

city of **LEBANON**

2009 Comprehensive Plan





**ORDINANCE NO. 2009-003**

**AN ORDINANCE ADOPTING THE 2009 COMPREHENSIVE  
PLAN FOR THE CITY OF LEBANON**

WHEREAS, the City of Lebanon is committed to preserving and enhancing the high-quality of life, community character and fiscal well-being offered to those who live or work in the community; and

WHEREAS, the City of Lebanon strives to manage growth and adapt to the changes that result from the demand for residential and commercial development; and

WHEREAS, the Comprehensive Plan is a flexible planning document that is intended to guide the City in decision making and policy implementation; and

WHEREAS, the City of Lebanon seeks to protect the public health, safety, and welfare through enactment of the policy goals and objectives as provided in the Comprehensive Plan; and

WHEREAS, the Comprehensive Plan Steering Committee presented Planning Commission with the 2009 Comprehensive Plan, which included an update to the Official Thoroughfare Plan; and after consideration of the same recommended adoption by Council.

NOW, THEREFORE, BE IT ORDAINED by the Council of the City of Lebanon, Ohio, that:

SECTION 1. The 2009 Comprehensive Plan be, and hereby is, adopted pursuant to Lebanon Charter Section 8.07.

SECTION 2. Council hereby repeals the previously adopted plan and all amendments thereto.

SECTION 3. That this Ordinance shall take effect and be in force at the earliest date allowed by law.

  
Mayor

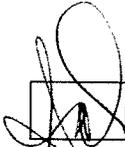
Passed: February 10, 2009

Attest:

  
Clerk of Council

**Sponsors:**  
All Members of Council

  
City Manager

  
City Auditor

  
City Attorney

## EXECUTIVE SUMMARY

The Comprehensive Plan for the City of Lebanon is the guiding document for the future development of the city. The plan includes a future land use map, focus areas, public realm recommendations, a thoroughfare plan, and implementation strategies all designed to meet the goals of the city for its future. The citizens and elected officials of Lebanon want it to grow into a sustainable, attractive and livable city.

Lebanon has experienced the growth pressure in recent years associated with being located between two metropolitan areas. However, due to the changes in the economy, development in all sectors has slowed. In response to this opportunity, the city is able to define its future and set the direction it desires so when the economy does return the city will be prepared.

A steering committee of residents and stakeholders worked throughout 2008 to set the goals for the future of Lebanon and to craft the recommendations to achieve those goals. The recommendations were forwarded to City Boards and Commissions for their review and adoption. At this time the recommendations of this plan are the policies of the City of Lebanon.

The comprehensive plan is traditionally a document defining future land uses and development patterns. However, cultivating a strong and sustainable city goes beyond the use and pattern of its land. Although those are critical elements in the success of the city, it is also important to set a course for area redevelopment, economic health and quality of life. This plan includes the traditional comprehensive plan elements as well as chapters on focus areas, economic development, and the public realm.

The recommendations are based on the planning principles identified by the steering committee and reflect the goals of the community. The planning principles provide important foundations for the recommendations in the plan. They tie the strategies to the results the community is seeking.

### *Future Land Use Plan*

A critical component of the plan is the future land use plan. The previous Lebanon Comprehensive Plan provided limited direction for future land use both within the existing corporate boundaries and in logical expansion areas. As a result this plan update cast a wide net for future land use recommendations. The study area includes the existing corporate boundaries and the unincorporated land that is feasible for Lebanon to serve with utilities in the future.



This comprehensive approach provided a clear picture of the possible future, and it allowed the committee to create a future land use map that met their goals.

Evaluation of existing land use makes clear that Lebanon has a strong core surrounded by existing development, some of which is successful, some of which needs improvement. Beyond that is an attractive rural landscape. The future land use map maintains the focus of development in the core, recommends redevelopment of commercial corridors and significantly reduces residential densities beyond the existing corporate boundaries. If implemented, the future development pattern would support the small town character Lebanon is interested in preserving.

#### *Focus Areas*

In addition to the future land use map, the steering committee identified four redevelopment possibilities: along Columbus Avenue and East Main Street; infill development within downtown; and office development along I-71. These are areas of opportunity for the city, but each of them suffer from development challenges. The focus area plans show viable development or redevelopment schemes for these areas. They show possible solutions to the design challenges, but are not intended to stifle creativity for the development of these areas. The city should use the focus area plans to encourage new quality development in these areas and evaluate proposals against the goals and the recommendations of the plan.

#### *Economic Development*

Another important component in moving Lebanon forward as a sustainable, healthy community is economic development. The city is currently burdened by land uses that are not in balance. There is a significant amount of residential land that requires services, which is not currently being supported by enough revenue-generating land uses. The plan includes an economic development chapter, as well as a fiscal impact analysis model - both are tools the city can use to increase office and industrial ground to the level needed to support the residents' service needs.

#### *Public Realm*

As Lebanon grows it will need to make improvements to infrastructure, roadways, parks and open space. Each of these instances is an opportunity to define and carry on the character of Lebanon. Residents and visitors in Lebanon experience the community largely within the public realm; establishing organizing elements and a consistent character creates a unique and attractive place.

#### *Thoroughfare Plan*

In conjunction with the comprehensive plan, the city completed a thoroughfare plan for the study area. This plan determines necessary improvements and additions to the roadways system that will be needed to accommodate new growth. It is important to undertake the two plans together so future land use can respond to roadway improvement needs; these can in turn respond to the future land use recommendations. By enabling that relationship at the planning stage, the city can implement land use and roadway plans that function together. The impact of the improvements and growth will be better managed and in line with the community's goals for a livable city.





## ACKNOWLEDGMENTS

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chapter 1  
INTRODUCTION



## PURPOSE

A city's comprehensive plan serves as the voice of its residents and stakeholders about the desired future of their community. It is a critical document that guides growth and development in a manner that reflects the community's priorities, values and desires.

This plan identifies the objectives, strategies and future development pattern for the City of Lebanon and recommends policies that lead the community toward its goals in the most effective manner.

The community comprehensive plan:

- Establishes community land use expectations
- Frames development review
- Informs city policy decisions
- Encourages positive change for the future
- Guides allocation of resources

It is critical for a community to have a plan and initiate the planning process. In doing so the members of the community establish a direction for the future that is based on a community conversation. The conversations related to growth and development in a community are more effective prior to development. The creation of the future land use map allows the city to analyze future growth patterns and anticipate infrastructure and service needs in order to better provide and manage services. The plan also provides developers with a clear idea of what Lebanon envisions for the future and allows them to meet those expectations from the outset.

Addressing the future growth of the community comprehensively and ahead of new development, Lebanon can make decisions related to its growth that will maximize benefits and minimize impacts.

## PLAN SCOPE AND PRODUCT

The contents of the plan address residential, commercial, industrial, office, retail and civic land uses. The plan recommends their future location, intensity, pattern and character. The plan also contains recommendations for the elements of the public realm, which include street conditions, parks, and infrastructure. The 2009 Lebanon Comprehensive Plan includes an update to the Thoroughfare Plan.

The comprehensive plan is a document that guides Lebanon's decision-making bodies (Planning Commission, City Council, the Board of Zoning Appeals, etc). It is



Lebanon Public Library

also an action plan, giving the City direction for steps necessary to accomplish community goals. The plan addresses the following topics:

- Future land uses (character, location, density, pattern)
- Parks and open spaces
- Streetscapes and gateways
- Fiscal impacts
- Roadway capacity and needs
- Infrastructure and services

## STUDY AREA

The study area for the 2009 Comprehensive Plan includes the area currently within the corporate boundaries as well as areas outside of the existing boundaries defined as future growth areas. The future growth areas are bounded by the current sewer service provision areas and some additional water provision areas. See figure 1.

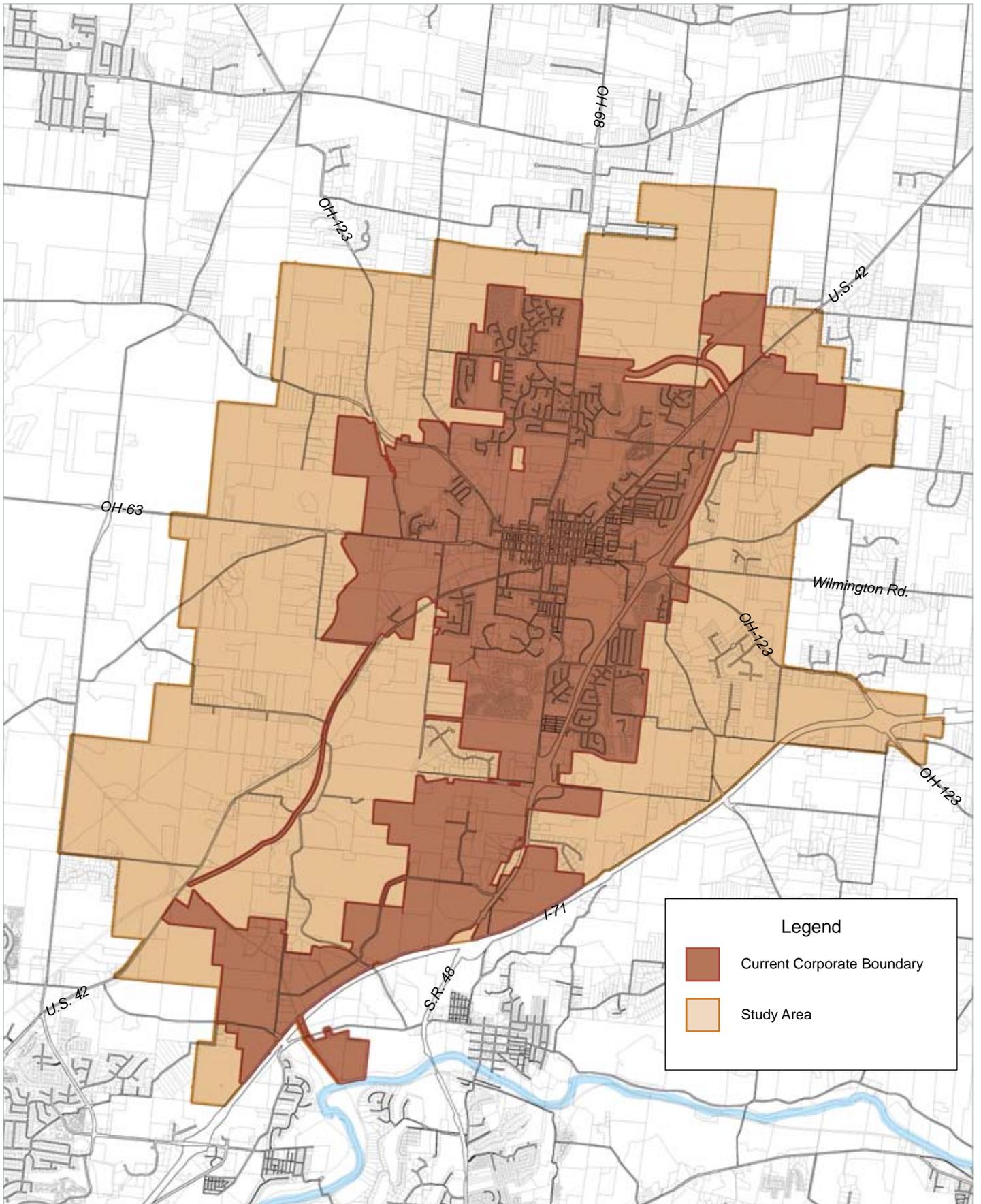


Figure 1: 2008 Lebanon Comprehensive Plan Study Area

↑ N 1" = 6000'



## APPROACH

The planning approach for the 2009 Lebanon Comprehensive Plan update relies on the interests and goals of the community to define the future growth of Lebanon. The steering committee and city staff regard the goals of the community as the single strongest driver of the plan. The process and the product reflect that priority.

Using this approach the plan establishes a future growth plan that will result in a livable and sustainable community that maintains the high quality of life in Lebanon.

Additionally, an effective plan is one that is clear and understandable and provides specific action steps for the City to implement the recommendations. The plan creates an overall balance of land uses in order to make the community sustainable and livable in the long term. The plan has an extensive time line and manages the impacts of new development while capitalizing on the benefits.

The plan balances the quality of life for residents and business owners, the fiscal health of the city, and future transportation needs. To achieve that balance there are four main components that are addressed in the plan; future land use, focus area development scenarios, a thoroughfare plan, and fiscal impact analysis.

## COMPREHENSIVE PLANNING PROCESS

A community's comprehensive planning process is an open process with substantial guidance from residents, business leaders, stakeholders and interested parties. The standard comprehensive planning process for a community includes the following steps taken by a citizen-led steering committee.

1. Establish community goals and guiding principles
2. Inventory existing conditions, conflict points, agents of change, and trends
3. Develop a future land use plan and related components
4. Determine implementation strategies
5. Produce a Comprehensive Plan Document
6. City Council considers the document for adoption

This typical process is appropriate for many communities but because Lebanon is facing imminent growth, a more tailored process is necessary. The City of Lebanon requires a plan update that both addresses future growth patterns in the expansion area, but also addresses the redevelopment of existing areas within the community.

Therefore elements including focus area plans and a fiscal analysis were included to manage the community growth impacts.

### **Role of the Plan in the Community**

*The Plan will be used in the following manner:*

1. *To frame development review and provide direction and guidance for land owners and to the various boards and commissions charged with development review, including the:*
  - *City Council*
  - *Planning Commission*
  - *Other City Boards & Commissions*
  - *Staff*
  - *Developers*
  - *Public*
2. *To guide City policy decisions and provide community input to the elected officials and City staff.*
3. *To encourage positive change for the future. The document can facilitate and encourage the City to focus energy and resources toward projects that benefit the community, and encourage developers to invest in projects the community desires.*
4. *To guide allocation of resources. The plan informs the City of community preferences as they allocate capital improvement dollars and prioritize City projects.*



Lebanon Gazebo

### *Steering Committee*

The steering committee provides the voice of the community for the plan by directing the project team throughout the process. The members reflect the diverse needs and interests in the community. The committee members are expected to advocate for their individual interests while balancing those with the overall needs of the community.

The steering committee serves as an advisory board to the Planning Commission and to City Council, who are responsible for the eventual adoption of the plan. The committee will direct the project team in producing the plan and forward it to the respective boards for consideration and adoption.

### *Stakeholder Interviews*

As a part of the process the consultant team conducted stakeholder interviews in February of 2008. Those interviews provided critical and detailed information to the project team about the future growth of the community.

The stakeholder interviews were conducted with the following groups:

- Ohio Valley Development Council
- Commercial industrial developers
- Local realtors
- Neighborhood associations
- Lebanon City Schools
- Downtown business representatives
- Historic interests
- Property owners
- Community organizations
- Homeowner's associations

### *Community Open Houses*

Over the course of the process three community open houses were held to present information to the community and get input and feedback at critical decision points. The first open house was held in April to discuss the community goals for the future of Lebanon. At the second open house the draft future land use map was presented for comment, and at the final open house the preliminary draft plan was presented to the public to obtain feedback. The public provided valuable feedback and direction to the steering committee, and the plan contents reflect those comments.

## ***Lebanon Comprehensive Plan Schedule***

### 2008

January 17 <sup>th</sup>	Steering Committee #1 Plan Kick-Off
February	Stakeholder Interviews
March 20 <sup>th</sup>	Steering Committee #2 Preliminary Land Use & Fiscal Impact
April 3 <sup>rd</sup> & 9 <sup>th</sup>	Community Open House
April 17 <sup>th</sup>	Steering Committee #3 Focus Area
May 15 <sup>th</sup>	Steering Committee #4 Focus Area
June 19 <sup>th</sup>	Steering Committee #5 Thoroughfare Plan
June 25 <sup>th</sup>	Community Open House
July 17 <sup>th</sup>	Steering Committee #6 Preliminary Draft Plan
August 6 <sup>th</sup>	Community Open House
September 18 <sup>th</sup>	Steering Committee #7 Final Draft Plan
December 16 <sup>th</sup>	Planning Commission

### 2009

February 10 <sup>th</sup>	City Council
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Sidewalk along Broadway downtown

## COMMUNITY PLANNING GOALS

Based on the input from the steering committee, the stakeholders and the community developed the following list of goals to guide the planning process.

- Create a fiscally balanced plan for future growth of the community
- Identify and plan future growth areas
- Identify opportunities and determine options for redevelopment
- Coordinate future land uses with the thoroughfare plan
- Appropriately manage the extension and provision of services
- Balance housing types in the community
- Encourage development of a strong tax base
- Encourage quality retail development to serve the residents and workers
- Preserve and enhance Downtown Lebanon
- Focus on building a community

### **Opportunities and Constraints**

*In order to plan effectively for the future of Lebanon it is important to capitalize on the opportunities and minimize the constraints present in the community. As identified by the steering committee, stakeholders and community members the following is a summary of the community opportunities and constraints.*

#### *Opportunities*

- *Dedicated citizenry*
- *Strong downtown fabric with great buildings*
- *Rich history*
- *Beautiful surroundings and topography*
- *Good highway access*
- *Nearby recreational areas*
- *Proximity to both Dayton and Cincinnati*
- *Serviceable land for new development*

#### *Constraints*

- *Some areas in need of redevelopment*
- *Lower than average home ownership rates*
- *Impact of development in neighboring communities*
- *Impact of recent growth*



A rich history in Lebanon is anchored by the Golden Lamb



Example of the rural character surrounding Lebanon.



Strong downtown building fabric is an opportunity for Lebanon to capitalize on.

## EXISTING PLANS

The 2008 Comprehensive Plan is based on the foundations established by the following planning documents.

