



T W O T H O U S A N D S E V E N



**BUTLER
COUNTY
ENGINEER'S
OFFICE**



**BUTLER
COUNTY
BOARD OF
COMMISSIONERS**

**BUTLER
COUNTY
PLANNING
DEPARTMENT**

This 2007 Official Butler County
Thoroughfare Plan
was adopted March 27, 2007 by the
Butler County Planning Commission
and shall be effective
from March 27, 2007 until May 2008.

Butler County Thoroughfare Plan 2007

- Legend**
- Interstate-Freeway
 - Principal Arterial
 - Minor Arterial
 - Major Collector
 - Minor Collector
 - Minor Collector-2nd Class
 - Neighborhood Collector
 - Prop Interstate-Freeway
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 - Prop Neighborhood Collector

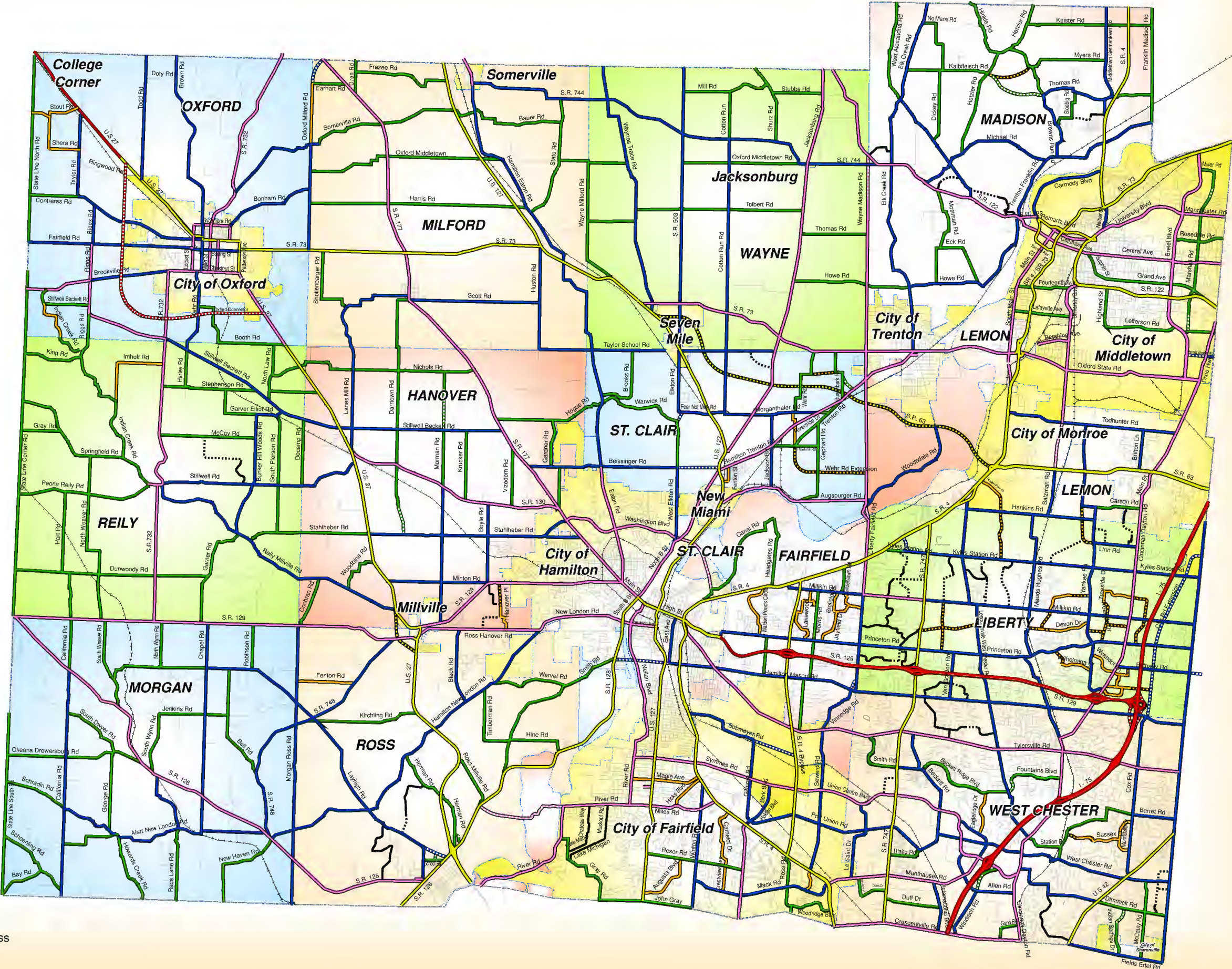


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Introduction and Overview

The Butler County Engineer's Office is pleased to present this update of the Butler County Thoroughfare Plan to our citizens and local officials. While several important modifications have been made in recent years, this is the first major update to the Plan since 1994 when it was officially adopted and put into use by Butler County planners, engineers, surveyors, administrators, and highway officials. Since that time, much about the County's overall transportation network has changed due to a continued pattern of high residential and commercial growth. This has altered our demographics, making our focus on "quality of life" issues more important than ever before.

Contained within this document are the results of much thoughtful deliberation by the members of our Thoroughfare Plan Advisory Committee. Without their valuable input, producing this document would not have been possible. Moreover, it would not have the broad-based support that the sharing of diverse views and opinions provides. When cultivated, this multitude of ideas develops into a strong, well-planned strategy for our transportation needs as we move into the future.

During our research and development for this document many elements came into play to help us arrive at our conclusions. The Butler County Planning Department was instrumental in providing data and expertise to evaluate Butler County's ever changing demographics. This critical information was used to determine future growth patterns and what to expect ten to twenty-plus years from the time of this document's adoption. Our advisory committees utilized land-use plans, population projections, township and county zoning, cities' and surrounding county thoroughfare plans, growth patterns for economic development, and a wealth of hands-on experience that led us to our conclusions for this Thoroughfare Plan, which will be made an element of the overall Comprehensive Plan for Butler County.

The Ohio Department of Transportation's Roadway Classification Map was also utilized as we formulated a strategy for our County's Thoroughfare Plan. The ODOT map helped us view the roadway classifications from a statewide perspective. ODOT considers a highway leading across the state to be a principal arterial. Similarly, we have designated highways that cross the county as principal arterials for the purpose of this Plan. The county is divided into two areas – urban and non-urban, which is determined by population density based on the 2000 census (see map on page 13). The urban and non-urban boundary has an influence on available funding sources and design elements of the roadway. Therefore the classifications and their definitions shown in the 2007 Butler County Thoroughfare Plan are our interpretations at the county level.

This document, which will be known as the "2007 Butler County Thoroughfare Plan," is the short range, mid-range, and long-range approach to our future roadway needs. The purpose of the Plan is to provide planners, engineers, surveyors, administrators, developers, and government officials the tools they need to plan and layout a highway network that best serves the traveling public.

Each section of this Thoroughfare Plan provides information to help determine future projects or improvements and development planning for our county and township roads. The sections shown in the Plan are as follows:

Roadway Classifications define a hierarchy of roadway networks which function at various levels of performance based on their ability to handle traffic – the highest level being the Interstate and Freeway Class. These roads are designed to carry the greatest traffic volumes at the highest safe speeds and are typically intended for longer trips. At the other end of the scale are our local streets which carry low traffic volumes at low speeds and provide direct access to our homes and businesses.

Typical Sections depict what a given roadway classification facility would look like in terms of cross section view. Higher classified roads such as Principal Arterials have multiple lanes and wider right-of-way widths accordingly. Local streets on the other hand are typically two lanes with curb and gutter. It is important to note that there is an increasing demand by other facilities that are crowding the usable right-of-way space. Not only does the right-of-way have to accommodate the highway lanes and berms but also utilities (above ground and below ground), sidewalks, bicycle facilities, and additional turf area to allow for water filtration (a Clean Water Act initiative).

Access Management is an integral part of making a good thoroughfare plan. Fortunately, Butler County adopted Access Management Regulations that became effective January 1, 2005. The Access Management Regulations are intended to be part of this Thoroughfare Plan and are mentioned here as a matter of reference to this document. Copies of the Butler County Access Management Regulations are available at the Butler County Engineer's Office and online at www.bceo.org.

Proposed Projects are listed to provide guidance and direction to planners, government officials, and developers. The projects listed in this section were divided into four categories based on our Advisory Committee's view of necessity and how long it will take to proceed through the project development timeline. Each agency is responsible for the projects in their jurisdiction and should move forward accordingly.

Roadways with Designated Bicycle Facilities is a new section of the Thoroughfare Plan. The Butler County Engineer and the Advisory Committee felt there was a strong need to address bicycle users in our overall strategy for our roadway system. This section addresses the type and location of different bicycle facilities on public roadways. Not all roadways are suitable for safe bicycle travel. The Advisory Committee developed a map which identifies a network of roadways with certain types of bicycle facilities. Everything from separate paths to shared road facilities and signage are identified in this section.

Funding Sources are definitively outlined as this is a very critical component to the successful completion of this Plan's roadway projects. The different sources listed have their own set of guidelines and when and where each is applicable. Determining the type of funding used will determine the time, local funding match, and dollars needed to accomplish any project.

**ELECTED OFFICIALS
And
PLANNING COMMISSION**

BUTLER COUNTY COMMISSIONERS

MICHAEL A. FOX

CHARLES R. FURMON

GREGORY V. JOLLIVETTE

BUTLER COUNTY ENGINEER

GREGORY J. WILKENS, P.E., P.S.

BUTLER COUNTY PLANNING COMMISSION

SETH JOHNSON, CHAIRMAN
G. COE POTTER, VICE CHAIRMAN
ROBERT BIERLY
CHARLES BULLINGTON
STEPHEN DANA
DONALD DIXON
STEVE FELDMANN
MICHAEL T. McNEIL

MICHAEL JUNGLING, DIRECTOR-SECRETARY

ADVISORY COMMITTEE

<u>Name</u>	<u>Representing</u>
Belanger, John	City of Fairfield
Bailey, Rick	City of Oxford
Brock, Bill	City of Monroe
Burrell, Don	OKI, Bicycle And Pedestrian Coordinator
Donovan, Erin	City of Fairfield
Fehr, David	Butler County Department of Development
Fonner, John	Butler County Transportation Improvement District
Haskins, Alison	City of Hamilton
Heilman, John	OKI Regional Council of Governments
Juengling, Mike	Butler County Department of Development
Kleingers, Jim	Professional Engineers and Surveyors
Leventry, Bob	Butler County Dept of Environmental Services
Loeffler, Matt	Butler County Engineer's Office
Matacic, Christine	Liberty Township Trustee
Muska, Mike	Butler County MetroParks
Popescu, Victor	City of Oxford
Porter, Ron	Butler County Engineer's Office
Pottenger, Eric	Butler County Engineer's Office
Reed, Etta	Professional Engineer and Traffic Engineer
Reigelsperger, Ralph	City of Hamilton
Samoviski, Mike	City of Hamilton
Schwieterman, Dale	Butler County Engineers Office
Shelby, Martha	Butler County Dept of Environmental Services
Smith, Dan	Highway Contractors
Smith, Ken	Commercial Development
Snyder, Steve	Miami University
Statt, Megan	City of Trenton
Stewart, Jay	City of Monroe
Tadych, Scott	City of Middletown
Thomas, Harry	Commercial and Residential Development
Triick, Bill	The Chamber Of Commerce Serving Middletown, Monroe, and Trenton
West, Jon	Liberty Township Planning
Wilkins, Greg	Butler County Engineer

Goals and Objectives

The goal of this Thoroughfare Plan is to provide a diverse, safe, and efficient system of transportation in Butler County by establishing a thoroughfare network that will satisfy our present and future transportation needs and unify all of Butler County toward that common goal by achieving the following objectives:

- Provide direction for setting timelines and priorities for funding of major capital improvement projects throughout Butler County;
- Provide basis for establishing rights of way for future roads and improvement projects;
- Provide direction and basis for road improvements and bicycle and pedestrian facilities for economic, residential, and commercial developments.

ROADWAY CLASSIFICATIONS

Classification of highway systems is necessary for establishing a hierarchy which allows engineers, planners, administrators, and other public agencies to develop their plans and strategies for maintaining adequate roadway facilities for present and future use by the traveling public.

There are eight individual types of roadways defined in our Thoroughfare Plan hierarchy. They are in order of their relative rank as to their traffic-carrying characteristics: Interstate and Freeway, Principal Arterial, Minor Arterial, Major Collector, Minor Collector, Minor Collector (Second Class), Neighborhood Collector, and Local Street. The map shown on page 8 depicts the entire County with each category of classification in a color-coded format.

Each classification is described as follows:

Interstate and Freeway: (Per ODOT classifications)

- Primarily federal and or state highways
- Highest level of roadway classification
- Interstates and freeways are intended to provide uninterrupted flow of traffic
- Generally have multiple lanes and are usually controlled or limited access

Principal Arterial:

- Primarily state and U.S. highways
- Heavily traveled city and county roads
- Carry cross-state, cross-county, and local traffic
- Intended to link metropolitan areas and urban and rural communities and other major traffic generators
- Intended to move higher volumes of traffic to and from interstates and major traffic generators
- Design speeds of 45 mph and up
- Multiple lanes
- R/W widths of 120'
- Additional slope/utility easements as required

Minor Arterial:

- State and U.S. highways
- City, county, and township roads
- Intended to serve through traffic and longer trips
- Distribute traffic to and from principal arterials to lower class roads
- R/W widths of 100'-120'
- Additional slope/utility easements as required

Major Collector:

- City, county, and township roads
- Carry local traffic for short to moderate trips
- Distribute traffic to and from principal and minor arterials and lower class roads
- R/W widths of 100'-120'
- Additional slope/utility easements as required

Minor Collector:

- City, county, and township roads
- Intended to serve properties that abut them
- Provide links to short distance trips
- R/W widths of 80'
- Turn lanes as required by traffic analysis
- Additional slope/utility easements as required

Minor Collector (Second Class):

- Lesser city and township roads
- Intended to serve properties that abut them
- Provide links to short distance trips
- R/W widths of 60'
- Turn lanes as required by traffic analysis
- Additional slope/utility easements as required

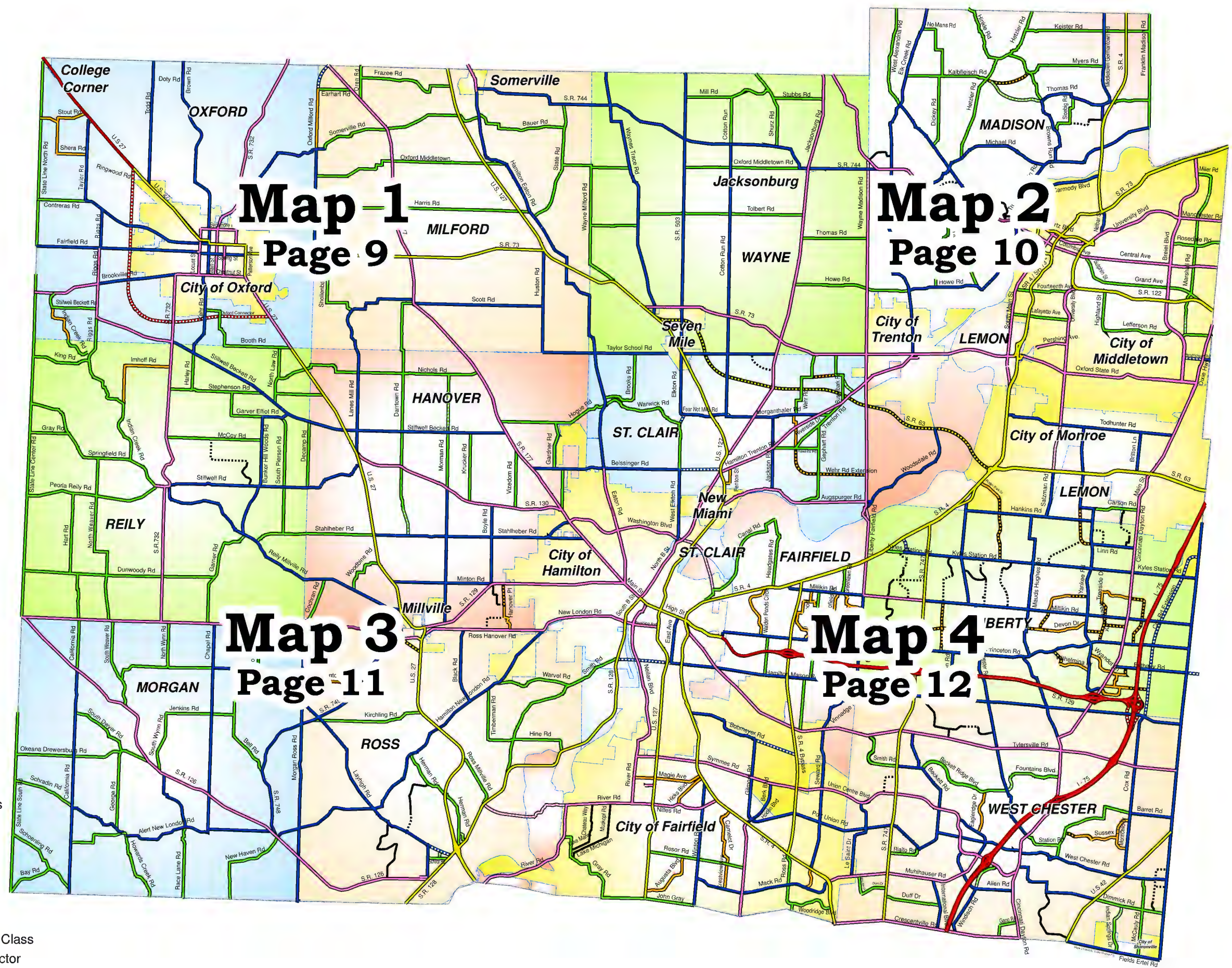
Neighborhood Collector:

- Lesser city and township streets
- Intended to serve properties that abut them
- Provide links to short distance destinations
- R/W widths of 60'
- Turn lanes as required by traffic analysis
- Additional slope/utility easements as required

Local Street:

- Access to individual properties that abut them
- Provide access to the collector and arterial system
- Serve residential, commercial, and industrial land uses
- R/W widths of 60'
- Additional slope/utility easements as required

SEE ROADWAY CLASSIFICATION MAPS ON PAGES 8-12.



