition of billboards
 - e.) Lush landscaping; end islands for parking stalls. Parking lot forested look.
 - f.) Signage restraint. Use of franchise type fonts and colors, but neutral backgrounds. No garish or fluorescent colors. Unified background color on shared signs.

- g.) Avoidance of white, yellow and red plastic internally lit signs.
 - h.) Limit number, type and location of signs.
 - i.) Limit conversion to inappropriate uses such as flea markets from storage lockers.
 - j.) Parallel access roads or interconnecting parking lots to limit curb cuts to major highway.
 - k.) Community theme for greenbelt/landscape along road.
 - l.) Exclusively retail, no mixture of commercial and residential uses.
 - m.) Deep setbacks.
6. Residential Areas with the following attributes
- a.) Narrow streets with either no on street parking for streets with deep (more than 35' from ROW) setbacks, or on-street parking with landscaped end islands for streets with shallow (less than 35' from ROW) setbacks.
 - b.) Traffic calming features (center islands with landscaping), eyebrow islands with landscaping), parks at blocks end to divert traffic flow.
 - c.) Separation of residential uses from all other uses.
 - d.) Curvilinear roads, low speeds.
7. Adopt a General Plan for overall road development.
8. Require development to "fit" and preserve natural features such as topography, wetlands, floodplains, water views, and trees. Encourage public space around such features.
9. Preserve rural areas with the following attributes
- a.) open vistas from the roads
 - b.) save natural resources
 - c.) retain agriculture where feasible
 - d.) retain woods where feasible or replant.
 - e.) Narrow roads, wide spacing of curb cuts (300-400 feet)
 - f.) Deep setbacks.
 - g.) Low densities.
 - h.) Retention of rural/historic structures, such as attractive wooden barns.
 - i.) Retain tree lines along rural roads.
10. Industrial areas with the following attributes:
- a.) Ground or fascia signage, no pole signs.
 - b.) Wide roads with large curve radii for heavy trucks.
 - c.) Location in parks, not stripped out along highways.
 - d.) Landscaped greenbelt around parking areas.
 - e.) Signalized entrance to park areas for safe vehicular entry.

Appendix D

Delaware County Sewer Capacity Study

DCRPC Staff, with the cooperation of the Delaware County Sanitary Engineer

Delaware County Sewer Capacity Study (7/19/99)

Prepared By: Delaware County Regional Planning Commission

Assumption:

1. Commercial/Industrial Average Water Uses = 1,200 gal/acre/day
2. Residential Average Water Uses = 375 gal/du/day
3. Pump will be upgraded, but Pipe won't.

Summary Statistics:

Anticipated Residual Treatment Plant Capacities and Residential Densities After Consideration of the Existing Land Uses, Current Flows, and Proposed Land Uses Based on Zoning and Subdivision Approvals or Partial Approvals Granted as of 6/1/99.

	Existing Land Use (from DALIS)	Future Land Use* (from DCRPC)
Townships Residential (# DU)	8,491	19,943
Comm./Indu. (Acres)	779.1	2,540.60
Columbus/ Residential (# DU)	1,028	
Westerville Comm./Indu. (Acres)	266.32	2097.16**
Water Uses	4.824 mgd	13.4284 mgd

Note: *, Pipeline Land Use

Note: **, Total Acreage of Columbus and Westerville within Serwer Service Area

Note: Those figures are not including Zone M (Future Sewer Service Area).

	Remainder Total Water Uses	Overall Residual Density
East Side (total 10.0 mgd)	1.581 mgd	0.36 du/ac
West Side (total 6.0 mgd)	1.123 mgd	0.925 du/ac

East Alum Creek Lift Station

Zone A

Total Acreage: 934.79 Acres

Existing Pump Capacity: 0.504 mgd (50% full: 0.252 mgd currently used)

Pipe Capacity: 4.00 mgd

Used Capacity within Zone A: 0.252 mgd

Potential Developable Area (Agri. Land Use): 363.0 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	21 (9)*					68	89 (77)*
Multi-F. (# of HU)							
Commercial (Acres)	104.03		61.56		73.32	156.45	395.36
Industrial (Acres)			9.99		24.33		34.32
Total # of HU	21 (9)*					68	89 (77)*
Total Acreage	104.03		71.55		97.65	156.45	429.68

Note: (##)* - # of lots inside Subdivisions

Existing Commercial Water Uses for Zone A: 0.252 mg/day

Commercial Reserve Water Uses for Zone A: 0.516 mgd (= 429.68 ac * 1,200 gal/ac/day)

Total Reserve Water Uses for Zone A: 0.5445 mgd (= 0.516 mgd + 77 du * 375 gd)

Cheshire Lift Station**Zone B**

Total Acreage: 2,550.42 Acres
Existing Pump Capacity: 0.576 mgd (80% full: 0.461 mgd currently used)
Pipe Capacity: 2.351 mgd
Used Capacity within Zone B: 0.2088 mgd (= 0.461 - 0.252 mgd (from Zone A))

Potential Developable Area (Agri. Land Use): 2,215.33 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	177 (123)*	56	30	76	2	237	578 (524)*
Multi-F. (# of HU)							
Commercial (Acres)	4.73		9.47		26.54		40.74
Industrial (Acres)					1.7		1.7
Total # of HU	177 (123)*	56	30	76	2	237	578 (524)*
Acreage	4.73		9.47		28.24	0	42.44

Note: (##)* - # of lots inside Subdivisions

Reserve Water Uses for Zone B: 0.247 mgd (= 524 DU * 375 gal/du + (42.44 ac * 1,200 gal/ac))

Total Reserve Water Uses for Zone A and B: 0.792 mgd (= 0.5445 mgd (Zone A) + 0.247 mgd (Zone B))

Peachblow Lift Station**Zone C**

Total Acreage: 2,254.28 Acres
Existing Pump Capacity: 0.72 mgd (110% full: 0.792 mgd currently used)
Pipe Capacity: 3.58 mgd
Used Capacity within Zone B: 0.3312 mgd

Potential Developable Area (Agri. Land Use): 1,827.98 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	203 (157)*	58	120	256	61		698 (652)*
Multi-F. (# of HU)							
Commercial (Acres)	15.51						15.51
Industrial (Acres)							0
Total # of HU	203 (157)*	58	120	256	61	0	698 (652)*
Acreage	15.51		0		0	0	15.51

Note: (##)* - # of lots inside Subdivisions
Public Building - one school existed

Reserve Water Uses for Zone C: 0.301 mgd (= 652 du * 375 gal/du + (15.51 ac * 1,200 gal/ac) + school)

Total Reserve Water Uses for Zone A, B and C: 1.093 mgd (= 0.5445 mgd (Zone A) + 0.247 (Zone B) + 0.301 (Zone C))

Alum Creek Lift Station**Zone D****Total Acreage: 14,727.11 Acres**

in Townships: 12,022.26 acres

in Columbus: 1,583.69 acres

in Westerville: 1,121.16 acres

Existing Pump Capacity: 4.32 mgd**Pipe Capacity: 32.246 mgd****Used Capacity within Zone D: approx. 2.2 mgd****Potential Developable Area (Agri. Land Use): in Townships - 6,438.83 Acres**

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	3,254 (2,871)*	1,135	766	1,609	1,175		7,939 (7,556)*
Multi-F. (# of HU)	905				112	248	1,265
Commercial (Acres)	53.32		82.92		82.5		218.74
Industrial (Acres)	39.15		14.29		36.4	86.21	176.05
Total # of HU	4,159 (3,776)*	1135	766	1609	1287	248	9,204 (8,821)*
Acreage	92.47		97.21		118.9	86.21	394.79

Note: (##)* - # of lots inside Subdivisions**Public Building** - three schools existed

Those figures are not including City of Columbus and Westerville.

Total Reserve Water Uses for Zone D:**6.4104 mgd**

in Townships: 3.894 mgd

(= 8,821 du * 375 gal/day + (394.79 ac * 1,200 gal/ac) + 3 schools)

in Columbus: 1.9004 mgd

(= 1,583.69 ac * 1,200 gal/ac)

in Westerville: 0.616 mgd

(= 513.47 ac * 1,200 gal/ac)

(Designed) Optimal Pump Capacity for Zone A, B, C, D and E:**10.0 mgd****Total Reserve Water Uses for Zone A, B, C, D and E:****8.419 mgd**

(= 0.5445 mgd (Zone A) + 0.247 (B) + 0.301 (C) + 6.4104 (D) + 0.916 (E)

Remainder Total Water Uses for Zone A, B, C, D and E:**1.581 mgd**

(= 10.0 mgd - 8.419 mgd)

Future Developable # of Residential Lots:

4,216 du

(= 1.581 mgd / 375 gd/du)

Total Potential Developable Area (Agri. Land Use) in Zone A, B, C, D and E:**11,622.39 ac****Overall Residual Residential Density for Zone A, B, C, D and E:****0.36 du/ac**

(= 4,216 du / 11,622.39 ac)

Maxtown Lift Station**Zone E**

Total Acreage: 2,382 Acres
 Existing Pump Capacity: 1.728 mgd
 Pipe Capacity: 3.830 mgd
 Used Capacity within Zone E:

Potential Developable Area (Agri. Land Use): 777.25 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	553 (472)*	338	216	997	388		2,492 (2,411)*
Multi-F. (# of HU)							
Commercial (Acres)	0.93		3.14		0.44		4.51
Industrial (Acres)	5.13						5.13
Total # of HU	553 (472)*	338	216	997	388	0	2,492 (2,411)*
Acreage	6.06		3.14		0.44	0	9.64

Note: (##)* - # of lots inside Subdivisions
 Assumption: 3.83 mgd Pipe Capacity will not be upgraded.

Reserve Water Uses for Zone E: 0.916 mgd (= 2411 du * 375 gal/du + (9.64 ac * 1,200 gal/ac))

Orange Road Lift Station**Zone F**

Total Acreage: 340.49 Acres
 Existing Pump Capacity: 0.432 mgd
 Pipe Capacity: 1.218 mgd
 Used Capacity within Zone F:

Potential Developable Area (Agri. Land Use): 74.665 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	3 (0)*		3	16			22 (19)*
Multi-F. (# of HU)	76						76
Commercial (Acres)	29.29		29.8		31.44		90.53
Industrial (Acres)	53.18		104.11		0.11		157.4
Total # of HU	79 (76)*	0	3	16	0	0	98 (95)*
Acreage	82.47		133.91		31.55	0	247.93

Note: (##)* - # of lots inside Subdivisions

Reserve Water Uses for Zone F: 0.333 mgd (= 95 du * 375 gal/du + (247.93 ac * 1,200 gal/ac))

Hidden Ravines Lift Station**Zone G**

Total Acreage: 225.64 Acres
Existing Pump Capacity: 0.72 mgd
Pipe Capacity: 2.128 mgd
Used Capacity within Zone G:

Potential Developable Area (Agri. Land Use): 39.55 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)		2	3	138			143
Multi-F. (# of HU)	510			140	302		952
Commercial (Acres)	9.49		117.08	60.02	35.35		221.94
Industrial (Acres)	1.12		9.98		14.7		25.8
Total # of HU	510	2	3	278	302	0	1,095
Acreage	10.61		127.06	60.02	50.05	0	247.74

Reserve Water Uses for Zone G: 0.708 mgd (= 1095 du * 375 gal/du + (247.74 ac * 1,200 gal/ac))

Olentangy Environmental Control Center**Zone H**

Total Acreage: 3,981.19 Acres
Existing Pump Capacity: 6.0 mgd
Pipe Capacity: 31.125 mgd
Used Capacity within Zone H:

Potential Developable Area (Agri. Land Use): in Townships - 1,314.33 Acres
in Powell - 9.56 Acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	1,868 (1,757)*	79	454	80		85	2,564 (2,453)*
Multi-F. (# of HU)							
Commercial (Acres)	121.98		149.21	26.68	62.69	37.94	398.50
Industrial (Acres)	158.14		57.76		37.41		253.31
Total # of HU	1,868 (1,757)*	79	454	80	0	85	2,564 (2,453)*
Acreage	280.12		206.97		100.1	37.94	625.13

Note: (##)* - # of lots inside Subdivisions

(Designed) Optimal Pump Capacity for Zone F, G, H, I, J, K and L: 6.0 mgd

Total Reserve Water Uses for Zone H: 1.67 mgd (= 2,453 du * 375 gd + (625.13 ac * 1,200 gd/ac))

Total Reserve Water Uses for Zone F, G, H, I, J, K and L: 4.877 mgd
(= 0.333 mgd(Zone F) + 0.708 (G) + 1.67 (H) + 0.109 (I) + 1.265 (J) + 0.775 (K) + 0.017 (L))

Remainder Total Water Uses for Zone F, G, H, I, J, K and L: 1.123 mgd (= 6.0 mgd - 4.877 mgd)