### 2004 Comprehensive Plan

The city underwent a comprehensive planning process in 2004. The planning process achieved the following goals for the community:

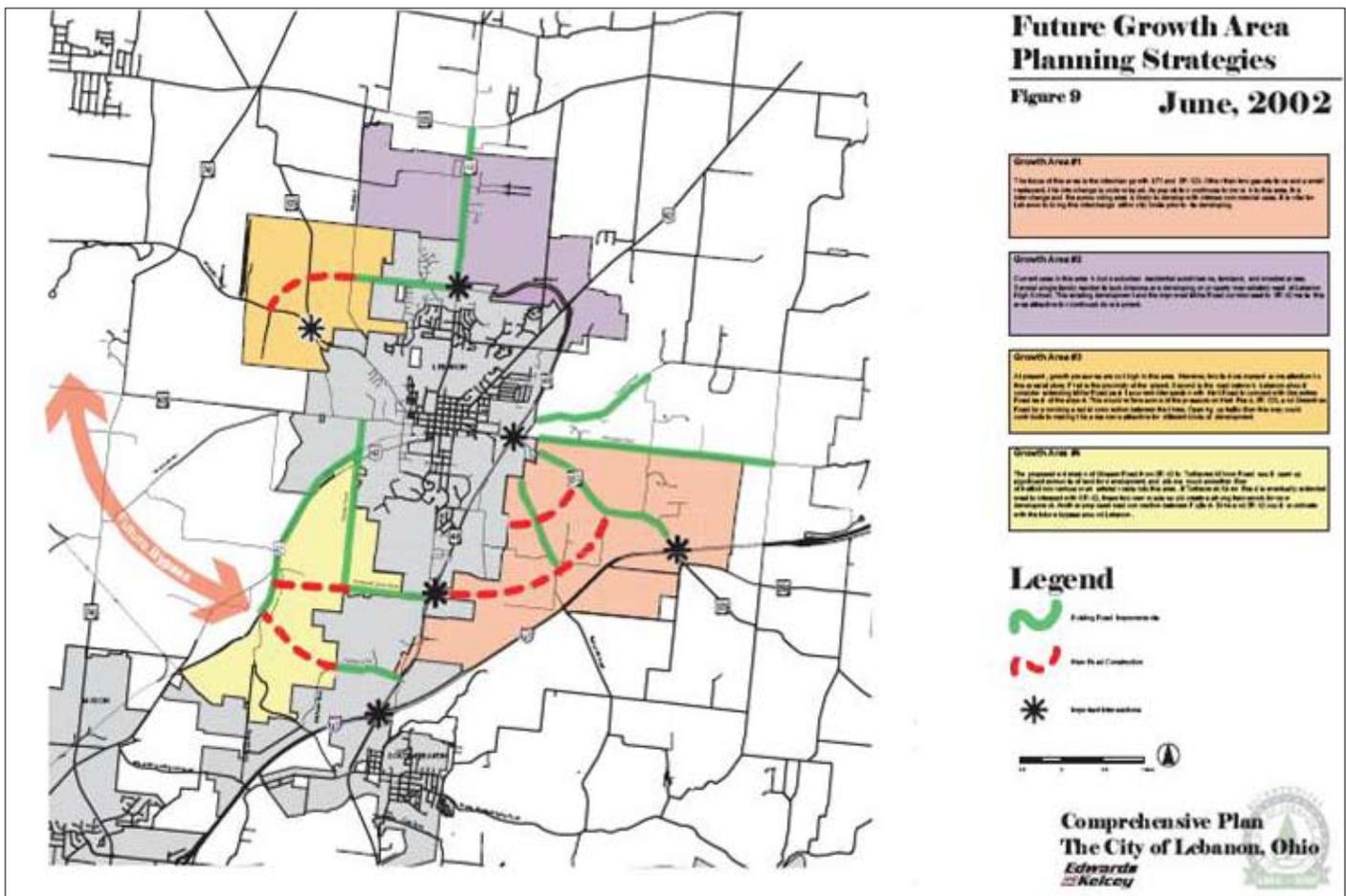
- Identified likely future growth areas
- Identified transportation improvement needs
- Developed strategies to control the character of development surrounding it
- Developed strategies to reinforce the unique character of Lebanon

To achieve those tasks the plan inventoried the existing conditions, including a population projection, a land capacity analysis, and an economic analysis.

The plan included a series of recommendations in the following areas:

- Identity & Image
- Land Use Planning
- Economic Development
- Parks & Recreation
- Downtown Lebanon
- Transportation
- Infrastructure & Services
- Housing

Each of these topics were divided among geographic areas of the city. Additionally, the plan included future growth area development strategies.



Future growth area planning strategies - 2002

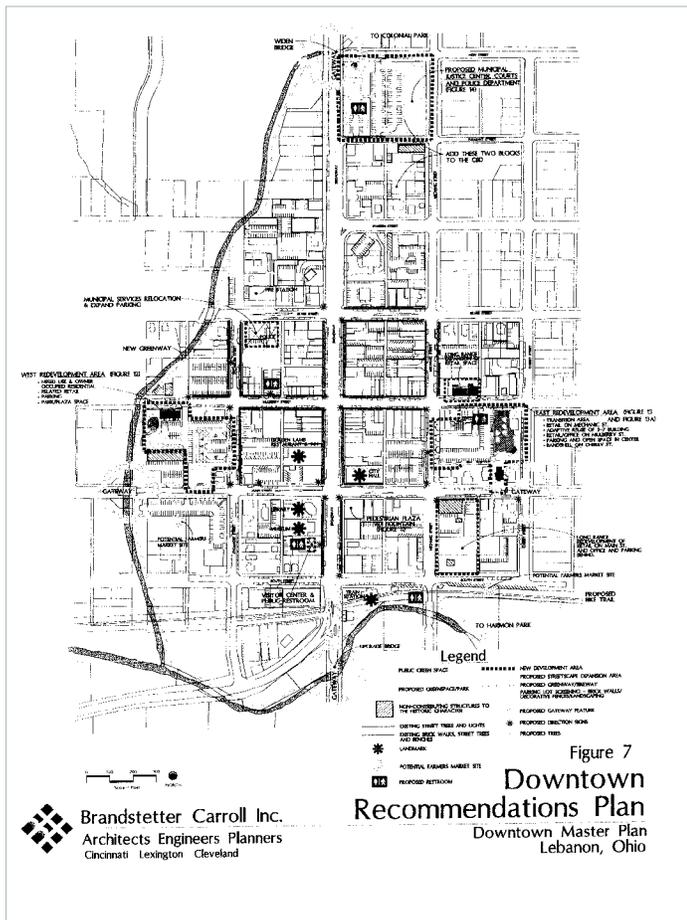
### 2001 Downtown Master Plan

The city adopted a Downtown Master Plan to guide the preservation and renovation of downtown Lebanon. The plan focused on improving the appearance, function and economic vitality of downtown. The goals of the plan were addressed by analyzing and providing strategies for the following areas:

- Parking
- Zoning and Regulations
- Market
- Municipal Facilities
- Streetscape & Greenspace

Key recommendations of the plan included forming a downtown association, creating a strong retail environment to encourage new businesses, improving the attractiveness of the streetscape, creating more and better greenspace, fostering the existing uniqueness of the downtown, preserving historical character, improving traffic flow, improving signage and wayfinding, and improving parking downtown.

The plan provided redevelopment area concepts for under-utilized areas of the downtown.



Downtown recommendations plan - 2001

### Parks & Recreation Needs Assessment

Lebanon completed a Parks and Recreation Needs Assessment in 2002 to assess the existing park inventory, current park usage, and to determine future needs and level of service. At the time of the assessment Lebanon had 368.3 acres of parkland including almost 40% in active recreational uses, 19% in passive uses, and 42% in unimproved open space. There was 89 acres of public owned school sites as well as 193 acres of private owned open space.

On average for the community in 2002 there was 21.7 acres of city parkland per 1,000 residents. In order to maintain that ratio the city will need to increase the parkland by another 380 acres (based on a population estimate of 36,638) in 2020. Additionally, by 2020 if no additional amenities are added Lebanon will be short 17.25 miles of trails, 17.5 miles of biking trails, add 2 indoor theaters, and 189 picnic tables.

As part of the public process the following elements were discussed by the public; outdoor amphitheater, skate park, a pond and fishing area, better signage and wayfinding, and more usable greenspace within the residential developments.

### 2006 Market Study

Lebanon engaged in a market study of the community in 2006 to determine the range of potential land uses that could be accommodated within the study area.

The study found that Lebanon will have to be an active participant in the development of the office and industrial market and that most of the growth will come from small, locally owned and operated companies.

Existing retail and future growth of retail in Lebanon may be destabilized by the development of large scale retail projects in neighboring communities. The retail in the East Main Street corridor is likely to be threatened most intensely by the proximate developments.

The study also determined that the successful transition of downtown Lebanon will be crucial to the future success of business.

The study recommends the City take a proactive role in the revitalization, utilizing city tools and revamping the regulatory environment to encourage redevelopment.

chapter 2  
EXISTING CONDITIONS



## EXISTING CONDITIONS

In order to inventory the existing conditions in Lebanon in 2008 the consultant team utilized several techniques. In addition to the traditional statistical, demographic and historical research about the city, the planning team visited the community to evaluate the conditions of the built and natural environment in Lebanon. Since Lebanon is a dynamic city and census data is somewhat outdated in 2008 the on-the-ground research on Lebanon provided the most significant information for the planning team.

### *Evolution*

Lebanon's history is a point of pride for its residents and establishes its unique position in the region as a picturesque community with a rich history. It is an important crossroads in the region, and that position has influenced its growth and evolution over the years.

Lebanon's long history was a result of its strategic location, a one-day stage coach ride from Cincinnati. In 1802 four settlers laid out the first one hundred lots around Main and Broadway. Broadway was designed to be wide enough to turn a stagecoach around. In 1803 The Golden Lamb was opened as a tavern and log cabin inn to serve travellers.

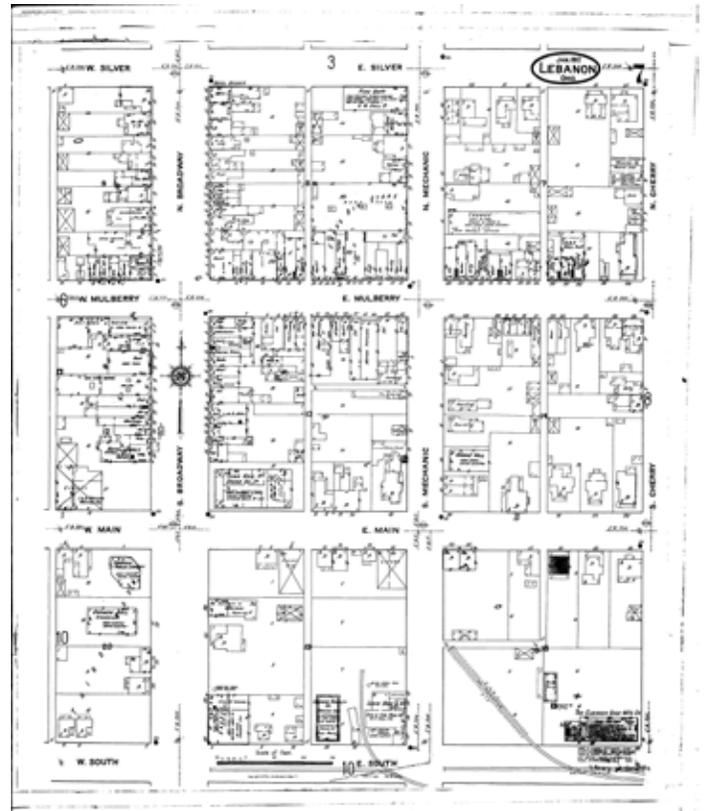
The Cincinnati, Lebanon & Northern Railroad was constructed in 1876 to connect Cincinnati to Dayton and passed through Lebanon. The rail line reached Lebanon in 1881. The total line was 36.1 miles from Cincinnati to Dodd. It was later connected to the Middletown and Cincinnati Railroad in 1894.

The Warren County Canal was navigable by 1840. Part of the Miami and Erie Canal, it was about 20 miles long and connected Lebanon to the main canal route in Middletown. It was never successful as a connection and was abandoned within a decade.

Once the car took over as the dominant form of travel and transportation, Lebanon was once again located along a critical corridor. US42 was built in 1926 and passed through Lebanon on its way from Cleveland to Louisville. Lebanon also has three state routes, and access to an interstate highway. State Route 48 was created in 1926 and runs north/south through Lebanon. State Route 63



Golden Lamb Inn



Sanborn Map of downtown - January 1917

### **Demographics - snapshot**

*Population: 20,421*

*Area: 12.55 square miles*

*Median Income: \$51,400, (Ohio \$43,493)*  
*(source: US Census, 2000)*

*Unemployment: 3.7%*

*Mean Travel Time to Work: 22.5 minutes*

*Average Household Size: 2.6 (Ohio 2.5)*

*Percentage of Family Households: 71.5%*  
*(Ohio 67.3%)*

runs east/ west from State Route 4 and ends in Lebanon at Interstate 75. State Route 123 runs north south and was completed in 1966.

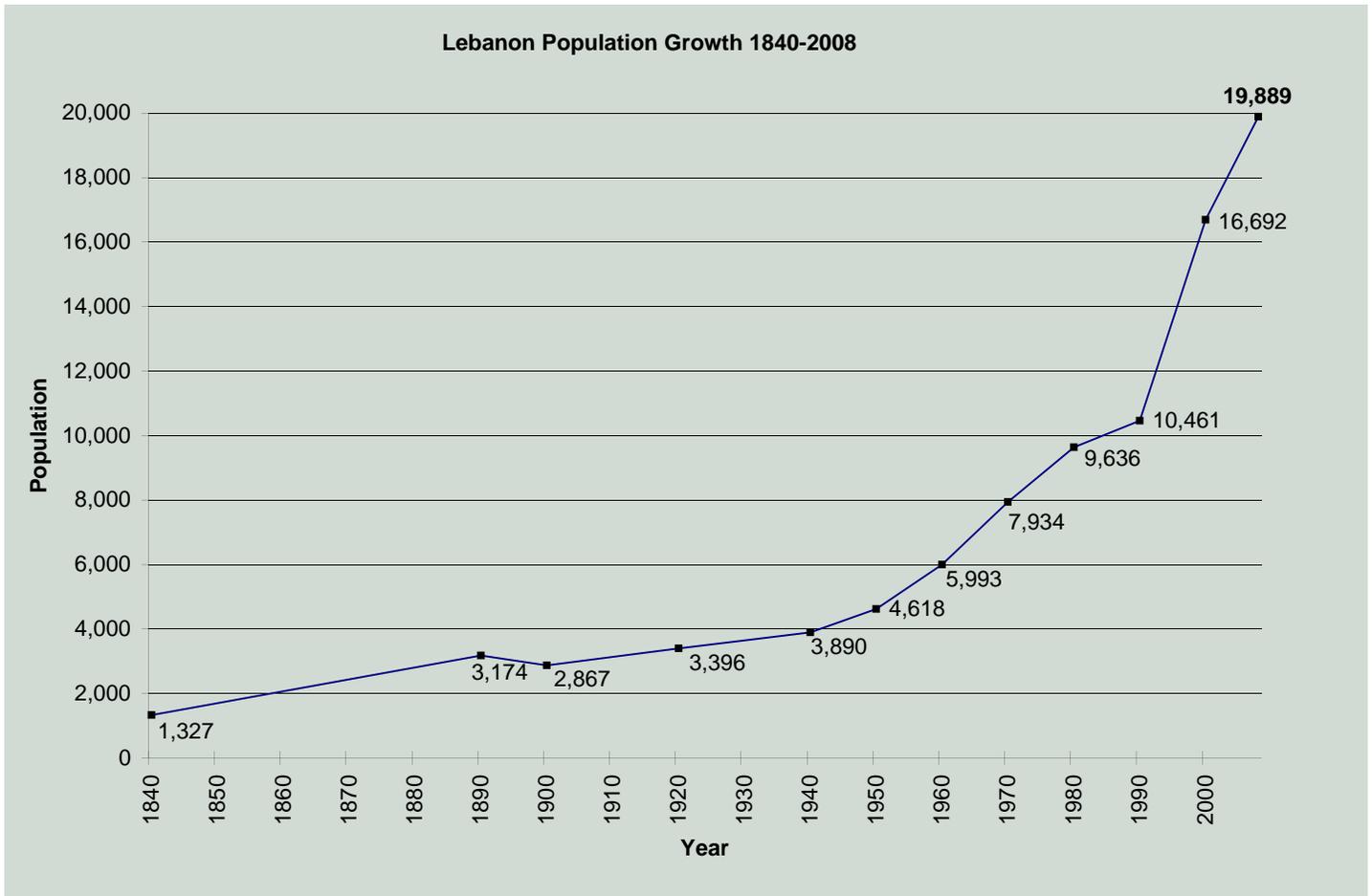
Interstate 71 runs north/south to the east of Lebanon and Interstate 75 runs north/south to the west of Lebanon. There are interchanges off 71 at State Route 123 and 48. Interstate 75 has interchanges off State Route 63 and State US Route 42.

In Lebanon, like most communities in exurban counties, most of the growth has taken place in the past two decades. The greatest population increase in Lebanon was between 1990 and 2000. 6,501 new residents moved into Lebanon during this time representing a 62% population increase. There were 1,378 new housing units constructed since 1990 representing 34% of the housing in Lebanon (compared to 19.2% nationwide).

For most of Lebanon's history downtown was the functional heart of the community. It served as the center of commerce and civic life. However, as the city evolved in the 20th century, focus was diverted to the automobile-oriented corridors like Columbus Avenue, along Broadway north of downtown and Main Street east of downtown.



Downtown Lebanon today



These commercial corridors catered to the contemporary development pattern that emphasized the car.

This development pattern occurred in cities all around the nation. For many communities retail and restaurants began to relocate along previously undeveloped corridors outside of the downtown. These areas provided large tracts of vacant land for a new building and most importantly parking lots.

When the interstate was built, commercial development moved closer to the highway for visibility. Those corridors are now aging and no longer serving as commercial hubs.

*Existing Land Use*

Lebanon has more than 45 industries, constituting 3,500 jobs in its high-tech industrial parks. There are currently five industrial parks; Harmon Industrial Park, Norgal Industrial Park, Columbia Business Park, the Lebanon Commerce Center, and Kingsview Industrial Park. There are over 700 acres of prime industrial and office land for new business development. The city has added jobs at an annual rate of about 4% since 1980.

New home construction peaked in 1999 and has dropped significantly as of 2006. Median Home Value is \$129,000 in Lebanon (statewide it is \$129,600). The owner-occupied housing units constitute 58.9% of the housing units; nationwide that number is 66.2%.

Lebanon is home to four historic districts recognized by the National Register of Historic Places in Washington D.C.

*Natural Features*

One of the major contributors to the character of the community in Lebanon are the natural features. Lebanon sits between the Little Miami River and the Miami River which creates significant topography lending to attractive vistas and interesting landscapes. These waterways also have tributaries that provide scenic watercourses to the community that provide passive and active recreational opportunities. The area is heavily wooded and many large woodstands remain throughout the area.

*Utilities & Infrastructure*

The City of Lebanon is served by a centralized sewage treatment plan located on the south side of the city. The plant currently has additional capacity for new development. Use of gravity sewers is preferred for all new development and lift stations are strongly discouraged. Water is provided by the City and Western Water. The capacity, location and pressure capabilities of the water system influence development patterns and feasibility. This is particularly true on the northeast side of Lebanon. Electrical service is provided by the City of Lebanon.