Map 1
Page 9

Map 2
Page 10

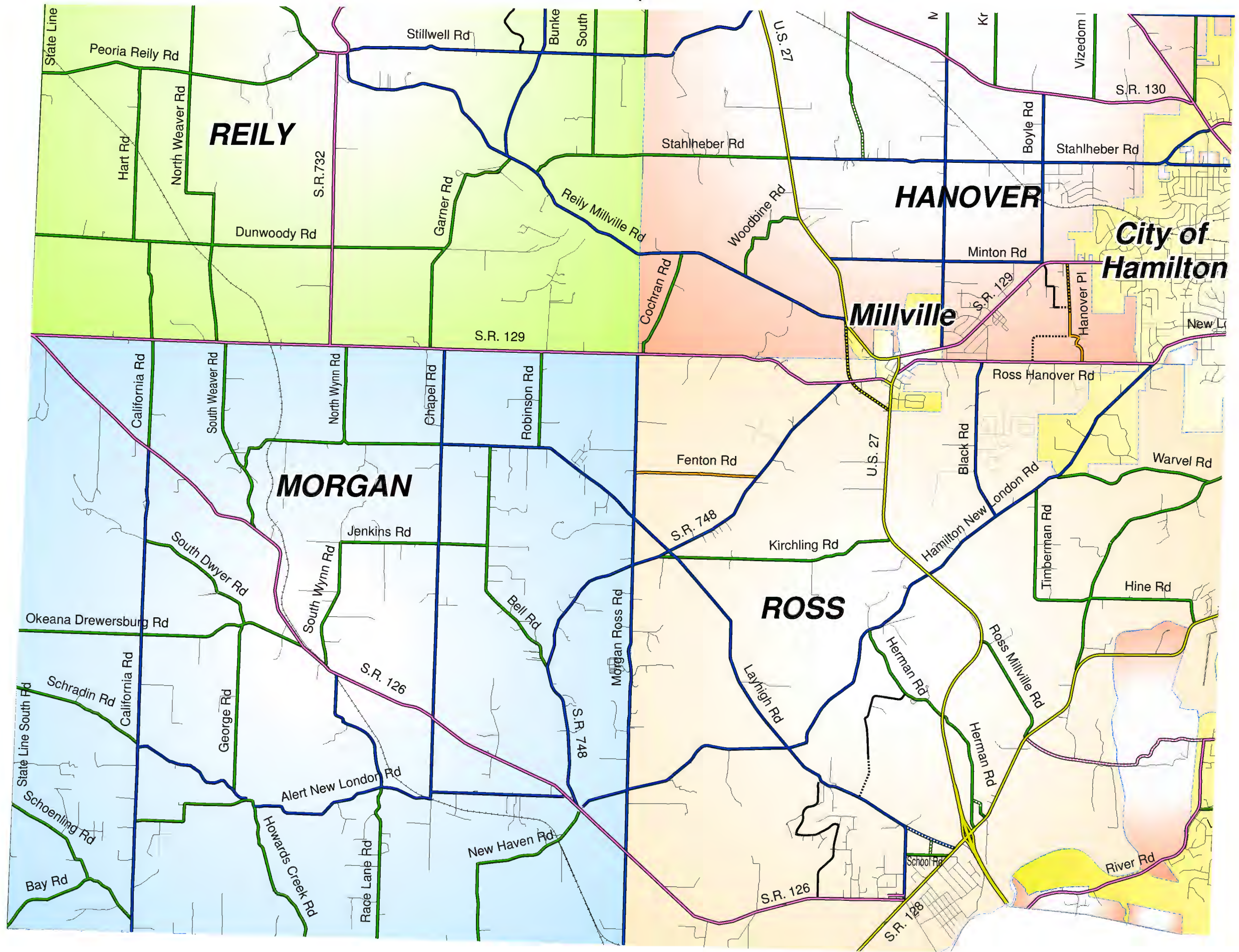
Map 3
Page 11

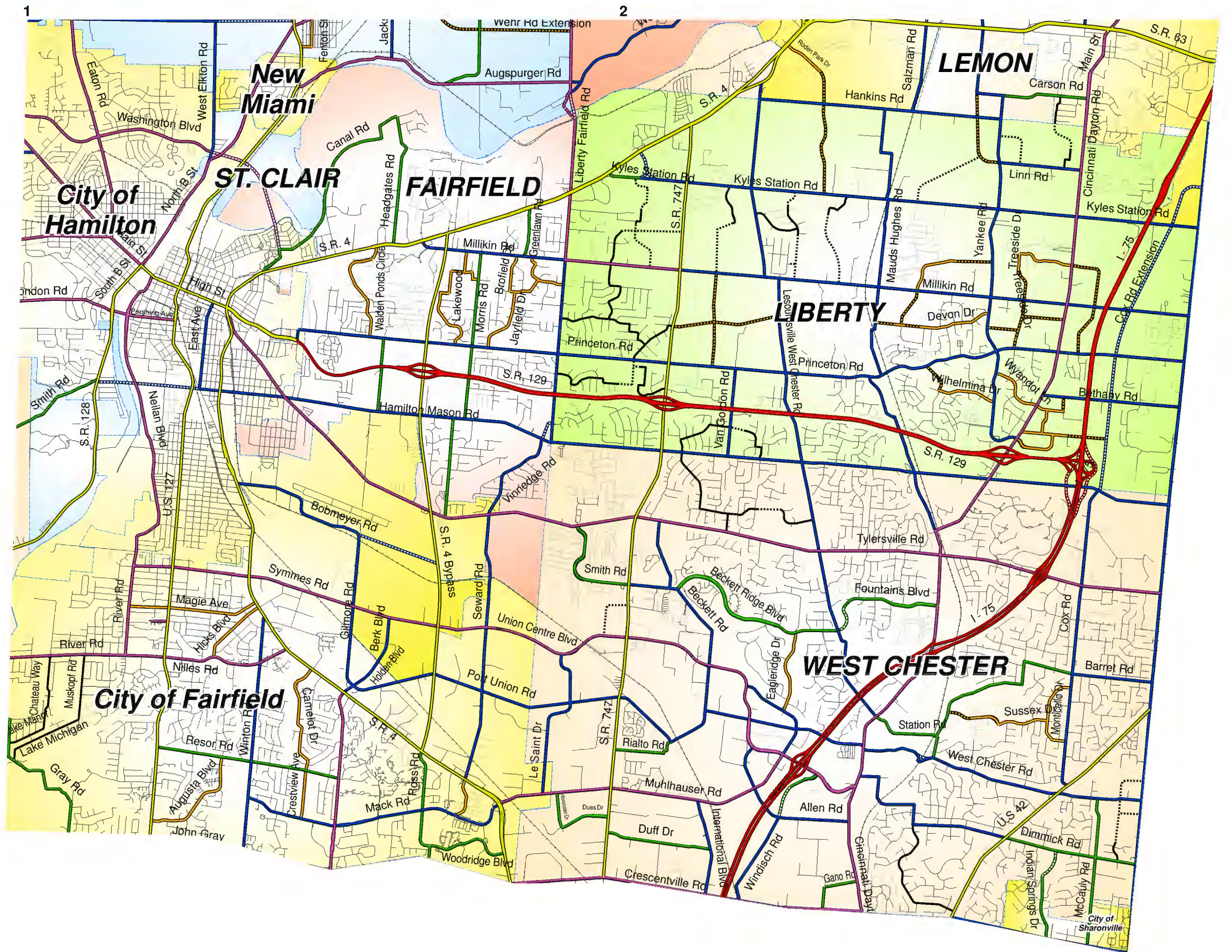
Map 4
Page 12

- Legend**
- Interstate-Freeway
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 - Minor Arterial
 - Major Collector
 - Minor Collector
 - Minor Collector-2nd Class
 - Neighborhood Collector
 - - - Prop Interstate-Freeway
 - - - Prop Principal Arterial
 - - - Prop Minor Arterial
 - - - Prop Major Collector
 - - - Prop Minor Collector
 - - - Prop Minor Collector-2nd Class
 - - - Prop Neighborhood Collector

Legend

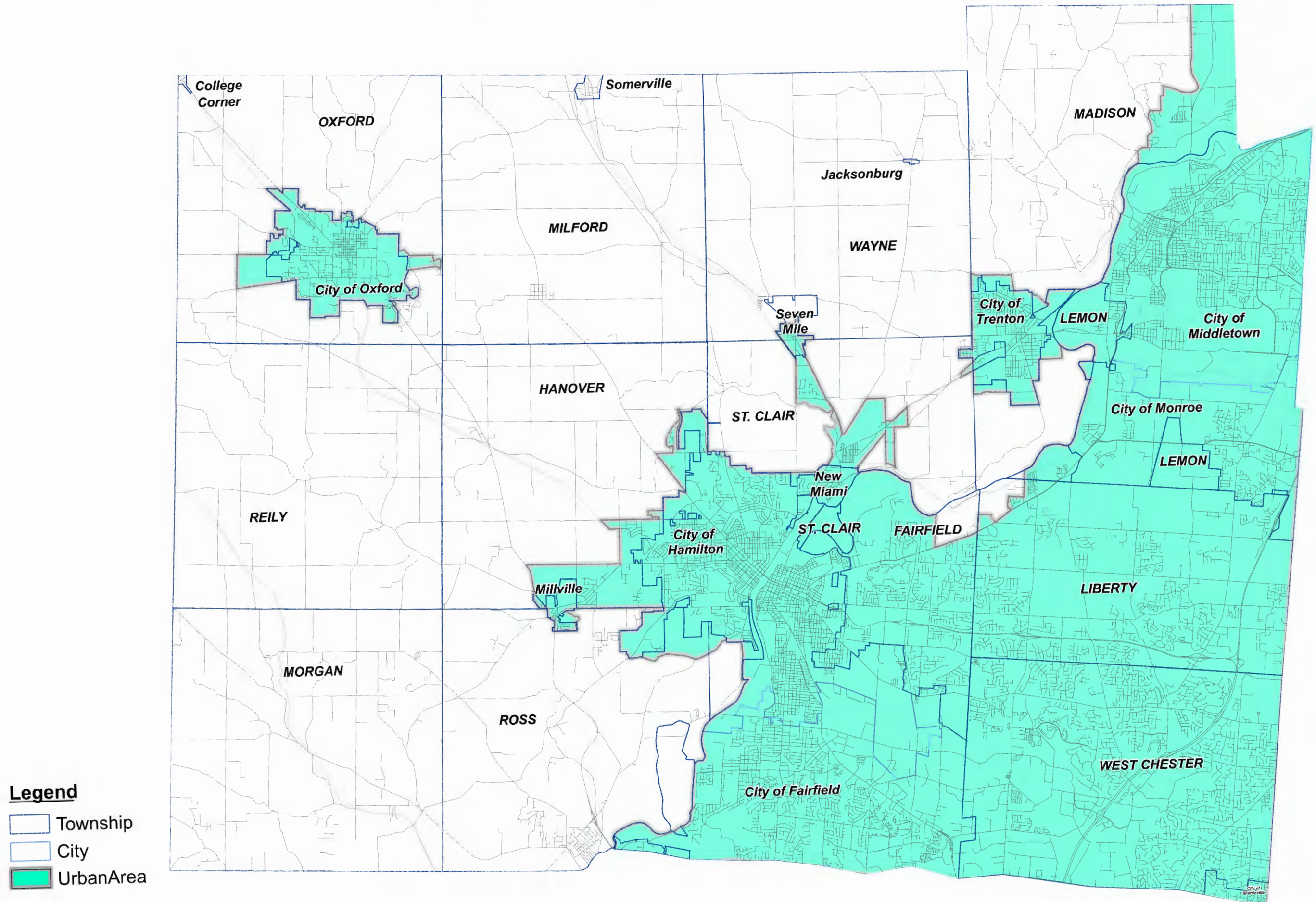
- Interstate-Freeway
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- Minor Collector-2nd Class
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- - - Prop Minor Collector
- - - Prop Minor Collector-2nd Class
- - - Prop Neighborhood Collector





- Legend**
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 - Minor Arterial
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 - - - Prop Minor Arterial
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 - - - Prop Minor Collector-2nd Class
 - - - Prop Neighborhood Collector

Butler County Urban Area 2007

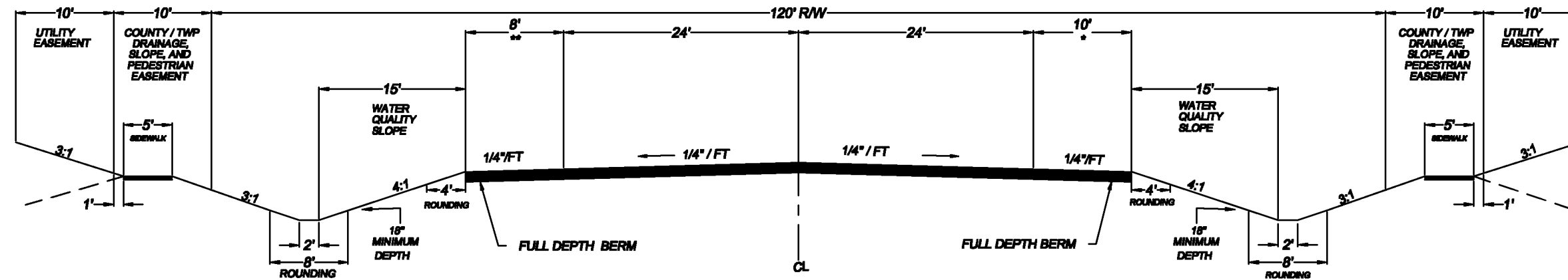


TYPICAL SECTIONS

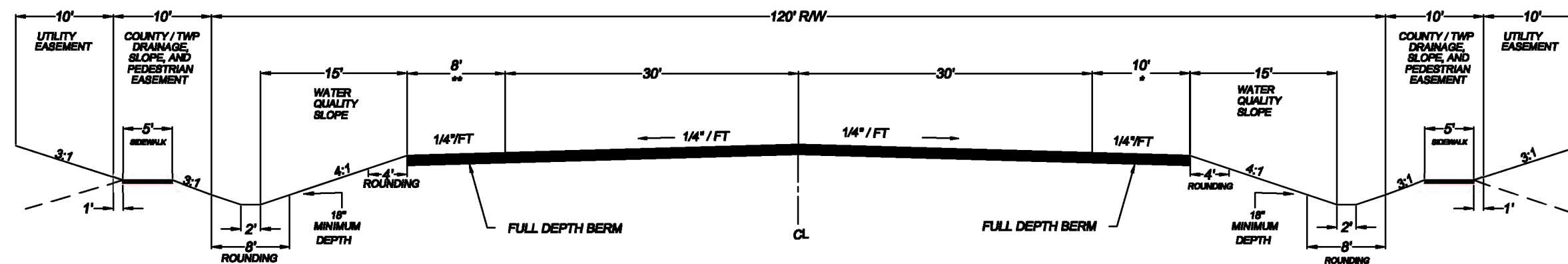
The following typical sections are to be used for planning and guidance purposes only for future roads and streets only.