Future Developable # of Residential Lots: 2,995 du (= 1.123 mgd / 375 gd/du)

Total Potential Developable Area (Agri. Land Use) in Zone F, G, H, I, J, K and L: 3,237.445 ac

In Townships: 2,932.395 ac

In Village of Powell: 305.05 ac

Overall Residual Residential Density for Zone F, G, H, I, J, K and L: 0.925 du/ac (= 2,995 du / 3,237.445 a)
(This figure is not including Future Service Area (Zone M))

Wingate Farms Lift Station**Zone I**

Total Acreage: 696.77 Acres
Existing Pump Capacity: 0.432 mgd
Pipe Capacity: 1.080 mgd
Used Capacity within Zone I:

Potential Developable Area (Agri. Land Use): 528.02 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	229 (224)*	22	12	32			295 (290)*
Multi-F. (# of HU)							-
Commercial (Acres)							-
Industrial (Acres)							0
Total # of HU	229 (224)*	22	12	32	0	0	295 (290)*
Acreage	0		0		0	0	-

Note: (##)* - # of lots inside Subdivisions

Reserve Water Uses for Zone I: 0.109 mgd (= 290 du * 375 gal/du)

Liberty Hills Lift Station**Zone J**

Total Acreage: 1,930.94 Acres
Existing Pump Capacity: 1.224 mgd
Pipe Capacity: 4.857 mgd
Used Capacity within Zone J:

Potential Developable Area (Agri. Land Use):
in Townships - 381.78 Acres
in Powell - 295.49 Acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	1,140 (1,096)*	11	468	139	34		1,792 (1,748)*
Multi-F. (# of HU)	347					272	619
Commercial (Acres)	90.62		133.52		29.79	49.2	303.13
Industrial (Acres)	23.85		1.13			14.1	39.08
Total # of HU	1,487 (1,443)*	11	468	139	34	272	2,411 (2,277)*
Acreage	114.47		134.65		29.79	63.3	342.21

Note: (##)* - # of lots inside Subdivisions

Reserve Water Uses for Zone J: 1.265 mgd (= 2277 du * 375 gal/du + 342.21 ac * 1200 gal/ac)

Future Sewer Service Area

Zone M

Total Acreage: 24,264.77 Acres
Existing Pump Capacity:
Pipe Capacity:
Used Capacity within Zone M:

Potential Developable Area (Agri. Land Use): 20,408.01 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	1,437 (817)*	10	19	1,744	322		3,532 (2,912)*
Multi-F. (# of HU)	173			154			327
Commercial (Acres)	445.92		154.38	67.03	108.28	10.84	786.45
Industrial (Acres)	104.58		46.27		236.43		387.28
Total # of HU	1,610 (990)*	10	19	1898	322	0	3,859 (3,239)*
Acreage	550.5		200.65		344.71	10.84	1,106.70
Note: (##)* - # of lots inside Subdivisions							
Public Building - five schools existed							

Leather Lips Lift Station**Zone K**

Total Acreage: 1,681.90 Acres
Existing Pump Capacity: 1.728 mgd
Pipe Capacity: 7.734 mgd
Used Capacity within Zone K:

Potential Developable Area (Agri. Land Use): 401.89 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	476 (470)*	220	195	24	16	89	1,020 (1,014)*
Multi-F. (# of HU)	460						460
Commercial (Acres)	68.85		102.75	5.05	8.88		185.53
Industrial (Acres)							0
Total # of HU	936 (930)*	220	195	24	16	89	1,480 (1,474)*
Acreage	68.85		102.75		8.88	0	185.53

Note: (##)* - # of lots inside Subdivisions

Reserve Water Uses for Zone K: 0.775 mgd (= 1474 du * 375 gal/du + 185.53 ac * 1200 gal/ac)

Seldom Seen Lift Station**Zone L**

Total Acreage: 204.95 Acres
Existing Pump Capacity: 0.259 mgd
Pipe Capacity: 0.775 mgd
Used Capacity within Zone L:

Potential Developable Area (Agri. Land Use): 192.16 acres

	Existing Land Use (from DALIS)	Under Construction	Vacant Land (Recorded)	Active Subdivision	Zoned Area (Not Platted)	Active Zoning Request	Total
Single-F. (# of Lots)	50 (42)*		4				54 (46)*
Multi-F. (# of HU)							-
Commercial (Acres)							-
Industrial (Acres)							0
Total # of HU	50 (42)*	0	4	0	0	0	54 (46)*
Acreage	0		0		0	0	-

Note: (##)* - # of lots inside Subdivisions

Reserve Water Uses for Zone L: 0.017 mgd (= 46 du * 375 gal/du)

Appendix E

Delaware County Sewer Drainage Areas

By DCRPC Staff

Drainage area	Acres
Berlin & Berkshire (Areas A, B, C)	5,739
Area D; subareas	
5	2811.95
6	719.66
7	1087.78
16	137.80
17	352.37
18	443.61
19	423.21
20	299.47
26	804.00
27	271.99
28	781.49
29	1525.43
30	590.00
31	449.31
33	159.65
Totals Area D	10,857.72 ac.
Area E; subareas	
8	1,370.38
9	230.97
10	780.91
Totals Area E	2,382.26 ac
Area F; subareas	
11	299.81
12	196.36
13	491.55
14	699.42
15	734.53
Totals area F	2421.67 ac
Area G minus Columbus contract	2,876.93 ac- 1571= 1305.93

Area H (Orange Point)	340.48 ac.
Area I	225.63 ac.
Area J; subareas	
35 (Green Meadows Ind. Pk)	300.80
36	260.33
37	160.69
Totals area J	721.82 ac
Subtotals	
Area P; subareas	
34	562.09
40	17,635.06
69	6533.14
Totals Area P	24,730.29 ac
Westerville contract	513 ac
Columbus contract area (from Area G)	1571 ac

Appendix F

NRPA Recreational Standards

Excerpted from The Subdivision and Site Plan Handbook/ David Listokin and Carole Walker, copyright 1989, Rutgers, State University of New Jersey, Center for Urban Policy Research, New Brunswick, New Jersey.

EXHIBIT 3-3

NRPA RECOMMENDED STANDARDS FOR LOCAL DEVELOPED OPEN SPACE

This classification system is intended to serve as a *guide* to planning—not as an absolute blueprint. Sometimes more than one component may occur within the same site (but not on the same parcel of land), particularly with respect to special uses within a regional park. Planners of park and recreation systems should be careful to provide adequate land for each functional component when this occurs.

NRPA suggests that a park system, at a minimum, be composed of a "core" system of parklands, with a total of 6.25 to 10.5 acres of developed open space per 1,000 population. The size and amount of "adjunct" parklands will vary from community to community, but *must* be taken into account when considering a total, well-rounded system of parks and recreation areas.

<i>Component</i>	<i>Use</i>	<i>Service Area</i>	<i>Desirable Size</i>	<i>Acres/1,000 Population</i>	<i>Desirable Site Characteristics</i>
LOCAL/CLOSE-TO-HOME SPACE					
MINI-PARK	Specialized facilities that serve a concentrated or limited population or specific group such as tots or senior citizens.	Less than 1/4 mile radius	1 acre or less	0.25 to 0.5A	Within neighborhoods and in close proximity to apartment complexes, townhouse developments, or housing for the elderly.
NEIGHBORHOOD PARK/ PLAYGROUND	Area for intense recreational activities, such as field games, crafts, playground apparatus area, skating, picnicking, wading pools, etc.	1/4 to 1/2 mile radius to serve a population up to 5,000 (a neighborhood).	15+ acres	1.0 to 2.0A	Suited for intense development. Easily accessible to neighborhood population—geographically centered with safe walking and bike access. May be developed as a school-park facility.
COMMUNITY PARK	Area of diverse environmental quality. May include areas suited for intense recreational facilities, such as athletic complexes, large swimming pools. May be an area of natural quality for outdoor recreation, such as walking, viewing, sitting, picnicking. May be any combination of the above, depending upon site suitability and community need.	Several neighborhoods. 1 to 2 mile radius.	25+ acres	5.0 to 8.0A	May include natural features, such as water bodies, and areas suited for intense development. Easily accessible to neighborhood served.

TOTAL CLOSE-TO-HOME SPACE = 6.25–10.5 A/1,000

Source: National Recreation and Park Association, *Recreation, Park and Open Space Standards and Guidelines*, p. 56. Copyright © 1983 by the National Recreation and Park Association, 3101 Park Center Drive, Alexandria, Virginia 22302.

ACTIVITY/ FACILITY	RECOMMENDED SPACE REQUIREMENTS	RECOMMENDED SIZE AND DIMENSIONS	RECOMMENDED ORIENTATION	NO.OF UNITS PER POPULATION	SERVICE RADIUS	LOCATION NOTES
Badminton	1620 sq. ft.	Singles – 17' x 44' Doubles – 20' x 44' with 5' unobstructed area on all sides	Long axis north-south	1 per 5000	¼-½ mile	Usually in school, rec- reation center, or church facility. Safe walking or bike access.
Basketball 1. Youth 2. High School 3. Collegiate	2400-3036 sq. ft. 5040-7280 sq. ft. 5600-7980 sq. ft.	46'-50' x 84' 50' x 84' 50 x 94' with 5' unobstructed space on all sides	Long axis north-south	1 per 5000	¼-½ mile	Same as badminton. Outdoor courts in neighborhood and com- munity parks, plus active recreation areas in other park settings.
Handball (3-4 wall)	800 sq. ft. for 4-wall, 1000 for 3-wall	20' x 40' – Minimum of 10' to rear of 3-wall court. Minimum 20' overhead clearance.	Long axis north-south. Front wall at north end.	1 per 20,000	15-30 minute travel time	4-wall usually indoor as part of multi-purpose facility. 3-wall usually outdoor in park or school setting.
Ice Hockey	22,000 sq. ft. including support area.	Rink 85' x 200' (minimum 85' x 185'). Additional 5000 sq. ft. support area.	Long axis north-south if outdoor	Indoor—1 per 100,000. Outdoor—depends on climate.	½-1 hour travel time	Climate important consideration affecting no. of units. Best as part of multi-purpose facility.
Tennis	Minimum of 7,200 sq. ft. single court. (2 acres for complex.)	36' x 78'. 12' clearance on both sides, 21' clearance on both ends.	Long axis north-south.	1 court per 2000.	¼-½ mile	Best in batteries of 2-4. Located in neighbor- hood/community park or adjacent to school site.
Volleyball	Minimum of 4,000 sq. ft.	30' x 60'. Minimum 6' clearance on all sides.	Long axis north-south	1 court per 5000.	¼-½ mile	Same as other court activities (e.g., bad- minton, basketball, etc.)
Baseball 1. Official 2. Little League	3.0-3.85 A minimum 1.2 A minimum	<ul style="list-style-type: none"> • Baselines—90' Pitching distance— 60 ½' Foul lines—min. 320' Center field—400'+ • Baselines—60' Pitching distance—46' Foul lines—200' Center field—200'- 250' 	Locate home plate so pitcher throwing across sun and batter not facing it. Line from home plate through pitcher's mound run east-north-east.	1 per 5000 Lighted—1 per 30,000	¼-½ mile	Part of neighborhood complex. Lighted fields part of com- munity complex.
Field Hockey	Minimum 1.5A	180' x 300' with a minimum of 10' clearance on all sides.	Fall season—long axis northwest to southeast. For longer periods, north to south.	1 per 20,000	15-30 minutes travel time	Usually part of base- ball, football, soccer complex in community park or adjacent to high school.