**Existing Land Use by Acres**

<i>Land Use</i>	<i>Acres</i>	<i>Percent</i>
<i>Downtown</i>	63	1%
<i>Residential</i>	3,699	51%
<i>Commercial</i>	475	6%
<i>Office</i>	311	4%
<i>Industrial</i>	1,858	25%
<i>Parks/Civic</i>	999	13%
<hr/>		
<b>TOTAL</b>	<b>7,405</b>	<b>100%</b>

**Existing Land Use by Units**

<i>Single Family Homes</i>	<i>approx. 4,700 units</i> <i>(not downtown)</i>
<i>Residential Downtown</i>	<i>approx. 400 units</i> <i>(within &amp; adjacent to)</i>
<i>Multi-Family Complexes</i>	<i>19 buildings</i>
<i>Commercial</i>	<i>approx. 2,240,000 sq ft</i>
<i>Office</i>	<i>approx. 1,700,000 sq ft</i>
<i>Industrial</i>	<i>approx. 5,750,000 sq ft</i>

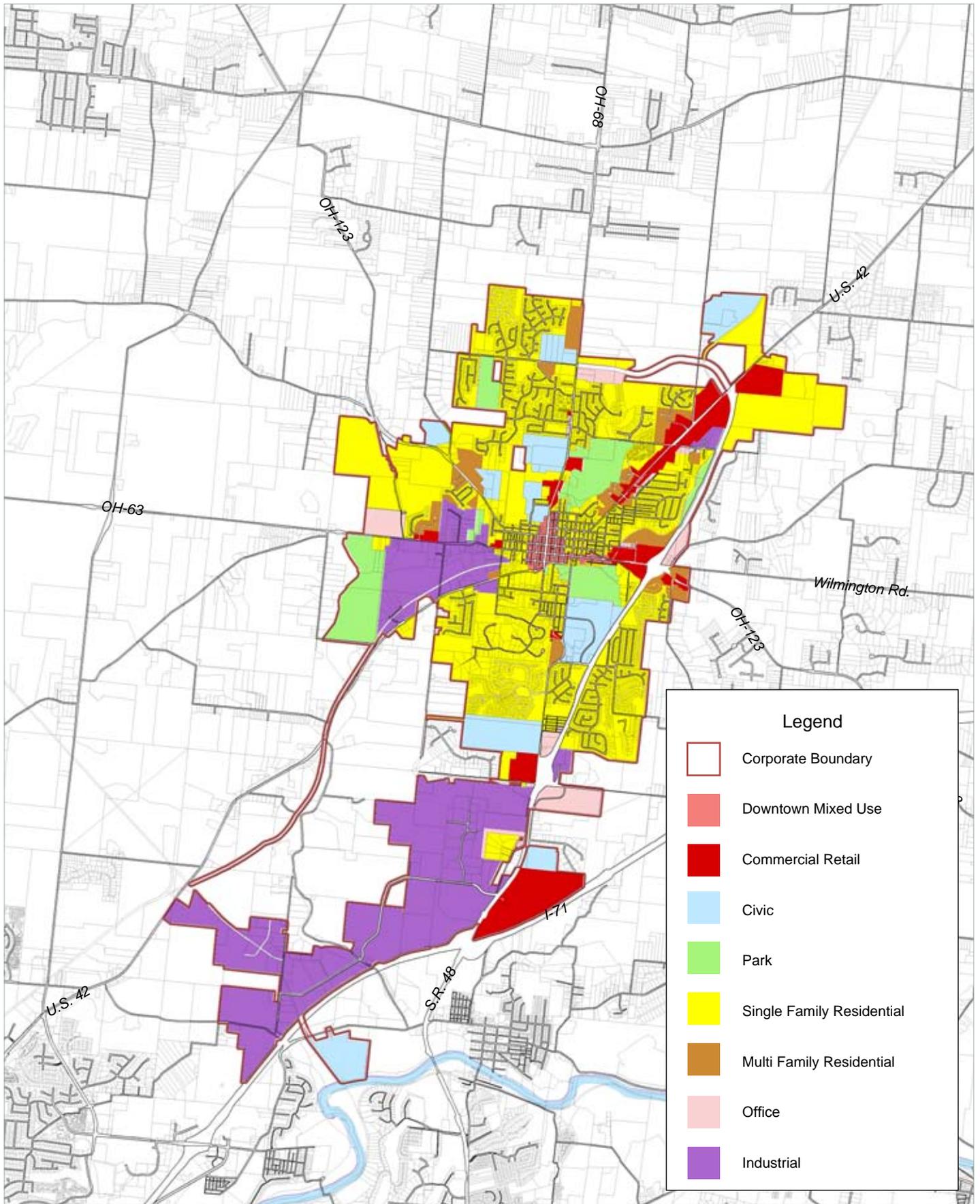


Figure 2: Existing Land use

↑ N 1" = 6000'



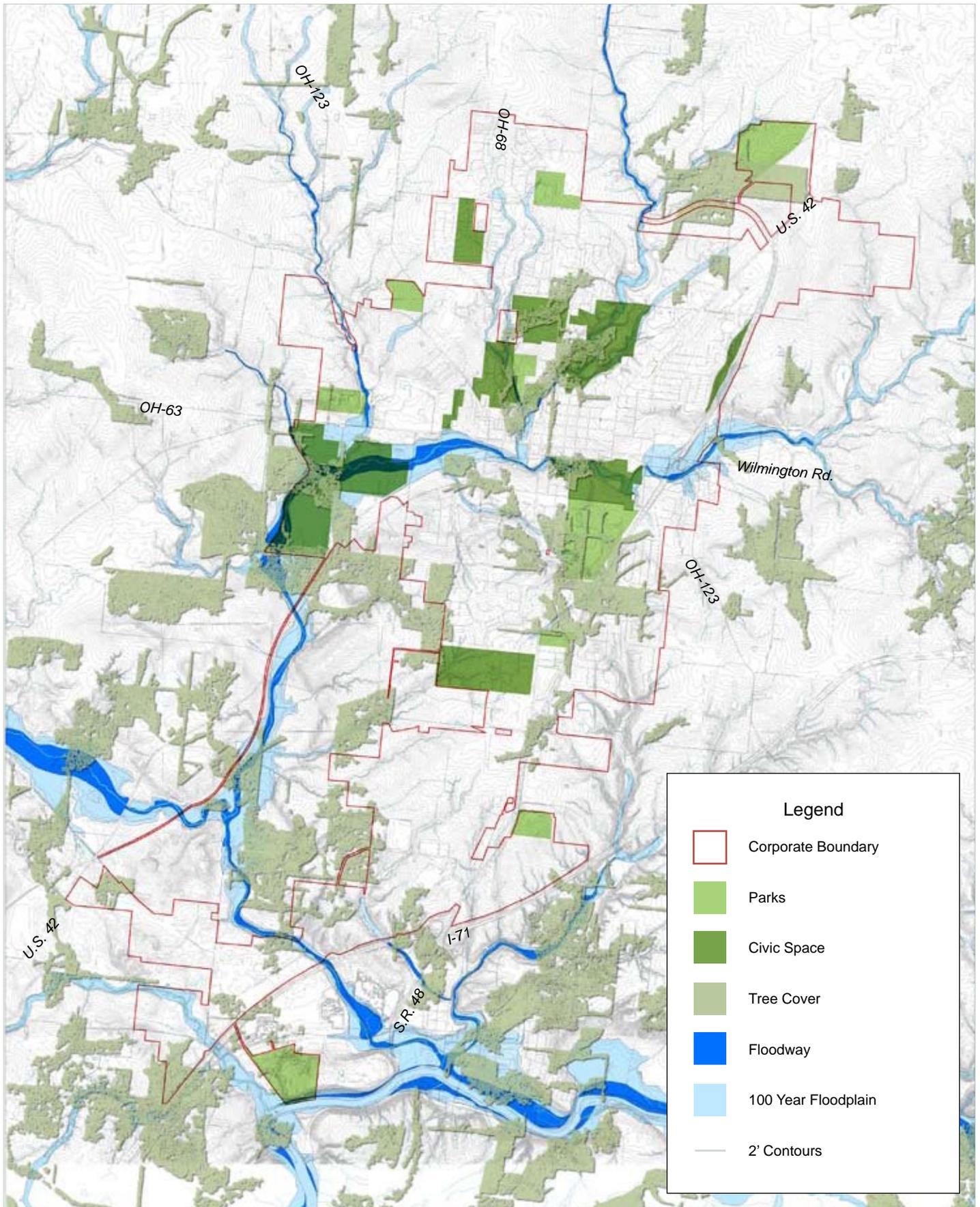


Figure 3: Existing Natural Features

↑ N 1" = 6000'

### Regional Context

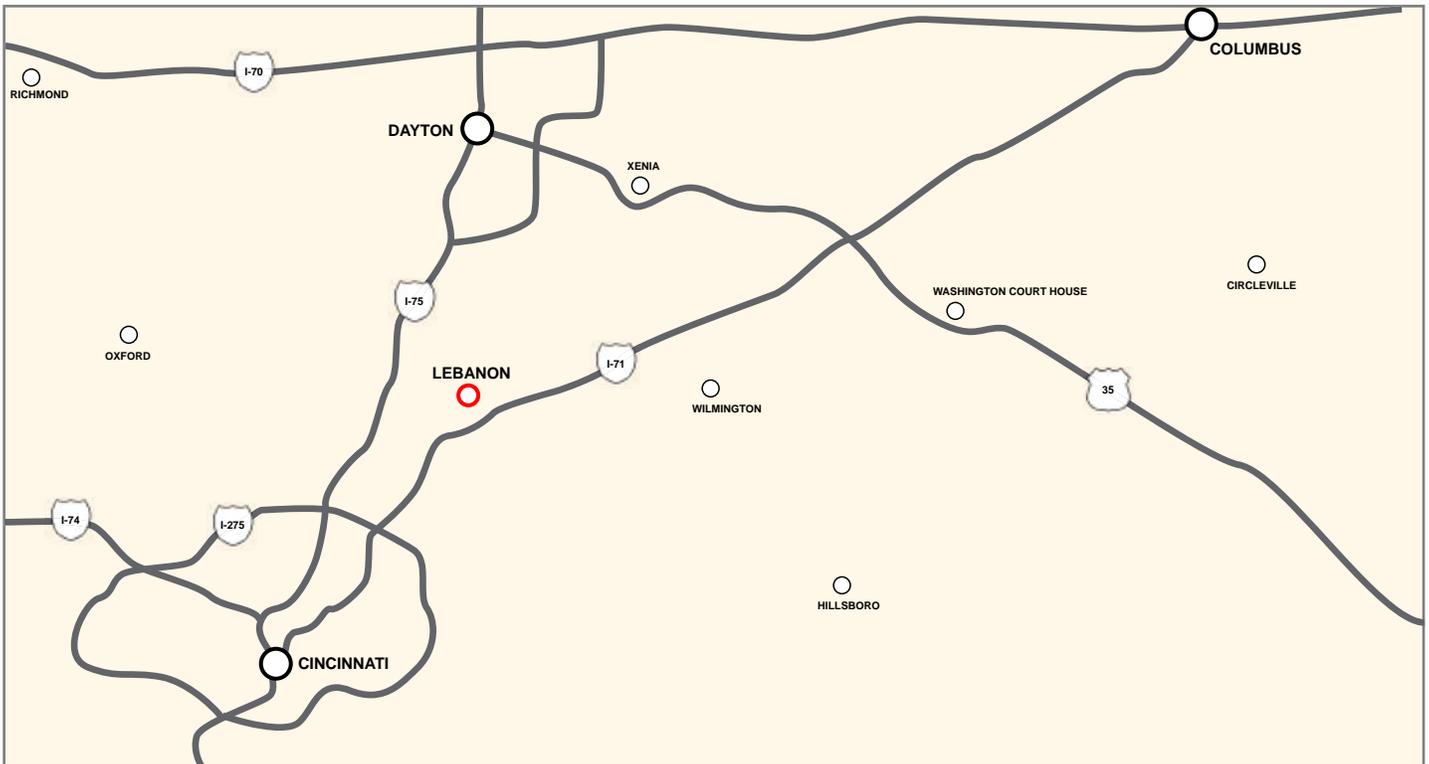
Lebanon is located in Warren County, a fast growing suburban county for both Cincinnati and Dayton. While Lebanon experienced unprecedented growth during this period, the city did not grow as significantly as those located closer to Cincinnati.

Substantial development has been occurring in neighboring communities and now a large scale residential and mixed use community is being developed to the northwest of Lebanon in Turtlecreek Township called San Mar Gale. This pattern of development in the township is serviced by a package plant and does not require centralized services from the City. Also, to the west, outside the City, Otterbein is planning residential, office and retail development in their area.

The real estate market in the region is relatively strong, although it has slowed in recent years. Lebanon is located in a fast growing county which saw large amounts of residential, office and retail development over the last ten to fifteen years. However, the slow down of the national residential market significantly lessened the development occurring throughout Warren County. The office and retail markets reacted to the housing slowdown by reducing their growth as well. These conditions are not expected to be permanent, and it is likely that development will pick up again in all sectors. However, it is unlikely to return to the high levels we saw prior to the decline in the housing market.

### Regional Influences

- Proximity to Cincinnati & Dayton
- Interstates 71 & 75
- Neighboring communities
- Development in the townships (San Mar Gale)
- Large Format Retail Development in South Lebanon (Rivers Crossing)
- Warren County is the 2nd fastest growing county in Ohio
- Overall downturn in housing construction
- Increasing gas prices
- New housing types like senior housing and urban style units are becoming successful



Context Map

Rising gas prices may also affect the future market for development market in Warren County. Individuals with jobs in Cincinnati and Dayton may not choose to live as far out as Lebanon unless public transportation options become available for the commute. Those with jobs in neighboring Mason or Kettering will likely continue to find Lebanon an attractive place to live. However, the change in transportation costs will change the future development pattern, and it will be important for Lebanon to adapt to those changes to remain successful.

#### *Built Environment Conditions*

Because Lebanon has seen development interest over the years, the condition of that development now varies throughout the community. Buildings in Lebanon range from highly historic buildings downtown to the new development at US 42 and SR 48. The conditions range as well throughout the community. As part of the comprehensive plan process it is important to evaluate the condition of the built environment in order to identify ways to maintain quality places and improve areas in need.

The historic downtown's development was shaped by its importance to travellers throughout its history. It has been generally well maintained, although it suffers some from the impacts of modern development. There are some 'missing teeth' along the street where buildings are no longer located. The downtown tenants are mainly restaurants and specialty shops. There are some vacancies along the streets as well.

The retail development that occurred along the main corridors is now largely marginal in condition and in character. The retail along these corridors served the community of Lebanon and surrounding areas until larger retail centers were constructed in neighboring communities. The newer retail development is largely still occupied by first tenants and therefore still in good condition.

The single family housing market has been most active within the last decade in Lebanon, resulting in a housing stock that is generally new and strong. However, some of the older single family homes in the city have been converted to rental units. This can reduce the quality and upkeep of the home.

In addition to single family homes being converted to rental units, the multi-family housing market is strong in Lebanon. Lebanon is the county seat in Warren County and like other county seats around Ohio has a higher percentage of renters than other cities. There 19 multi-family apartment buildings in the city and additional duplex buildings throughout the city. The condition of these buildings varies but is generally below the condition of single family housing in the community.

Office development in Lebanon is limited. Historically, there have not been significant opportunities for office development in Lebanon, so most of the employers are retail-based or small scale offices. Recently that has changed with the addition of the Bethesda Medical Center at Arrow Springs and Lebanon Medical Campus.

Industrial development has been a strong market in Lebanon. The industrial uses are largely located in the southwest corner of the city. In the past few years some of the businesses have been consolidating or changing focus resulting in some loss of employees.

Civic and parkland in Lebanon is a strong element of the built environment. In addition to the new Warren County Complex and the new Lebanon High School there are great parks and a strong trail system. Lebanon also benefits from the being home to the largest YMCA in the country, Countryside YMCA.

chapter 3  
PLAN FOUNDATIONS



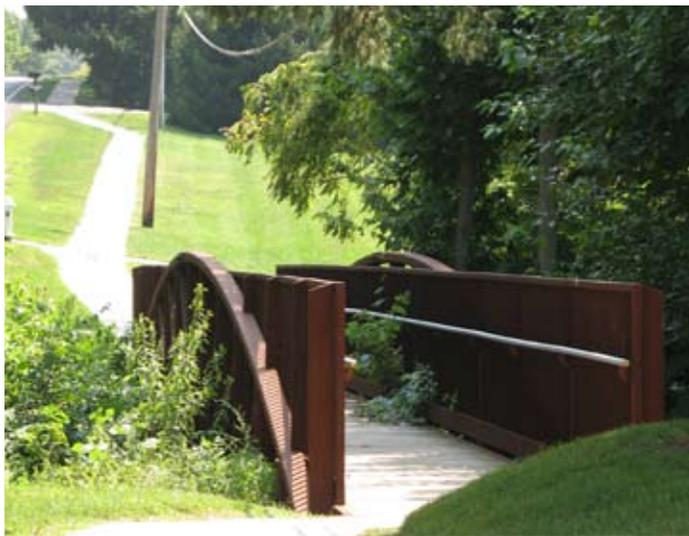
The City of Lebanon and its citizens have placed a high value on community planning and execute this focus through the recommendations and strategies in this plan. The plan is intended to protect what is valued and provide what is desired.

In order to achieve that goal the plan must be based on solid foundation of planning theories and community values. This chapter explains the foundations and basis for the plan.

The plan foundations, combined with the goals of the community, drive the plan and reflect the priorities, values and beliefs of the community.

1. Smart Growth practices should be employed as Lebanon grows to mitigate the impacts and maximize the benefits
2. Community character must be maintained as the community grows
3. Lebanon must establish a balance of land uses to be a sustainable city
4. City must grow using innovative and sustainable development patterns
5. Downtown must be preserved and enhanced
6. Redevelopment of existing commercial corridors is important

This chapter details each of these plan foundations and provides the background support for the recommendations of the plan.



By managing growth Lebanon can maintain its character, small town feel and high quality of life.

## PLAN FOUNDATION # 1: SMART GROWTH PRACTICES SHOULD BE EMPLOYED AS LEBANON GROWS TO MITIGATE THE IMPACTS AND MAXIMIZE THE BENEFITS

### *Smart Growth*

A critical principle for a growing community to follow is smart growth. Although the term has been generally overused, the notion is still an important one.