The official typical sections for Butler County are found in the Butler County Subdivision Standards.

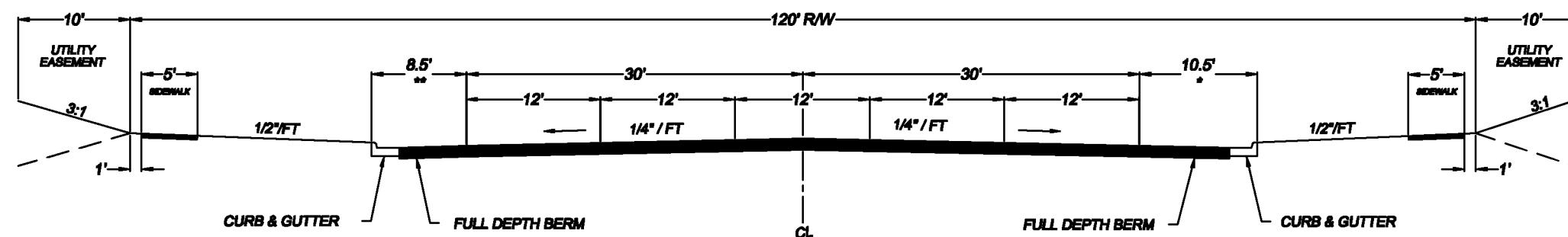
NON-URBAN NON-CURB & GUTTER SECTION



URBAN NON-CURB & GUTTER SECTION

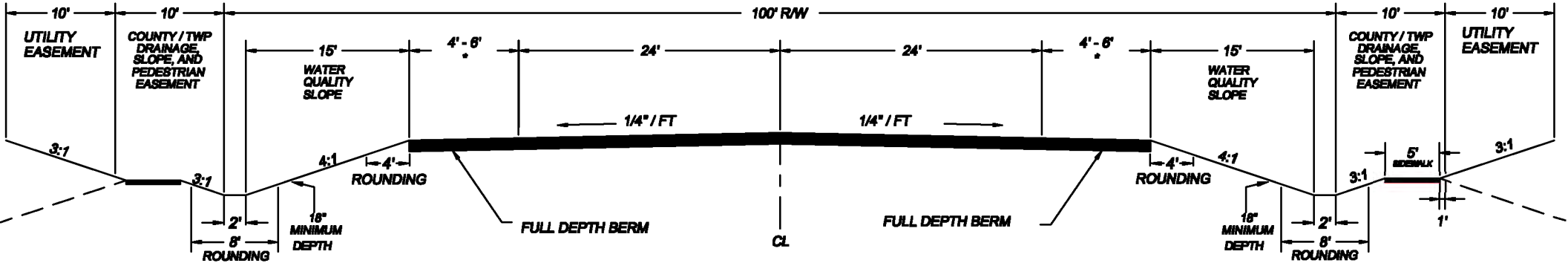


URBAN CURB & GUTTER SECTION

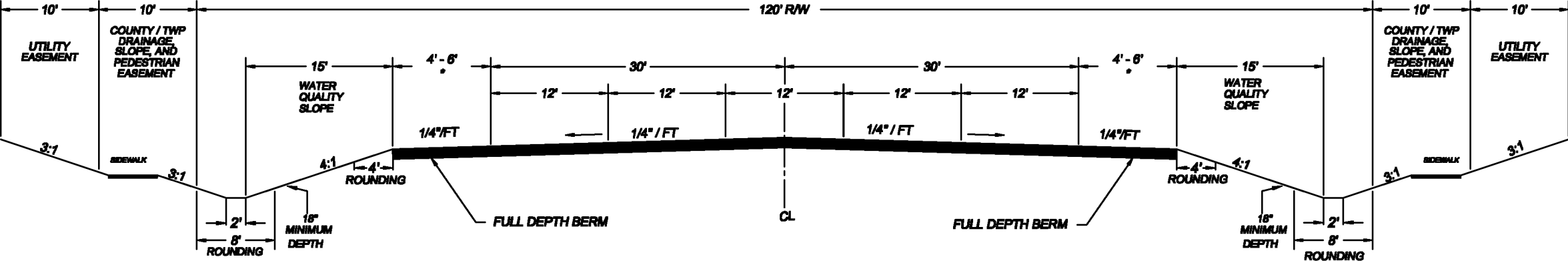


* For Design Speeds 50 MPH And Over
 ** For Design Speeds Under 50 MPH

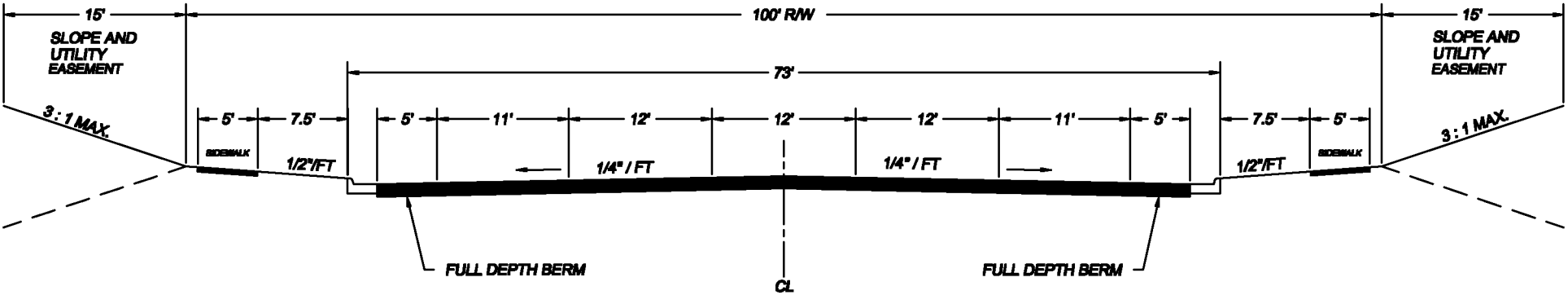
NON-URBAN NON-CURB & GUTTER SECTION



URBAN NON-CURB & GUTTER SECTION

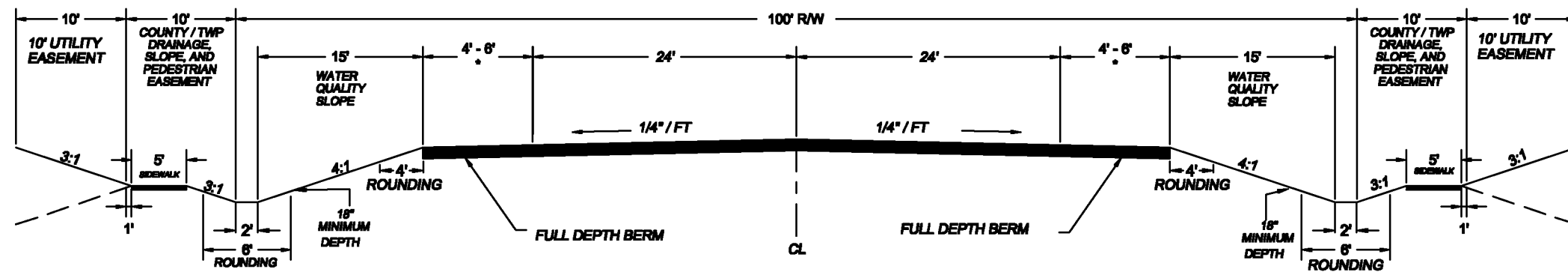


URBAN CURB & GUTTER SECTION

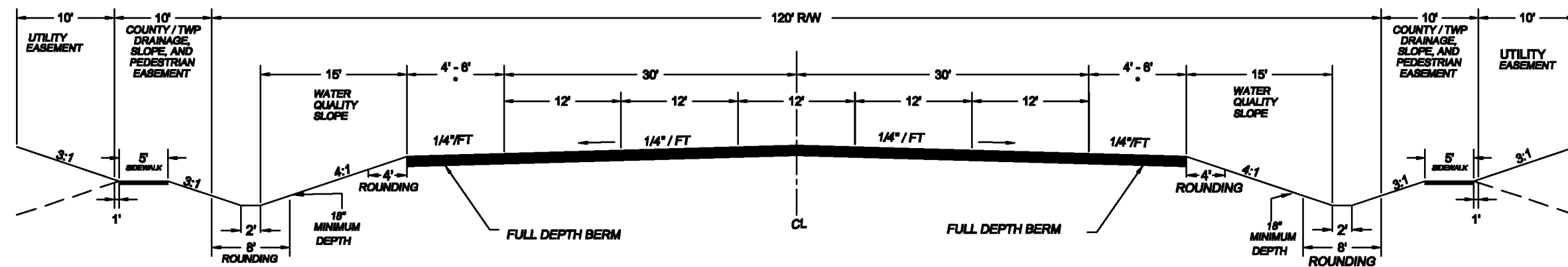


* SEE FIGURE A, PAGE 38

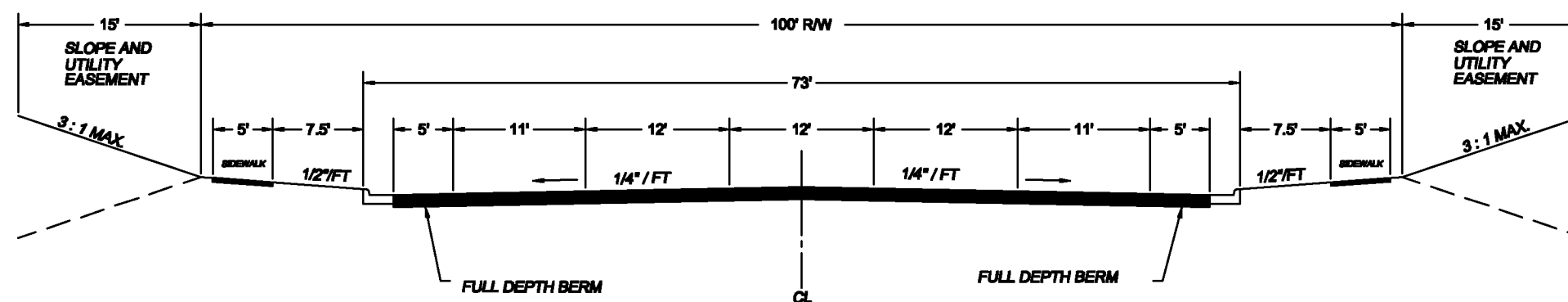
NON-URBAN NON CURB & GUTTER SECTION



URBAN NON CURB & GUTTER SECTION



URBAN CURB & GUTTER SECTION



* SEE FIGURE A, PAGE 36

The diagram illustrates a cross-section of a proposed 80-foot Right-of-Way (R/W). The layout is symmetrical around a central centerline (CL). The components from left to right are:

- UTILITY EASEMENT:** 10' wide.
- COUNTY DRAINAGE, SLOPE, AND PEDESTRIAN EASEMENT:** 10' wide.
- ROUNDING:** 8' wide.
- WATER QUALITY SLOPE:** 15' wide, with a 3:1 slope.
- BICYCLE FACILITY:** 4'-6" wide, with a 4:1 slope.
- FULL DEPTH PAVED BERM:** 12' wide, with a 1/4" per foot slope.
- CL (Centerline):** Indicated by a dashed line.
- FULL DEPTH PAVED BERM:** 12' wide, with a 1/4" per foot slope.
- BICYCLE FACILITY:** 4'-6" wide, with a 4:1 slope.
- WATER QUALITY SLOPE:** 15' wide, with a 3:1 slope.
- ROUNDING:** 8' wide.
- COUNTY DRAINAGE, SLOPE, AND PEDESTRIAN EASEMENT:** 10' wide.
- UTILITY EASEMENT:** 10' wide.

Additional details include a 5' sidewalk on the outer edges of the rounded shoulders and a 1' offset from the utility easement boundary.

The diagram illustrates two cross-sections of a road, comparing a standard configuration with one that includes a bicycle facility. The total right-of-way (R/W) is 80 feet.

HALF SECTION WITHOUT BIKE FACILITY:

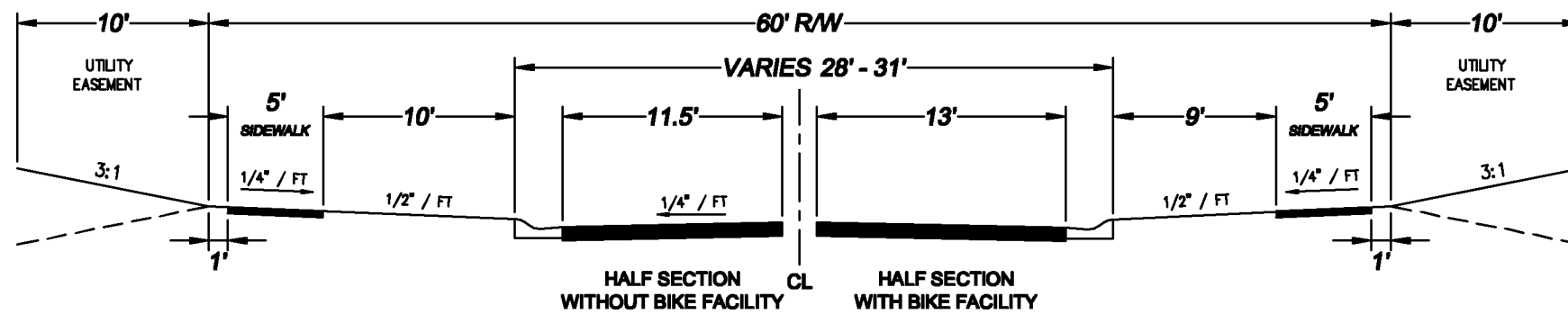
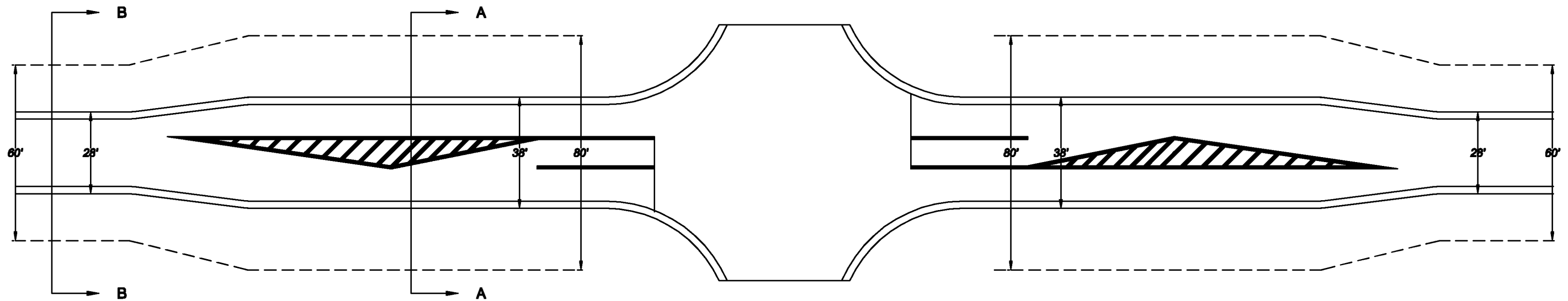
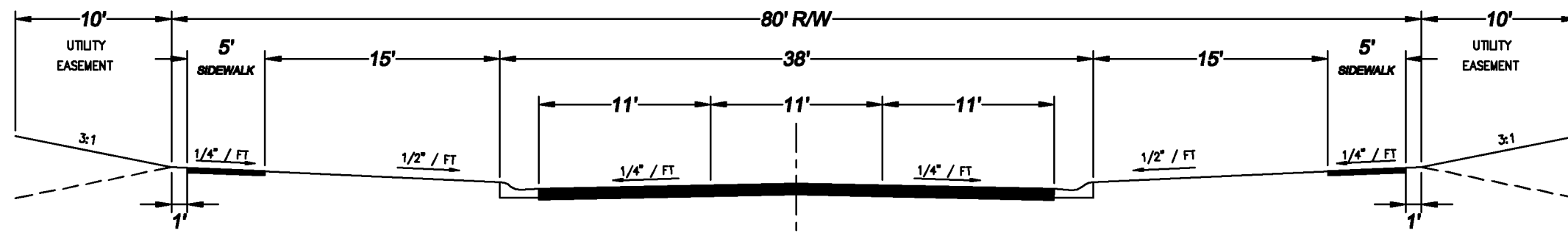
- Utility Easement: 10'
- Sidewalk: 5'
- Offset: 11'-6"
- Offset: 2'
- Offset: 12'
- Offset: 12'
- Offset: 11'
- Offset: 5'
- Offset: 9'-6"
- Sidewalk: 5'
- Utility Easement: 10'