ACTIVITY/ FACILITY	RECOMMENDED SPACE REQUIREMENTS	RECOMMENDED SIZE AND DIMENSIONS	RECOMMENDED ORIENTATION	NO. OF UNITS PER POPULATION	SERVICE RADIUS	LOCATION NOTES
Football	Minimum 1.5A	160' x 360' with a minimum of 6' clearance on all sides.	Same as field hockey.	1 per 20,000	15-30 minutes travel time	Same as field hockey.
Soccer	1.7 to 2.1A	195' to 225' x 330' to 360' with a 10' minimum clearance on all sides.	Same as field hockey.	1 per 10,000	1-2 miles	Number of units depends on popularity. Youth soccer on smaller fields adjacent to schools or neighborhood parks.
Golf—Driving Range	13.5A for minimum of 25 tees	900' x 690' wide. Add 12' width for each additional tee.	Long axis south-west-northeast with golfer driving toward northeast.	1 per 50,000	30 minutes travel time	Part of golf course complex. As a separate unit, may be privately operated.
¼ Mile Running Track	4.3A	Overall width—276' length—600.02' Track width for 8 to 4 lanes is 32'.	Long axis in sector from north to south to north-west-south-east with finish line at northerly end.	1 per 20,000	15-30 minutes travel time	Usually part of high school, or in community park complex in combination with football, soccer, etc.
Softball	1.5 to 2.0A	Baselines—60' Pitching distance—46' min. 40'—women. Fast pitch field radius from plate—225' between foul lines. Slow pitch—275' (men) 250' (women)	Same as baseball.	1 per 5,000 (if also used for youth baseball)	¼-½ mile	Slight difference in dimensions for 16" slow pitch. May also be used for youth baseball.
Multiple Recreation Court (basketball, volleyball, tennis)	9,840 sq. ft.	120' x 80'	Long axis of courts with primary use is north-south.	1 per 10,000	1-2 miles.	
Trails	N/A	Well defined head maximum 10' width, maximum average grade 5% not to exceed 15%. Capacity rural trails—40 hikers/day/mile. Urban trails—90 hikers/day/mile.	N/A	1 system per region	N/A	
Archery Range	Minimum 0.65A	300' length x minimum 10' wide between targets. Roped clear space on sides of range minimum of 30', clear space behind targets minimum of 90' x 45' with bunker.	Archer facing north + or - 45°.	1 per 50,000	30 minutes travel time	Part of a regional/metro park complex.
Combination Skeet and Trap Field (8 station)	Minimum 30A	All walks and structures occur within an area approximately 130' wide by 115' deep. Minimum cleared area is contained within two superimposed segments with 100-yard radii (4 acres). Shot-fall danger zone is contained within two superimposed segments with 300-yard radii (36 acres).	Center line of length runs northeast-south-west with shooter facing northeast.	1 per 50,000	30 minutes travel time	Part of a regional/metro park complex.
Golf 1. Par 3 (18-Hole) 2. 9-hole standard 3. 18-hole standard	• 50-60A • Minimum 50A • Minimum 110A	• Average length—vary 600-2700 yards • Average length—2250 yards • Average length—6500 yards	Majority of holes on north-south axis.	• 1/25,000 • 1/50,000	½ to 1 hour travel time	• 9-hole course can accommodate 350 people/day. • 18-hole course can accommodate 500-550 people a day. Course may be located in community or district park, but should not be over 20 miles from population center.
Swimming Pools	Varies on size of pool and amenities. Usually ½ to 2A site.	Teaching—minimum of 25 yards x 45' even depth of 3 to 4 feet. Competitive—minimum of 25m x 16m. Minimum of 27 square feet of water surface per swimmer. Ratios of 2:1 deck vs. water.	None—although care must be taken in siting of lifeguard stations in relation to afternoon sun.	1 per 20,000 (Pools should accommodate 3 to 5% of total population at a time.)	15 to 30 minutes travel time	Pools for general community use should be planned for teaching, competitive, and recreational purposes with enough depth (3.4m) to accommodate 1m and 3m diving boards. Located in community park or school site.
Beach Areas	N/A	Beach area should have 50 sq. ft. of land and 50 sq. ft. of water per user. Turnover rate is 3. There should be 3-4A supporting land per A of beach.	N/A	N/A	N/A	Should have sand bottom with slope a maximum of 5% (flat preferable). Boating areas completely segregated from swimming areas.

Appendix G

Model Planned Residential Development Resolution

Philip C. Laurien, AICP

Legislative Intent of the Planned Residential Development District (PRD)

The Township has determined that its rural character is critical to its community character. In order to preserve the character and environment of the Township, to avoid congestion on its narrow roads, and to preserve natural open space, the Township Zoning Commission and Trustees have hereby provided for a Planned Residential Development district.

In a PRD, house lots are clustered, village-like, in the most environmentally appropriate portion of a tract, adjacent to permanently preserved open space. The development rights to the preserved open space are permanently and irrevocably transferred to the village lots. The open space is protected by permanent deed restrictions, plat restrictions and open space easements. The land that transfers its development rights to the PRD may be retained outside of the PRD.

The PRD is intended to be density neutral, meaning that the overall density, or number of house lots on the gross tract is approximately the same as it would be if it had been converted to lots in the underlying district.

Purpose

The purpose of the Planned Residential District is:

- a.) To permanently preserve natural topography and trees.
- b.) To encourage a less sprawling form of community development that makes more efficient use of land, requires shorter networks of streets and utilities and which fosters more economical development and less consumption of rural land.
- c.) To use permanent open space as the development's centerpiece. To provide open space and recreation in close proximity to dwelling units. To link open space to existing or proposed roads, bike paths or sidewalks.
- d.) To encourage creativity in design through a controlled process of review and approval of particular plans.

PLANNED RESIDENTIAL DISTRICT (PRD)

Section 11.01 - Definitions

- a.) **Open space development**- land that is designed and developed as a residential unit with open space as an integral characteristic. Instead of subdividing an entire tract into house lots of conventional size, the same number of housing lots may be clustered on a reduced amount of acreage. The remaining land in the tract, or on an adjacent tract, is reserved for permanent open space area.
- b.) **Net Developable area**- determined by deducting 15% of the subdivision's gross acreage for streets and utilities plus all otherwise unbuildable areas, as follows:
 - 1.) Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss. Jurisdictional wetlands as regulated by Section 404 of the Clean Water Act consist of a.) hydric soils, b.) hydrophytic vegetation and c.) wetland hydrology (this generally means they support more than 50% wetland vegetation, and are poorly drained soils which are periodically inundated or saturated).
 - 2.) floodplains – areas that lie within a FEMA 100-year floodplain, either with in elevations determined by FEMA or mapped by FEMA.
 - 3.) slopes greater than 20%, including ravines shown to be critical resource areas on the Delaware County Regional Planning Commission Comprehensive Land Use Plan.
 - 4.) utilities rights-of-way and easements for aboveground and currently existing utility structures such as above ground pipelines, and overhead electric transmission (not local service) wires that exist prior to the PRD application.
 - 5.) existing bodies of water.
- c.) **Permitted density**- The permitted density is the number of dwelling units in the development. Such number shall be determined by dividing the net developable area by the conventional lot size for the zoning district being overlaid. If the proposed open space development is located in more than one zoning district, then the total number of dwelling units allowed within the tract shall be the sum of those allowed for the portion of land lying within each zoning district.

If land is dedicated to public use as part of the PRD development plan, and such dedicated tract will house public buildings (such as a school, fire station, police station, public recreational facility, township hall) that are approved by the Zoning Commission, and if the public buildings occupy less than 30 % of the tract so dedicated, the full land area of the tract dedicated to a public use may be included in the net developable area for density calculations.

If the buildings on the public dedication tract comprise more than 30% of the land area of the dedicated tract, the amount of acreage in excess of 30% lot coverage of the

dedicated tract shall be subtracted from the net developable area and reduce overall allowable project density.

- d.) **Open space-** land that shall not be built upon and may be classified as either “common” or “natural” open space, or a combination of both. It does not include the areas of individual fee simple lots conveyed to homeowners. Open space land may either be owned by the homeowner’s association, or may be owned by a third party if protected by an open space easement which permanently and irrevocably transfers the development rights from the open space land to the homeowner’s association of the PRD.
 - 1.) Common area- open space set-aside for passive or active recreational purposes. These areas may contain accessory buildings and improvements necessary and appropriate for recreational uses. If deemed appropriate by the zoning commission, common area may incorporate land for on site wastewater disposal.
 - 2.) Natural area- land set-aside in its natural condition for the benefit of the residents of the PRD. Typical natural conditions might be, but are not limited to ravines, wetlands, floodplains, woods, scenic views, or appropriate agriculture.
- e.) **Open space easement-** a recorded legal instrument, which permanently and irrevocably transfers all development rights, other than for approved open space uses, to the PRD to be controlled by the Home Owner’s Association. The easement shall be tied to the title of the land regardless of the subsequent ownership of the land.
- f.) **Home Owner’s Association-** A private non-profit corporation, association or other non-profit entity established by the developer to maintain such open space and facilities as may be dedicated to subdivision residents. Membership in such an association shall be mandatory for property owners and made a required covenant in any deed issued. It shall provide voting and use rights in the open space areas when applicable and may charge dues to cover expenses, which may include tax liabilities of common areas, recreational or utility facilities. Articles of association or incorporation must be recorded pursuant to subdivision plat approval.
- g.) **Single family dwellings-** detached, individual dwelling units, which accommodate one family related by blood or marriage or up to five unrelated individuals living as one housekeeping unit. The type of construction of such units shall conform any of the following:
 - 1.) The CABO One and Two family dwelling code.
 - 2.) Be classified as an Industrialized Unit inspected by the State of Ohio
 - 3.) Be classified as a “permanently sited manufactured home” as defined in section 3781.06 of the Ohio Revised Code. *

Section 11.02 - Initial Discussions

The applicant is encouraged to engage in informal consultations with the Zoning Commission and the Delaware County Regional Planning Commission prior to formal submission of a development plan and application to amend the zoning map.

No statement by officials of the Township or the DCRPC shall be binding upon either at the concept stage.

In addition to any other procedures set out in this Resolution, all applications for amendments to the zoning map to rezone lands to this PRD district shall follow the procedures herein.

Section 11.03 - Location of Planned Residential Developments

Planned Residential Development zoning may be overlaid on the FR-1 and the R-2 zones pursuant to a zoning map amendment approved by the township.

Section 11.04- Permitted Uses

- 1.) Single Family detached residential dwelling units in FR-1 and R-2 PRDs; single family attached dwellings (condominiums separated by vertical firewalls) in R-2 PRDs.
- 2.) Common Area- upon approval of the final development plan by the township, the following uses and improvements may be permitted in the common area:
 - a.) Outdoor recreation, such as golf, swimming, tennis, skating and other forms of predominantly outdoor recreation, except shooting ranges. If the common areas are intended for spectator events, they shall be so stated and approved as part of the development plan. If outdoor recreation areas are intended to be used as a profit basis as a private, commercial venture they shall be so stated and approved as part of the development plan.
 - b.) Accessory service buildings and structures incidental and pertinent to outdoor recreation, as set forth in paragraph a.) above, where said accessory service buildings and structures are necessary to the pursuit of a permitted recreational use on the premise.
- 3.) Natural Area- restricted to passive recreational uses such as fishing, swimming, hiking, canoeing, and such other recreation that does not alter any of the natural features of the area. Agriculture may also be used as natural open space, provided it does not permit hog operations, poultry barn, fur bearing farms or feed lots. Accessory buildings should be discouraged in the natural area.
- 4.) A convenience store without fuel sales according to NAICS (Executive Office of the President of the United States industry classification manual) number 445120; provided it does not exceed .5% of the total residential square footage to be constructed, and it is located within the tract, but front on a major arterial street adjacent to the PRD. For example, if there were 100 houses, each with a square footage of 2000 square feet, the general or convenience store could be provided up to 1000 square feet. The Township may regulate the architecture, and site plan of such store in the final development plan.

Section 11.05 - Design Features Required of a PRD

The development plan shall incorporate the following standards:

- a.) Open space shall be distributed throughout the development as part of a unified open space system, which shall serve to unify the development visually and functionally, and buffer surrounding land uses;
- b.) No building shall be constructed within 50 feet of the perimeter property line of the overall PRD tract;
- c.) The zoning commission may require walkways to connect all dwelling areas with open space and to interconnect the open spaces;

- d.) Moderate to thick coverage by trees and natural undergrowth is desirable to most intended functions of the open space. Where such foliage exists naturally, it should be retained where practicable. Where adequate foliage does not exist, the Zoning Commission may require establishment of such tree cover or other foliage as may be necessary to achieve the purpose of the open space and the buffer of adjacent uses;
- e.) Scenic areas and views shall be preserved to the maximum extent practicable, including views from the adjacent road;
- f.) Open spaces may be used for the natural disposal of storm water drainage. No features should be designed which are likely to cause erosion or flooding of the proposed or existing houses;
- g.) Minimum overall tract size for a PRD is 20 acres, unless adjacent to a neighborhood of comparable density or design, in which case the Zoning Commission may permit the tract size to be reduced to 10 acres;
- h.) Improvements within the PRD shall conform to the subdivision standards for Delaware County Ohio;
- i.) Wetlands, steep (over 20%) slopes, forests, 100 year floodplains, ravines and noted wildlife habitat are to be preserved to the greatest extent possible;
- j.) The permitted density shall not be exceeded.
- k.) The required percent of open space shall be provided. The percent of open space required varies according to the zoning district overlaid;

FR-1- 40% (of gross tract area) open space

R-2: - 20% (of gross tract area) open space

In calculating open space, the areas of fee simple lots conveyed to homeowners shall not be included. Unbuildable areas, as provided in 11.03 (b), may count for up to 50% of the required open space. That portion of land dedicated to public purposes (see section 11.03, c.) that remains either open and unbuilt upon by any structure (including parking) or which houses a recreational facility approved by the Zoning Commission on the Development Plan may count toward the open space requirement.