In order to get the highest quality new development, and minimize the impact of growth the city must execute the tenets of smart growth. Diligent management by the city and the citizens will allow utilities, infrastructure and amenities to keep pace with new development.

In addition to management of impacts Smart Growth allows the community to maximize the benefits of new development in the community. By requiring high quality development that is appropriate the city can become more attractive and have more amenities for its residents and visitors. Quality development that contributes to the city is not just a matter of using quality materials. The architecture of the building and the site design should also reflect the character of the area and respond to the location in which it is located within the community. A helpful tool to achieve appropriate, quality development is the transect.

The transect organizes and illustrates the development in a community along a continuum that reflects the transitions from urban to suburban to rural. Communities use it to identify a development's appropriateness to its surrounding context and require the development that occurs there to reflect the appropriate character.

Site plans, buildings, densities, etc. should all relate to the community in which they are located. For example, the same fast food restaurant building and site design is not appropriate in both downtown Cincinnati and in Lebanon. The aesthetic of each is different and the development that occurs in either place should contribute to that character, not diminish it.

By managing impacts and maximizing the benefits of growth Lebanon will become a quality, livable city that is attractive to visitors and residents.



Buildings should respond to the community, the surrounding character and the contribute to the quality of the city. The same McDonalds building should not be built anywhere but should respond to and be designed to fit into the surrounding character.

New development should contribute to the small town character of Lebanon, not detract from it.

### 10 Principles for Smart Growth - Urban Land Institute

1. Create and maintain a shared vision for the future
2. Identify and sustain green infrastructure
3. Remember that the right design in the wrong place is not smart growth
4. Protect environmental systems and conserve resources
5. Provide diverse housing types and opportunities for changing demographics
6. Build centers of concentrated mixed uses
7. Use multiple connections to enhance mobility and circulation
8. Deliver sustainable transportation choices
9. Preserve the community's character
10. Make it easy to do the right thing



The Transect - The Smart Code

## PLAN FOUNDATION # 2: COMMUNITY CHARACTER MUST BE MAINTAINED AS THE COMMUNITY GROWS

As development and redevelopment occur in Lebanon, maintaining the community character is a priority. A city's character is the heart of its identity and what separates it from other communities. New development can either support or erode that identity.

The preservation of community character is often difficult in the face of an ever globalizing world. The McDonalds in Phoenix or Orlando is the same McDonalds that wants to locate in Lebanon. Clearly, the character of Phoenix is distinct from Orlando which is different from Lebanon. While the homogenization of architecture and site design is a cost-saver to the developer it comes at a significant cost to the unique character of our communities.

Unfortunately, preservation of community character is not as simple as requiring a particular brick color or a sign type. And, community character cannot be applied as a faux facade on a big box building. These solutions have long been employed by communities with limited, if any, success.

Lending to the difficulty is the understanding that character is not uniform throughout the community. Lebanon has an overall small town feeling which is established both by the historic downtown, but also by the rural surroundings. The downtown and the rural areas have distinctly different character but together they create the small town feeling of Lebanon. Both must be preserved.



Heavily wooded areas and significant topography are assets that influence the character of the community.

The community must identify the elements of their character that are dominant, unique and desired in the community. Both building design and site design are critical to the preservation, therefore the identified elements should incorporate both in order to fully succeed.

Lebanon is a community with strong character and a clear aesthetic. The housing, downtown buildings, civic structures, natural features, topography, open spaces, and other elements of the environment combine to create the character of Lebanon.

The small town feeling in Lebanon is a unique asset that many communities are attempting to replicate today with varied success. Lebanon has historic urban fabric that has largely remained in tact. Downtown is a strong contributor to the character of Lebanon.

The rural areas surrounding Lebanon are also something that many cities in urbanizing areas have lost. The bucolic aesthetic of the land outside the existing corporate boundaries contributes to the small town feeling in Lebanon. Preserving the rural vistas and open spaces as development occurs will protect the pastoral character.

### *Architecture*

The architectural character and style of a city is largely influenced by its location and time of establishment. Being located in the midwest and established in the early 1800's created a building stock that is a traditional mix of Colonial, Romantic and Victorian Style homes and traditional Main Street architecture for the commercial buildings. The rural areas are dominated by traditional midwestern agricultural buildings, significant open spaces, naturalized conditions and striking rural vistas.



Open spaces, agricultural architecture and rural vistas contribute to the small town feeling in Lebanon.

## ***Lebanon's Community Character***

- 1. Small town feeling*
- 2. Bucolic natural environment surrounding the city*
- 3. Strong downtown and impressive urban fabric*
- 4. Historic architectural elements and styles*
- 5. Significant natural features, large wooded areas, and interesting topography*



Historic homes define the architectural style found in Lebanon

### ***Natural Environment***

When Lebanon was founded in 1802 the settlers coined the name from the trees covering the hillsides and their resemblance to Middle Eastern cedar trees. In addition to the significant tree coverage the area has substantial topography as well. Being nestled between the Miami River and the Little Miami River creates significant slopes and valleys through Lebanon and the surrounding area.

### ***Additional Influences***

Lebanon's history as a city along major travel routes strongly influences the character. The roadways were originally designed to allow for stagecoaches to fully turn around. This created wide streets downtown which gives Lebanon a distinct feel. Also, the presence of the railroad provided unique building architecture that contributes to the overall aesthetic.



Historic Main Street commercial buildings contribute significantly to the genuine character of Lebanon



Lebanon's role as an important transportation hub influenced its structure and architecture.

### PLAN FOUNDATION # 3: LEBANON MUST ESTABLISH A BALANCE OF LAND USES TO BE A SUSTAINABLE CITY

In a city each land use type has a different role to play. Each is important, establishing a balance based on benefits and costs, positioning the city up for long term prosperity. A city must carefully manage the balance of land uses in the community based on all of the factors including quality of life, city fiscal health and long term sustainability.

Becoming a balanced city that is able to provide services and generate revenue will make Lebanon a sustainable, livable city in the long term.

#### Land Use

Residential is obviously an important part of any community. The homes bring residents, turning cities into communities. A city's residents create a market for retail and commercial uses to locate in the community. Without a certain number of residents to patronize restaurants and shops, the businesses cannot survive. Additionally, the type of residential products added to a community influences the impact that new housing has on the fiscal health of the city and the school district. Some may increase the number of school aged children; others may add empty nesters or young professionals to the community. In Ohio, for city budgets, residential development does not contribute sufficient revenue to cover the cost of services a city provides. These services include police, fire, snow removal and street maintenance, among others.

Retail is the most challenged land use in a city. It is also one of the most sought after by the residents. Retail provides services like dining, groceries, and entertainment. All of these retail uses benefit the residents. However, given the retail market development practices, the gain is often short-lived for a city. Retail establishments have a strong likelihood of relocation



An overabundance of retail ground in a city encourages retail leapfrogging.

#### Creating a Balance of Land Uses

- *Only provide (zone) for retail space that your community desires*
- *Foster & support employment centers (office/ industrial)*
- *Carefully locate and consider zoning for residential development. Match pace & availability with employment centers*
- *Various land use types require varying degrees of community services*
- *Various land uses generate varying amounts of revenue to the community*

in short time periods and continued investment in communities is not likely from national retailers. These factors lead to retail leap-frogging that leave second and third tier tenants behind in previously thriving retail areas. Additionally, retail does not provide net positive revenue for a city. With low wages and the need for services, the city often breaks even. Therefore, it is critically important to manage the amount of retail ground in the city and to only add retail ground if there is a significant demand. The city should encourage redevelopment of existing retail ground over greenfield development for new retail.

Commercial uses, like offices and industrial uses, are an important part of any community. The city receives revenue from income taxes which support maintenance and services for the residents. In Ohio, office development is critical to offset the costs of residential development. Offices provide the largest revenue source per square feet due to the likelihood of large salaries.



Permitting iconic architecture, where appropriate, encourages the development of owner occupied office buildings which are more likely to be long term members of the community.

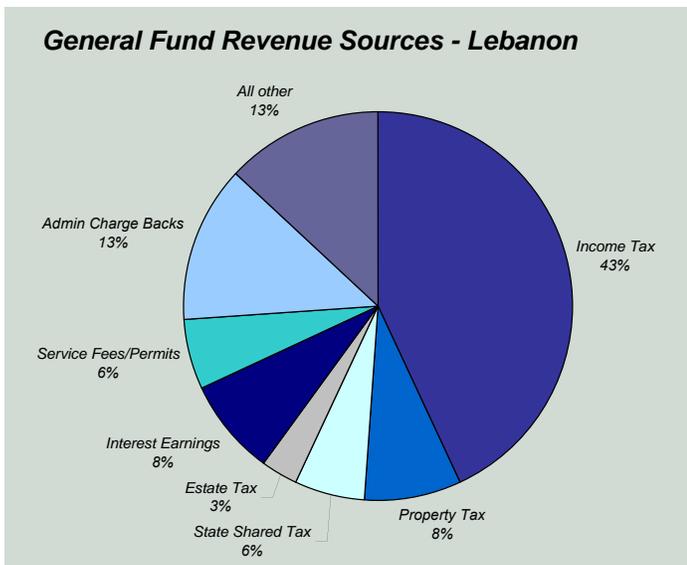
Industrial uses help if they are employee-intensive. Warehouse uses often employ few people at lower salaries relative to their substantial size. Construction helps provide income tax, but it is temporary.

**Land Use Balance**

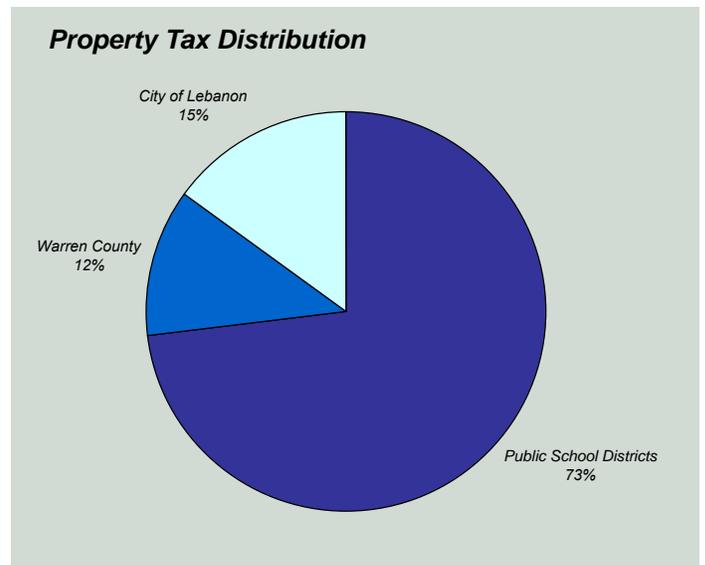
The goal for a healthy, sustainable city is to establish and maintain a balance of land uses that capitalizes the benefits of each. Achieving that kind of balance is elusive and difficult for most cities.

Each community is distinct in its demands for services such as water and sewer and different in its tolerance for revenue-generating land uses. The balance of land uses for each community is therefore different.

Achieving land use balance in the city is not about creating a city where land uses are equal percentages of the whole. It is about determining, as a community, the desired service levels and planning for land uses to provide that revenue. If a community is willing to accommodate a large daytime population, and its impacts, then a large amount of revenue will be available for city services like bike trails, recreation centers, infrastructure improvements, and the like. Determining land use is a science of balancing the books as well as the art of determining what the city's needs are (and providing the resources without compromising the quality of the life in the community).



Lebanon is no exception, income tax provides the majority of the revenue for cities in Ohio.



The majority of property taxes go to fund schools.



Office development should be organized to create amenities such as greenspace to create an office development that encourages long term tenants.



Residential provides community members to the city, but new homes require services that without additional revenue become difficult for the city to provide

## PLAN FOUNDATION # 4: GROWTH OF THE COMMUNITY MUST BE IN SUSTAINABLE, INNOVATIVE PATTERNS

Innovative tools and development patterns create unique, successful, sustainable communities. The field of planning and development have become more sophisticated, and therefore better tools have been created to facilitate quality development that contributes to the community. To reach its goal of being a successful, sustainable city it is Lebanon's interest to employ these innovations in planning and development.

Development in cities around the country has long been dominated by developers. Companies arrived in communities with their template retail, office or residential products and developed them independent of the character of the community, street or surrounding parcels. These developments became ubiquitous in the American landscape. Developments were designed and reviewed as individual sites that required self sustaining parking, circulation, access and utilities. Parcels were developed in a vacuum. This practice resulted in cities with individual parcels that lacked coordination. This deteriorated the character of communities, resulted in unattractive places, and led to dysfunctional cities. As a result planners and city officials have looked toward more effective means to achieve their goals, requiring integrated, not isolated development.

*Traditional Neighborhood Design/Mixed Use*  
Zoning, as it has been practiced since its inception, was focused on the separation of uses. Many communities adopted zoning at the height of an automobile revolution that created development focused on cars, not people.



Middleton Hills, Wisconsin -  
Example of Traditional Neighborhood Design

### Components of Traditional Neighborhood Design

- *Historical development patterns*
  - *Grid Street Pattern*
  - *Homes closer to the street*
  - *Strong connections*
- *Focus on human scale development*
- *Mix of Uses including*
  - *Residential*
  - *Neighborhood retail*
  - *Office*
- *Walkable and bikable*
- *Compact*
- *Quality open spaces*
- *May involve transit*

These zoning codes, many of which are still in use, have resulted in cities, lacking a sense of community through separation of uses, concentration on individual parcel development, and the over-accomodation of the car.

Traditional neighborhood design and a mix of uses brings neighborhoods back by encouraging neighborhood retail, a variety of housing types and other compatible (though not necessarily the same) uses to locate together. This pattern of development employs a holistic view by fitting developments into their surroundings and managing impacts among developments rather than on each individual site. These developments are compact and walkable. Homes are closer to the street with strong pedestrian and vehicular connections to neighborhood retail, schools and parks. Traditional neighborhood design



The Kentlands, Gaithersburg, Maryland

with a mix of uses refocuses commitment to developing viable sustainable communities that create a high quality of life for the residents.

**Conservation Design**

Conservation design clusters home sites in a residential development to preserve significant open spaces as a part of the development. Typically, 50% to 70% of the site is preserved in permanent open space.

Conservation design is preferred for subdivision development in exurban areas because it promotes the protection of natural resources, requires the subdivision to respond to the existing conditions, preserves rural character and open vistas, and provides recreation and greenspace opportunities for the entire community.

**Conservation Development Design**



Typical Subdivision Design



Conservation Development Design

*In contrast to typical subdivision design arranges the units in a way that responds to the existing conditions of the site and preserves typically 50% to 70% in permanent open space. This pattern of subdivision design is especially appropriate in rural areas where natural features and rural vistas can be preserved.*



Davidson, North Carolina



Example of traditional neighborhood design pattern

## PLAN FOUNDATION # 5: PRESERVING AND ENHANCING DOWNTOWN LEBANON IS CRITICAL

Downtown Lebanon is the historic, cultural, and civic center of the City. Over the past decade many successful communities have realized the importance of having a downtown or town center, even to the point where some communities have decided to create a new town center where there was none. A downtown is a unique place which not only acts as the heart of the local community, but also acts to enhance community character and identity.

Whereas some communities are attempting to create a new town center from scratch, Lebanon has the opportunity to build on and enhance what already is a strong asset for the community. Today, Downtown Lebanon is a unique place filled with historic and cultural resources, so much so that it has become a popular tourist destination in southwestern Ohio. Along with its success however, the future prosperity of Downtown Lebanon may be at risk due to the development of competitive lifestyle centers in nearby communities. In order for Lebanon to remain competitive and prominent within the region, investment and revitalization in Downtown Lebanon must take place.

Maintaining historic fabric in the face of contemporary development is difficult; however it is possible. There are critical components of successful downtowns that must be maintained in Lebanon as well as some additional elements that would improve the downtown.

There are a number of characteristics which combine to create successful downtowns and town centers. A number of these characteristics are present in Downtown Lebanon today whereas others are missing and should be addressed in order to ensure the future success of Downtown. These elements are discussed below.

### *Proximity of Housing*

Locating housing in and near the downtown with good accessibility provides a critical populace to shop and dine downtown. People on the street provide vibrancy and activity that make it an attractive place to be, and nearby residents create a base market for retailers downtown. Furthermore, many market studies show that there are segments of the population that enjoy living in or close to downtown for the opportunities and unique quality of life such living provides. Adding and improving residential opportunities in close proximity to downtown is an important strategy.

Lebanon already has a good supply of housing located around the downtown commercial area which has contributed to its success over the years. However,

there are opportunities for additional housing around the downtown core and above existing shops. The city should encourage such development. Additionally, housing in the downtown development pattern can be unique and provide opportunities for products not found elsewhere in the community. Downtown housing fulfills a great niche for empty-nester and young professional housing which is a growing portion of the residential market.

### *Opportunities for Office Development*

Because Lebanon has a strong existing downtown there is an opportunity not available in other area communities to foster an office environment downtown. The market for this office user would be directed at small professional services (legal firms and medical providers) and the “creative class” (design firms, architects, interior design, etc.). Cultivating this market will add to the vibrancy and provide additional shoppers and diners in downtown.

### *Strong Connections*

Nearby residents will provide the most activity downtown, however if improved bicycle and pedestrian connections were made to downtown, residents elsewhere in the community could also contribute to foot traffic. As bicycle and pedestrian trails are designed, they should be designed to provide connections to downtown from all areas of the community.

### *Competition*

The success of downtown will be influenced by the development patterns outside of downtown. While not all uses are appropriate for the downtown development condition (for example large format retail or gas stations), the uses that would fit well downtown should be encouraged to locate there. When considering zoning for new development in the community it is important



Quality architecture and site design that focuses on the pedestrian enhances the unique experience of being downtown

## **Keys to Downtown's Success**

1. *Additional Housing*
2. *Opportunities for Office Development*
3. *Making strong connections*
4. *Discouraging competition for downtown elsewhere in the community*
5. *Continued public investment*
6. *Maintaining quality architecture and appropriate downtown development patterns for all new development*

to evaluate its impact on downtown. New retail in the community will either contribute to downtown or detract from it, and those with negative impacts should be steered downtown, rejected, or mitigated if possible.

### *Public Investment*

As a valuable area of the community, Lebanon should continue to invest in the infrastructure and services downtown. One of the most important public investments downtown is the location of civic and institutional uses downtown. These uses bring people downtown and increase the activity. Many communities choose to locate new civic and institutional uses to greenfield sites for feasibility reasons. However, the overall impact to the community of moving customer-generating uses out of the core of the community often outweighs the benefits of greenfield development.