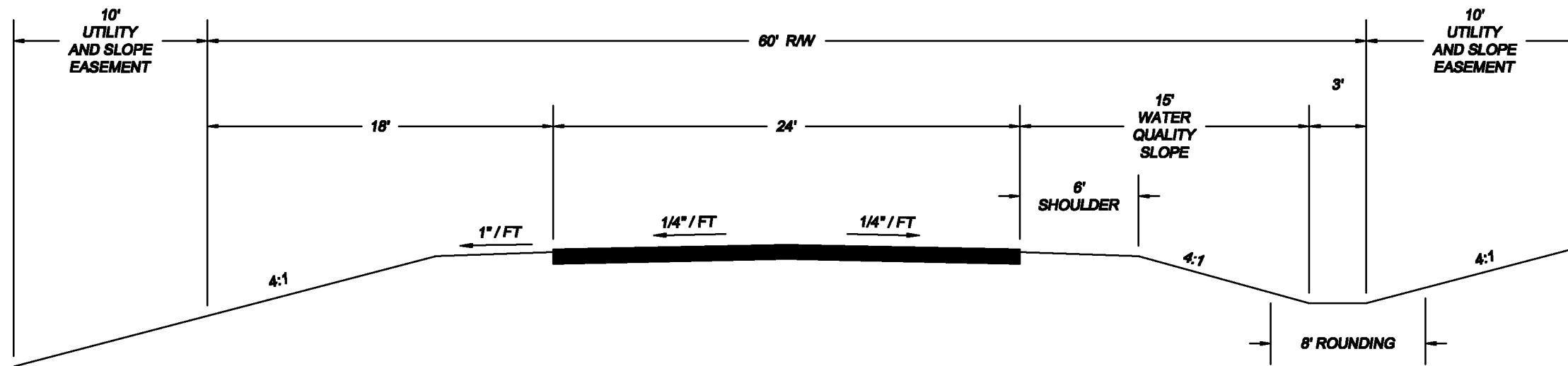
HALF SECTION WITH BIKE FACILITY:

- Utility Easement: 10'
- Sidewalk: 5'
- Offset: 11'-6"
- Offset: 2'
- Offset: 12'
- Offset: 12'
- Offset: 11'
- Offset: 5'
- Offset: 9'-6"
- Sidewalk: 5'
- Utility Easement: 10'

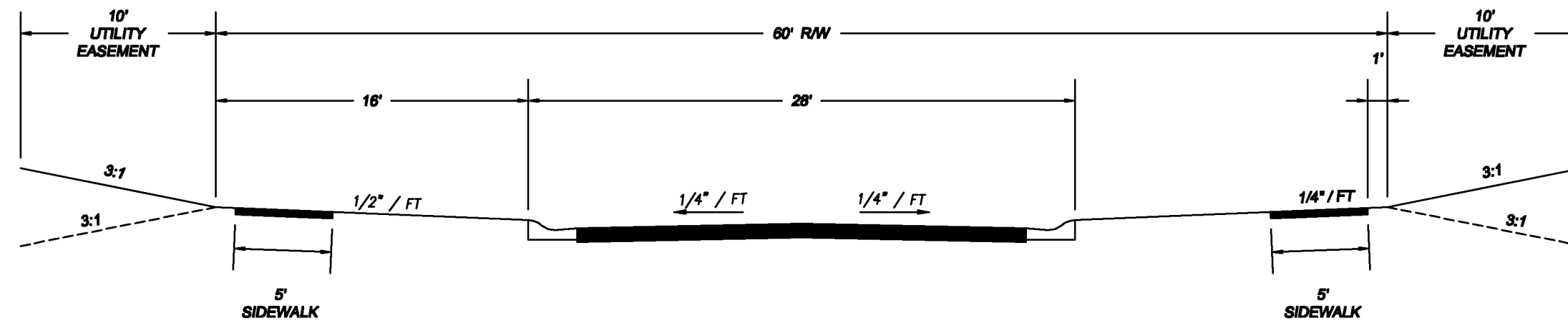
The diagram also shows a 3:1 slope, a 1/2'FT offset, and a 1/4'FT offset. A dashed line indicates the centerline (CL).

Minor Collector





LOCAL STREET WITHOUT CURB



LOCAL STREET WITH CURB

ACCESS MANAGEMENT

Butler County has adopted Access Management Regulations by action of the Board of Butler County Commissioners Resolution No. 04-11-3011 dated November 18, 2004 and having an effective date of January 01, 2005.

Access Management is an integral part of any thoroughfare plan and is mentioned here as being part of this Thoroughfare Plan by reference. All aspects of the Thoroughfare Plan shall be in accordance with the regulations as described in the above mentioned Access Management Regulations document on file at the Butler County Engineer's Office.

In any cases of conflict between this Thoroughfare Plan and the Access Management Regulations, the latest provisions in the Access Management Regulations shall prevail.

Proposed Projects

Our goal in evaluating and listing projects for the thoroughfare network of Butler County was to identify highways that might have the greatest impact on meeting the future transportation needs of the County.

The conditions which we considered in planning for proposed projects were safety, population growth, traffic counts, economic development, plus current and projected levels of service. Also factored in was an evaluation of probable funding sources and project development times which allowed development of a time table for short term, mid-term, and long term projects along with an estimated cost for the project. Timing is an essential element in the project selection process, especially with regards to major projects.

Each category of functional classification and the highways within the category were ranked based on the factors identified as most important. Only Major Capital Improvement Projects and not Operational Projects (general maintenance) were listed as potential projects.

The transportation network of Butler County was broken into the following functional classifications listed in order of importance:

- Interstate / Freeway and National Highway Systems
- Principal Arterials
- Minor Arterials
- Major Collectors
- Minor Collectors
- Minor Collectors (Second Class)
- Neighborhood Collectors
- Local Streets

The Advisory Committee did not address any highways below the Major Collector category in this report.

The construction estimate shown on the Proposed Project List is based on a conceptual idea of the proposed project. No other costs such as right-of-way, design, studies, or utilities are included in the total.

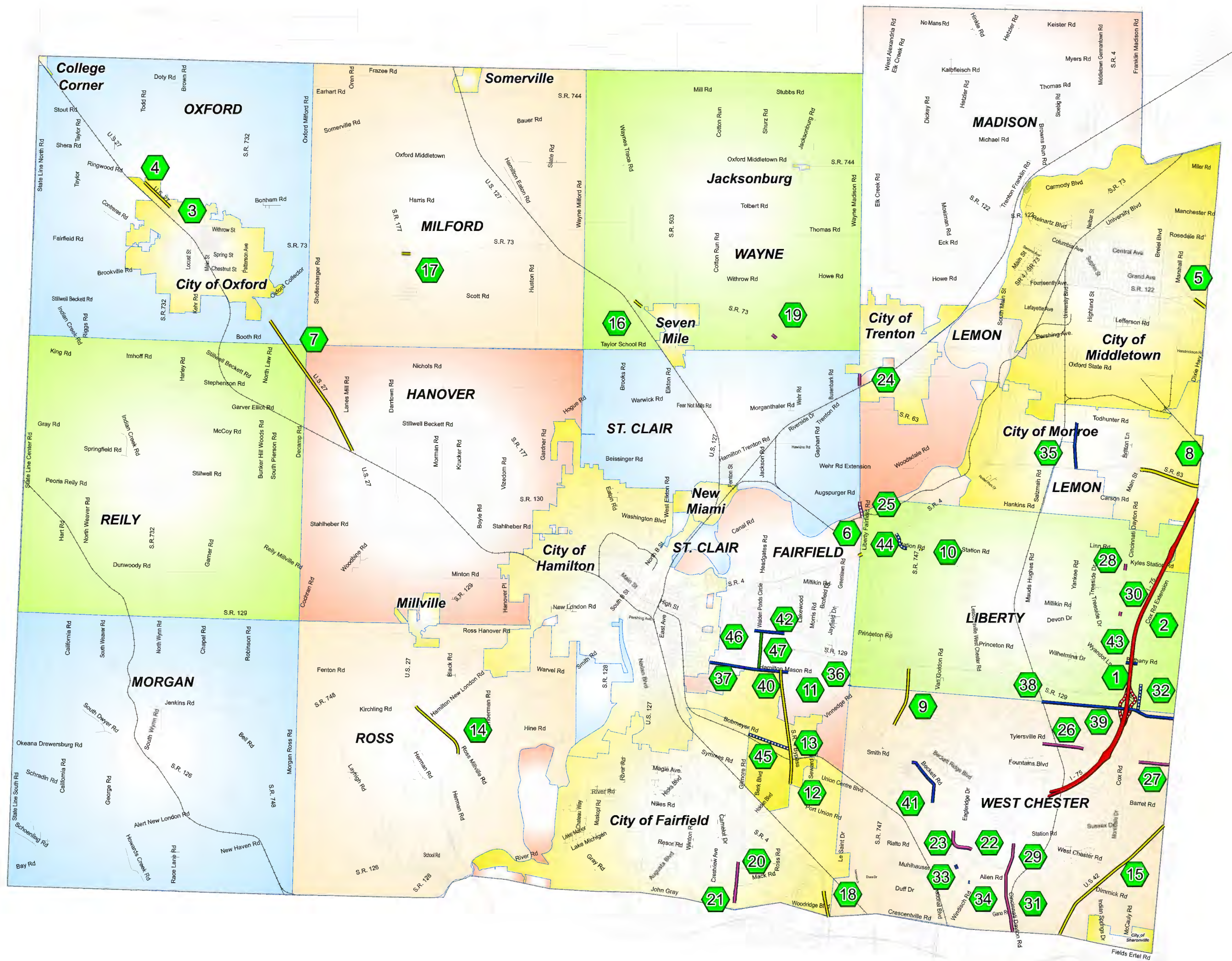
The cost figures shown are based on 2006 dollars for estimating purposes. No adjustment has been made for future dollars.

Categories of 0-5 years, 5-10 years, 10-20 years, and 20-plus years were used to estimate where a given project might lie relative to its project development time, the amount of time that the respective local agencies can budget for local share, and when outside funding sources would become available.

The following maps are broken into the different year categories and are color-coded according to their classification. The listing page has a “map reference number” to help identify its location on the map.