- l.) No residential dwelling structures shall be constructed within the 100-year floodplain of any stream or river.
- m.) In FR-1 zones, water supply and sanitary sewage disposal shall be as approved by the Delaware County Board of Health and/or the Ohio EPA. Feasibility shall be indicated by the appropriate agency at the time of the preliminary plan. In the R-2 zone, centralized water supply and sanitary sewage disposal systems shall be provided, subject to Delaware County Sanitary Engineer, Board of Health and Ohio Environmental Protection Agency approval. Feasibility of water supply and wastewater disposal systems shall be indicated by the appropriate agencies at the time of the preliminary plan.

- n.) The project architect shall give due regard to the footprints, building orientation, massing, roof shape, pitch and exterior materials to blend with other traditional or historic architecture in the community or with the site. All residential roofs must be a minimum of 5/12 pitch, or as approved by plan.
- o.) House lots shall be fenced for safety if they abut agriculture.
- p.) Sidewalks or paths shall be provided in the village area. Sidewalks shall be separated from the paved street surface by at least five feet (5') of landscaped or grassed green strip. Deciduous, broad leaf street trees (i.e. maple, oak, sycamore, chestnut, sweet gum) shall be planted (or saved) at the rate of one per 60 feet of frontage on both sides of the street. Trees must be at least a 2.5-inch caliper at planting. Trees may be placed in the 5 foot green strip if permitted by the county engineer and/or township trustees, otherwise they shall be placed in the front lawn of the residences.
- q.) Setbacks- Houses shall be setback a minimum of 50 feet from the village street centerline, or as approved per plan.
- r.) Minimum lot size-, none, per plan
- s.) Minimum Lot Width at the building line- none, per plan.
- t.) Minimum Side yards- Eight feet each side for houses, five feet from an attached garage to side lot line.
- u.) Detached garages with one hour fire rated construction may be constructed within three feet of the lot line provided the garage is located to the rear of the house, and that the garage does not abut an adjacent residence.
- v.) Minimum Rear yard- Fifty (50) feet for houses and attached garages, or as per plan.
- w.) Street layouts should be looped, grid, square or other traditional village layout. Cul-de-sacs should be avoided where street connections are possible.
- x.) Attached garages shall be setback at least 12 feet from the front building line of the house, if on street parking is not provided.
- y.) Porches- A covered porch or portico across some portion of the front of the house is a recommended structural design element.
- z.) Street lighting, if provided, must be of white light, with light standards of traditional or Victorian design (no modern gooseneck lamps or yellow lighting). Maximum height of standards is 16 feet.
- aa.) Building Height Limits - No buildings in this district shall exceed thirty-five (35) feet in height measured from the elevation of the threshold plate at the front door to the highest point of the roof. Chimneys, barns, silos, grain handling conveyors, church spires, domes, flag poles, and elevator shafts are exempted from the height regulation and may be erected to any safe height, not to exceed one-hundred (100) feet in height. No windmills, antennas, or towers shall be constructed to a height greater than the distance from the center of the base

thereof to the nearest property line of said tract and not to exceed one hundred (100) feet in height.

- bb.) Building Dimensions - (Floor space requirements) - Each detached single family dwelling hereafter erected in this district shall have a living area not less than one-thousand (1000) square feet or eight-hundred (800) square feet of ground floor living area, if the residence is multi-story. All such living areas shall be exclusive of basements, porches or garages.

All attached single family structures constructed within this district shall contain the following minimum living area:

One (1) bedroom unit-	800 square feet
Two (2) bedroom unit	900 square feet
Three or more bedroom units	1000 square feet

- cc.) Landscaping - All yards, front, side and rear, shall be landscaped, and all organized open spaces or non-residential use areas shall be landscaped and shall meet the requirements of article XXIII, unless a variation from these standards is specifically approved as part of the final development plan. A landscape plan showing the caliper, height, numbers, name and placement of all material, prepared by a licensed landscape architect shall be approved as a part of the final development plan.

- dd.) Parking - Off-street parking shall be provided, at the time of construction of the main structure or building, with adequate provisions for ingress and egress according to the development plan. In preparing and approving the parking plan, the provisions of Article XXI of this Resolution, when appropriate, shall be incorporated.

- ee.) Signs - Except as provided under the provisions of this article for home occupations or as controlled by Article XXII (Signs) of this Resolution and except as permitted by the Board of Zoning Appeals incidental to Conditional Uses, no signs shall be permitted in this district except a "For Sale" or "For Rent or Lease" sign advertising the tract on which the said sign is located. Such sign shall not exceed six (6) square feet in area on each side.

- ff.) The owner or developer of a subdivision or similar area, upon the conditions and for the time period established by the Zoning Commission, may erect one (1) sign not exceeding thirty-two (32) square feet in area per side advertising said subdivision, development or tract for sale.

- gg.) Exterior Lighting- All exterior lighting shall meet the lighting requirements of Article XXI of this zoning resolution, unless a variation from these standards is specifically approved as part of the final development plan.

- hh.) Other required provisions as stated in this ordinance. The Berlin Township Zoning Commission and/or Board of Trustees may impose special additional conditions relating to the development with regard to type and extent of public improvements to be installed, landscaping, development, improvement and maintenance of common open space, and any other pertinent development characteristics.

Section 11.06 - Required findings for Approval of a Planned Residential Development

The Zoning Commission and Trustees may approve a Planned Residential Development zoning overlay provided they find that the proposed use complies with all of the following requirements:

- 1.) That the proposed development is consistent in all aspects with the intent, and general standards of this zoning resolution.
- 2.) That the proposed development is in conformity with the comprehensive plan or portion thereof as it may apply.
- 3.) That the proposed development advances the general welfare of the township and the immediate vicinity.
- 4.) That the proposed plan meets all of the design features required in this resolution.
- 5.) That the proposed development is in keeping with the existing land use character and physical development potential of the area.
- 6.) That the proposed development will be compatible in appearance with the remainder of the district; and
- 7.) That the minimum open space as required herein has been provided.

Section 11.07- Application Procedure

An application for a PRD requires:

- Step 1. A change in the zoning map to show the PRD as an overlay zone. This includes a preliminary development plan. The change in the zoning map is considered a legislative amendment, and is subject to referendum by the citizens of the township.

A rezoning to another district may be submitted simultaneously with a PRD overlay application. For example, if a PRD/R-2 were desired for land zoned FR-1, a rezoning from FR-1 to R-2 would be filed with the application for PRD. No double fees would be charged. In order to receive the PRD at the higher density, both zonings would have to be approved.

- Step 2. The submission and approval of a final development plan. Unless simultaneously adopted as part of the zoning map change, the subsequent approval or disapproval of the final development plan is an administrative act by the Township, based on the PRD standards herein adopted, which is an administrative action, but is subject to the review and approval by the township for appropriateness.

Section 11.08 - Process for Amendment

Planned Residential Developments may be approved according to one of the following procedures:

- 1.) Simultaneous with the application for a PRD, the applicant shall schedule a walkabout on the site with the Zoning Commission to familiarize all parties with the lay of the land, and the general design intent of the applicant
- 2.) The applicant, being the owner of subject real estate, may apply for designation of the land as a PRD overlay. A preliminary development plan must be submitted with the application. If the application is approved, then the zoning map is amended to PRD

overlay, either FR-1/PRD or R-2 /PRD. (This is a legislative act and is subject to referendum).

- 3.) The applicant, being an owner of real estate, may apply for designation of the land as a PRD and simultaneously submit, along with the application for the zoning change, a final development plan acceptable to the township and in accordance with the final development plan standards set forth herein. (This is a legislative act and is subject to referendum).

Section 11.09 - Effect of Property Owner Initiated PRD Zoning Overlay On The Previous Zone.

Upon approval of the PRD district, all previous regulations shall no longer be in effect, and the regulations for the PRD shall prevail.

Section 11.10 - Accessory Uses

- 1.) Non-residential uses of a religious, cultural, educational or recreational nature or character to the extent that they are designed and intended to serve the residents of the Planned Residential District. Said facilities may be designed to serve adjoining neighborhoods or residents if they are located in such proximity to major thoroughfares as to permit access without burdening residential streets.
- 2.) Schools, if they occupy a lot of not less than 1 acre, with adequate area for indoor and outdoor recreation, and additional setbacks as may be necessary to avoid disruption to adjacent residences.
- 3.) Adult Family Homes as provided for and defined in ORC Chapter 3722
- 4.) Child Day Care provided in the provider's permanent residence for six or fewer children, who are not members of the immediate resident family, provided the day care is accessory to the use of the dwelling as a residence.
- 5.) Temporary structures such as mobile office and temporary buildings of a nonresidential character may be used incidental to construction work on the premises or on adjacent public projects or during a period while the permanent dwelling is being constructed. The user of said structure shall obtain a permit for such temporary use, which permit shall be valid for six (6) months and may be renewed not more than two (2) times. Renewal of the permit shall be at the discretion of the Zoning Inspector on finding of reasonable progress toward completion of the permanent structure or project. The Zoning Inspector may require provisions for sanitary waste disposal, solid waste disposal and water supply, as he/she deems necessary. The fees for such permit and renewals thereof shall be established by the Board of Township Trustees. Said temporary structure shall be removed no later than ten (10) days after expiration of said permit. No unit shall be occupied as a residence without approval of the Board of Zoning. Appeals as granted in compliance with the provisions of Article XXVIII of this Resolution.
- 6.) Conducting of casual sale of goods in what are commonly referred to as garage sales or yard sales provided that such sales shall not be conducted on more than six (6) days in any

calendar year or more than three (3) consecutive days. The sale and parking area shall be out of the road right-of-way so as not to interfere with traffic on adjacent thoroughfares.

7.) Home occupation, conducted by the resident of a permitted dwelling subject to the restrictions of the zoning resolution.

8.) Licensed Family Homes as provided for in ORC 5123.19 (k). All such facilities shall possess all approvals and/or licenses as required by state or local agencies.

Section 11.11- CONDITIONAL USES

A. Model Homes in Subdivisions, the same being defined as residential-type structures used as sales offices by builders/developers and to display the builder's/developer's product. The same may be furnished within, since its purpose is to display to prospective buyer the builder's/developer's features (such as exterior siding treatment, roofing materials, interior trim, moldings, floor coverings, etc.), in the environment of a completed home. Model homes may be staffed by the builder's/developer's sales force. Model homes shall be subject to the following restrictions:

1. Lighting: All exterior lighting, except for security lighting, must be down-lighting, so that no light shall be cast onto adjoining residential properties. All off-street parking areas must be illuminated. All exterior lighting, except for security lighting, shall be extinguished at the closing time of the model home.

2. Parking: All model homes shall provide off-street paved parking for the public. Such off-street paved parking shall be located as directed by the Board of Zoning Appeals. The number of required parking spaces shall be six (6) per model home. The driveway of the model home may be utilized for not more than two (2)-parking spaces.

3. Screening and Trash Receptacles: Landscape drawing shall be required and show adequate landscaping and screening from adjoining residential lots, together with the clear marking of the boundaries of the model home lot. Trash receptacles shall be provided around the model home for use by visitors to the home.

4. Termination of Use: The use of model homes within a residential subdivision, or within any single phase of a multi-phase subdivision, shall terminate when building permits have been issued for ninety percent (90%) of the lots.

5.) Model Home signs: Model home signs may be approved by the Board of Zoning Appeals provided the following conditions are met:

- a.) the sign shall not exceed 16 (sixteen) square feet per side with 32 (thirty two) square feet maximum total display area;
- b.) the overall height of the sign shall be no more than four (4) feet above grade.
- c.) model home sign shall be located on the same lot as the model home.

6.) If sign information is not presented at the time the development is submitted and approved, the applicant will apply for a conditional use permit to the Board of Zoning Appeals, which will rule on additional sign conditions.

Section 11.12 - PROHIBITED USES:

- A. No use not specifically authorized by the express terms of this article of the Zoning Resolution shall be permitted.
- B. Outdoor storage of inoperable, unlicensed, or unused vehicles or trailers, for a period exceeding fourteen (14) days is prohibited. Said vehicles if stored on the premises shall be enclosed within a building so as not to be visible from any adjoining property or public road.
- C. No trailer of any type, no boats, no motor homes nor equipment of any type shall be parked in front of the building line on any parcel within this district for more than twenty-four (24) hours in any ten (10) day period. If a dwelling is located on said lot, the building line shall be considered to be the front wall of the dwelling even if said dwelling is located behind the minimum building line established by this code or the restrictions on the plat or subdivision.
- D. No motor home, mobile home or camper of any type may be occupied by a guest of the resident/owner for more than fourteen (14) days. No more than one (1) motor home, trailer, or camper may be occupied for such a period on any lot or parcel.
- E. Except as specifically permitted in Section 11.03 g or approved in the approved development plan, no manufactured housing/mobile home shall be placed or occupied in this district.
- F. No trash, debris, unused property, or discarded materials which creates an eyesore, hazard or nuisance to the neighborhood or general public shall be permitted to accumulate on any lot or portion thereof.
- G. In subdivided areas that meet the requirements of section 711.131 of the Ohio Revised Code, the keeping of livestock and poultry is prohibited.
- H. Cellular telephone towers, if, upon notification of objection to the sighting of the cellular tower is met, per requirements of section 519.211 of the Ohio Revised Code (cellular towers would be prohibited).