Another important public investment downtown are parks and places for people to gather. If these are well integrated into the development of downtown, they provide great benefit to downtown residents and visitors and enhance property values and market conditions.

### *Quality Architecture and Appropriate Patterns*

Encouraging new development and investment downtown is critical to the continued success of downtown. However, more than anywhere else in the community, good design and site development is paramount to the success of downtown.

The downtown environment is focused on pedestrians, therefore high quality architecture is important to facilitate an experience for users who will be experiencing the buildings up close. Also, a proper street envelope must be maintained with minimal interruptions to make for a comfortable and captivating pedestrian experience.

Short, manageable blocks should be maintained, with active storefronts, and parking located to the rear of the buildings. Curb cuts should not occur along the street frontage to maintain the safety and comfort of pedestrians.

The contemporary needs of development are often in contrast with the historic pattern of downtown development. While we cannot, and should not ignore those needs, we must solve them in creative ways that do not erode the quality of the downtown. Planning ahead to manage parking, access, and other needs will create a friendly development environment, while not sacrificing the downtown experience and quality of life.



Higher density residential downtown is a critical element in the success of downtown. It has to be a neighborhood to succeed.



Investments in public spaces and infrastructure are essential to the success of any downtown

## PLAN FOUNDATION # 6: THE REDEVELOPMENT OF EXISTING COMMERCIAL CORRIDORS IS IMPORTANT

Redevelopment of the key corridors in Lebanon is important because they serve as “gateways” into the heart of the city. The development that has occurred along these corridors does not reflect the community and does not serve as an appropriate gateway. These corridors should be well organized, have high quality buildings, and contribute positively towards the image of Lebanon.

Most communities, upon establishing zoning, located retail zoning along the major corridors in their communities. This created substantially more retail ground than could be supported by the population. By supplying more ground than there is demand, cities created a situation where retailers can freely move around leaving behind abandoned buildings and unkept sites. Retail is more likely to jump to a new site and build a new building when land is available farther down the corridor. This leads to larger consumption of land, traffic management issues and vacant buildings which cannot be easily re-used.

Aging commercial corridors could not sustain their viability because they were developed without a sense of place. Commercial corridors are typically a series of individual sites that do not relate to each other or create a larger sense of inviting space. Another factor that led to the decline of these commercial corridors is the dominance of the automobile. Pedestrians and bicycles were not accommodated in these areas, reducing the long term sustainability of the corridor.

Retail businesses are most successful when clustered with other businesses. This promotes visibility of businesses, multiple visits on a single trip, and sets up



A consistent streetscape along with development guidelines can create a retail corridor which contributes positively towards the image of Lebanon.

### **Commercial Corridor Redevelopment**

1. *Establish a community vision for the redevelopment area and plan for it*
2. *Continued investment by the community*
3. *Facilitate agency coordination to ease infill development procedures*
4. *Plan ahead for impacts of development; parking, access management, stormwater retention*
5. *Create strong pedestrian and bicycle connections*
6. *Create retail nodes*

a continued investment at a single node of commercial activity. When retail is allowed to line long corridors of roadways, development becomes disposable. Concentrating retail into nodes encourages investment and re-use of concentrated retail sites. Areas that would otherwise be designated for retail and are no longer being utilized can redevelop to a higher mix of uses and commercial office.

One of the most critical steps a city can take in the development of its commercial corridors is to establish a community vision for that development. This is critical in the case of redevelopment, where the vision must be clear



Commercial corridors should accommodate for more than automobile use and traffic efficiency.

and well-documented. Focused area plans can catalyze new development. Also such plans will focus the attention and energy of the City on those areas for redevelopment instead of looking to greenfield sites at the edge of the community. By creating a vision of a redeveloped and enhanced commercial corridor, the community, developers, and the city will stop seeing existing corridor strips as built and “done” and start to see the possibilities for improvement and reinvestment.

Public investment in the commercial corridors may also be an important catalyst to drive redevelopment. City investments can create streets that are more attractive and function better through the addition of streetscape enhancements, sidewalks, and traffic management tools. Public investment may also take the form of public-private partnerships where the city strategically works with private developers to achieve the type of development that is desired by the community.

Redevelopment efforts should acknowledge the automobile and be organized in such a way to accommodate safe, enjoyable pedestrian and bicycle connections along the corridor. This also has the advantage of forcing site design to a more comfortable and inviting scale.

Design guidelines can also be applied to commercial corridors in order to further protect or improve the character of development. Design guidelines can establish a palette for the corridor which when applied to individual redevelopments helps, over time, create an attractive, well organized corridor.

Finally, the city must acknowledge that often the city is creating an environment where infill and redevelopment is often more difficult than greenfield development. It will be critical for all agencies and departments involved in development review to identify obstacles to redevelopment and mitigate them.

### Retail Leapfrogging

*Throughout the country communities have liberally zoned retail uses in their communities. This glut of retail zoned land causes retailers to leapfrog within communities and across larger regions. This leapfrogging leaves behind retail buildings and entire centers that are under performing or vacant.*

*Balancing the amount of retail to your community’s size will encourage reinvestment in the existing retail areas. The city can maintain quality in the built environment and reduce infrastructure and service extension for new development outside existing retail corridors.*



Retail Leapfrogging which has taken place in the Cincinnati metro area.



chapter 4  
FUTURE LAND USE



## FUTURE LAND USE

This section of the plan describes the future development pattern of Lebanon.

Defining and prescribing a future land use plan for a city is a critical exercise for a community. The future land use map provides direction for those proposing new development and benchmarks for review of proposed development for the boards and commissions in Lebanon, as well as City Council. The recommendations of the future land use map are designed to revitalize the existing city, preserve the assets in Lebanon, and responsibly plan for the growth of the city. The map is based on the plan foundations presented in Chapter 3 of the plan.

The future land use map envisions Lebanon with a focus on the downtown core with land uses transitioning seamlessly out to join the rural character of the surrounding area. This structure for the city will contribute to its future sustainability as well as create a livable and attractive community.

### *Future Land Use Map*

The future land use map provides general guidance for development by identifying uses and development patterns for areas of the community. It locates uses appropriately given the existing conditions and goals of the community. The map capitalizes on the opportunities of Lebanon and minimizes the impacts future development will have on the quality of life in the community.

The full build-out of the community under this plan is not expected to be realized in the near term and may never be fully realized. However, it is important to consider the total possible extent of Lebanon's future growth potential.

### **Future Land Use Plan Elements**

*The future land use plan for Lebanon includes the following elements:*

- *Future Land Use Map*
- *District Descriptions*
- *Focus Areas*
- *Impact Evaluations*

*This chapter details each of these future land use plan elements.*

### *Districts*

Corresponding to each district on the future land use map is a description of that land use. The descriptions include densities, patterns, design and layout of developments within the district. These districts are based on the goals of the community for high-quality, attractive development that contributes to the aesthetics and character of Lebanon. These district descriptions are not equivalent to zoning, however development should be asked to meet these basic requirements to facilitate the highest quality new development.

### *Focus Areas*

Several key areas in Lebanon were identified for further study. Focus area plans were developed to provide plausible development or redevelopment possibilities given the constraints and opportunities of the identified areas. These focus area plans are illustrative and not intended to be considered the only future land use pattern possible. The plans are meant to provide possible configurations, inspire creativity, and establish goals and priorities for new development.

Legend					
	Current Corporate Boundary		Professional Office		Industrial District
	Study Area		Freeway Commerce		Civic Space
	Downtown District		Neighborhood Residential		Park Space
	Corridor Mixed-Use		Transition Rural Residential		
	Retail District		Conservation Residential		

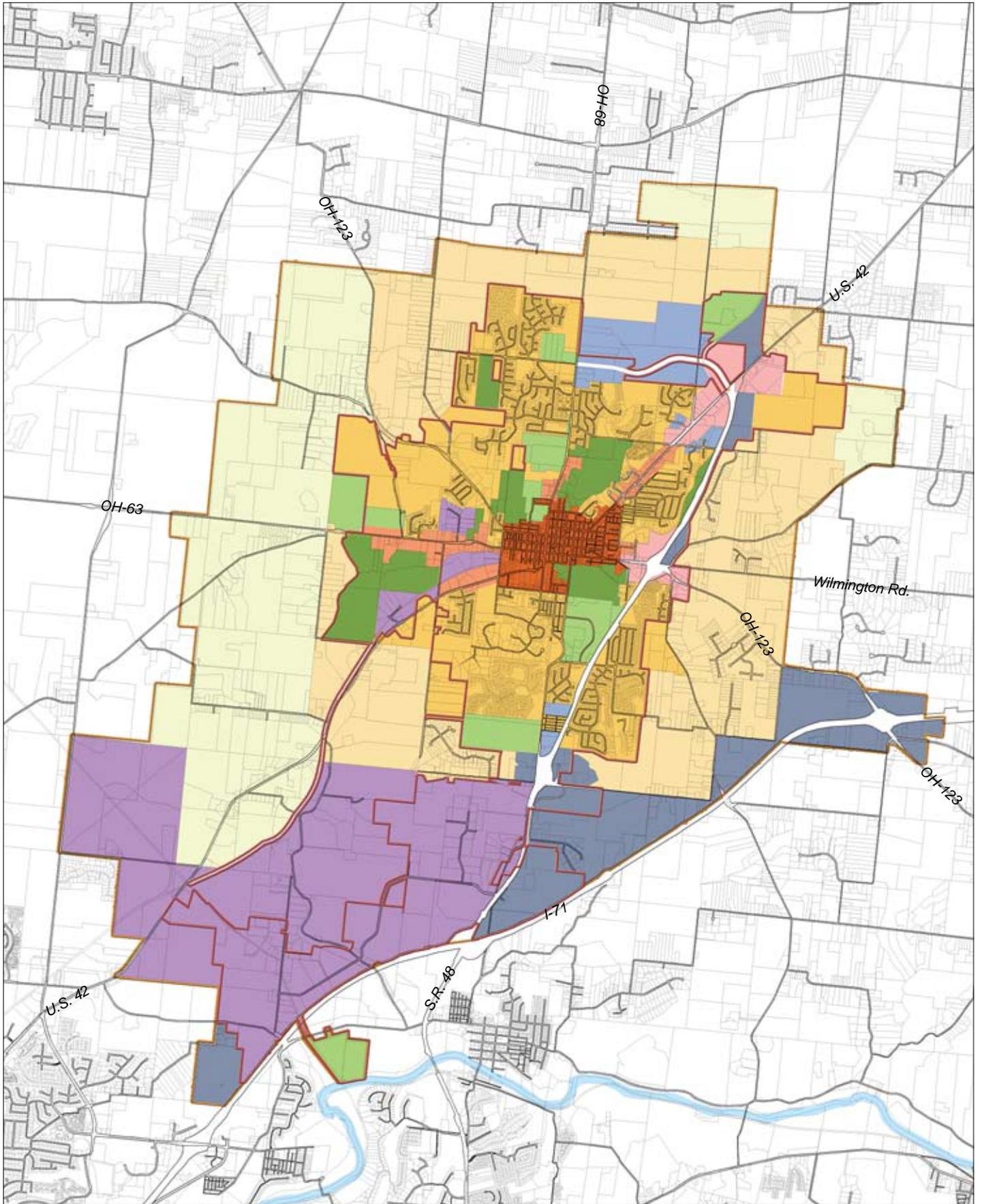


Figure 4: Future Land Use Map

↑ N 1" = 6000'



## CONSERVATION RESIDENTIAL DISTRICT

This district requires lower density housing developments arranged in clustered patterns with substantial preserved open space. The character of the developments should be naturalized and rural. Formal arrangement of buildings, landscaping and other treatments are discouraged. Architecture of housing should be in keeping with the character of rural Ohio buildings.

One of the goals identified for the future of Lebanon is to ensure that growth occurs in a manner that preserves the rural character surrounding Lebanon and promote preservation of natural features.

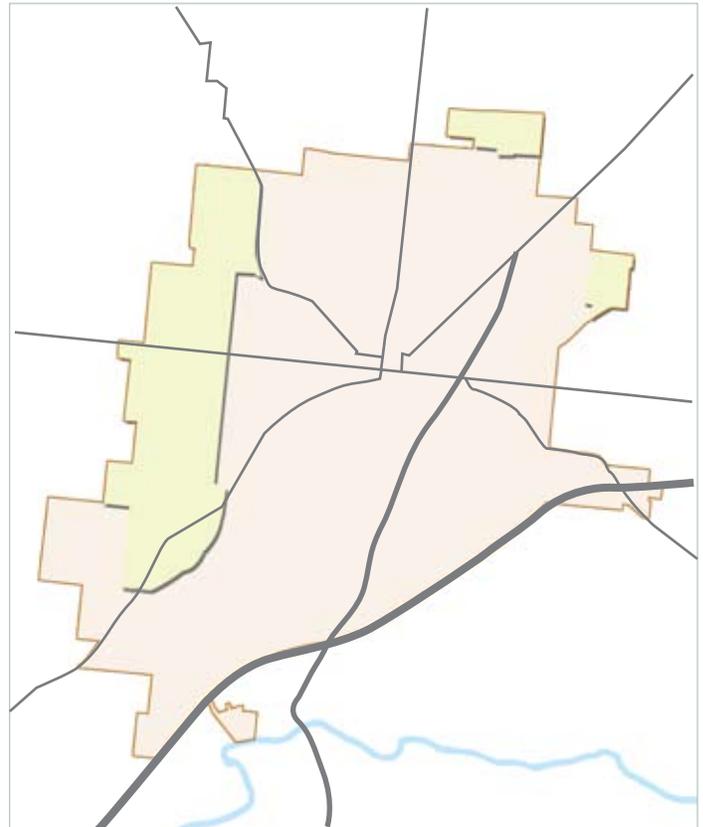
Lebanon currently enjoys a small town atmosphere. This feeling was consistently cited as a positive aspect of the community for current residents and as a draw for new residents. It is a possible that as the city grows, the small town feeling could be lost.

One of the overlooked contributors to a small town atmosphere is the surrounding rural condition. Big cities and suburbs are characterized by the proximity of the neighboring communities. Often it is indiscernible when you have left one community and entered another. Small towns, however, have a dense core surrounded by low density rural development patterns that create gaps between communities.

As growth continues in exurban communities like Lebanon, it is possible that the development will eventually connect with a neighboring community. This condition will erode the small town atmosphere. To maintain that small town atmosphere, protecting the rural condition around the core is critical. By locating conservation residential in the outer reaches of the future growth area, Lebanon protects those areas from over-development.

Additionally, the lower density allows housing units to be clustered on a parcel, which protects natural features. Steep slopes, woodstands greater than 3 acres, watercourses and floodplains can be preserved in the dedicated open space. This preserves the natural character by retaining these elements of the landscape.

Clustering also preserves the rural vistas and open landscaped indicative of rural areas, which typical low density development patterns does not protect.



Conservation Residential District Locator Map



Homesites must be clustered with a minimum of 50% of the site preserved in permanent open space.

**Figure 5: Conservation Residential District**

Conservation Residential is located near the edges of the study area to preserve rural character and natural features.

The following are guidelines for development in the Conservation Residential District:

1. Half (0.5) to one (1) dwelling unit per gross developable acre.
2. Density bonus on the subject site may be obtained by the developer if additional acreage is preserved elsewhere in the City of Lebanon's future growth area. The developer would purchase and protect acreage in areas identified by the city as priorities for preservation. That land would be protected from development in perpetuity and those units that would have otherwise been developed there are relocated to the subject site. The amount of preserved acreage would determine the additional units permitted on the subject site at one (1) dwelling unit per gross acre.
3. Single family homes are permitted.
4. Institutional and public uses are permitted provided they are compatible with the character of the area and the impacts are not substantial to the neighboring residents.
5. Homesites must be clustered with a minimum of 50% of the site preserved in permanent open space.
6. Road widths and pavement must be minimized throughout the development.
7. Lot arrangement and aesthetic of the development must be rural in character.
8. Plantings, street trees, landscape treatments and drainage infrastructure must be naturalized and organic in character and form.
9. Internal roadways must be rural in character. And the rural corridors along the public roadways must be preserved according to the recommendations of the roadway typologies.
10. Public trails must be included within the development, with links to the greater existing or planned Lebanon trails system.
11. Open space must be contiguous and designed to preserve the site's natural features and maintain the rural vistas.
12. Connections must be made where ever possible to existing developments and stub streets must be constructed to any neighboring undeveloped parcels.
13. Quality architecture and building materials that reflect the character of Lebanon and its environs must be utilized throughout the development.
14. The primary facades of homes must front roadways. Double fronting homesites are not permitted, except for corner lots where the architecture quality and street presence must be reflected on all sides facing roadways.
15. Culs-de-sac are discouraged.



Plantings, street trees, landscape treatments and drainage infrastructure must be naturalized and organic in character and form.



Lot arrangements and aesthetic of the development must be rural in character.

## RURAL TRANSITION RESIDENTIAL DISTRICT

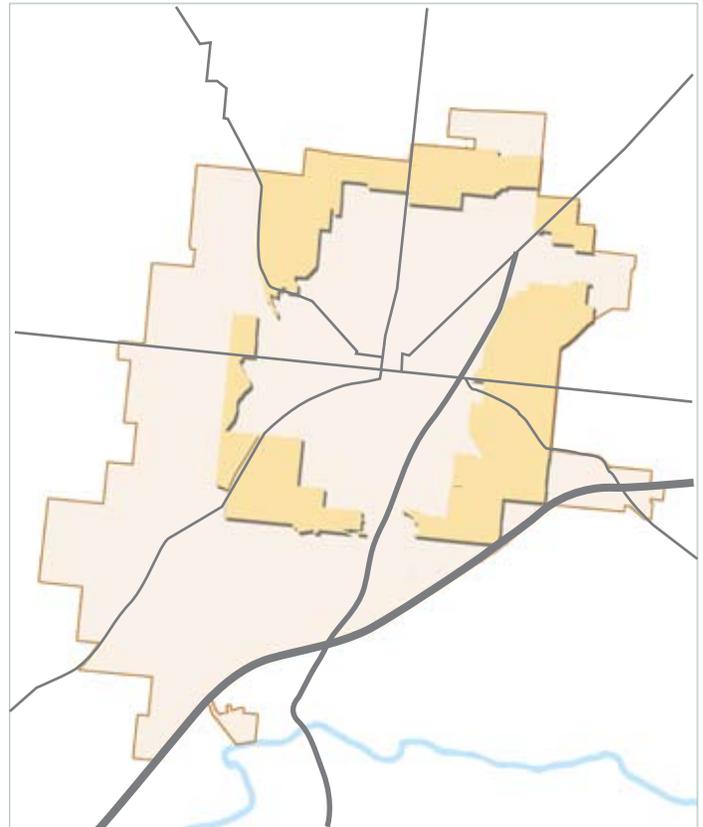
The rural transition residential district is characterized by moderate densities with preserved open spaces that create a low density feel. The units should be clustered with open space to preserve the natural features of the site and to provide buffers between the roadways and the homes.