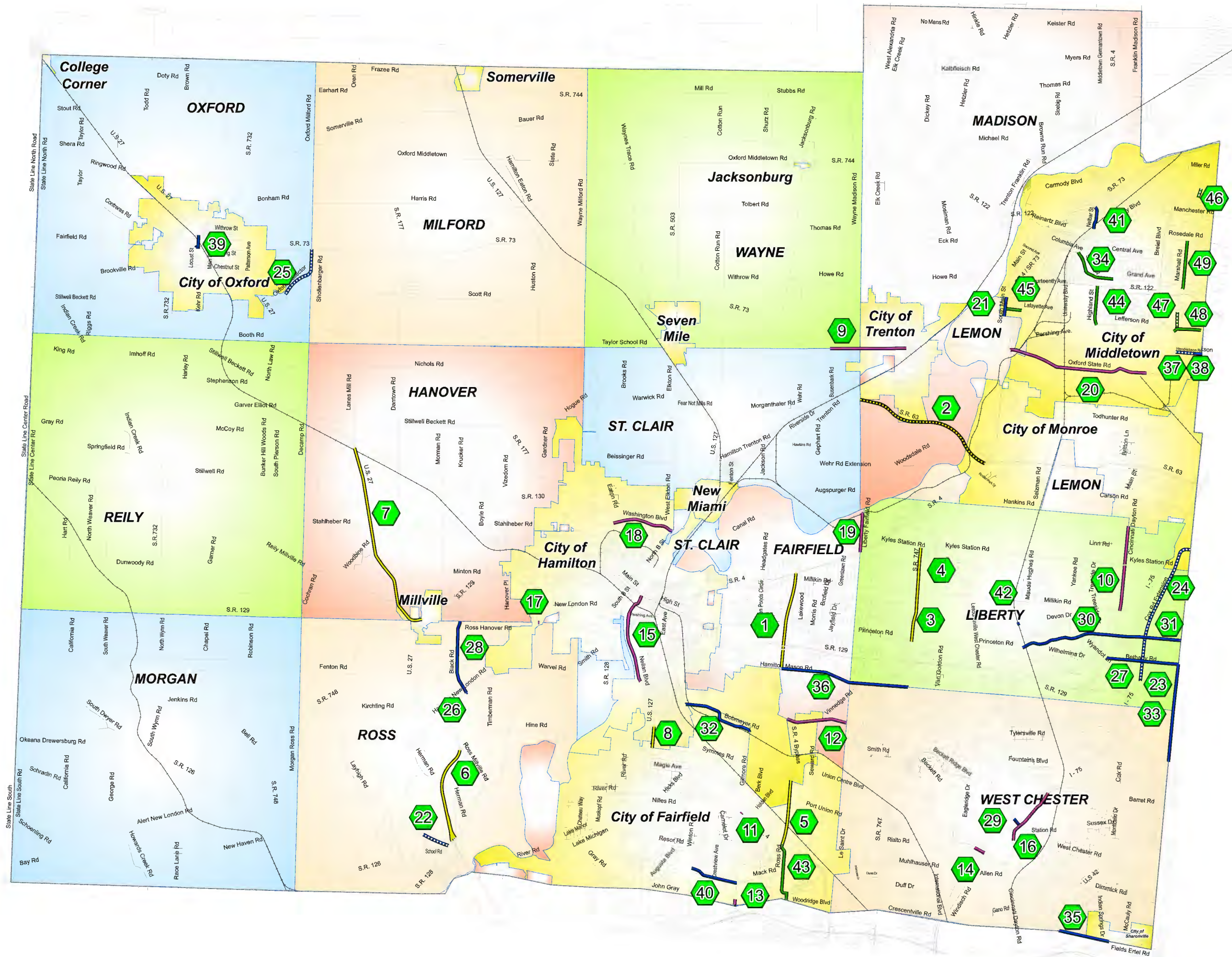
PROPOSED PROJECTS 0 - 5 YEARS

INTERSTATE FREEWAY				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
1	I-75	S.R. 129	Add ramps to Hamilton Mason Rd	30.0
2	I-75	Cincinnati Dayton Rd to county line	Add 1 north and 1 southbound lane	(20.0)
3	U.S. 27	U.S. 27 - Locust St to Merry Day Dr	Add 1 lane w/ safety upgrades	2.0
4	U.S. 27	Merry Day Dr to Todd Rd	Add 1 lane w/ safety upgrades	4.0
PRINCIPAL ARTERIAL				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
5	S.R. 129	Grand Ave to Middletown city limits	Add 2 lanes	5.5
6	S.R. 4	Liberty Fairfield Rd	Intersection upgrade	3.0
7	U.S. 37	U.S. 27 - Phase 3, S.R. 130 to Oxford College	Add 1 lane w/ safety upgrades	5.0
8	S.R. 69	Cincinnati Dayton Rd to I-75	New on and off ramps	10.0
9	S.R. 747	Phase 3, Tylersville Rd to S.R. 129	Add 2 lanes	3.0
10	S.R. 747	Phase 1, Kyles Station Rd	Intersection upgrade and add 2 lanes	3.0
11	S.R. 4 Bypass	Hamilton Mason Rd	Intersection upgrade	3.0
12	S.R. 4 Bypass	Symmes Rd	Intersection upgrade	3.0
13	S.R. 4 Bypass	Phase 1, Symmes Rd to Hamilton Mason Rd	Add 4 lanes	8.0
14	U.S. 37	U.S. 27 - Phase 2, Ross Milville to Kitching Rd	Add 2 lanes w/ safety upgrades	6.0
15	U.S. 37	County line to Butler Warren Rd	Add 1 lane w/ safety upgrades	3.0
16	U.S. 127	S.R. 79	Intersection improvement	3.0
17	S.R. 79	S.R. 177	Add turn lanes w/ safety upgrades	2.5
18	S.R. 4	Crescentville Rd to Commercial Dr	Add 2 lanes	1.6
MAJOR ARTERIAL				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
19	S.R. 79	Jacksonburg Rd	Intersection improvement / Safety upgrades	1.5
20	Gilmore Rd	Reesor Rd to Mack Rd	Add 1 lane w/ safety upgrades	1.5
21	Gilmore Rd	Mack Rd to Robt Dr	Add 1 lane w/ safety upgrades	1.0
22	Union Centre Blvd	Muhlbauer Rd	Add dual turn lanes	3.4
23	Union Centre Blvd	Muhlbauer Rd to West Chester Rd	Add 2 lanes	1.6
24	Wayne Madison Rd	Tranton Rd	Intersection upgrade	0.5
25	Wayne Madison Rd	Liberty Fairfield Rd	Bridge realignment	12.0
26	Tylersville Rd	Lakota Hills Dr to Wellesburg Dr	Add 3 lanes	7.0
27	Tylersville Rd	Kohls to Butler Warren Rd	Add 1 lane	0.8
28	Cincinnati Dayton Rd	Kyles Station Rd	Intersection improvement	3.0
29	Cincinnati Dayton Rd	Went Chester Rd	Turn lanes	1.0
30	Cincinnati Dayton Rd	Milken Rd	Intersection improvement	0.5
31	Cincinnati Dayton Rd	Crescentville Rd to West Chester Rd	Widening	2.4
MAJOR COLLECTOR				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
32	Cox Rd	Cox Rd extension	Hamilton Mason Rd to golf course	3.0
33	Allen Rd	Muhlbauer Rd	Add 1 lane	0.5
34	Allen Rd	Whitson Rd	Add turn lane	0.0
35	Vandee Rd	S.R. 63 to Toddman Rd	3 lanes on new alignment	3.0
36	Liberty Fairfield Rd	Hamilton Mason Rd	Intersection improvement and realignment	1.5
37	Hamilton Mason Rd	Five Points to Gilmore Rd	Add 1 lane w/ safety improvements	4.0
38	Hamilton Mason Rd	Cincinnati Dayton Rd to railroad overpass	Add 1 lane	3.0
39	Hamilton Mason Rd	Cincinnati Dayton Rd to Butler Warren Rd	Add 3 lanes	6.4
40	Hamilton Mason Rd	Gilmore Rd to S.R. 4 Bypass	Add 2 lanes	4.0
41	Berkett Rd	Union Centre Blvd to Smith Rd	Add 1 lane w/ safety upgrades	3.0
42	Princeton Rd	S.R. Bypass 4 to Walden Ponds Circle	Add 1 lane and 3 lane sections	2.5
43	Stephany Rd	Bridge over I-75	Widen bridge to 3 lanes + bike lane	1.5
44	Kyles Station Rd	S.R. 4	Relocate intersection to north	1.0
45	Salmeyer Rd	BC Regional Airport to S.R. Bypass 4	New 3 lane boulevard	2.0
MINOR COLLECTOR				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
46	Gilmore Rd	S.R. 129 overpass to Princeton Rd	Add 1 lane	0.8
47	Gilmore Rd	Hamilton Mason Rd to S.R. 129 overpass	Add 1 lane	0.8



PROPOSED PROJECTS 5 - 10 YEARS

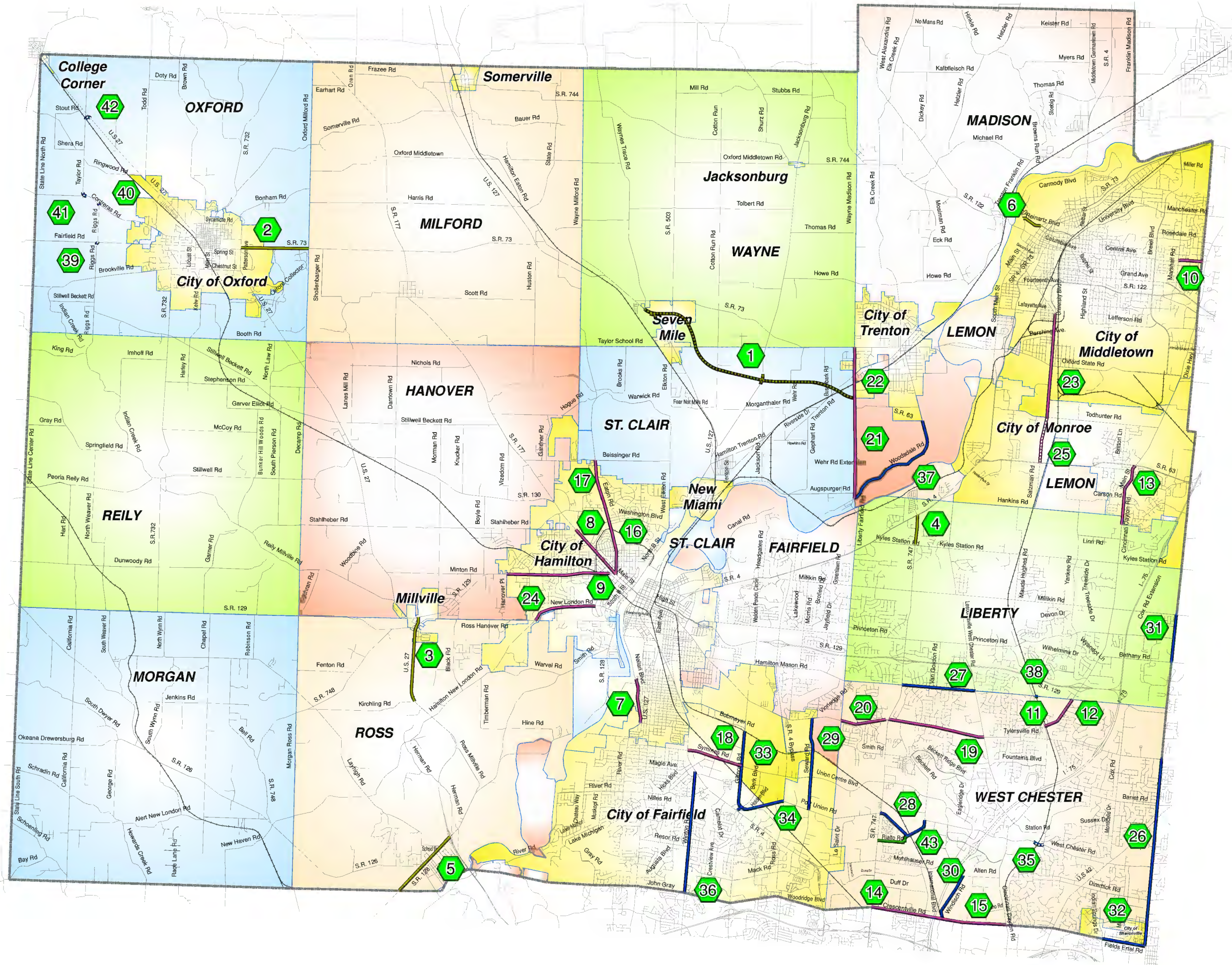
PRINCIPAL ARTERIAL				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
1	S.R. 4 Bypass	Phase 3, Hamilton Mason Rd to S.R. 4	Add 2 lanes	7.0
1	S.R. 83	Phase 1, Wayne Madison Rd to S.R. 4	4 lanes, L/A R/W, new street crossing	72.2
3	S.R. 747	Phase 2, Princeton Rd to Millikin Rd	Add 3 lanes	5.5
4	S.R. 747	Phase 3, Millikin Rd to Kyles Station Rd	Add 3 lanes	5.5
5	S.R. 4 Bypass	Phase 2, S.R. 4 to Symmes Rd	Add 2 lanes	8.0
6	U.S. 37	Phase 1, S.R. 128 to Ross Millville Rd	Add 2 lanes w/ turn lanes	6.0
7	U.S. 37	Phase 3, S.R. 129 to S.R. 130	Add 1 lane w/ safety upgrades	5.0
8	U.S. 127	Symmes Rd to St. Clair Avenue (Hamilton 3 lanes)	Add 1 lane w/ safety upgrades	1.3
SECOND ARTERIAL				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
0	S.R. 73	Essenberry Rd to N. Miami St	Add 1 lane	3.0
10	Cincinnati Dayton Rd	Millikin Rd to Monroe connection line	Add 1 lane	5.0
11	Gilmore Rd	S.R. 4	Intersection upgrade	1.0
11	Tylersville Rd	S.R. 4 Bypass to West Chester Township line	Add 3 lanes	8.0
15	Gilmore Rd	1275	Interchange modification	12.5
16	Irish Canine Blvd	175	Interchange modification	5.0
17	Indian Blvd	Williams Ave to S.R. 129	New alignment 2 lanes	3.0
18	Cincinnati Dayton Rd	West Chester Rd to 175	Add 1 lane w/ safety upgrades	5.0
17	Russ Hanover Rd	New London Rd	Turn lanes and safety upgrades	1.0
18	Washington Blvd	Easton Rd to Cleveland Ave	Add 3 lanes	6.0
19	Liberty Fairfield Rd	S.R. 4 to Great Miami River	Add 2 lanes w/ safety upgrades	2.5
20	Oxford State Rd	Spulino Way to S.R. 4	Add 3 lanes	8.5
THIRD ARTERIAL				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
21	South Main St	Middletown south corp line to Eighteenth Ave	Add 2 lanes w/ safety upgrades	1.0
22	Layhigh Rd Extension	Layhigh Rd to U.S. 27	Add 1 lane w/ safety upgrades	4.0
23	Cox Rd Extension	Cox Rd extension	Golf course to Bethany Road	3.0
24	Cox Rd Extension	Cox Rd extension	Bethany Rd to Butler Warren County line	20.0
25	Oxford Collector	Existing Oxford Collector to S.R. 72	New 2 lane w/ turn lanes	8.0
26	Hamilton New London Rd	Black Rd	Intersection improvement	0.7
27	Bethany Rd	Cincinnati Dayton Rd to Butler Warren rd	Add 1 lane	3.0
28	Black Rd	Hamilton New London Rd to Ross Hanover Rd	Turn lanes and safety upgrades	4.5
29	Sycamore St	Cincinnati Dayton Rd to Steeple Chase Way	Add 1 lane w/ safety upgrades	1.0
30	Princeton Rd	Maude Hughes Rd to Cincinnati Dayton Rd	Safety upgrades	4.2
31	Princeton Rd	Cincinnati Dayton Rd to Butler Warren Rd	Safety upgrades	3.0
32	Bobmeyer Rd	S.R. 4 to Gilmore Rd	Add 3 lanes	2.0
33	Butler Warren Rd	Tylersville Rd to Bethany Rd	Add 3 lanes	6.0
34	Grand Ave	Orchard St to Central Ave	Upgrade	2.6
35	Fields Eitel Rd	U.S. 42 to Indian Springs Dr (Hardy Intersect Hwy)	Add 1 lane w/ safety improvements	3.5
36	Hamilton Mason Rd	S.R. 4 Bypass to S.R. 747	Add 1 lane w/ safety improvements	6.5
37	Hendrickson Rd	Breitel Blvd to Cincinnati Dayton Rd	3 lanes on new alignment	2.6
38	Hendrickson Rd	Cincinnati Dayton Rd to Towne Blvd (Warren Co)	Add 1 lane	2.0
49	Locust St	Spring St to Church St	Add 3 lanes w/ safety improvements	2.0
40	Maple Rd	Winton Rd to Gilmore Rd	Add 1 lane w/ safety improvements	3.5
41	Neibart St	University Blvd to S.R. 73	Add 3 lanes w/ safety improvements	20.0
42	Maude Hughes Rd	Bridge # 2,500	Proposed new railroad underpass	2.0
LOCAL COLLECTOR				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
43	Ross Rd	County line to S.R. 4 Bypass	Add 1 lane w/ safety improvements	3.0
44	Highland St	Remond Blvd to Lefferson Rd	Add 2 lanes	1.5
45	Lafayette Ave	South Main St to South Varsity Plwy	Safety upgrades and bike path	0.7
46	Marshall Rd Extension	Marshall Rd Extension	Riverside Ave to Miller Road	4.0
47	Marshall Rd Extension	Marshall Rd Extension	Bonita Dr to Lefferson Rd	5.0
48	Lefferson Rd	Breitel Blvd to Cincinnati Dayton Rd	Add 1 lane w/ safety improvements	1.5
49	Marshall Rd	Grand Ave to Rosedale Rd	5 lanes new alignment	3.0