Section 11.13 – DEVELOPMENT PLANS

- A. Preliminary Development Application – Upon application for a PRD District, the owner(s) of lots or land within the Township shall simultaneously submit a preliminary development plan. The preliminary development plan shall show the intended layout of the site in accordance with PRD standards.

Fifteen copies of the preliminary development plan shall be submitted to the Zoning Commission with the PRD application. The plan shall include in text and map form, the following:

- 1.) The proposed size and location of the PRD district, at a scale of at least 1" = 200', showing topographic contours of at least 5' intervals, wooded areas, wetlands, adjacent (within 200') structures, 100 year floodplains.
- 2.) Suggested architectural designs for all structures and signs.
- 3.) The intended general provisions for water, fire hydrants, sanitary sewer and surface drainage, to the extent known. Information regarding existing pipe sizes,

capacities, committed flows, and potential needed upgrades must be documented.

- 4.) The relationship of the proposed development to existing and probable uses of surrounding areas, including easements, rights of way, proposed drainage and public utilities.
- 5.) A design of the open space and proposed description of its use and maintenance.
- 6.) Specific statements of divergence from the development standards in this article.
- 7.) Proposed location of all structures
- 8.) Preliminary Traffic Impact Analysis, based upon new trip generation.
- 9.) The responsibility and maintenance of any proposed on site sewage disposal systems, and letter from the appropriate county or state agency declaring the site feasible for such design.
- 10.) All required design features from Section 11.08.
- 11.) Emergency service provisions (letter from Fire and Police departments).
- 12.) Phasing plans.

- B. Final Development Plan – The applicant shall submit fifteen (15) copies of the final development plan to the Zoning Commission with the application. The Zoning Commission shall be the review authority for the final development plan.

The review and approval of the Final Development Plan is an administrative, not legislative act, unless the final development plan is simultaneously submitted with application for the zoning change.

If, in the opinion of the Zoning Commission, there is substantial deviation from the approved preliminary development plan, the final development plan shall state the areas of divergence. The final development plan shall include in text and map form the following:

1. A survey plat and legal description signed by a registered Ohio surveyor showing the size and location of the proposed Planned Residential District.
2. The plan will be to scale of at least 1" = 100' and will show the proposed uses of the site, location of buildings and structures, streets and roadways, and parking areas, all required design features, and the following:
 - a. The general development character of the tract including the limitations or controls to be placed on all uses, with proposed lot sizes, minimum setback requirements. Other development features, including landscaping, entrance features, signage, pathways, sidewalks, recreational facilities and all commonly owned structures shall be shown in detail which identifies the quantity and type and typical section of each. For example, the landscape plan shall identify each plant, shrub or tree, its name, its size at planting and rendering of how that section of the development would look in elevation.

b. Environmentally sensitive areas such as the 100 year floodplain, wetlands, and slopes greater than 20% shall be mapped. No structure (other than approved drainage structures) shall be constructed within the limits of the 100-year floodplain as mapped by FEMA on the Flood Insurance Rate Maps for Delaware County.

c. Architectural design criteria including materials, colors and exact renderings for all structures and criteria for proposed signs, with proposed control procedures. These are specific renderings of the elevations of structures. Any modification of these structures shall require re-approval of the development plan by the Township. Materials and colors shall be submitted for approval.

d. The proposed provisions for water, fire hydrants, sanitary sewer and surface drainage with engineering feasibility studies or other evidence of reasonableness. Line sizes and locations, detention basins and drainage structures shall be drawn.

e. A traffic impact analysis by a competent traffic engineer, showing the proposed traffic patterns, public and private streets and other transportation facilities, including their relationship to existing conditions, topographical and otherwise.

f. The relationship of the proposed development to existing and probable uses of surrounding areas during the development timetable.

g. Location of schools, parks and other public facility sites, within or adjacent to the site.

h. The proposed time schedule for development of the site including streets, buildings, utilities and other facilities.

i. If the proposed timetable for development includes developing the land (including open space) in phases, all phases developed after the first, which in no event shall be less than five (5) acres or the whole tract (whichever is smaller), shall be fully described in textual form in a manner calculated to give township officials definitive guidelines for approval of future phases.

j. The ability of the applicant to carry forth this plan by control of the land and the engineering feasibility of the plan.

k. Specific statements of divergence from the development standards in Articles XXI (General Standards) XXII (Signs) AND/OR XXIII (Landscaping) or existing County Subdivision regulations or standards and the justification therefore, unless a variation from these development standards is specifically approved, the same shall be complied with. Since the Final Development Plan is an exact rendition of what is intended to be built, all standards for setback, landscaping parking and lot size are per plan.

l. Evidence of the applicant's ability to post a bond or an irrevocable letter of credit if the plan is approved assuring completion of public service facilities to be constructed within the project by the developer.

m. The development plan shall bear the seal of an architect, landscape architect, and professional engineer licensed to practice in the state of Ohio.

C. Effect of Final Development Plan Approval - The Final Development Plan as approved by the Township Zoning Commission shall be the subject of a subdivision plat to be approved by the Delaware County Regional Planning Commission if required by Ohio Revised Code. Where the land is to be developed in phases, plans for phases subsequent to the first phase shall be submitted in accordance with the timetable in the approved development.

D. Failure to Maintain-If the organization established to own and maintain the open space, or the owners of dwelling units within the PRD shall, for any reason, fail to maintain the open space in reasonable order and in accordance with the final development plan, the township trustees shall serve written notice upon such organization of the deficiencies and demand that corrective action be taken within 14 days.

If such maintenance shall not have been performed within 14 days, the Township, in order to preserve the taxable values of the properties within and adjacent to the PRD, may enter upon the open space and maintain it for a period of up to one year. Said entry shall not vest any rights in the public to use and enjoyment of the open space. The cost of such maintenance shall be assessed against the properties within the PRD in direct relation to their proportionate interest in the open space and shall become a tax lien on such properties.

E. Plat Required – If required by applicable law, no use shall be established or changed, and no structure shall be constructed or altered until the required subdivision plat has been prepared and recorded in accordance with the Subdivision Regulations for Delaware County, Ohio, and this Resolution. The subdivision plat and plan shall be in accordance with the approved development plan and shall include:

1. Site arrangement, including building setback lines and space to be built upon within the site; water, fire hydrants, sewer, all underground public utility installations, including sanitary sewers, surface drainage and waste disposal facilities; easements, access points to public right-of-way, parking areas and pedestrian ways; and land reserved for non-highway service use with indication of the nature of such use.
2. Deed restrictions, covenants, easements and encumbrances to be used to control the use, development and maintenance of the land, the improvements thereon, and the activities of occupants, including those applicable to areas within the tract to be developed for non-residential uses.
3. In the event that any public service facilities not to be otherwise guaranteed by a public utility have not been constructed prior to the recording of the plat, the owner of the project shall post a performance bond in favor of the appropriate public officers in a satisfactory amount ensuring expeditious completion of said facilities within one (1) year after the recording of said plat. In no event, however, shall any zoning certificate be issued for any building or use until such time that the facilities for the phase in which the building or use is located are completed.

F. Extension of Time or Modification of Final Development Plan

- a.) An extension of the time limit for either filing the required subdivision plat or recording the approved subdivision plat may be granted by the Zoning Commission without public hearing provided the Board finds that such an

extension is not in conflict with the public interest, that there is a legitimate purpose and necessity for such extension, and that the applicant shows evidence of a reasonable effort toward the accomplishment of the filing and/or recordation.

- b.) A request for minor changes to the final development plans may be approved by the Zoning Commission without being subject to the same procedures as the original application.
- c.) In the case of a request for a modification or amendment to the approved final development plan that represents a substantial departure from the intent of the original proposal, said modification or amendment shall be subject to the same procedure and conditions of final development plan approval as the original application. The following shall be considered substantial departures from the original application.
 - (i) A change in the use or character of the development
 - (ii) An increase in overall lot coverage of structures and off-street parking
 - (iii) An increase in the density
 - (iv) An increase in the problems of traffic circulation and public utilities;
 - (v) A reduction in approved open space;
 - (vi) A reduction of off street parking and loading space;
 - (vii) A reduction in required pavement widths;
 - (viii) A reduction of the acreage in the planned development;
 - (ix) Any other departure from the approved development plan which is deemed substantial by the Zoning Commission.

G. Administrative Review - All plats, construction drawings, restrictive covenants and other necessary documents shall be submitted to the Zoning Inspector, the Zoning Commission or their designated technical advisors for administrative review to ensure substantial compliance with the development plan as approved.

* Permanently Sited Manufactured Housing:

- a.) Must be constructed pursuant to the HUD Code (Manufactured Home Construction and Safety Standards Act, 42 U.S.C. §§ 5401) after January 1, 1995.
- b.) Be attached to a permanent frost-free foundation.
- d.) Must be connected to appropriate utilities.
- e.) Have a length of at least 22 feet and a width of at least 22 feet.
- f.) Have at least 900 square feet of living area.

- g.) Have conventional residential siding.
- h.) Have a minimum 6-inch eave overhang.
- i.) Have a minimum 3:12 "A" roof pitch.
- j.) Have removed its indicia of mobility (temporary axles, trailer tongue, running lights) upon placement upon its foundation.
- k.) Be intended to be assessed and taxed as permanent real estate, not personal property. The title for such structure shall be surrendered to the county Auditor upon its placement on its permanent foundation, and such surrender shall be notice to the Auditor to tax said structure as real estate from that day forward.
- l.) Meet all applicable zoning requirements (including square footage).

Appendix H

Permanently Sited Manufactured Housing Zoning Definitions

Philip C. Laurien, AICP

Proposed zoning amendments to incorporate the intent of SB 142 re permanently sited manufactured housing. Amend the definitions section with the following definitions.

I. Definitions-

Single family dwellings- detached, individual dwelling units, which accommodate one family related by blood, adoption, or marriage, or up to five unrelated individuals living as one housekeeping unit. The type of construction of such units shall conform either to the OBOA, or CABO One and Two family dwelling code, or other applicable building code, or be classified as an Industrialized Unit under the Ohio Basic Building Code, or conform to the Ohio Revised Code [ORC 303.212- counties; ORC 519.212-townships] definition of permanently-sited manufactured housing, as follows:

Permanently Sited Manufactured Housing must:

- a.) Be constructed pursuant to the HUD Code (Manufactured Housing Construction and Safety Standards Act of 1974, 88 stat.700, 42 U.S.C.A. 5401 and 5403) after January 1, 1995. It must also have a permanent label or tag attached to it as specified in 42 U.S.C.A 5415, certifying compliance with all federal construction and safety standards.
- b.) Be attached to a permanent foundation (defined in ORC 3781.06 as permanent masonry, concrete or locally approved footing or foundation).
- c.) Be connected to appropriate facilities (i.e. gas , water sewage disposal systems, electric, etc.).
- d.) Have a length of at least 22 feet and a width of at least 22 feet, as manufactured.
- e.) Have at least 900 square feet of living area, or whatever greater square footage is uniformly required by zoning.
- f.) Have conventional residential siding (i.e. lap, clapboard, shake, masonry, vertical natural materials), a 6-inch minimum eave overhang, and a minimum "A" roof pitch of 3:12.
- g.) Not be located in a manufactured home park as defined by Section 3733.01 of the Ohio Revised Code.
- h.) Meet all applicable zoning requirements uniformly imposed (i.e. minimum lot size; setbacks; minimum dwelling unit square footage) on all single-family dwellings in the district, (excepting contrary requirements for minimum roof pitch and requirements that do not comply with HUD code standards for manufactured housing).

Manufactured home – a non self- propelled building unit or assembly of closed construction fabricated in an off site facility, and which conforms with the federal construction and safety standards established by the Secretary of Housing and Urban development (HUD) pursuant to the "Manufactured Housing Construction and Safety Standards Act of 1974, and that has a label or tag permanently affixed to it certifying compliance with all applicable federal construction and safety standards. A manufactured home is transportable in one or more sections, which, in the traveling mode, is eight body feet or more in width or forty body feet or more in length or, when erected on site, is three hundred twenty or more square feet, and which is built on a permanent chassis, designed to be used as a dwelling with or without permanent foundation when connected to required utilities. Calculations used to determine the number of square feet in a structure's exterior dimensions are measured at the largest horizontal projections when erected on site. These dimensions include all expandable rooms, cabinets, and other projections containing interior space, but do not include bay windows. (ORC 4501.01) For the purposes of this section, chassis means a steel frame specifically designed and constructed with wheels or running gear and towing tongue installed for transportation on public streets or highways and designed without the need for a permanent foundation arriving at the site complete and ready for residential occupancy except for minor and incidental unpacking and assembly operations; location on wheels, jacks, blocks, or other foundation, connection to utilities and the like.