The growth of a community should not create a condition where high density housing abuts a rural or agricultural condition. The density of the housing should taper off as it moves from the downtown core to the rural areas. This transition reduces conflicts between agricultural uses and housing developments.

In order to create a proper transition between the existing housing pattern and the proposed conservation residential pattern a transition district is needed. This transition area should be somewhat formalized in terms of arrangements of homes, landscaping and other treatments. However, open space buffers should be located along the roadway corridors to create an openness along the corridors to smoothly transition into the rural condition.

Roadway connections should be made whenever possible and stub streets provided to neighboring undeveloped parcels for future connections. These connections will reduce the burden on the major roadways and allow those roadways to maintain appropriate character for the transition areas. The connections will also reduce the isolated developments that impact Lebanon's ability to function as a "whole" community.

Bike paths should be provided in the open space along the roadway corridors to provide connections to the greater bikeway network in Lebanon and the region.



Rural Transition Residential District Locator Map



Lot arrangement, plantings, street trees, landscape treatments and drainage infrastructure must be pastoral in character.

### **Figure 6: Rural Transition Residential District**

Rural Transition Residential is located between the residential and the conservation residential to provide transitions between the existing suburban residential character and the rural character provided by the conservation residential. The following are guidelines for development in the Rural Transition Residential District:

1. One (1) to one and a half (1.5) dwelling unit per gross developable acre
2. Density bonus on the subject site may be obtained by the developer if additional acreage is preserved elsewhere in the City of Lebanon future growth area. The developer would purchase and protect acreage in areas identified by the city as priorities for preservation. That land would be protected from development in perpetuity and those units that would have otherwise been developed there are relocated to the subject site. The amount of preserved acreage would determine the additional units permitted on the subject site at one and a half (1.5) dwelling unit per gross acre.
3. Single family homes or two family dwelling, that resemble single family homes in character, are permitted. No more than 15% of the total units in a development may be two family dwellings and must be integrated well into the overall design.
4. Public and Institutional uses are permitted and should be designed and sited to maintain the rural character of the area.
5. Homesites must be clustered with a minimum of 30% of the site preserved in permanent open space. This open space must be utilized to preserve natural features on the site and may be counted towards the setback required to create attractive corridors throughout the community. Road widths and pavement must be minimized throughout the development.
6. Lot arrangement, plantings, street trees, landscape treatments and drainage infrastructure must be pastoral in character. It should be slightly more formal than the ruralized conditions of conservation residential, although more natural than the existing suburban residential pattern.
7. Sidewalks and/or paths must be included within the development, with links to the greater existing or planned Lebanon trails system.
8. Connections must be made wherever possible to existing developments and stub streets must be constructed to any neighboring undeveloped parcels.
9. Quality architecture and building materials that reflects the character of Lebanon and its environs must be utilized throughout the development.
10. The primary facades of homes must front roadways. Double frontage homesites are not permitted, except for corner lots where the architecture quality and street presence must be reflected on all sides facing roadways.
11. Culs-de-sac are discouraged.



Sidewalks and/or paths must be included within the development, with links to the greater existing or planned Lebanon trail system.



Homesites must be clustered with a minimum of 30% of the site preserved in permanent open space.



## NEIGHBORHOOD RESIDENTIAL DISTRICT

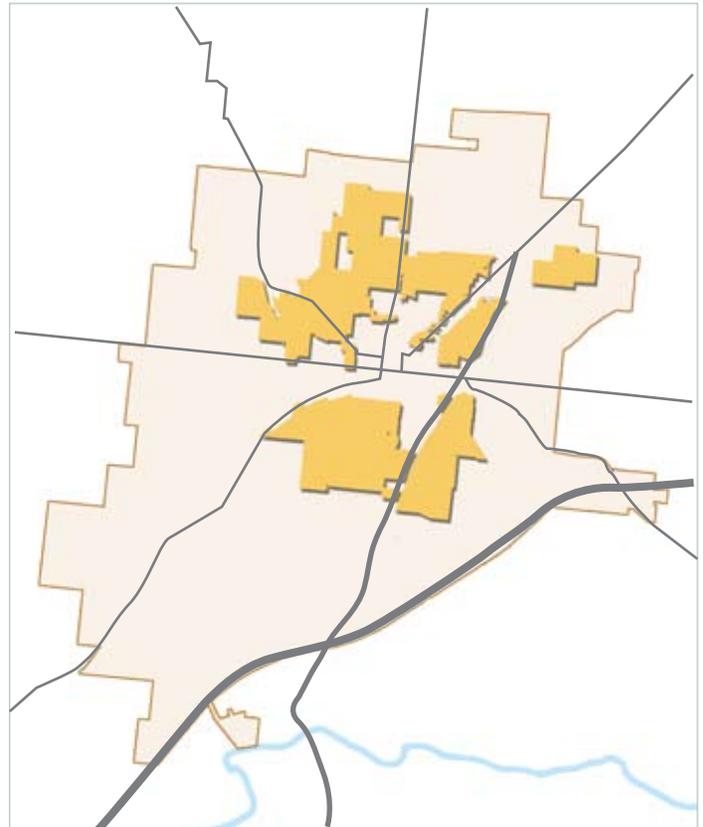
The Neighborhood Residential district is largely built out at the time of this plan. In the locations where new housing could be added, it should replicate the existing development patterns that have occurred in the other areas of the district. In areas with existing housing, the focus is on maintenance and protection of those existing homes and neighborhoods.

One of the challenges facing many cities is maintaining the existing housing stock, both as it ages and as new housing becomes available. In growing cities infrastructure monies and public investment is often shifted to service the new developments, leaving little to maintain the existing neighborhoods. Also, as new housing products become available the older housing stock can become less attractive. Therefore, it is important for cities to efficiently maintain existing neighborhoods. Continued reinvestment in the existing homes and the neighborhoods is a critical component of creating a sustainable city.

Neighborhoods that maintain their quality and desirability over time have several factors in common. The most important is the continued investment of public money into the neighborhood. This investment includes the maintenance of infrastructure like paving roadways and drainage and sewer systems as well as streetscape elements like street trees and tree lawns. Upkeep of the public elements of the neighborhood is the foundation to a sustainable neighborhood.

Another element of successful neighborhoods is the availability of amenities that create a livable community. Amenities like bike paths and parks are critical to creating a place that is sustainable. These elements create places where new residents continue to locate, despite a housing stock that may no longer have all of the latest ‘bells and whistles.’ These amenities should be added to existing neighborhoods if possible and maintained wherever they are currently contributing.

Finally, the city has a responsibility to its existing neighborhoods to require quality infill projects that fit in the neighborhood. If new development seeks to locate within the neighborhood, or even proximate to it, the city must consider the development’s role in contributing to the long term success of the neighborhood. Infill development should be like in scale and character to the existing homes.



Neighborhood Residential District Locator Map



Trails or sidewalks along with well organized greenspace must be incorporated into Neighborhood Residential District developments.

### **Figure 7: Neighborhood Residential District**

Neighborhood Residential is largely located within the existing corporate limits and is mainly made up of the existing residential in the community. The following are guidelines for development in the Neighborhood Residential:

1. Assumes maintenance of existing densities in existing neighborhoods and permits densities in new developments that are comparable to contiguous developments.
2. Single family homes and multi-family buildings are permitted. Multi-family units may only be included provided they are replacing or redeveloping existing multifamily buildings as part of the development. Multifamily building must be traditional in form, character and architecture.
3. Well organized greenspace must be incorporated into the design to improve aesthetics and provide areas for trail connections or parkland.
4. Trails or sidewalks must be included along all roadways with links to the greater existing or planned Lebanon trails system.
5. Road widths and pavement must be minimized throughout the development.
6. Street trees must be placed along all public roadways at no less than 20' - 30' on center.
7. Landscaping must be included in all common areas and maintained.
8. Drainage infrastructure must be wet and pond edges must be naturalized.
9. Connections must be made wherever possible to existing developments and stub streets must be constructed to any neighboring undeveloped parcels.
10. Quality architecture and building materials that reflect the character of Lebanon and its environs must be utilized throughout the development.
11. The primary facades of homes must front roadways. Double frontage homesites are not permitted, except for corner lots where the architecture quality and street presence must be reflected on all sides facing roadways.
12. Culs-de-sac are discouraged.



Quality architecture and building materials that reflect the character of Lebanon and its environs must be utilized.



The primary facade of homes must front roadways.

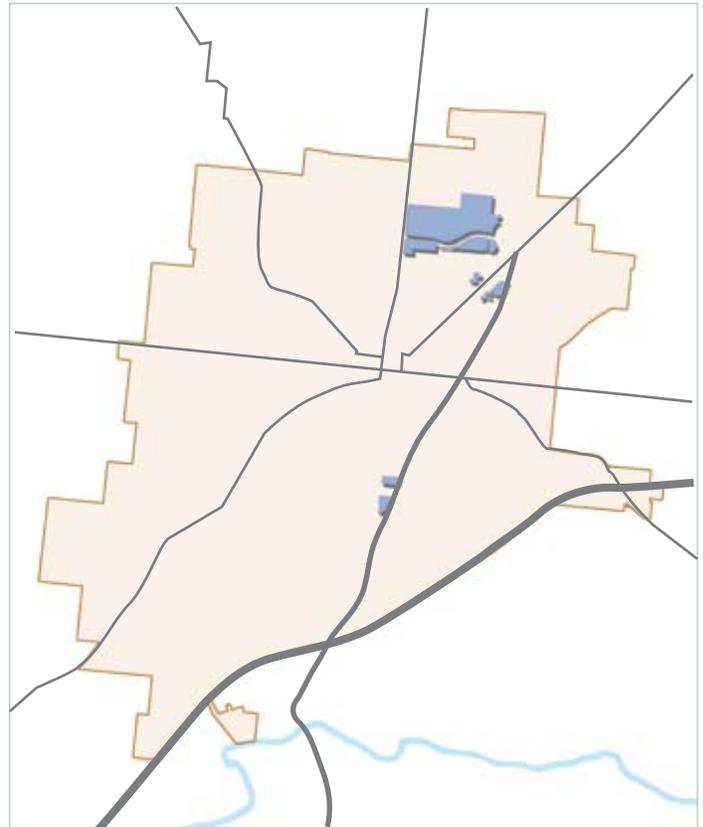
## PROFESSIONAL OFFICE DISTRICT

The Professional Office district is intended to capitalize on opportunities in the city for new office development while maintaining an appropriate scale and impact for the community. In order for the city to be sustainable in the long term, revenue-generating land uses are critical. The Professional Office district allows for smaller scale office development to occur throughout the community.

Lebanon is in a strong position to attract professional offices related to the medical and legal profession. However, the market in Lebanon for corporate headquarters and other large scale office is not strong. The Professional Office district provides the best opportunity for the current market to take hold.

The 2006 Lebanon Market Study identified an existing lack of ground available for new office development as being one of the impediments to attracting businesses to Lebanon. By encouraging office development in these areas at this scale Lebanon is able to capitalize on the location of existing medical facilities for new medical offices.

Also, professional office buildings at this scale provide a good opportunity for business incubation. Although Lebanon does not currently have a strong market for large scale office, incubation may provide a long term, sustainable large scale business in the future. A business that has its roots in Lebanon is likely to remain in the community.



Professional Office District Locator Map



The primary facades of buildings must front roadways and have an appropriate presence on the street.

### **Figure 8: Professional Office District**

The Professional Office District is intended to provide opportunities for office development throughout the community. Professional Office may be located with the designated district areas as well as within the Corridor Mixed Use District and the Downtown District. The following are guidelines for development in the Professional Office District:

1. Maximum 8,000 sq ft per acre -10,000 sq ft per acre office buildings.
2. Maximum three (3) stories.
3. Must be compatible with surrounding uses and densities. Buffering must be provided between professional office developments and existing or planned residential areas except in the downtown district.
4. Arrangement of buildings should be organized to create greenspaces and attractive corridors. A building surrounded by parking is not permitted.
5. Parking must be located to the side or rear of the primary building facade. Common parking areas are encouraged to reduce overall parking needs and size. Lots shall be landscaped with shade trees.
6. Landscaping must be incorporated into the site and must be compatible with the character of the area.
7. Green building and site design techniques should be utilized.
8. Site lighting must be attractive and no light spill can occur on adjacent properties.
9. Signage is permitted but must be appropriate in size and cohesive to the character of the area.
10. Drainage infrastructure should be coordinated whenever possible to reduce the need for ponds on each individual site. Drainage infrastructure must be wet and pond edges must be naturalized.
11. Sidewalks must be included within the development, with links to the greater existing or planned Lebanon trails system or sidewalk network. Trail connections should be made within or along the site if trails are present along the corridor or contiguous to the site.
12. Connections must be made wherever possible to existing developments and stub streets must be constructed to any neighboring undeveloped parcels.
13. Quality architecture and building materials that reflect the character of Lebanon and its environs must be utilized throughout the development.
14. The primary facades of buildings must front roadways and have a decent and appropriate presence on the street. If building is located downtown the building must adhere to the urban development pattern laid out in that district description. If located along a redevelopment corridor the building arrangement must adhere to the recommendations from the Corridor Mixed Use District.



Signage must be appropriate in size and cohesive to the character of the area,



Quality architecture and building materials must be utilized throughout the development.



## FREEWAY COMMERCE DISTRICT

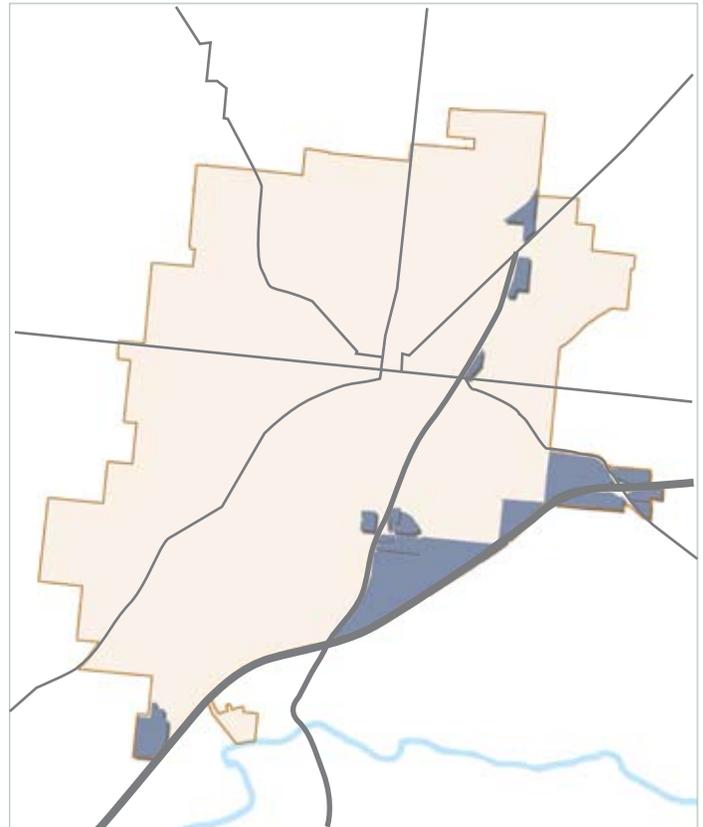
The Freeway Commerce district is intended to facilitate the development of large office development in Lebanon. Although the current market for large scale office in Lebanon is limited, this land use district is an important element of the long term sustainability of the city.

As markets and conditions change over time it is possible that Lebanon could be home to large corporate offices, either through the addition of established companies to the community or through successful incubation of companies. The location of large offices is based on freeway frontage and access, and it is critical for communities to preserve attractive office ground for eventual development. If the city does not identify this prime office ground and designate it as office in the future land use map, then the opportunity to benefit from future markets will be lost.

Currently, access is a concern due to a lack of existing roadway connections and limitations from the existing topography. Despite the existing challenges, an access road should be planned for and constructed as funds are available. Or, as development occurs, the road can be built with developer contributions.

Companies are increasingly cultivating lifestyles associated with their products or services that they wish to reflect in their corporate headquarters. By being a city that is open to signature buildings and iconic architecture in the Freeway Commerce District, Lebanon can position itself to be an attractive place to locate for companies with a strong corporate culture and identity.

Another important component to sustainable office development is to organize the developments in a campus style pattern with well sited parking, greenspace, bicycle and pedestrian accommodations. Also, the city can plan ahead for stormwater infrastructure so that it can become an attractive feature rather than requiring individual detention basins for each site.



Freeway Commerce District Locator Map



Landscaping must be incorporated into the site and be compatible with the character of the area.

### **Figure 9: Freeway Commerce District**

The Freeway Commercial District permits larger format office development in Lebanon and allows limited retail to serve the office employment. The following are guidelines for development in the Freeway Commerce:

#### Office

1. Maximum 15,000 sf/acre -18,000 sf/acre office buildings.
2. Maximum six (6) stories.
3. Must be compatible with surrounding uses and densities. Buffering must be provided between freeway commercial developments and existing or planned residential areas contiguous to the site.
4. Iconic architecture is encouraged.
5. Use of green building and site design techniques are encouraged.
6. Arrangement of buildings should be organized to create organized greenspaces and attractive corridors. A building surrounded by parking is not permitted.
7. Parking must be located to the side or rear of the primary building facade. Common parking areas are encouraged to reduce overall parking needs and size of parking lots.
8. Landscaping must be incorporated into the site and be compatible with the character of the area.
9. Drainage infrastructure within this district should be coordinated whenever possible to reduce the need for ponds on each individual site. Drainage infrastructure must be wet and pond edges must be naturalized.
10. Site lighting must be attractive and no light spill can occur on adjacent properties.
11. Provisions for amenities within the development, like walking paths, well organized open spaces, and bikeways are required throughout the development and connections must be made to existing or planned Lebanon trails.
12. Connections must be made wherever possible to existing non-residential developments and stub streets must be constructed to any neighboring non-residential undeveloped parcels.
13. All facades that face roadways must have a presence on the street or freeway.

#### Retail

1. Retail uses may be no larger than 6,000 sq ft per acre to 8,000 sq ft per acre and no greater than 2 stories.
2. Small scale convenience retail and restaurants are permitted to serve the office users.
3. Parking for the retail uses must be located to the side or rear of the primary facade of the building.
4. Retail developments must connect with the office uses and must include pedestrian and bicycle connections to the greater sidewalk and trail network.
5. Design of site, building, and signage must meet the minimum requirements of the Retail District.