Butler County Thoroughfare Plan 2007 - Proposed Projects 5-10 Years

PROPOSED PROJECTS 10 - 20 YEARS

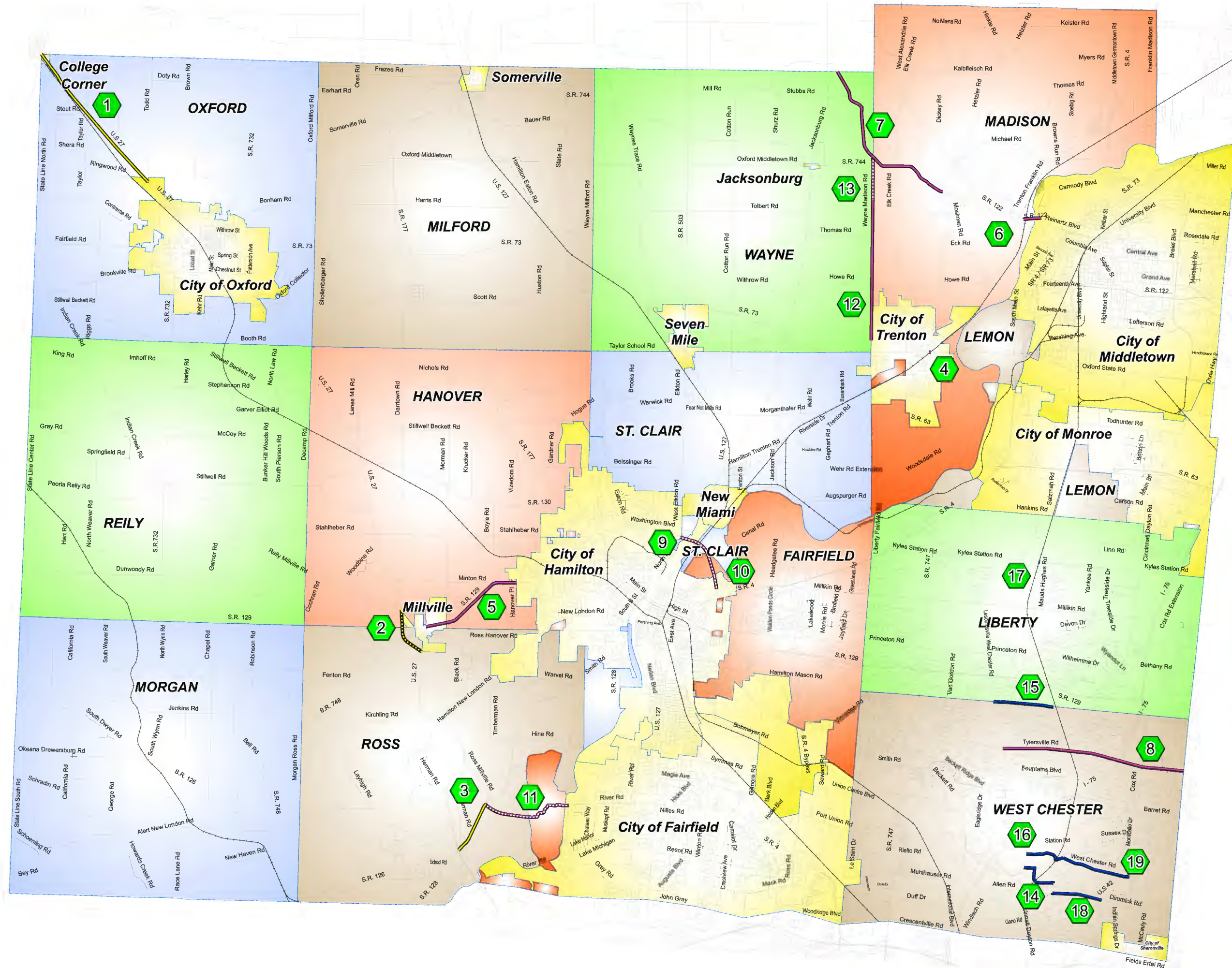
PRINCIPAL ARTERIAL				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
1 S.R. 60		Phase 2: Wayne Madison Rd to U.S. 127	2 lanes w/ L/A R/W	17.0
2 S.R. 73		U.S. 127 to City of Oxford	Safety upgrades at various locations	6.0
3 U.S. 27		U.S. 27 - Phase 3: Kirchling Rd to S.R. 129	Add 2 lanes w/ turn lanes	6.0
4 S.R. 747		Phase 4: Kyles Smiling Rd to S.R. 4	Add 3 lanes	3.0
5 S.R. 128		U.S. 27 to Hamilton County corp line	Add 2 lanes w/ safety upgrades	14.0
6 Columbia Ave / Heinz Ave Blvd		Main St to Carmody Blvd	Add 1 lane	2.0
MINOR ARTERIAL				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
7 River Rd		Williams Ave to St. Clair Ave	Add 1 lane w/ safety upgrades	2.5
8 S.R. 177		Eaton Rd to Stahlheber Rd	Add 1 lane	3.5
9 S.R. 129		Ross Ave to Hamilton Corp Line	Add 1 lane w/ safety upgrades	6.5
10 Central Ave		Marshall Rd to Cincinnati Dayton Rd	Add 1 lane	4.0
11 Cincinnati Dayton Rd		Railroad overpass	Replace railroad overpass	10.0
12 Cincinnati Dayton Rd		Railroad overpass to Hamilton Mason Rd	Add 1 lane w/ safety upgrades	3.2
13 Main St		Monroe Corp line to S.R. 60	Add 1 lane	5.5
14 Crescentville Rd		S.R. 747 to I-75 Bridge	Add 1 lane w/ safety upgrades	4.5
15 Crescentville Rd		I-75 Bridge to Cincinnati Dayton Rd	Add 1 lane	6.6
16 Eaton Rd		Main St to Taff Pl	Safety upgrades	4.0
17 Eaton Rd		Taff Pl to Beissinger Rd	Add 2 lanes w/ safety upgrades	3.8
18 Symmes Rd		S.R. 4 to North Gilmore Rd	Add 3 lanes and new railroad underpass	15.0
19 Tylersville Rd		S.R. 747 to LeSouadsville West Chester Rd	Turn lanes w/ safety upgrades	5.0
20 Tylersville Rd		S.R. 747 to West Chester Twp line	Safety upgrades w/ turn lanes	1.0
21 Wayne Madison Rd		Great Miami River to S.R. 73	Add 2 lanes w/ safety upgrades	9.0
22 Wayne Madison Rd		Railroad	New railroad overpass	6.0
23 Yankee Rd		University Blvd to Tothunter Rd	Add 1 lane	10.0
24 New London Rd		Washington Blvd to Rose Hansover Rd	Add 1 lane w/ safety upgrades	3.5
25 Yankee Rd		S.R. 60 to Tothunter Rd	Relocation - New 3 lane	3.0
MAJOR COLLECTOR				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
26 Butler Warren Rd		Fields Enter Rd to Tylersville Rd	Add 1 lane	5.0
27 Hamilton Mason Rd		S.R. 747 to LeSouadsville West Chester Rd	Turn lanes w/ safety upgrades	6.0
28 Port Union Rialto Rd		S.R. 747 to West Chester Rd	Add 1 lane w/ safety upgrades	3.5
29 Seward Rd		Port Union Rd to Tylersville Rd	Add 3 lanes w/ new railroad underpass	12.0
30 Windisch Rd		Crescentville Rd to Allen Rd	Add 3 lanes on new alignment	6.0
31 Butler Warren Rd		Bethany Rd to Milliken Rd	Add 3 lanes	2.5
32 Fields Enter Rd		Indian Springs Dr to But/Ham Cor line	Add 1 lane w/ safety upgrades	5.0
33 Gilmore Rd		S.R. 4 to Bottmeyer Rd	Add 1 lane w/ safety upgrades	3.5
34 Port Union Rd		S.R. 4 Bypass to Holden Blvd	Add 3 lanes and new railroad overpass	1.5
35 West Chester realignment		Railroad overpass	Roadway realignment	5.0
36 Winton Rd		County Line to S.R. 4	Add 1 lane w/ safety upgrades	6.0
37 Woodside Rd		Wayne Madison to new S.R. 60	Widen and improvements at curves	2.0
38 Hamilton Mason Rd		At railroad overpass	New railroad overpass	14.0
39 Riggs Rd		Riggs Rd at Fairfield Rd	Intersection realignment	0.5
40 Riggs Rd		Riggs Rd at Contreras Rd	Intersection realignment	0.5
41 Contreras Rd		Contreras Rd at Taylor Rd	Intersection realignment	0.5
42 Taylor Rd		Taylor Rd at U.S. 27	Intersection realignment	1.0
MINOR COLLECTOR				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
43 Rialto Rd		S.R. 747 at Port Union Rd	Add 1 lane w/ safety upgrades	2.5



Butler County Thoroughfare Plan 2007 - Proposed Projects 10-20 Years

PROPOSED PROJECT 20+ YEARS

PRINCIPAL ARTERIAL				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
1	U.S. 27	Todd Rd to Butler/Preble county line	Add 1 lane w/ safety upgrades	7.0
2	U.S. 27	Millville Connector	4 lanes	15.0
3	S.R. 128	Future River Rd to Hamilton County U.S. 27	Add 2 lanes w/ safety upgrades	14.0
MINOR ARTERIAL				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
4	S.R. 73	Railroad crossing in Trenton	New railroad overpass	10.0
5	S.R. 129	U.S. 27 to Hamilton corp line	Add 1 lane w/ safety upgrades	5.0
6	S.R. 122	Trenton Franklin Rd to Carmody Blvd	New bridge on new alignment	20.0
7	S.R. 122	Butler/Preble County line to Mosiman Rd	Widening and safety upgrades	7.0
8	Tylersville Rd	LeSourdsville West Chester Rd to Cincinnati Dayton Rd	Add 1 lane w/ safety upgrades	3.5
9	Washington Blvd Extension	West Elkton Rd to U.S. 127 (crossing Great Miami River)	4 lanes on new alignment	30.0
10	Washington Blvd Extension	U.S. 127 to S.R. 129	4 lanes on new alignment	16.0
11	River Rd	Nilles Rd to S.R. 128 (new river crossing)	4 lanes, new river crossing	15.0
12	Wayne Madison Rd	S.R. 73 to dead end	Safety upgrades	3.5
13	Wayne Madison Rd	Dead end to S.R. 122	2 lanes on new alignment	3.5
MAJOR COLLECTOR				
MAP REF	ROAD	LOCATION	PROPOSED IMPROVEMENT	CONSTR ESTIMATE (MILLIONS)
14	Dimmick Rd	Cincinnati Dayton Rd to Windwood Dr	Add 1 lane w/ safety upgrades	3.0
15	Hamilton Mason Rd	LeSourdsville West Chester Rd to Mauds Hughes Rd	Turn lanes and safety upgrades	5.0
16	West Chester Rd	Cincinnati Dayton Rd to Barret Rd	Add 1 lane w/ safety upgrades	4.0
17	Kyles Station Rd	Railroad overpass	New railroad overpass	10.0
18	Dimmick Rd	Windwood Dr to U.S. 42	Add 1 lane w/ safety upgrades	2.5
19	West Chester Rd	Barret Rd to U.S. 42	Add 1 lane w/ safety upgrades	4.0



ROADWAYS WITH DESIGNATED BICYCLE FACILITIES

BUTLER COUNTY THOROUGHFARE PLAN BIKEWAY AND PEDESTRIAN FACILITIES INTRODUCTION/OVERVIEW

As part of Butler County's program for transportation planning, it is recognized that non-motorized modes of transportation are another component of that planning. For the most part, this involves bikeway and pedestrian facilities such as roadways with bike shoulders, signed shared roadways, and separate multi-use paths.

The formulation of this Bikeway and Pedestrian Plan was driven by a combination of factors at the national, state, and local level. The national interest is to encourage and promote the development of transportation systems embracing various modes of transportation in a manner which will efficiently maximize mobility of people and goods and minimize transportation-related fuel consumption and air pollution. The State of Ohio as well as the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) have been developing their plans for the urbanized areas. At the local level a number of communities in Butler County have been working to integrate bikeway and pedestrian facilities with their neighboring communities. This is evidenced with the regional initiative of the Miami 2 Miami (M2M)* feasibility study that was completed in October 2002.

In an effort to create an updated document that includes these aspects of transportation, the Butler County Engineer's Office put together a Bikeway and Pedestrian Subcommittee of the Butler County Thoroughfare Plan. This committee was comprised of individuals that represent the communities, planners, and developers in Butler County as well as representatives from OKI.

After months of research, review, and discussion, the following section of the Butler County Thoroughfare Plan was recommended for adoption. The committee feels most situations that may occur in planning for bikeway and pedestrian facilities have been addressed in this Plan. Further, it is assumed individuals will assess their riding skills when determining which route(s) they will follow to reach their destinations.

If the Butler County Thoroughfare Plan for Bikeway and Pedestrian Facilities does not address an issue, then the American Association of State Highway and Transportation Officials Guide to Development of Bicycle Facilities (AASHTO)** guide should be used.

The successful implementation of this Bikeway and Pedestrian Plan for Butler County will depend not only on the recommendations included in the Butler County Thoroughfare Plan but also on the development of local plans by townships and municipalities. Where county roads are involved, the Butler County Engineer's Office will work with representatives of local governments to incorporate these facilities into road and bridge improvements planned for the County. Bikeway and pedestrian facility recommendations included in the Butler County Thoroughfare Plan are advisory and not mandatory, but the intent of the Butler County Engineer is to improve bikeway and pedestrian travel in the County over time.

* The Miami 2 Miami Connection is a proposed 84-mile trail system made up of a combination of 10-foot wide separate trails, 5-foot wide bike lanes on roadways and signed shared roadways to connect the Great Miami River Recreation Trail (existing and proposed) with the existing Little Miami Scenic Trail. The multi-use system will offer transportation and recreation opportunities for walking/jogging, cycling, skating, and wheelchair use. When completed, the trail system will not only connect two large north-south trails, but with those connections, will provide links to more than 400 miles of the multi-use trails across the state of Ohio.

** AASHTO is a nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia, and Puerto Rico. It represents all five transportation modes: air, highways, public transportation, rail, and water. Its primary goal is to foster the development, operation, and maintenance of an integrated national transportation system.

**BUTLER COUNTY
THOROUGHFARE PLAN
BIKEWAY AND PEDESTRIAN FACILITIES
GOALS AND OBJECTIVES**

PURPOSE AND NEED: The national trend is showing increases each year in the number of individuals that choose walking and/or bicycle riding as an alternative form of transportation. The transportation system in Butler County needs to reflect the coordinated efforts of our communities in providing safe, convenient, and well designed bicycle/pedestrian facilities to meet the needs of our residents. Our environment benefits from pedestrian and bicycle travel by improving air quality, conservation of precious fuels and improves the general health and well-being and quality of life of each person choosing to participate. It is assumed individuals will assess their riding skills when determining which route(s) they will follow to reach their destinations. It is also assumed that any organization (public and/or private) developing these facilities acknowledges their responsibility for maintenance.

GOALS:

- To provide direction to the County, cities, townships, and developers in planning and implementing bicycle/pedestrian facilities.
- To provide safe, convenient, and well designed bicycle/pedestrian facilities that encourage use.
- To integrate the bicycle/pedestrian facilities with other transportation systems and surrounding communities' bicycle/pedestrian facilities.

OBJECTIVES:

- Develop a bicycle/pedestrian plan that complements the Butler County Thoroughfare Plan.
- Provide a profile of certain types of bicycle/pedestrian facilities that are appropriate on or near the highway system.
- Develop typical sections that can be incorporated into the roadway typical sections as used elsewhere in the Butler County Thoroughfare Plan.
- Improve and expand the existing network of bicycle/pedestrian facilities.

- Develop criteria consistent with the County, cities', and townships' designs so there is a seamless transition from one area to another.
- Develop bicycle/pedestrian facilities that provide a safe environment and utilize up-to-date design practices.
- Develop a bicycle/pedestrian facilities plan that encourages and, where possible, provides connectivity to county, city, and township parks, recreational areas, government services, schools, scenic areas, community centers, shopping, historic, and other points of interest.
- Develop bicycle/pedestrian facilities that ensure access for emergency vehicles.
- Develop a list of federal, state, and local funding sources with contacts for bicycle/pedestrian facilities.

ROADWAYS WITH DESIGNATED BICYCLE FACILITIES

The Butler Thoroughfare Bikeway Pedestrian Plan has incorporated bicycle facilities tables which identify recommended minimum shoulder widths and widened curb lanes to accommodate bicycle traffic along public roads. The roadways impacted by these recommended minimum widths are identified on the “ROADWAYS WITH DESIGNATED BICYCLE FACILITIES MAP” on pages 39-41.

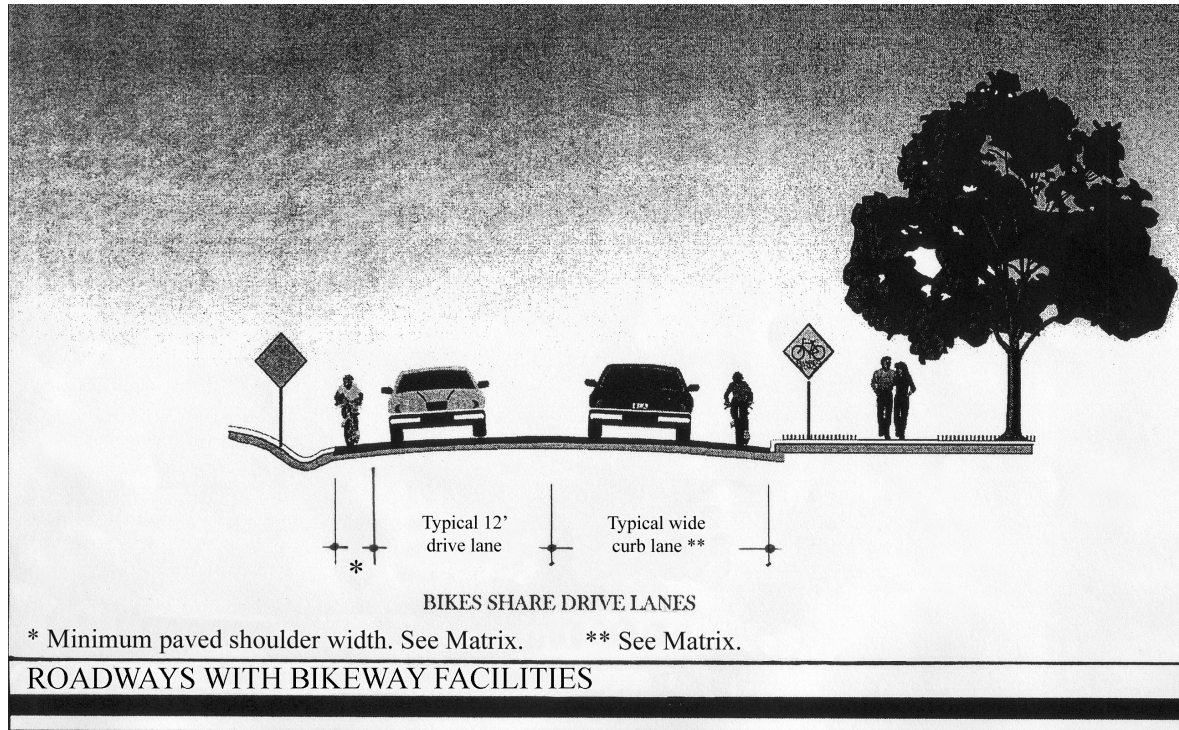


Figure A

Table 1.0

NON CURB AND GUTTER ROADS

SEE FIGURE “A”

Posted Speed	ADT <2000	ADT 2000-5999	ADT 6000-9999	ADT Over 10,000
<=25 mph	12' Lane	2' Shoulder	4' Shoulder	4' Shoulder
30,35 mph	2' Shoulder	4' Shoulder	5' Shoulder	6' Shoulder
40,45 mph	4' Shoulder	5' Shoulder	6' Shoulder	6' Shoulder
50+ mph	4' Shoulder	6' Shoulder	6' Shoulder	6' Shoulder

Table 1.1

CURB AND GUTTER ROADS

SEE FIGURE “A”

Posted Speed	ADT <400	ADT <2000	ADT 2000-5999	ADT 6000-9999	ADT Over 10,000
<=25 mph	*	*	*	*	*
30,35 mph	*	*	Lane + 4'	Lane + 5'	Lane + 5'
40,45 mph	*	Lane + 4'	Lane + 5'	Lane + 5'	Lane + 6'
50+ mph	*	Lane + 5'	Lane + 5'	Lane + 6'	Lane + 6'

* Curb lane width as defined in the current Butler County Subdivision Standards

ROADWAYS AND STREETS WITH BICYCLE SHOULDERS are roads and streets with additional paved shoulder width (see Table 1.0) to accommodate bicycle use. These sections of roads and streets may be posted with signs and pavement markings identifying the area as a bicycle facility.