Mobile home- a non self-propelled building unit or assembly of closed construction that is fabricated in an off-site facility, **built** on a permanent movable chassis which is 8 feet or more in width and more than 35 feet in length, which when erected on site is 320 or more square feet, that is transportable in one or more sections and which does not qualify as a manufactured home or industrialized unit.

Industrialized Unit- means a building unit or assembly of closed construction fabricated in an off site facility, that is substantially self sufficient as a unit or as a part of a greater structure and that requires transportation to the site of intended use. Industrialized unit includes units installed on the site as independent units, as part of a group of units, or incorporated with standard construction methods to form a completed structural entity. Industrialized unit does not include a manufactured or mobile home as defined herein.

Appendix I

Acronyms

ADT – Average Daily Traffic

AICP – American Institute of Certified Planners

APA – American Planning Association

BIA – Building Industry Association

BZA – Board of Zoning Appeals

DALIS - Delaware Area Land Information Systems

DCRPC - Delaware County Regional Planning Commission

DU – Dwelling Unit

EMS – Emergency Medical Service

FEMA – Federal Emergency Management Agency

GIS – Geographical Information Systems

HU – Housing Unit

LESA – Land Evaluation Site Assess

NRPA – National Recreation and Park Association

OCAP – Ohio Capability Analysis Program

ODOT – Ohio Department Of Transportation

OEPA – Ohio Environmental Protection Agency

PACE – Protocol for Assessment of Community Environmental Health

PCD – Planned Commercial District

PRD – Planned Residential District

PUD – Planned Unit Development

ROW – Right Of Way

RPC – Regional Planning Commission

Appendix J

Model Conservation Subdivision Regulations

by Randall Arendt

From Conservation Design for Subdivisions, (1996, Island Press, reprinted with permission from the author)

OUTLINE OF CONTENTS

I. Standards for "Conservation Subdivision Design"

- A. Determining Density or "Yield"
- B. Density Incentives
 - 1. To Endow Maintenance Fund
 - 2. To Encourage Public Access
 - 3. To Encourage Affordable Housing
- C. Minimum Percentage of Open Space
- D. Location of Open Space
 - 1. Primary Conservation Areas
 - 2. Secondary Conservation Areas
 - 3. General Locational Standards
 - 4. Interconnected Open Space Network
- E. Evaluation Criteria

II. Site Planning Procedures for Conservation Subdivisions

- A. General
 - 1. Process Overview
- B. Elements of the Preliminary Plan Process
 - 1. Pre-Application Discussion
 - 2. Existing Features (Site Analysis) Plan
 - 3. On-Site Walkabout
 - 4. Pre-Submission Conference
 - 5. Conceptual Preliminary Plan
 - 6. Four-Step Process
 - a. Designating the Open Space
 - b. Location of House Sites
 - c. Street and Lot Layouts
 - d. Lot Lines
 - 7. Preliminary Engineering Certification

III. Ownership and Maintenance of Open Space

- A. General
- B. Ownership Standards
 - 1. Offer of Dedication
 - 2. Homeowners' Association
 - 3. Condominiums
 - 4. Dedication of Easements
 - 5. Transfer of Easements to a Private Conservation Organization
- C. Maintenance Standards

I. STANDARDS FOR "CONSERVATION SUBDIVISION DESIGN"

A. Determining Density or "Yield"

Applicants shall have the option of estimating the legally permitted density on the basis of mathematical percentages and formulas contained in this ordinance, or on the basis of a "yield plan." Such "yield plans" consist of conventional lot and street layouts and must conform to the township's regulations governing lot dimensions, land suitable for development (for example, not including wetlands), street design, and parking. Although such plans shall be conceptual in nature, and are not intended to involve significant engineering costs, they must be realistic and must not show potential house sites or streets in areas that would not ordinarily be legally permitted in a conventional layout.

In order to prepare a realistic "yield plan," applicants generally need to first map the Primary Conservation Areas on their site. Typical "yield plans" would include, at minimum, basic topography, location of wetlands, 100-year floodplains, slopes exceeding 25%, and soils subject to slumping, as indicated on the medium-intensity maps contained in the county soil survey published by the USDA Natural Resources Conservation Service.

On sites not served by public sewerage or a centralized private sewage treatment facility, soil suitability for individual septic systems shall be demonstrated. The Planning Commission shall select a small percentage of lots (10 to 15%) to be tested, in areas considered to be marginal. If tests on the sample lots pass the percolation test, the applicant's other lots shall also be deemed suitable for septic systems, for the purpose of calculating total lot yield. However, if any of the sample lots fail, several others (of the township's choosing) shall be tested, until all the lots in a given sample pass.

B. Density Incentives

1. To Endow Maintenance Fund. The township may allow a density bonus to generate additional income to the applicant for the express and sole purpose of endowing a permanent fund to offset continuing open space maintenance costs. Spending from this fund should be restricted to expenditure of interest, in order that the principal may be preserved. Assuming an annual average interest rate of 5%, the amount designated for the Endowment Fund should be twenty (20) times the amount estimated to be required on a yearly basis to maintain the open space. On the assumption that additional dwellings, over and above the maximum that would ordinarily be permitted on the site, are net of development costs and represent true profit, 75% of the net selling price of the lots shall be donated to the Open Space Endowment Fund for the preserved lands within the subdivision. Such estimates shall be prepared by an agency or organization with experience in open space management acceptable to the Planning Commission. This fund shall be transferred by the developer to the designated entity with ownership and maintenance responsibilities (such as a homeowners' association, a land trust, or the township).

2. To Encourage Public Access. Dedication of land for public use, including trails, active recreation, municipal spray irrigation fields, etc., in addition to the 10% public land dedication required under other provisions of this ordinance, may be encouraged by the supervisors who are authorized to offer a density bonus for this express purpose. The density bonus for open space that would be in addition to the 10% public land dedication that may also be required shall be computed on the basis of a maximum of one dwelling unit per five acres of publicly accessible open space. The decision whether to accept an applicant's offer to dedicate open space for public access shall be at the discretion of the board of supervisors, who shall be guided by the

recommendations contained in the township's *Open Space Recreation, and Environmental Resources Plan*, particularly those sections dealing with trail networks and/or recreational facilities.

3. To Encourage Affordable Housing. A density increase is permitted where the conservation subdivision proposal provides on-site or off-site housing opportunities for low- or moderate-income families. The amount of the density increase shall be based on the following standard: *For each affordable housing unit provided under this section, one additional building lot or dwelling unit shall be permitted, up to a maximum 15% increase in dwelling units. Affordable housing is herein defined as units to be sold or rented to families earning 70 to 120 percent of the county median income, adjusted for family size, as determined by the U.S. Department of Housing and Urban Development.*

C. Minimum Percentage of Open Space

The minimum percentage of land that shall be designated as permanent open space, not to be further subdivided, and protected through a conservation easement held by the township or by a recognized land trust or conservancy, shall be as specified below:

1. A minimum of fifty percent (50%) of the total tract area, after deducting the following kinds of unbuildable land (which are also required to be deducted when calculating net permitted density for conventional subdivisions as well):

- wetlands (both tidal and fresh) and land that is generally inundated (land under ponds, lakes, creeks, etc.),
- all of the floodway and floodway fringe within the 100-year floodplain, as shown on official FEMA maps,
- land with slopes exceeding 25%, or soils subject to slumping,
- land required for street rights-of-way (10% of the net tract area),
- land under permanent easement prohibiting future development (including easements for drainage, access, and utilities).

The above areas shall generally be designated as *undivided open space*, to facilitate easement monitoring and enforcement, and to promote appropriate management by a single entity according to approved land management standards. [However, in subdivisions where the gross density is one dwelling per ten acres (or lower), the required open space may be included within individual lots.]

2. All undivided open space and any lot capable of further subdivision shall be restricted from further subdivision through a permanent conservation easement, in a form acceptable to the township and duly recorded in the County Register of Deeds Office.

3. At least twenty-five percent (25%) of the minimum required open space shall be suitable for active recreation purposes, but no more than fifty percent (50%) shall be utilized for that purpose, in order to preserve a reasonable proportion of natural areas on the site. The purposes for which open space areas are proposed shall be documented by the applicant.
4. The required open space may be used, without restriction, for underground drainage fields for individual or community septic systems, and for "spray fields" for spray irrigation purposes in a "land treatment" sewage disposal system. However, "mound" systems protruding above grade and aerated sewage treatment ponds shall be limited to no more than ten percent of the required minimum open space.
5. Stormwater management ponds or basins may be included as part of the minimum required open space, as may land within the rights-of-way for underground pipelines. However, land within the rights-of-way of high-tension power lines shall not be included as comprising part of the minimum required open space.

D. Location of Open Space

The location of open space conserved through compact residential development shall be consistent with the policies contained in the Open Space, Recreation, and Environmental Resources Element of the township's comprehensive plan, and with the recommendations contained in this section and the following section ("Evaluation Criteria").

Open space shall be comprised of two types of land: "Primary Conservation Areas" and "Secondary Conservation Areas." All lands within both Primary and Secondary Conservation Areas are required to be protected by a permanent conservation easement, prohibiting further development, and setting other standards safeguarding the site's special resources from negative changes.

1. Primary Conservation Areas. This category consists of wetlands, lands that are generally inundated (under ponds, lakes, creeks, etc.), land within the 100-year floodplain, slopes exceeding 25%, and soils subject to slumping. These sensitive lands are deducted from the total parcel acreage to produce the "Adjusted Tract Acreage," on which density shall be based (for both conventional and conservation subdivisions).

2. Secondary Conservation Areas. In addition to the Primary Conservation Areas, at least fifty percent (50%) of the remaining land shall be designated and permanently protected. *Full density credit shall be allowed for land in this category that would otherwise be buildable under local, state and federal regulations, so that their development potential is not reduced by this designation.* Such density credit may be applied to other unconstrained parts of the site.

Although the locations of Primary Conservation Areas are predetermined by the locations of floodplains, wetlands, steep slopes, and soils subject to slumping, greater latitude exists in the designation of Secondary Conservation Areas (except that they shall include a 100-foot deep greenway buffer along all waterbodies and watercourses, and a 50-foot greenway buffer alongside wetlands soils classified as "very poorly drained" in the medium-intensity county soil survey of the USDA Natural Resources Conservation Service).

The location of Secondary Conservation Areas shall be guided by the maps and policies contained in the Open Space, Recreation, and Environmental Resources Element of the township's comprehensive plan, and shall typically include all or part of the following kinds of

resources: mature woodlands, aquifer recharge areas, areas with highly permeable ("excessively drained") soil, significant wildlife habitat areas, sites listed on the Pennsylvania Natural Diversity Inventory, prime farmland, historic, archaeological or cultural features listed (or eligible to be listed) on national, state or county registers or inventories, and scenic views into the property from existing public roads. Secondary Conservation Areas therefore typically consist of upland forest, meadows, pastures, and farm fields, part of the ecologically connected matrix of natural areas significant for wildlife habitat, water quality protection, and other reasons. Although the resource lands listed as potential Secondary Conservation Areas may comprise more than half of the remaining land on a development parcel (after Primary Conservation Areas have been deducted), no applicant shall be required to designate more than 50% of that remaining land as a Secondary Conservation Area.

3. General Locational Standards. Subdivisions and planned residential developments (PRDS) shall be designed around both the Primary and Secondary Conservation Areas, which together constitute the total required open space. The design process should therefore commence with the delineation of all potential open space, after which potential house sites are located. Following that, access road alignments are identified, with lot lines being drawn in as the final step. This "four-step" design process is further described in Section II.B.6 below.

Both Primary and Secondary Conservation Areas shall be placed in undivided preserves, which may adjoin housing areas that have been designed more compactly to create larger areas that may be enjoyed equally by all residents of the development.

Undivided open space shall be directly accessible to the largest practicable number of lots within a conservation subdivision. To achieve this, the majority of house lots should abut undivided open space in order to provide direct views and access. Safe and convenient pedestrian access to the open space from all lots not adjoining the open space shall be provided (except in the case of farmland, or other resource areas vulnerable to trampling damage or human disturbance). Where the undivided open space is designated as separate, noncontiguous parcels, no parcel shall consist of less than three (3) acres in area nor have a length-to-width ratio in excess of 4:1, except such areas that are specifically designed as village greens, ballfields, upland buffers to wetlands, waterbodies or watercourses, or trail links.