Iconic architecture is encouraged.



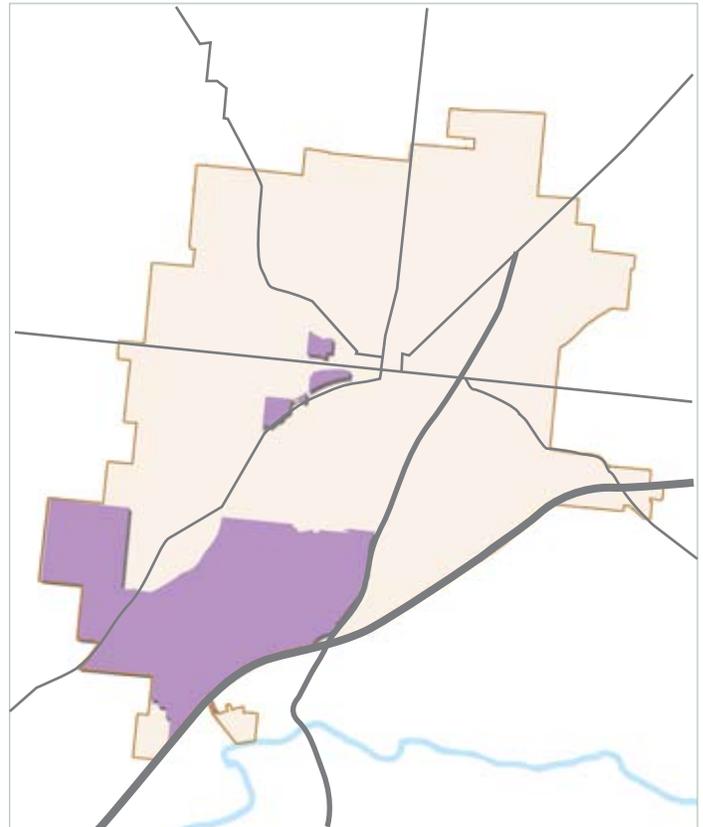
Drainage infrastructure must be wet and pond edges must be naturalized.

## INDUSTRIAL DISTRICT

Industry has been a historically strong market in Lebanon. The Industrial District recommends a limited expansion to the industrial ground proximate to the existing industrial uses. Although industrial development is a revenue generating land use, it also tends to have impacts on infrastructure and quality of life for the community. By keeping the industrial ground in its current location Lebanon is able to capture additional industry while minimizing the burden on the community.

The industrial segment of the economy is ever-changing and influenced by global trends. Responding to those changes and providing an opportunity for industries to react to the changes will allow Lebanon to be a strong industrial market into the future. There are improvements to technology that change the nature of industry. Higher energy costs are also significantly changing the industrial market. Lebanon must position itself to respond to the changes and encourage businesses to grow and change in the city without having to relocate to accommodate new and changing needs.

Lebanon should encourage industrial sites to preserve some ground for expansion. And the city should be prepared to provide the utilities and infrastructure companies will require as industry evolves. New technologies like wireless infrastructure and fiber optic networks should be considered as well.



Industrial District Locator Map



Industrial buildings may be iconic in nature and may be more modern in character.

### **Figure 10: Industrial District**

The Industrial district is intended to provide opportunities for industrial development in the community. The following are the development guidelines for development in the Industrial District:

1. Maximum 7,000 sq ft per acre - 8,000 sq ft per acre buildings
2. Arrangement of buildings should be organized to create organized greenspaces and attractive corridors. A building surrounded by parking is not permitted.
3. Any associate office components or administration should be located at the primary frontage of the site and create a 'front side' to the building.
4. Common parking areas are encouraged to reduce overall parking needs and size of parking lots.
5. Landscaping must be incorporated into the site and must be compatible with the character of the area and the street on which it is located.
6. Signage is permitted but must be appropriate in size and cohesive to the character of the area.
7. Drainage infrastructure should be coordinated whenever possible to reduce the need for ponds on each individual site. Drainage infrastructure must be wet and pond edges must be naturalized.
8. Site lighting must be attractive and no light spill can occur on adjacent properties.
9. Connections must be made wherever possible to existing non-residential developments and stub streets must be constructed to any neighboring non-residential undeveloped parcels.
10. All facades that face roadways must have a presence on the street or freeway.
11. Buildings design and architecture should serve to minimize the massing of large buildings
12. Screening must be provided for all industrial activity outside the building.
13. Quality buildings are encouraged. Industrial buildings may be iconic in nature and may be more modern in character.
14. Architectural guidelines for industrial buildings should be established to guide review of the buildings to ensure attractive buildings in the community.



Building design and architecture should serve to minimize the massing of large buildings.



Any associate office components or administration should be located at the primary frontage of the site.



## RETAIL DISTRICT

### *Small Format Retail*

Currently, Lebanon has more retail zoned ground than it can sustain with successful, vibrant retail establishments. Like most cities, Lebanon zoned retail along all of the major corridors, and retailers located there originally. However, as time has passed many retailers have moved on to new locations in Lebanon or neighboring communities. When the supply of retail land is in oversupply there is no incentive for businesses to reinvest in existing sites; it is far more advantageous for them to move to a new site and construct a new building. In doing so they abandon the former building and leave behind corridors that are not contributing to the community.

In an effort to cease the retail leapfrogging, the retail district on the future land use map has generally been applied to land already zoned retail. In addition to the recommendation to limit its scope, this district defines additional building and site design requirements for new retail that will create attractive retail corridors.

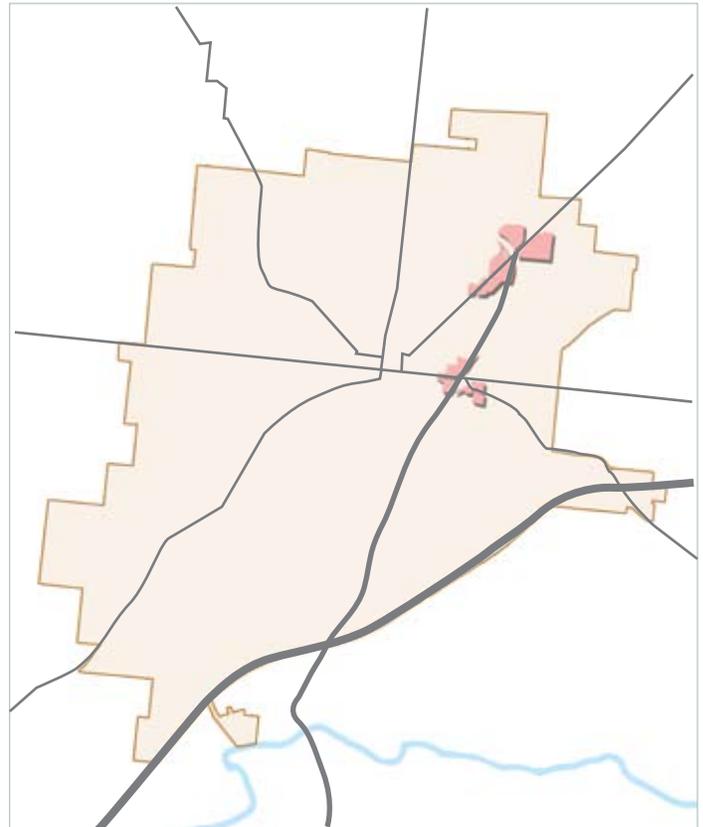
While suburban retail provides desired services in the community, it is difficult to attract and sustain quality retail. Retail, restaurants and entertainment uses rely on a strong market to locate in an area. The market is usually based on rooftops or in the case of regional retail, the number of cars passing through or by. In Lebanon the current number of households does not constitute a large retail market. Another factor limiting the retail market today is the proximity of The River's Edge development in South Lebanon. Also, the current economic downturn is, in the short term, halting much new development in the retail sector.

While residents desire additional retail and restaurants in the community, it is difficult to build a market without first building the population. Therefore, it is not in the city's long term best interest to allow additional retail zoning just to attract a new business in the community. It is better to build a quality retail component in the community and encourage reinvestment of that ground rather than encourage the continued leapfrogging of businesses.

### *Large Format Retail*

Within the retail district, large format retail is permitted provided the building architecture and siting meet design criteria to minimize the impact on the community.

Large format retail or "big box retail" buildings are freestanding, single story buildings built on a concrete slab. The buildings are generally 150,000 square feet - 250,000 square feet. They require substantial parking and often impact traffic in the area they are located. The



Retail District Locator Map

buildings are often sparse and more closely resemble a warehouse than a store. The impacts and the aesthetics are often cited by communities as reasons they oppose them.

Due to the significant impacts of large format retail on a site and on the community as a whole, it should be considered separately from smaller scale retail with different standards applied. So while the retail district permits it, the site standards and design reflect the unique considerations for large format retail that apply in Lebanon.

### *Retail Noding*

A critical component of an overall effective retail strategy for a city is to focus retail uses in nodes. Historically retail uses lined up along primary street frontage. However, we have learned that it is not an ideal model to maintain success over the long term. Retailers benefit from the synergy created by neighboring retailers.

Retailers should be concentrated in nodes located at critical intersections identified by the community.

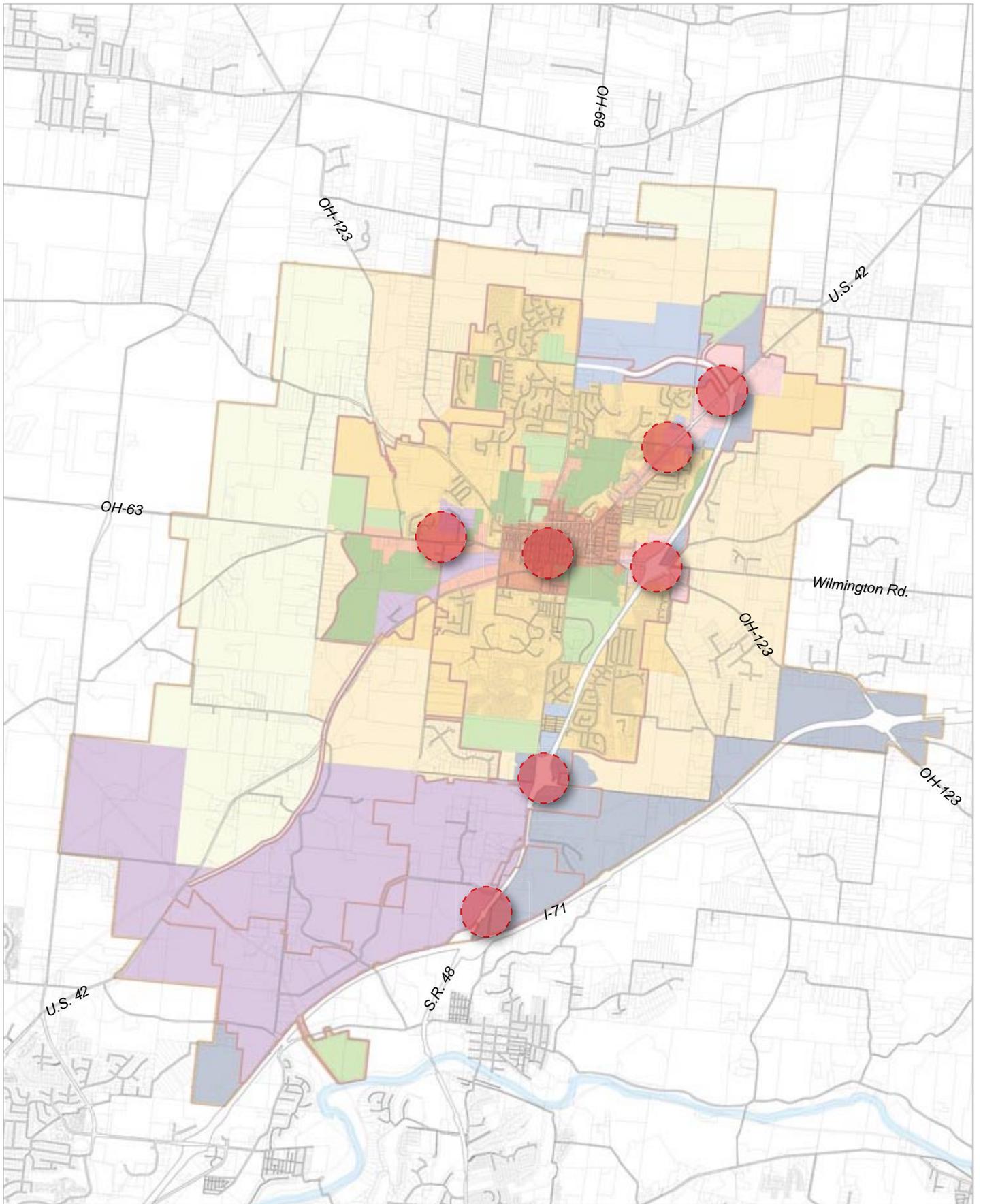


Figure 11: Retail Node Map

↑ N 1" = 6000'



### Figure 12: Small Format Retail

The Retail District permits the development of service uses for the residents, visitors and employees in the community. Retail development should be limited and should not impede the achievement of other goals in the plan, including but not limited to, downtown revitalization and corridor redevelopment. The following are guidelines for development in the Retail District:

1. Retail buildings should have a floorplate no greater than 80,000 sq ft and no greater than 60,000 sq ft for individual users. Floorplates larger than 80,000 sq ft and no greater than 150,000 sq ft are permitted provided the development adheres to the requirements for large format retail (listed on the following page).
2. Must be compatible with surrounding uses and character. Buffering must be provided between retail uses and existing or planned residential areas contiguous to the site.
3. High quality architecture and building materials must be used. The buildings must respond to their location in the community and reflect the aesthetic of Lebanon.
4. Buildings must have a street presence. The primary facade of the building must face the public roadway and activating amenities like patios are encouraged.
5. Store windows must be a significant part of the primary building facade.
6. Arrangement of buildings should create organized greenspaces and attractive corridors. A building surrounded by parking is not permitted.
7. Parking must be located to the rear or side of the primary building facade. Common parking areas are encouraged to reduce overall parking needs and size of parking lots.
8. Drive thrus are discouraged, but if included they must be located to the rear of the building.
9. Signage should be limited, but sufficient to identify the retail uses. No pole or freeway signage is permitted. Signage should be incorporated into and compatible with the building architecture.
10. Curb cuts should be minimized on primary streets and organized connections between buildings are preferred.
11. Site lighting must be attractive and no light spill can occur on adjacent properties.
12. Landscaping must be incorporated into the site and be compatible with the character of the area.
13. Drainage infrastructure within this district should be coordinated whenever possible to reduce the need for ponds on each individual site. Drainage infrastructure must be wet and pond edges must be naturalized.
14. Retail developments must include pedestrian amenities and contribute to walkable streets throughout the community. Connections must be made to existing or planned trails or sidewalks contiguous to the site.



The primary facade of retail buildings must face the public roadway and activating amenities like patios are encouraged.



High quality architecture and building materials must be used. Store windows must be a significant part of the primary building facade.

### Figure 13: Large Format Retail

Large Format Retail buildings and site design must be done in a manner that mitigates the size and impact of the building size.

1. Large format retail buildings should be located to the rear of a site with smaller retail buildings fronting the public roadways.
2. All internal circulation roads must appear to be public roadways which includes defined edges with street trees and sidewalks.
3. Out lot buildings must front the primary roadway and have a presence on the street. However, they should be accessed from a secondary road or internal roadway system.
4. Architecture of the large format retail building must be designed to mitigate the mass of the building including the following:
  - Facades any longer than 300' must be broken up by fenestration, banding or columns.
  - EIFS can only make up 20% of total building materials.
  - Natural building materials must be used on the remainder of the building.
  - Store windows must be located along the primary facade of the building.
  - Parking should be limited and shared with adjacent out lots to minimize the expanse of parking typically associated with large format retail.
  - Landscaping, including deciduous trees, must be located along the building exterior to break up the facade.
  - Two deciduous tree for every fifteen (15) parking spaces must be located throughout the parking lot.
  - Site lighting must be attractive and no light spill can occur on adjacent properties.
  - Front entrance should be designed to be pedestrian in scale.
  - Facades taller than 15' must be detailed.
5. Signage for the development must be appropriate for the character of the roadway and must not be overly large.
6. Individual building signage should be limited, but sufficient to identify the retail uses. No pole or freeway signage is permitted. Signage should be compatible with the building architecture.
7. Provisions should be made at the time of development for maintenance of the building should, at some time in the future, a viable tenant not occupy the building.



Architecture of the large format building must be designed to mitigate the mass of the building.



Front entrances should be designed to be pedestrian in scale.

## CORRIDOR MIXED USE DISTRICT

One of the most complicated issues communities face with respect to land use and development is how to improve existing development that is currently underperforming. For Lebanon, corridors like Columbus Avenue, Broadway Street, and Main Street to the east and west of downtown were developed as the town grew and the automobile became more prominent.

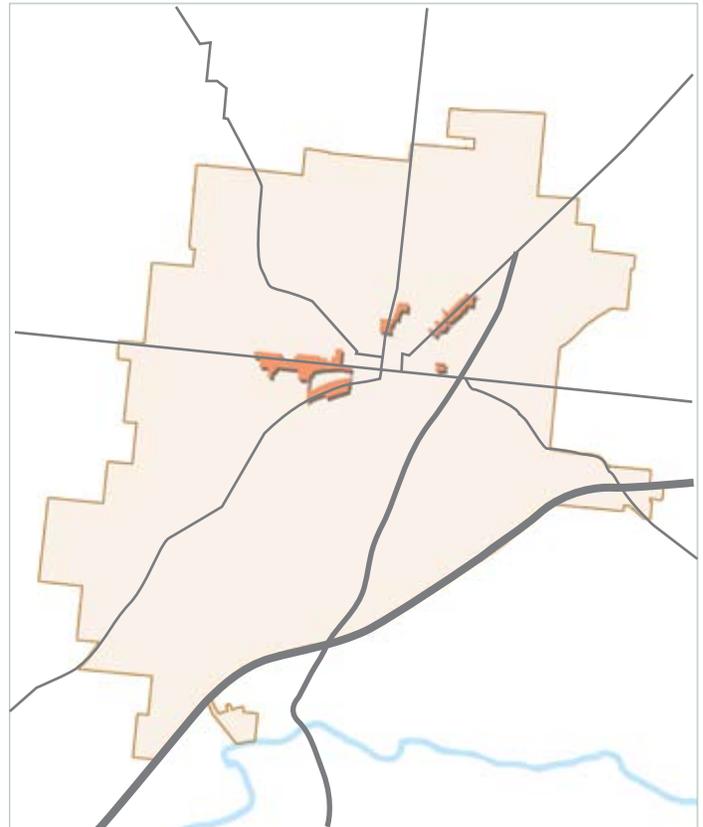
The lack of design controls and the overabundance of available retail ground along the corridors has resulted in areas that are underperforming and not contributing to the long term success of Lebanon. The remedies for such corridors are difficult and vary for each corridor.