Note: All areas shall be signed in accordance with the Uniform Manual of Traffic Control Devices; however, all areas may not have pavement symbols.

ROADWAYS AND STREETS WITH WIDE CURB LANES These roads and streets shall have additional pavement width (see Table 1.1) from the edge of the traveled lane to the front edge of the concrete gutter plate or face of curb for standing type concrete curbs (i.e., Type 6).

Note: All areas shall be signed in accordance with the Manual of Uniform Traffic Control Devices; however, all areas may not have pavement symbols.

SHARED LANES Roadways that are designated as shared lanes are defined as roadways where legal bicycles and legal motorized vehicles must share the existing lane. No special provisions are made to the roadway except that they are signed with “share the road” signs.

SEPARATE PATHS (multi-purpose trails) A minimum of 10 ft. of pavement width is required for two direction travel. Additional width may be needed for higher volumes and mixed mode users (cyclists, walkers, runners, skaters, wheelchairs). At least 2 ft. of graded shoulder is needed on both sides, level with the pavement to avoid any uneven edge. More width and/or protective barrier or railing may be needed for separation from utility poles, fences or drop-offs, or other obstacles. Recommended vertical clearance is 8 ft. Separate Shared Use Paths typically are on their own right-of-way; however, in some cases it may be adjacent to the roadway with the appropriate buffer area. Minimum buffer between the roadway and path shall be 5'. (See the AASHTO Guide for the Development of Bicycle Facilities.) See Figure “B”.

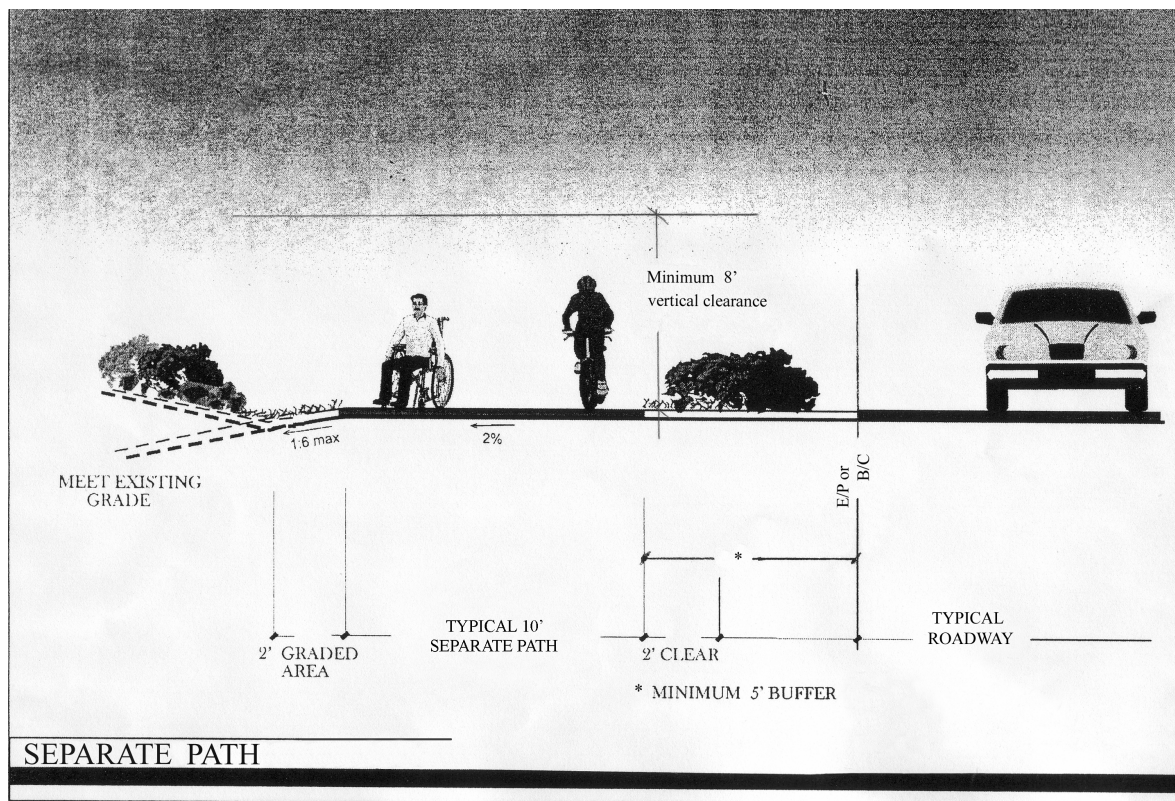


Figure B

ADDITIONAL CONSIDERATIONS

- If a roadway carries a high proportion of truck or bus traffic (>20%), additional width should be considered for the appropriate bike facility.
- If a section of roadway has sight distance problems caused by curves or hills, additional width should be considered for the appropriate bike facility.
- If parking is designated on roads, bikeways should be placed between the parked cars and the travel lane and include adequate clearance for opening car doors. An additional pavement (parking) stripe may be used between the parking lane (8 ft) and the bikeway (5-6 ft) so that drivers park close to the curb (open car doors typically extend 3 ft. from the car). See Figure C.

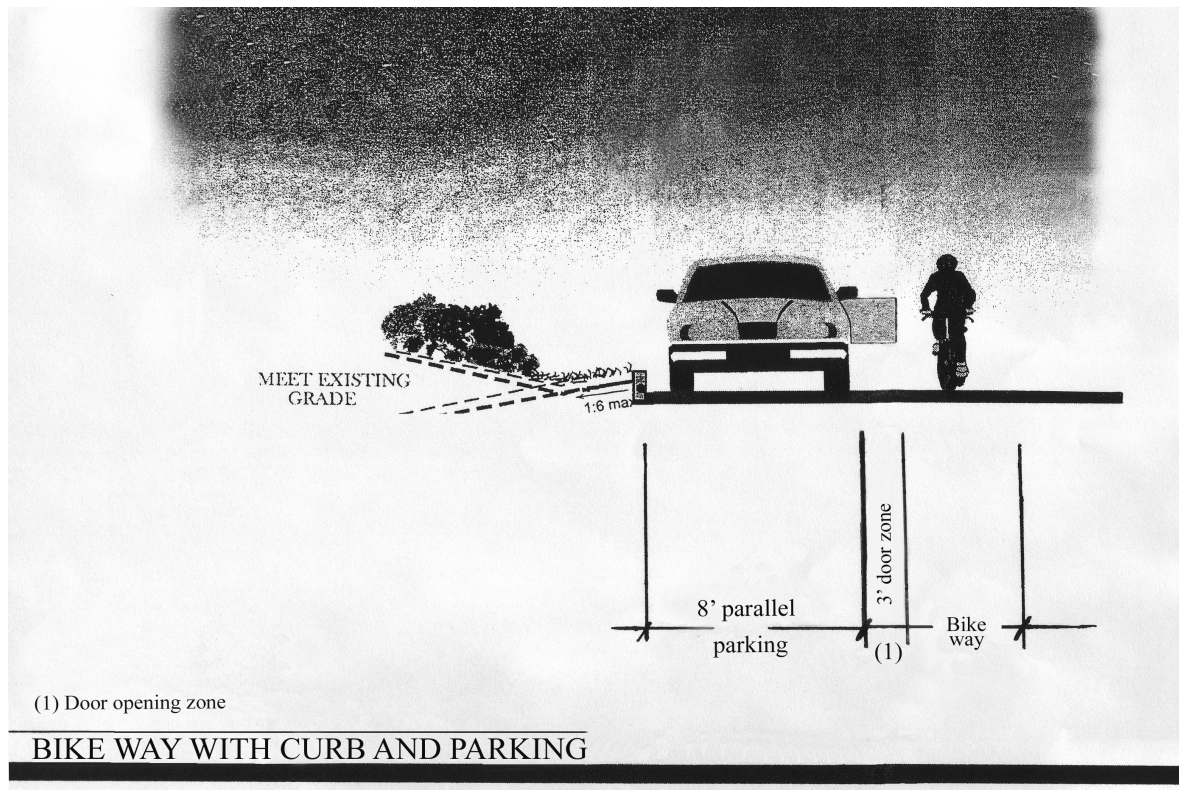
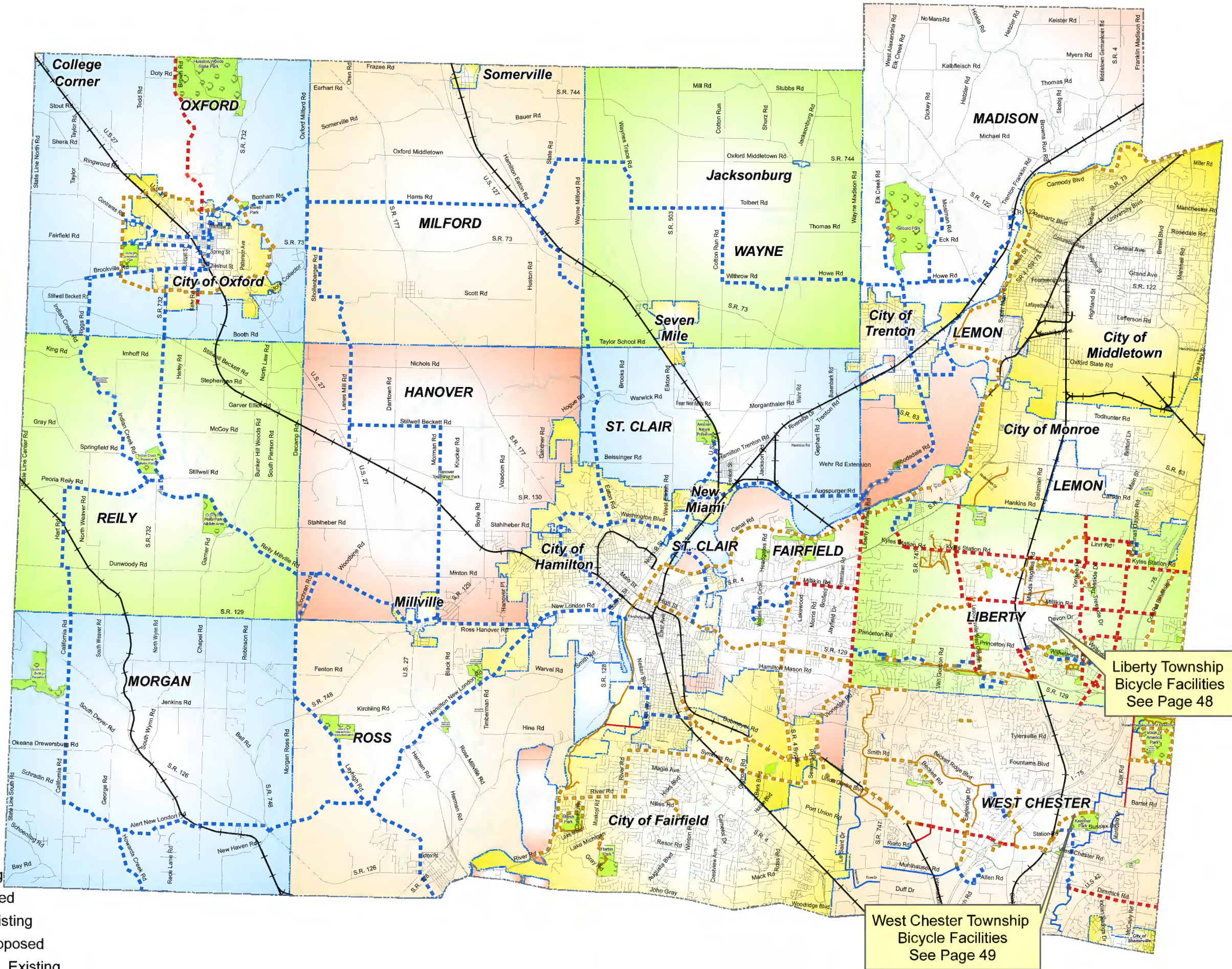


Figure C








- Bicycle road improvements are provided with the expectation that cyclists riding on the public streets are knowledgeable of the rules of the road and will obey them.
- While all roads (other than freeways) are used by bicyclists and should accommodate bicyclists, it is the intent of the Thoroughfare Plan to focus on a limited network of bikeway facilities. This will initially come from the local bike plans that have been incorporated into this Plan. With these recommendations, funding resources can be targeted to where there are documented needs. The network from local plans will be reviewed for gaps and connections needed.
- See DESIGNATED ROADWAYS WITH BICYCLE FACILITIES MAP on pages 39-41 and Typical Sections pages 15-19.

Legend

- Separate Path, Existing
- - - Separate Path, Proposed
- Road with Bikeway, Existing
- - - Road with Bikeway, Proposed
- Shared Road with Sign, Existing
- - - Shared Road with Sign, Proposed










Legend

-  Park
-  Separate Path, Existing
-  Separate Path, Proposed
-  Road with Bike Way, Existing
-  Road with Bike Way, Proposed
-  Shared Road with Sign, Existing
-  Shared Road with Sign, Proposed



Legend

-  Park
-  Separate Path, Existing
-  Separate Path, Proposed
-  Road with Bike Way, Existing
-  Road with Bike Way, Proposed
-  Shared Road with Sign, Existing
-  Shared Road with Sign, Proposed



Roadways Designated with Bike Facilities West Chester Township

FUNDING SOURCES

The means by which projects are funded is complex and sometimes difficult to explain. One reason for this is that the availability of funding sources is constantly changing as are the requirements to secure these funds.

There are presently over twenty funding programs by which a highway or bicycle project can be funded. These funds can be directed for use in one of two categories: 1) operational improvements, or 2) capital improvements. Operational improvements are those made to the existing system in order to make it function more safely and efficiently without adding lane capacity or additional lane miles. Capital improvements will add lane capacity in the form of additional lanes or a totally new highway.

Several factors play an important role in determining the most appropriate funding source for a project, such as the location and jurisdiction, the specific type of project, the anticipated cost, and the time frame in which the funds are needed. The Ohio-Kentucky-Indiana Regional Council of Governments (OKI) manages federal funds available in the urban areas of Butler County. The County Engineer's Association of Ohio (CEAO) manages federal funds used in the non-urban areas of Butler County.

There are a number of funds which are designated specifically for certain types of projects. For example, Bridge Replacement and Rehabilitation (LBR) Funds are strictly for the repair and replacement of bridges. State Capital Improvement Program (SCIP) Funds are to be utilized for improvements to various types of existing infrastructure and some new and expansion projects. Generally, operational projects are less costly than capital improvement projects. There is a direct correlation between project cost and the time of development. As the complexity and level of detail associated with project development increases, so does the development time and consequently the cost.

Generally, operational projects are less costly than capital improvement projects. There is a direct correlation between project cost and the time of development. As the complexity and level of detail associated with project development increases so does the development time and consequently the cost.