4. Interconnected Open Space Network. As these policies are implemented, the protected open spaces in each new subdivision will eventually adjoin each other, ultimately forming an interconnected network of Primary and Secondary Conservation Areas across the township. To avoid the issue of the "taking of land without compensation," the only elements of this network that would necessarily be open to the public are those lands that have been required to be dedicated for public use, never more than 10% of a development parcel's gross acreage, and typically configured in a linear fashion as an element of the township's long-range open space network.¹

E. Evaluation Criteria

In evaluating the layout of lots and open space, the following criteria will be considered by the Planning Commission as indicating design appropriate to the site's natural, historic, and cultural features, and meeting the purposes of this ordinance. Diversity and originality in lot layout shall be encouraged to achieve the best possible relationship between development and conservation

¹ The legality of requiring public land dedication is open to question in light of the recent *Dolan v. Tigard* decision.

areas. Accordingly, the Planning Commission shall evaluate proposals to determine whether the proposed conceptual preliminary plan:

1. *Protects and serves all floodplains, wetlands, and steep slopes* from clearing, grading, filling, or construction (except as may be approved by the township for essential infrastructure or active or passive recreation amenities).
2. *Preserves and maintains mature woodlands, existing fields, pastures, meadows, and orchards, and creates sufficient buffer areas* to minimize conflicts between residential and agricultural uses. For example, locating houselots and driveways within wooded areas is generally recommended, with two exceptions. The first involves significant wildlife habitat or mature woodlands that raise an equal or greater preservation concern, as described in items #5 and #8 below. The second involves predominantly agricultural areas, where remnant tree groups provide the only natural areas for wildlife habitat.
3. *If development must be located on open fields or pastures because of greater constraints in all other parts of the site*, dwellings should be sited on the least prime agricultural soils, or in locations at the far edge of a field, as seen from existing public roads. Other considerations include whether the development will be visually buffered from existing public roads, such as by a planting screen consisting of a variety of indigenous native trees, shrubs, and wildflowers (specifications for which should be based upon a close examination of the distribution and frequency of those species found in a typical nearby roadside verge or hedgerow).
4. *Maintains or creates an upland buffer of natural native species vegetation of at least 100 feet in depth adjacent to wetlands and surface waters*, including creeks, streams, springs, lakes and ponds.
5. *Designs around existing hedgerows and treelines between fields or meadows, and minimizes impacts on large woodlands* (greater than five acres), especially those containing many mature trees or a significant wildlife habitat, or those not degraded by invasive vines. Also, woodlands of any size on highly erodible soils with slopes greater than 10% should be avoided. However, woodlands in poor condition with limited management potential can provide suitable locations for residential development. When any woodland is developed, great care shall be taken to design all disturbed areas (for buildings, roads, yards, septic disposal fields, etc.) in locations where there are no large trees or obvious wildlife areas, to the fullest extent that is practicable.
6. *Leaves scenic views and vistas unblocked or uninterrupted*, particularly as seen from public thoroughfares. For example, in open agrarian landscapes, a deep "no-build, no-plant" buffer is recommended along the public thoroughfare where those views or vistas are prominent or locally significant. The concept of "foreground meadows," with homes facing the public thoroughfare across a broad grassy expanse (as illustrated in Fig. 5-5 of *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks*) is strongly preferred to mere buffer strips, with or without berms or vegetative screening. In wooded areas where the sense of enclosure is a feature that should be maintained, a deep "no-build, no-cut" buffer should be respected, to preserve existing vegetation.
7. *Avoids siting new construction on prominent hilltops or ridges*, by taking advantage of lower topographic features.

8. *Protects wildlife habitat areas* of species listed as endangered, threatened, or of special concern by the U.S. Environmental Protection Agency and/or by the Pennsylvania Natural Diversity Inventory.

9. *Designs around and preserves sites of historic, archaeological or cultural value*, and their environs, insofar as needed to safeguard the character of the feature, including stone walls, spring houses, barn foundations, cellar holes, earthworks, and burial grounds.

10. *Protects rural roadside character* and improves public safety and vehicular carrying capacity by avoiding development fronting directly onto existing public roads. Establishes buffer zones along the scenic corridor of rural roads with historic buildings, stone walls, hedgerows, and so on.

11. *Landscapes common areas* (such as community greens), cul-de-sac islands, and both sides of new streets with native specie shade trees and flowering shrubs with high wildlife conservation value. Deciduous shade trees shall be planted at forty-foot intervals on both sides of each street, so that the neighborhood will have a stately and traditional appearance when they grow and mature. These trees shall generally be located between the sidewalk or footpath and the edge of the street, within a planting strip not less than five feet in width.

12. *Provides active recreational areas* in suitable locations that offer convenient access by residents and adequate screening from nearby houselots.

13. *Includes a pedestrian circulation system* designed to assure that pedestrians can walk safely and easily on the site, between properties and activities or special features within the neighborhood open space system. All roadside footpaths should connect with off-road trails, which in turn should link with potential open space on adjoining undeveloped parcels (or with existing open space on adjoining developed parcels, where applicable).

14. *Provides open space that is reasonably contiguous*, and whose configuration is in accordance with the guidelines contained in the *Design and Management Handbook for Preservation Areas*, produced by the Natural Lands Trust. For example, fragmentation of open space should be minimized so that these resource areas are not divided into numerous small parcels located in various parts of the development. To the greatest extent practicable, this land shall be designed as a single block with logical, straightforward boundaries. Long thin strips of conservation land shall be avoided, unless the conservation feature is linear or unless such configuration is necessary to connect with other streams or trails. The open space shall generally abut existing or potential open space land on adjacent parcels (such as in other subdivisions, public parks, or proper-ties owned by or eased to private land conservation organizations). Such subdivision open space shall be designed as par-t of larger contiguous and integrated greenway systems, as per the policies in the Open Space, Recreation, and Environmental Resources Element of the township's *comprehensive plan*.

II. SITE PLANNING PROCEDURES FOR CONSERVATION SUBDIVISIONS

A. General

1. Process Overview. The sequence of actions prescribed in this article is as listed below. These steps shall be followed sequentially and may be combined only at the discretion of the Planning Commission:

- a. Pre-application discussion
- b. Existing Features (Site Analysis) Plan (90-day clock starts with the submission of this plan at the on-site walkabout or at a regularly scheduled meeting of the Planning Commission)
- c. On-site walkabout by planning commissioners and applicant
- d. Pre-submission conference
- e. Conceptual Preliminary Plan (*conceptual illustration* of greenway land, potential house sites, street alignments, and tentative lot lines, prepared according to the four-step design process described herein)
- f. Preliminary Plan submission, determination of completeness, review of overall planning concepts, and decision
- g. Preliminary engineering certification
- h. Final Plan submission, determination of completeness, review, and decision
- i. Supervisors' signatures
- j. Recording at County Recorder of Deeds

B. Elements of the Preliminary Plan Process

1. Pre-Application Discussion. A pre-application discussion is strongly encouraged between the applicant, the site designer(s), and the Planning Commission. The purpose of this informal meeting is to introduce the applicant and the site designer(s) to the township's zoning and subdivision regulations and procedures, and to discuss the applicant's objectives in relation to the township's official policies and ordinance requirements. The township may designate a consultant experienced in development design and in the protection of natural features and greenway lands to meet with the applicant and to attend or conduct meetings required under this ordinance. (The cost of these consultant services shall be paid for through subdivision review fees received by the township.)

2. Existing Features (Site Analysis) Plan. Plans analyzing each site's special features are required for all proposed subdivisions, as they form the basis of the design process for greenway lands, house locations, street alignments, and lot lines. The applicant or his/her representative shall bring a copy of the Existing Features (Site Analysis) Plan to the on-site walkabout. Detailed requirements for Existing Features (Site Analysis) Plans are contained in another section of this ordinance, but at the minimum must include (1) a contour map based at least upon topographical maps published by the U.S. Geological Survey; (2) the location of severely constraining elements such as steep slopes (over 25%), wetlands, watercourses, intermittent streams and 100-year floodplains, and all rights-of-way and easements; (3) soil boundaries as shown on USDA Natural Resources Conservation Service medium-intensity maps; and (4) the location of significant features such as woodlands, treelines, open fields or meadows, scenic views into or out from the property, watershed divides and drainage ways, fences or stone walls, rock outcrops, and existing structures, roads, tracks and trails, and any sites listed on the Pennsylvania Natural Diversity Inventory.

These Existing Features (Site Analysis) Plans shall identify both Primary Conservation Areas (floodplains, wetlands, and steep slopes, as defined in the process for computing "Adjusted Tract Acreage") and Secondary Conservation Areas, as described in Sections I.C.1 and I.D.1 of this ordinance. Together, these Primary and Secondary Conservation Areas comprise the development's proposed open space, the location of which shall be consistent with the locational design criteria listed in the Open Space, Recreation, and Environmental Resources Element of the township's *comprehensive plan*. The Existing Features (Site Analysis) Plan shall form the basis for the conceptual Preliminary Plan, which shall show the tentative location of houses, streets, lot lines, and greenway lands in new subdivisions, according to the four-step design process described in Section II.B.6 below.

3. On-Site Walkabout. After the Existing Features (Site Analysis) a mutually convenient date to walk the property with the applicant and his/her site designer. The purpose of this visit is to familiarize township officials with the property's special features, and to provide them an informal opportunity to offer guidance (or at least a response) to the applicant regarding the tentative location of the Secondary Conservation Areas and potential house locations and street alignments. If this visit is not scheduled before submission of the sketch plan or the Conceptual Preliminary Plan, it should occur soon thereafter.

4. Pre-Submission Conference. Prior to the submission of the sketch plan or a Conceptual Preliminary Plan, the applicant shall meet with the Planning Commission to discuss how the four-step approach to designing subdivisions, described in Section II.B.6 below, could be applied to the subject property. At the discretion of the Planning Commission this conference may be combined with the on-site walkabout.

5. Conceptual Preliminary Plan. After the pre-submission conference, a sketch plan or a *Conceptual Preliminary Plan* shall be submitted for all proposed subdivisions. As used in this ordinance, the term "Conceptual Preliminary Plan" refers to a preliminarily engineered sketch plan drawn to illustrate initial thoughts about a conceptual layout for greenway lands, house sites, and street alignments. This is the stage where drawings are *tentatively* illustrated, before heavy engineering costs are incurred in the design of any proposed subdivision layout. These drawings shall be prepared by a team that includes a landscape architect and a civil engineer.

A Conceptual Preliminary Plan shall be submitted by the applicant to the township zoning officer who will then submit it to the Planning Commission for review for the purpose of securing early agreement on the overall pattern of streets, houselots, Primary and Secondary Conservation Areas, and potential trail linkages (where applicable), prior to any significant

expenditure on engineering costs in the design of streets, stormwater management, or the accurate delineation of internal lot boundaries.

Within thirty days of receiving the Conceptual Preliminary Plan the Planning Commission shall approve it, disapprove it, or approve it with conditions, stating its reasons in writing. The remaining 60 days of the statutory 90-day review period for Preliminary Plans (as provided for in the state enabling legislation) shall therefore remain for the applicant to submit a Detailed Preliminary Plan (which shall contain all the customary engineering data) and for the Planning Commission to review said plan and to render its decision in writing. Either or both of these time periods may be formally extended if mutually agreeable to the applicant and the Planning Commission.

6. Four-Step Process. Each sketch plan or Conceptual Preliminary Plan shall follow a four-step design process, as described below. When the conceptual Preliminary Plan is submitted, applicants shall be prepared to demonstrate to the Planning Commission that these four design steps were followed by their site designers in determining the layout of their proposed streets, houselots, and greenway lands. This process shall be accomplished during the first 30 days of the statutory 90-day review period for Preliminary Plans.

a. *Designating the Open Space.* During the first step, all potential conservation areas (both primary and secondary) are identified, using the Existing Features (Site Analysis) Plan. Primary Conservation Areas shall consist of wetlands, floodplains, slopes over 25%, and soils susceptible to slumping. Secondary Conservation Areas shall comprise 50% of the remaining land, and shall include the most sensitive and noteworthy natural, scenic, and cultural resources on that remaining half of the property.