The time frame considered when determining an appropriate funding source is the total length of time it would take to develop and complete the project. A federally funded project may take two or three times longer than one utilizing strictly local revenues. Additionally, operational projects may take from six months to four years to complete depending on funding sources, whereas capital improvement projects generally take two years or more.

All things considered, the more costly projects are directed toward federal funds and utilize local match money. By using federal funds for example, the County share is usually 20 percent or less for construction costs. The use of federal funds enables the County to leverage its local revenue by approximately a four-to-one match. (Preliminary Engineering and right of way costs are figured independently of construction costs and are paid for with local funds.)

In order to be eligible for most federal and state funds, local match money must be available before the application is made. Other initial costs not always noted but incurred with most projects are preliminary engineering costs and right-of-way costs. Engineering costs include plan design and environmental studies, which can be rather involved due to increased environmental regulations. Although federal funds can technically be used in all phases of a project, it is generally the policy of local agencies, such as the County, to apply federal funding strictly to the construction cost. Preliminary engineering and right-of-way costs are paid for with local funds. This is in an effort to expedite projects more quickly and utilize funds more efficiently due to costly and often time-consuming regulations at the federal level.

Providing the engineering and the local match money has created such a demand on local revenue that the County has at times combined funding sources in order to meet these demands. For example, the County has historically utilized local revenue for engineering along with SCIP money to provide the local match needed in order to obtain federal aid funding. Funds most commonly combined have been the Federal Aid Metro and Federal Aid Secondary Funds with SCIP and LTIP money. A certain amount of latitude is necessary to rearrange funding as needed during the course of a project.

It is important to keep in mind that the system of funding has changed with the enactment of the Safe, Accountable, Flexible, Efficient Transportation Equity Act 2005 (SAFETEA). Many funding changes have occurred at the federal level. For example, the local metropolitan planning organization, the Ohio-Kentucky-Indiana Regional Council of Governments (OKI) has a greater role in the administration of federal funds under SAFETEA. Other changes are still possible as of this writing. Therefore, a document such as this is intended as a general guide to be used by public officials to achieve the goal of a safer, more efficient transportation system.

See WWW.FHWA.DOT.GOV/SAFETEA-LU/INDEX.HTM for specifics of this Federal Law.

TYPES OF FUNDING

FEDERAL FUNDS

- **LBR** **Local Bridge Replacement**

This fund is used to replace or rehabilitate existing bridges on both local and federal routes. The projects are generally in the million dollar range but can be as much as several million dollars. The projects usually take two to five years to develop. Local match = 20%. Generally considered for operational type-improvements.

- **FEDIR** **Federal Interstate Reconstruction**

This is a federal revenue source administered by ODOT for the purpose of reconstruction of the interstate system. The County has no administrative authority in this revenue source. Generally considered for operational-type improvements.

- **FEDSTP (OKI)** **Federal Surface Transportation Program**

This is a federal fund administered through OKI on a competitive project basis. Projects are usually in excess of a million dollars and can range upwards to five million dollars. The project must be on a roadway functionally classified as at least an urban collector and can take approximately five to seven years for development. Local match = 20%. Generally considered for operational-type improvements.

- **FEDSTP (CEAO)** **Federal Surface Transportation Program**

This is a federal fund administered through the County Engineer's Association (CEAO) on a competitive project basis. Projects are usually in excess of a million dollars and can range upwards to five million dollars. The project must be on a roadway functionally classified as at least a non-urban collector and can take approximately five to seven years for development. Local match = 20%. Generally considered for operational-type improvements.

- **STIP** **State Transportation Improvement Program**

This is a federal fund administered through ODOT for roads on the federal system in rural areas. One-hundred sixty-five thousand dollars per year can be programmed and is allowed to accumulate up to \$500,000. Development time ranges from two to five years. Local match = 20%. Generally utilized for capital improvements.

- **HSP Highway Safety Program**

This is a federal revenue source administered through ODOT for the purpose of making safety improvements to existing highways. These funds are used for locations having high accident rates and for locations with capacity problems. Projects must meet ODOT scoring criteria and usually have a development time of six months to a year for short term projects and two to five years for more complex projects. Local match = 20%. Utilized primarily for operational improvements for short term projects and as capital improvements on more complex long term projects.

- **OKI-ENH Transportation Enhancement Program (Sub-allocation through OKI)**

Federal funds administered through ODOT for enhancements to the transportation system. Projects also require OKI Transportation endorsement. Funds may be used for construction (and in rare cases right of way), but cannot be used for planning, environmental studies or engineering and design.

- **STP-E State Enhancement Funds**

Reserved for non-roadway projects. Eligible projects include historic site enhancements, environmental enhancements, and bicycle and pedestrian improvements. Local match = 20% which can include both planning and capital improvements.

- **CM/AQ Congestion Mitigation and Air Quality (Federal Funds)**

These funds are administered through OKI and are intended to provide funds for projects that relieve congestion and improve air quality. Includes both capital and operational-type improvements. Local match = 20% and can be used in conjunction with other funds.

- **TRAC Transportation Review Advisory Council**

The State of Ohio has established this council to review and select major improvement projects (capital-type projects only) that have a greater impact on the highway system and generate or satisfy economic developments. These projects are typically on higher classified highways such as Interstate Highways and Principal Arterials. Project costs range \$6,000,000 and more. There is a sliding scale on local shares -- the more the local agency contributes the more points they receive. 11% = 1 point and 91% = 10 points. Projects that are eligible must go through a tier process before final funding is approved. Tier 3 is a group of projects that do not meet the scoring requirements to move into Tier 2. They are put into a holding pattern until such

time that events or circumstances might change and improve their score. Tier 2 projects are those that are approved to move forward with preliminary engineering, environmental studies, and other project development needs. Tier 1 projects are those that are approved for funding within a six-year window.

- **CDBG** **Community Development Block Grant**
(Federal Funds managed by local agencies)

The CDBG program is utilized in a limited way for transportation improvements. The purpose is to benefit low to moderate income areas with housing and infrastructure, economic job development projects. Project costs are usually \$100,000 or less with a very short development time of six months to one year. For operational improvements only.

STATE FUNDS

- **ECONDEV** **Economic Development**

This is a special economic development fund that is awarded as a competitive grant to special projects through the Governor's office. The availability of these funds is very limited. They are used to generate improvements for industrial development. Utilized primarily for capital improvements.

- **SCIP** **State Capital Improvement Program**

This is a State Bond Fund administered through the Ohio Public Works Commission (OPWC) and the District 10 Integrating Committee. They are competitive funds which can be used for all types of infrastructure improvements. County agencies receive grants from the district with budgeted allocations distributed to the County, cities, villages, and townships on a competitive basis. Project development time is two years or less. Local match = 20%. Utilized for operational or capital-type improvements.

- **LTIP** **Local Transportation Improvement Project**

This is revenue generated from the increased gasoline tax and is administered by the Ohio Public Works Commission. These funds are divided among the townships and cities on a competitive project basis. Project development time is two years or less. Local match = 20%. Utilized primarily for capital improvements.

- **SG Small Government Grant (Through SCIP)(OPWC)**

This is a State Bond Fund which is administrated through the Ohio Public Works Commission to communities having a population of 5,000 or less. These grants are typically in the amount of \$100,000 to \$500,000 with a development time of two years or less. Local match = 10%. Utilized for capital improvements.

- **PUCO Public Utilities Commission of Ohio**

This is a revenue source set up for the purpose of making safety improvements at railroad crossings, generally limited to lights and gates. With special assistance from ODOT Rail, safety upgrades of roadway projects at railway crossings can be funded. Funds are generally used for operational-type improvements. Local match = 10%.

LOCAL FUNDING

- **ENG-TWP County Engineer and Township Co-op**

This is a joint revenue source between the Engineer's Office and the townships. Project costs are usually \$100,000 or less with a development time of six months to a year and a half. Operational improvements only.

- **CNTR Contract (BCEO Funds)**

This is a local revenue source generated from gasoline taxes and license plate fees, and permissive tax. These contracts usually have a development time from six months to a year and a half. Utilized for operational and capital-type improvements.

- **FA Force Account (BCEO Funds)**

This is minor work funded by the County and either awarded to a contractor or performed by maintenance crews. The Ohio Revised Code caps this amount of work at \$30,000 per mile or \$100,000 per bridge. These projects usually involve routine maintenance with development time usually from one month to a year. Operational improvements only.

- **FA-TWP Force Account-Township**

This is minor work funded by a township and either awarded to a contractor or performed by maintenance crews. The Ohio Revised Code caps this amount of work at \$15,000 per mile or \$45,000 total project limit. These projects usually involve routine maintenance with development time usually from one month to a year. Operational improvements only.

- **PRIVATE FUNDING Developer Funding**

Private funding is a means whereby a private developer or landowner pays the cost of designing and building a new road or improving an existing road. The project must meet current design standards and should fit in with the overall intent of the Thoroughfare Plan. The viability of this method as a funding source is generally dependant upon the developer/landowner's perceived economic benefit. Utilized mainly for capital improvements but can be can be used for operational improvements.

ALTERNATE FUNDING SOURCES

- **Road and Bridge Levies**

These revenue sources can be used by the townships and the County. A levy can be put into place for a specific project or can be renewed on an ongoing basis. This option can be executed by a vote of the electorate in the County or township in which the levy is proposed. In considering this option, one must recognize the difficulty in getting such a bond issue passed. Though a possible option, not considered a highly viable funding source.

- **SPEC Road Petition Process (Special Assessment Fund)**

These are bond funds by which an owner can petition the County Commissioners to construct a project and assess the total cost to the landowner. The cost of these projects is governed by the petitioner. Development time is usually a year or less. Use of this type of funding is contingent upon the property owner's willingness to be assessed.

- **TID Transportation Improvement**

This method of financing authorizes local governments to establish a geographic area (district) which would directly benefit from a proposed transportation improvement. A committee of representatives from this district determines the method to pay off revenue bonds issued for the improvement. The State would then take over the payments. TID enables the State to spread the cost of funding projects out over many years and speeds up the start of engineering and construction. In Butler County, the TID was initially set up to expedite these three projects: S.R. 747, Allen Road Interchange (Union Centre Boulevard), and the Butler Regional Highway (S.R. 129).

- **TIF Tax Increment Financing (Commercial-Industrial)**

This is a method by which the County, townships, and cities are able to capture property tax increases created by new or renovated commercial and or industrial development projects and target the tax for public improvements within the area of influence of such projects. The dollar amount of the project is controlled by the amount of new or renovated development. TIF is an option particularly for areas that are beneficial to economic development. Project development time is two to three years. In pursuing the use of TIF, the effect on local school districts must be considered. School boards may need to weigh the short-term and long-term effects on their districts. For TIF to be a viable option, public officials may need to re-evaluate the abatement process.

- **RID Residential Incentive District**

This is a method by which the County, townships, and cities are able to capture property tax increases created by new or renovated residential development projects and target the tax for public improvements within the area of influence of such projects. The dollar amount of the project is controlled by the amount of new or renovated development. RID is an option particularly for areas that are beneficial to economic development. Project development time is two to three years. In pursuing the use of RID funds, the effect on local school districts must be considered. School boards may need to weigh the short-term and long-term effects on their districts. For RID to be a viable option, public officials may need to reevaluate the abatement process.

- **JEDD Joint Economic Development District**

Sections 715.72 to 715.81 of the Ohio Revised Code allow townships and cities to enter into a Joint Economic Development District for the purpose of improving and enhancing the public infrastructure with the goal to attract and retain commercial and industrial developments that mutually benefit both the cities and the townships. The income tax normally levied inside the cities' incorporated boundaries can be levied against the incomes of employers and employees of businesses located inside the JEDD boundaries. The income tax generated from the district is divided between the cities and townships based upon an agreed to formula. The JEDD provides a mechanism for cities and townships to resolve issues arising from cities expanding their boundaries through incorporation.

- **Permissive Gasoline Tax Fund**

The State of Ohio sets aside a portion of the gasoline tax revenues for use by the cities and incorporated villages inside each county. These funds are distributed to the County Engineer. The County Engineer must develop a map showing eligible roads through each respective city or village in which these funds may be used. The funds are limited to repair, replacement, and general maintenance of the eligible roads. The County Engineer must approve any expenditure of funds prior to the work being performed.

- **Ohio Turnpike Project**

Section 5537 of the Ohio Revised Code allows the Ohio Turnpike Commission, with the approval of the Governor, to construct, maintain, and operate turnpike projects. The turnpike project may be financed through the issuance of Turnpike Revenue Bonds paid solely from the revenues under the control of the Turnpike Commission. This is a means of establishing a toll highway for the purpose of facilitating vehicular traffic throughout the state. In considering this as an optional funding source, it must be remembered that the method of establishing such a highway appears to be quite lengthy and cumbersome.

ADOPTION AND REVISION PROCESS

ADOPTION AND REVISION PROCESS

PROCEDURE ADOPTION

In accordance with Section 711.10 of the Ohio Revised Code, the adoption of a plan for major streets or highways of the county (a thoroughfare plan) is a jurisdictional prerequisite for the Planning Commission to regulate the subdivision of lands within the unincorporated portions of the county. The 2007 Official Thoroughfare Plan (OTP) is in compliance with this directive.

The formal procedure for adopting the Butler County Official Thoroughfare Plan is as follows: The County Engineer must first file the OTP with the Butler County Planning Commission. The Planning Commission reviews and considers the OTP at their regular Planning Commission meetings. The Planning Commission issues its findings, recommendations, and subsequent adoption to the Butler County Engineer.

PERIODIC REVIEW AND UPDATE

The Official Butler County Thoroughfare Plan should be reviewed in its entirety a minimum of every five years and certain revisions may be appropriate at times in the interim. Periodic reviews are necessary to ensure compliance with surface transportation requirements in the Federal SAFETEA Plan. Major unanticipated changes in the local or regional economy may also necessitate updating of the Plan in the intervening years. What should be remembered is that the Official Thoroughfare Plan framework is a statement of public policy toward future growth and development and should be utilized as such.

PHASING / RESPONSIBILITIES / BUDGET

Priorities have been established for all of the recommended improvements which have been discussed in this Report. Priorities were developed based upon (1) problem areas identified in the process of meetings with County Commissioners, Township Trustees, Chambers of Commerce, and developers; (2) immediacy of improvements due to pending developments or imminent development potential; and, (3) costs and funding availabilities.

RESOLUTION
OF
ADOPTION

**BUTLER COUNTY PLANNING COMMISSION
RESOLUTION NO. 07.22**

WHEREAS, The Butler County Engineer has recognized that the Official Thoroughfare Plan for Butler County has not been updated since its adoption in 1994; and

WHEREAS, The County Engineer has brought together an Advisory Committee for the purpose of updating the 1994 Thoroughfare Plan; and

WHEREAS, This Advisory Committee and the County Engineer have created a new document known as the 2007 Butler County Official Thoroughfare Plan, which is an important element for the Comprehensive Plan for Butler County, and have presented it to the Planning Commission for their review and consideration on November 14, 2006; and

WHEREAS, The County Engineer recognizes that the City of Oxford and Oxford Township are currently working on a thoroughfare plan for their area; and

WHEREAS, The County Engineer further recognizes that the plan can be modified at such time that the City of Oxford and Oxford Township present their plan to the Planning Commission for their review and consideration; and

WHEREAS, The County Engineer recommends formal adoption of the 2007 Butler County Official Thoroughfare Plan as presented to the Board on November 14, 2006 with the exception that the changes to Oxford Township portion of the plan shall not be adopted at this time and the 1994 Thoroughfare Plan shall be in effect; and

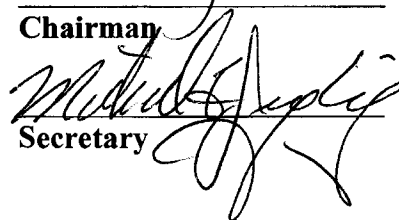
WHEREAS, If the Planning Commission is not presented with a Thoroughfare Plan for Oxford Township by May 2008, the Thoroughfare Plan presented to the Planning Commission in November 2006 shall be in effect.

THEREFORE BE IT RESOLVED, The Butler County Planning Commission has reviewed and considered the document and does hereby approve and adopt the 2007 Butler County Official Thoroughfare Plan as presented in November 2006 with the exceptions and conditions stated above and it's inclusion in the Comprehensive Plan for Butler County.

**Hamilton, Ohio
March 27, 2007**



Chairman



Secretary