Guidance on which parts of the remaining land to classify as Secondary Conservation Areas shall be based upon:

- the procedures described in *Conservation Design for Subdivisions: A Practical Guide to Creating Open Space Networks*, produced by Natural Lands Trust and published by Island Press,
- on-site visits or "walkabouts,"
- the open space locational criteria contained in Section I.E above,
- the evaluation criteria listed in Section I.E above,
- information from published data and reports, and
- conversations with existing or recent owners of the property, and members of the township Board of Supervisors and Planning Commission.

b. *Location of House Sites.* During the second step, potential house sites are tentatively located. Because the proposed location of houses within each lot represents a significant decision with potential impacts on the ability of the development to meet the 14 evaluation criteria contained in Section I.E. above, subdivision applicants shall identify tentative house sites on the Conceptual Preliminary Plan and proposed house sites on the detailed Final Plan. House sites should generally be located not closer than 100 feet from Primary Conservation Areas, but may be situated within 50 feet of Secondary Conservation Areas, in order to enjoy views of the latter without negatively impacting the former. The building "footprint" of proposed

residences may be changed by more than fifty feet in any direction with majority approval from the members of the Planning Commission. Changes involving less than fifty feet do not require approval.

c. *Street and Lot Layout.* The third step consists of aligning proposed streets to provide vehicular access to each house in the most reasonable and economical way. When lots and access streets are laid out, they shall be located in a way that avoids or at least minimizes adverse impacts on both the Primary and Secondary Conservation Areas. To the greatest extent practicable, wetland crossings and streets traversing existing slopes over 15% shall be strongly discouraged. Street connections shall generally be encouraged to minimize the number of new cul-de-sacs to be maintained by the township and to facilitate easy access to and from homes in different parts of the property (and on adjoining parcels). Where cul-de-sacs are necessary, those serving six or fewer homes may be designed with "hammer-heads" facilitating three-point turns. Cul-de-sacs serving more than six homes shall generally be designed with a central island containing indigenous trees and shrubs (either conserved on site or planted). The township generally encourages the creation of single-loaded residential access streets, in order that the maximum number of homes in new developments may enjoy views of open space.

Note that in situations where more formal, "neo-traditional," or village-type layouts are proposed, Steps Two and Three may be reversed, so that the location of house sites follows the location of streets and squares.

d. *Lot Lines.* The fourth step is simply to draw in the lot lines (where applicable). These are generally drawn midway between house locations and may include L-shaped "flag-lots" meeting the township's minimum standards for the same.

7. Preliminary Engineering Certification. Prior to approval of the Conceptual Preliminary Plan, the applicant shall submit to the Planning Commission a "Preliminary Engineering Certification" that the approximate layout of proposed streets, houselots, and open space lands complies with the township's zoning and subdivision ordinances, particularly those sections governing the design of subdivision streets and stormwater management facilities. This certification requirement is meant to provide the township with assurance that the proposed plan is able to be accomplished within the current regulations of the township. The certification shall also note any waivers needed to implement the plan as drawn.

III. OWNERSHIP AND MAINTENANCE OF OPEN SPACE

A. General

Different ownership and management options apply to the permanently protected open space created through the development process. The open space shall remain undivided and may be owned and managed by a homeowners' association, the township, or a recognized land trust or conservancy. (However, in low-density rural subdivisions with ten or more acres per dwelling, all or part of the required open space may be located within the houselots.) A public land dedication, not exceeding 10% of the total parcel size, may be required by the township, through this open space, to facilitate trail connections. A narrative describing ownership, use and maintenance responsibilities shall be submitted for all common and public improvements, utilities, and open spaces.

B. Ownership Standards

Common open space within a development shall be owned, administered, and maintained by any of the following methods, either individually or in combination, and subject to approval by the township.

1. Offer of Dedication. The township shall have the first and last offer of dedication of undivided open space in the event said land is to be conveyed. Dedication shall take the form of a fee simple ownership. The township may, but shall not be required to accept undivided open space provided: (1) such land is accessible to the residents of the township; (2) there is no cost of acquisition other than any costs incidental to the transfer of ownership such as title insurance; and (3) the township agrees to and has access to maintain such lands. Where the township accepts dedication of common open space that contains improvements, the township may require the posting of financial security to ensure structural integrity of said improvements as well as the functioning of said improvements for a term not to exceed eighteen (18) months from the date of acceptance of dedication. The amount of financial security shall not exceed fifteen percent (15%) of the actual cost of installation of said improvements.

2. Homeowners' Association: The undivided open space and associated facilities may be held in common ownership by a homeowners' association. The association shall be formed and operated under the following provisions:

- a. The developer shall provide a description of the association, including its bylaws and methods for maintaining the open space.
- b. The association shall be organized by the developer and shall be operated with a financial subsidy from the developer, before the sale of any lots within the development.
- c. Membership in the association is automatic (mandatory) for all purchasers of homes therein and their successors. The conditions and timing of transferring control of the association from developer to homeowners shall be identified.
- d. The association shall be responsible for maintenance of insurance and taxes on undivided open space, enforceable by liens placed by the township on the association. The association may place liens on the homes or houselots of its members who fail to pay their association dues in a timely manner. Such liens may require the imposition of penalty interest charges.
- e. The members of the association shall share equitably the costs of maintaining and developing such undivided open space. Shares shall be defined within the association bylaws.
- f. In the event of a proposed transfer, within the methods here permitted, of undivided open space land by the homeowners' association, or of the assumption of maintenance of undivided open space land by the township, notice of such action shall be given to all property owners within the development.

- g. The association shall have or hire adequate staff to administer common facilities and properly and continually maintain the undivided open space.
 - h. The homeowners' association may lease open space lands to any other qualified person, or corporation, for operation and maintenance of open space lands, but such a lease agreement shall provide:
 - (1) that the residents of the development shall at all times have access to the open space lands contained therein (except croplands during the growing season);
 - (2) that the undivided open space to be leased shall be maintained for the purposes set forth in this ordinance; and
 - (3) that the operation of open space facilities may be for the benefit of the residents only, or may be open to the residents of the township, at the election of the developer and/or homeowners' association, as the case may be.
 - i. The lease shall be subject to the approval of the board and any transfer or assignment of the lease shall be further subject to the approval of the board. Lease agreements so entered upon shall be recorded with the County Recorder of Deeds within thirty (30) days of their execution and a copy of the recorded lease shall be filed with the township.
- 3. Condominiums.** The undivided open space and associated facilities may be controlled through the use of condominium agreements, approved by the township. Such agreements shall be in conformance with the state's uniform condominium act. All undivided open space land shall be held as a "common element."
- 4. Dedication of Easements.** The township may, but shall not be required to, accept easements for public use of any portion or portions of undivided open space land, title of which is to remain in ownership by condominium or homeowners' association, provided: (1) such land is accessible to township residents; (2) there is no cost of acquisition other than any costs incidental to the transfer of ownership, such as title insurance; and (3) a satisfactory maintenance agreement is reached between the developer, condominium or homeowners' association, and the township.
- 5. Transfer of Easements to a Private Conservation Organization.** With the permission of the township, an owner may transfer easements to a private, nonprofit organization, among whose purposes it is to conserve open space and/or natural resources, provided that:
- 1. the organization is acceptable to the township, and is a bona fide conservation organization with perpetual existence;
 - 2. the conveyance contains appropriate provisions for proper reverter or retransfer in the event that the organization becomes unwilling or unable to continue carrying out its functions; and

3. a maintenance agreement acceptable to the board is entered into by the developer and the organization.

C. Maintenance Standards

1. The ultimate owner of the open space (typically a homeowners' association) shall be responsible for raising all monies required for operations, maintenance, or physical improvements to the open space through annual dues, special assessments, etc. The homeowners' association shall be authorized under its bylaws to place liens on the property of residents who fall delinquent in payment of such dues, assessments, etc.

2. In the event that the association or any successor organization shall, at any time after establishment of a development containing undivided open space, fail to maintain the undivided open space in reasonable order and condition in accordance with the development plan, the township may serve written notice upon the owner of record, setting forth the manner in which the owner of record has failed to maintain the undivided open space in reasonable condition.

3. Failure to adequately maintain the undivided open space in reasonable order and condition constitutes a violation of this ordinance. The township is hereby authorized to give notice, by personal service or by United States mail, to the owner or occupant, as the case may be, of any violation, directing the owner to remedy the same within twenty (20) days.

4. Should any bill or bills for maintenance of undivided open space by the township be unpaid by November 1 of each year, a late fee of fifteen percent (15%) shall be added to such bills and a lien shall be filed against the premises in the same manner as other municipal claims.

Appendix K

Glossary

Access: A way or means of approach to provide physical entrance to a property.

Adjacent Property: a lot or parcel of land which shares all or part of a common lot line with another lot or parcel of land; also: contiguous; abutting.

Common Access Drive (CAD): Privately constructed, owned and maintained drive within a platted ingress/egress easement, properly shown on a subdivision plat approved by the Commission in accordance with these Regulations.

County: Delaware County, State of Ohio, including officials, agencies, departments, or other representatives.

County Engineer: Delaware County Engineer and designated representatives.

County Commissioners: The Delaware County Board of Commissioners or designated representative.

County Sanitary Engineer: The Delaware County Sanitary Engineer or designated representative.

Deed: Legal document conveying ownership of real property.

Director: Director of the Delaware County Regional Planning Commission.

Easement: Rights granted by a landowner to and/or for use by the public, a corporation, person, or entity, for a specified purpose of a designated portion of land.

Erosion: a) The wearing away of the land surface by running water, wind, ice, or other geological agents, including such processes as gravitational creep; b) Detachment and movement of soil or rock fragments by wind, water, ice, or gravity.

Grade: The degree of rise or descent of a sloping surface.

Health Department: Delaware City/County General Health District Commissioner and designated representatives.

Improvements: Any man-made addition to the natural state of the land which increases its utility or value, including but not limited to: street, Common Access Drive, Shared Access Point, grading, storm water management and sanitary items.

Lot: A parcel of land of sufficient size to meet minimum health and zoning requirements for use, coverage, and area, and to provide such yards and other open spaces as are herein required, and which has frontage on an improved public street, approved private street, or Common Access Drive.

Maintenance Agreement: Document governing the responsibilities of maintenance of required subdivision improvements.

Metes and Bounds: A method of describing the boundaries of land by directions and distances from a known point of reference.

O.D.O.T.: Ohio Department of Transportation officials and designated representatives.

O.R.C.: Ohio Revised Code.

Plan, Preliminary: Drawings, plans and materials representing a proposed subdivision or development; does not constitute a subdivision plat.

Plan, Sketch: A rough sketch of a proposed subdivision or site plan of sufficient accuracy to be used for the purpose of discussion and classification.

Plat , Subdivision (Final Plat): Original subdivision plat document intended for recording, prepared and sealed by a professional surveyor in accordance with these Regulations and illustrating a subdivision or other development.

Plat, Survey (Survey Drawing): Survey plat drawn to scale prepared and sealed by a professional surveyor graphically representing a metes and bounds legal description showing all essential data pertaining to the boundaries and subdivisions of a tract of land. The drawing may also include other information and shall be included with deeds submitted for Commission approval.

Private Street: Privately constructed , owned and maintained street, or road within a platted ingress/egress easement, serving more than one platted lot, properly shown on a subdivision plat approved by the Commission in accordance with these Regulations, for which the County Engineer shall provide plan review and approval and construction inspection.

Public Authority: One or more of the following: Building Department, Regional Planning Commission, County Commissioners, County Engineer, Health Department, ODOT, Sanitary Engineer, Zoning authority (County or Township), or other public entity.

Regulations: Subdivision Regulations of Delaware County, Ohio.

Reserves: Parcels of land within a subdivision set aside for future subdivision or set aside for other purposes as noted on the plat.

Right-of-Way: A strip of land occupied, or intended to be occupied, by a road, cross-walk, railroad, electric transmission lines, oil or gas pipeline, water line, sanitary storm sewer and other similar uses.

Sedimentation: (1) The depositing of earth or soil that has been transported from its site of origin by water, ice, wind, gravity or other natural means as a product of erosion; (2) In waste water treatment, the settling out of solids by gravity.

Shared Access Point (SAP): Access management practice restricting two lots to a single shared vehicular access onto the public roadway, in accordance with these Regulations.

Sanitary Engineer: County Sanitary Engineer and designated representatives.

Site Review Committee: Group which conducts on-site reviews of proposed subdivisions, consisting of representatives from: Delaware County Regional Planning Commission, Delaware City/County General Health District, Soil and Water Conservation District, Delaware County Building Regulations, Delaware County Engineer; and Delaware County Sanitary Engineer.

Staff: Employees of the Delaware County Regional Planning Commission.

Storm Water Management: Items concerning earth-disturbing activities and storm water run-off and control, such as but not limited to: storm sewers and structures, storage basins, subsurface drainage, grading, major storm routing paths, erosion and sedimentation control, road or drive culverts, swales, ditches, watercourses, bridges, etc.

Subdivider: Landowner or their representatives proposing the subdivision of land.

Subdivider's Improvement Agreement (SIA): Agreement between a subdivider and public authority concerning the manner in which specified subdivision improvements shall be provided. Content and format shall be determined by the applicable public authority.

Subdivision: As defined by § 711.001 ORC.

Surveyor: A registered surveyor, authorized to practice professional surveying by the State Board of Registration, as specified in Section 4733, Ohio Revised Code.

Variance: Permission to depart from the requirements of existing regulations.

Zoning Official: Administrative officer designated by township and/or county officials to administer and enforce the adopted zoning ordinance and issue zoning permits and certificates.