The Corridor Mixed Use District in Lebanon attempts to set the base criteria for redevelopment of the areas. The two critical elements for redevelopment are private investment in the corridor and strategic public investments. This is the foundation for redevelopment.

Currently, along these corridors retail uses of varying quality dominate. As mentioned in the description of the retail district, this oversupply of retail ground leads to a lower quality and a lack of reinvestment. Many of the buildings along the corridor are not high in quality, of significant architecture, or in some cases even occupied.

Parking is a dominant component of the corridors, with some parking lots terminating into the street with a continuous curb cut. The condition created by individual parking lots and curb cuts is not only unattractive it is also unsafe. Additionally, landscaping and trees are severely lacking along the corridor. The corridors lack pedestrian and bicycle accommodations and are overly wide.

The guidelines for this district are intended to create circumstances favorable for private reinvestment in the corridors, improving the physical conditions and viability.



Corridor Mixed Use District Locator Map

One critical component to improving the corridors is to encourage the conversion of existing retail uses to other uses like residential or office. Retail uses will perform better along the corridor if they are centered around nodes. It is recommended that ground outside of the areas indicated for retail nodes on Figure 11 be redeveloped as residential or office uses.

Lebanon can also encourage redevelopment by allowing shared parking agreements, regional stormwater infrastructure, and investing public dollars in the corridors to improve streetscapes. Access management should also be studied.

The plan provides focus area plans for east Main Street and Columbus Avenue.

### Figure 14: Corridor Mixed Use Districts

The Corridor Mixed Use District is intended to encourage the redevelopment of aged retail corridors in Lebanon. The redevelopment should focus retail uses in nodes along the corridors as indicated by the retail node map. The following are guidelines for development in the Corridor Mixed Use District:

1. Small scale retail, professional office, single family homes and multi-family homes are permitted. Retail must be located within the nodes indicated in the plan, and office and residential should be located in the balance.
2. Use must be compatible with surrounding uses and densities. Buffering must be provided between professional office developments or retail and existing or planned residential areas.
3. Arrangement of buildings should be organized to create organized greenspaces and attractive corridors. A building surrounded by parking is not permitted. Buildings massing and location should create a comfortable street envelope for pedestrians. Buildings may be no less than two (2) stories in height and must meet the build-to line established in the corridor focus area plans.
4. Common parking areas are encouraged to reduce overall parking needs and size of parking lots. Parking must be located to the rear of the structure.
5. Drainage infrastructure should be coordinated when possible to reduce the need for ponds on each individual site. Innovative drainage infrastructure techniques are encouraged to reduce impact on the corridors.
6. Landscaping is required to improve site aesthetics and tree lawns, sidewalks, and any other necessary streetscape improvements must be included.
7. Curb cuts should be minimized on primary streets, and well organized connections between retail establishments are preferred.
8. Drive thrus are discouraged, but if included they must be located to the rear of the building
9. Signage is permitted, but must be cohesive to the character of the area and must be pedestrian in scale.
10. Quality architecture and building materials are required and must contribute to the pedestrian experience.
11. The primary facades of buildings must front roadways and have a significant presence on the street.
12. Multifamily buildings must be high quality, adhere to traditional multifamily building forms and satisfy the community need to diversify the housing stock, and cannot exceed three stories in height.



Multifamily buildings must be high quality, adhere to traditional multifamily building forms and satisfy the community need to diversify the housing stock



Buildings massing and location should create a comfortable street envelope for pedestrians.

## DOWNTOWN DISTRICT

The most important feature in the City of Lebanon is the historic downtown. Few cities have a genuine town center, and many are spending significant resources to replicate the incredible downtown fabric Lebanon has. The Downtown District will facilitate the preservation and enhancement of downtown Lebanon.

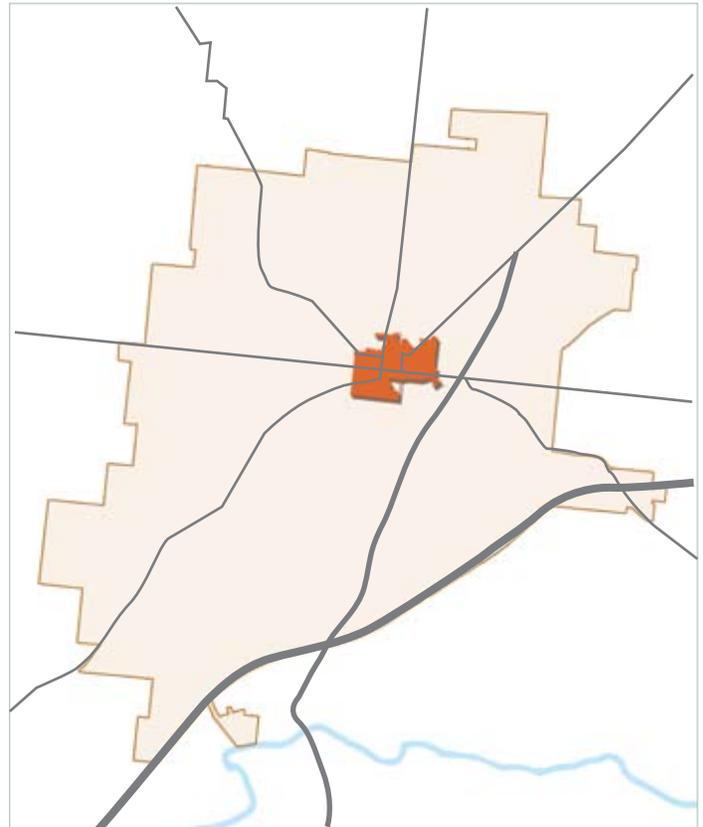
Nowhere is building massing, location and architecture more critical than in the Downtown District. Creating a comfortable, vibrant and inviting downtown requires a diligent management of all aspects of an infill development downtown.

Contemporary building patterns do not fit or belong downtown. Often quality downtown buildings are replaced with inappropriate buildings surrounded by parking with individual curb cuts. This development pattern erodes the downtown fabric and reduces its viability. Recently, more developers have been willing to develop infill buildings that match their urban surroundings. In order to encourage this cities must remove the impediments to good infill, like codes and regulations that do not permit the desired development pattern. Additionally, cities can help facilitate quality redevelopment by working with private developers to determine solutions for parking issues and stormwater management.

In the Downtown District, use is not as critical as the form of the development. If the infill developments properly reflect the existing pattern downtown the use can change, but the quality building remains. Also, creating buildings that are use-flexible will ensure a long sustainability in times of market change. A mix of uses is encouraged.

The proper building in Lebanon is unique to the conditions found downtown. In Lebanon the streets are substantially wide, therefore the building massing will need to be at least 3 to 4 stories. The architecture should be historic in nature and reflect the surrounding architecture. Storefronts should maintain traditional elements like bulkheads or storefront window sills. Elements that add activity like patio seating is encouraged. Residential and office uses on upper stories are strongly encouraged. Residential infill should be done in a high density pattern with elements reflecting the historic housing types in Lebanon.

A downtown focus area plan is included to demonstrate a possible infill development.



Downtown District Locator Map



Building architecture must be high in quality and match the character of existing historic buildings downtown.

### Figure 15: Downtown District

The Downtown District is intended to facilitate the revitalization of downtown. The following are guidelines for development in the Downtown District:

1. A mix of uses is encouraged; residential, office, retail and civic/institutional.
2. Retail uses should be centered at the intersection of Broadway and Main and should primarily be located along the Broadway corridor.
3. Office uses may be located above the first floor along Broadway or in stand alone buildings elsewhere in the downtown district.
4. Residential infill should be located both above the first floor of buildings or as stand alone buildings. If developed as stand alone buildings they must be urban in character. These structures must contribute to the pedestrian envelope as well.
5. Building architecture must be high in quality and match the character of existing historic buildings downtown. No building may be less than 2 stories in height and preferably greater than 3 stories.
6. Buildings must be located in a manner that reflects the existing conditions and the recommendations of the downtown focus area plan.
7. Signage must be urban in character, which allows for blade signs, wall signs, window signs and projecting signs.
8. Parking must be located to the rear of the primary building facade. Common parking areas are encouraged to reduce overall parking needs and size of parking lots.
9. No additional curb cuts should be permitted in the downtown district onto primary streets like Main Street and Broadway. Closing of existing curb cuts along primary streets is a priority.
10. Amenities like patios and display areas for shops are encouraged provided there is sufficient room remaining for pedestrian traffic.
11. Sidewalks, pocket parks and streetscape amenities must be incorporated into the site design.
12. Vehicular, pedestrian and bicycle connections must be made wherever possible throughout downtown.



Residential infill should be urban in character.

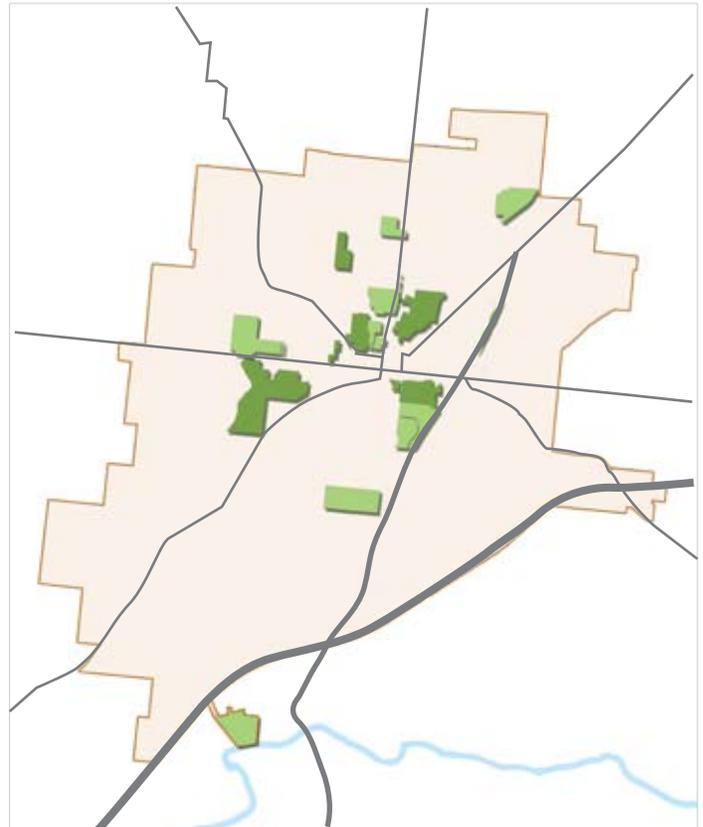


Structures must contribute to the street envelope.

## CIVIC SPACE AND PARK SPACE DISTRICTS

Both the Civic Space and Park Space districts on the future land use map indicate only the existing civic and park space in Lebanon. This limitation should not be construed to say that no additional civic spaces or parkland is necessary. However, unlike the other land use districts, the civic and park space in the community is guided by city policies. The Parks Master Plan is the proper source for future parks planning and that document should be referenced.

The Lebanon Comprehensive Plan supports the addition of parkland as the population increases. Parks and open spaces are critical elements of the sustainability of the city. It is likely that downtown would benefit from the addition of a town square where community gatherings and festivals could occur. The long term success of downtown counts on the continued location of civic and public uses downtown.



Civic Space and Park Space District Locator Map

### ***The Value of Green Space***

#### *The Economic Value of Public Space*

- *The positive impact on property prices*
- *Good for business*
- *Being close to public space adds economic value*
- *Creating tax revenue*

#### *The Social Dimension of Public Space*

- *Impact on Physical and Mental Health*
- *Benefits for Children and Young People*
- *Reducing Crime and Fear of Crime*
- *Human Interaction*

#### *The Environmental Value of Public Space*

- *The 'park breeze' and air quality*
- *Trees cool air and provide shade*
- *Nature and wildlife among the urban fabric*

**Figure 16: Civic Space and Park Space District**

The Civic Space and Parkland District reflects the current locations of such uses in Lebanon. Additions of these amenities is important to the community and should increase to meet demand as population increases. Civic spaces and buildings as well as parkland should be located so as to maximize the benefits to the community:

1. The 2008 Parks Master Plan should guide the development of new parks in Lebanon.
2. Institutional uses should be located throughout the community to serve the total population.
3. Civic buildings should be located downtown to preserve the vibrancy of downtown.
4. Lebanon should consider the addition of a town square downtown for community gatherings, festivals and other civic events.



Activating civic uses are critical to the vitality of a community and should be located in the town center whenever possible.



Parks and open spaces are critical elements of the sustainability of the city.



Lebanon should consider the addition of a town square downtown for community gatherings, festivals and other civic events.



The 2008 Parks Master Plan should guide the development of new parks in Lebanon.

**FIGURE 17: LAND USE DISTRICTS SUMMARY**

<b>Land Use</b>	<b>Acres</b>	<b>Density</b>	<b>Allowable Uses</b>	<b>Additional Information</b>
<i>Neighborhood Residential</i>	3,456	1.5 - 2.0 units / acre	single family homes multi-family buildings	Well organized greenspace must be included along with trails or sidewalks. Connections should be made whenever possible.
<i>Transition Rural Residential</i>	4,957	1.0 - 1.5 units / acre	single family homes two family dwellings	Homesites should be clustered with 30% of the site preserved as open space. Sidewalks and paths must be included along with street trees.
<i>Conservation Residential</i>	4,017	0.5 - 1.0 units / acre	single family institutional/public	Homesites should be clustered with 50% of the site preserved as open space. Public trails should be incorporated throughout.
<i>Freeway Commerce</i>	1,492	12,000 sq. ft. / acre	office limited retail	Maximum six (6) stories. Parking must be located to the side or rear.
<i>Professional Office</i>	473	8,000 sq. ft. / acre	office	Maximum three (3) stories. Parking must be located to the side or rear. Sidewalks must be included.
<i>Retail District</i>	314	9,000 sq. ft. / acre	retail	Limited to 80,000 sq. ft. floorplate. Buildings must have street presence.
<i>Industrial District</i>	4,017	6,000 sq. ft. / acre	industry	Sidewalks or trails must be included. Screening must be provided for all industrial outdoor activities.
<i>Corridor Mixed-Use</i> <i>Residential</i> <i>Office</i> <i>Retail</i>	291	per acre 10.0 units 8,000 sq. ft. 7,000 sq. ft.	residential office retail	Retail must be located with the nodes indicated in the plan. Buildings may be no less than two (2) stories in height and must meet the build-to line. Common parking is encourage.
<i>Downtown District</i> <i>Residential</i> <i>Office</i> <i>Retail</i>	291	10.0 units 8,000 sq. ft. 7,000 sq. ft.	civic/institutional residential office retail	Retail should be centered at Main and Broadway. Buildings may be no less than two (2) stories in height and must meet the build-to line. Common parking is encourage. No additional curb cuts should be permitted. Parking should be located to the rear of the primary building facade.

**FIGURE 18: BUILD-OUT ESTIMATIONS BASED ON 2008 LAND USE MAP**

Land Use	Acres	Density	# of Units	Sq. Footage	Population 2.5 persons/household	Population 2.25 persons/household
<b>RESIDENTIAL</b>						
		<i>units per acre</i>				
<i>Existing Residential</i>			8,138		20,345	18,311
<i>Neighborhood Residential</i>	467.0	1.68	785		1,963	1,766
<i>Transition Rural Residential</i>	1,990.0	1.25	2,488		6,220	5,598
<i>Conservation Residential</i>	2,024.0	0.75	1,518		3,795	3,416
<i>Corridor Mixed-Use</i>	17.5	10.0	175		438	394
<b>Sub Total</b>			<b>13,109</b>		<b>32,761</b>	<b>29,485</b>
<b>OFFICE</b>						
		<i>square feet per acre</i>				
<i>Existing Office</i>				1,700,000		
<i>Freeway Commerce</i>	914.5	9,000		8,230,500		
<i>Professional Office</i>	292.5	6,000		1,755,000		
<i>Corridor Mixed-Use</i>	17.5	6,000		105,000		
<b>Sub Total</b>				<b>11,790,500</b>		
<b>RETAIL</b>						
		<i>square feet per acre</i>				
<i>Existing Retail</i>				1,340,000		
<i>Retail District</i>	37.0	6,750		249,750		
<i>Corridor Mixed-Use</i>	17.5	5,250		91,875		
<b>Sub Total</b>				<b>1,681,625</b>		
<b>INDUSTRIAL</b>						
		<i>square feet per acre</i>				
<i>Existing Industrial</i>				5,750,000		
<i>Industrial District</i>	2,028.5	4,500		9,128,250		
<b>Sub Total</b>				<b>14,878,250</b>		
<b>DOWNTOWN</b>						
<i>Existing Residential</i>			0		0	0
<i>Existing Office</i>				0		
<i>Existing Retail</i>				0		
<b>Sub Total</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL</b>			<b>13,109</b>	<b>28,350,375</b>	<b>32,761</b>	<b>29,485</b>



chapter 5  
FOCUS AREAS



## FOCUS AREAS

In order to encourage quality development and identify opportunities for redevelopment in Lebanon the Steering Committee identified four focus areas. The committee took a closer look at the existing retail corridors on North Columbus Avenue, East Main Street as well as downtown and the area on the south side of SR 48 at I-71.

The committee looked at these four areas because they were identified as opportunity areas for the community. In encouraging redevelopment of existing retail corridors, infill development downtown, and office development along I-71, the city address some of the critical goals for the future of Lebanon.

Unlike the future land use map the focus areas are not the policy of the city of Lebanon. The future land use map guides and informs the city when evaluating development proposals. The focus areas are intended to indicate the possible arrangement of buildings, new uses, parking locations, etc. associated with development in these areas. The level of detail in the focus area plans is related to the difficulty of developing in these areas. Each faces its own challenges, and the focus area plans provide possible design solutions to the difficulties.

There are likely many other solutions to the challenges faced by these areas, and Lebanon should remain open to alternative development plans. However, the development plans proposed for these areas should meet the city's goals as established by the comprehensive plan.



Existing North Columbus Avenue focus area.



Existing East Main Street focus area.



Existing I-71 and SR 48 focus area.



Existing Downtown focus area.

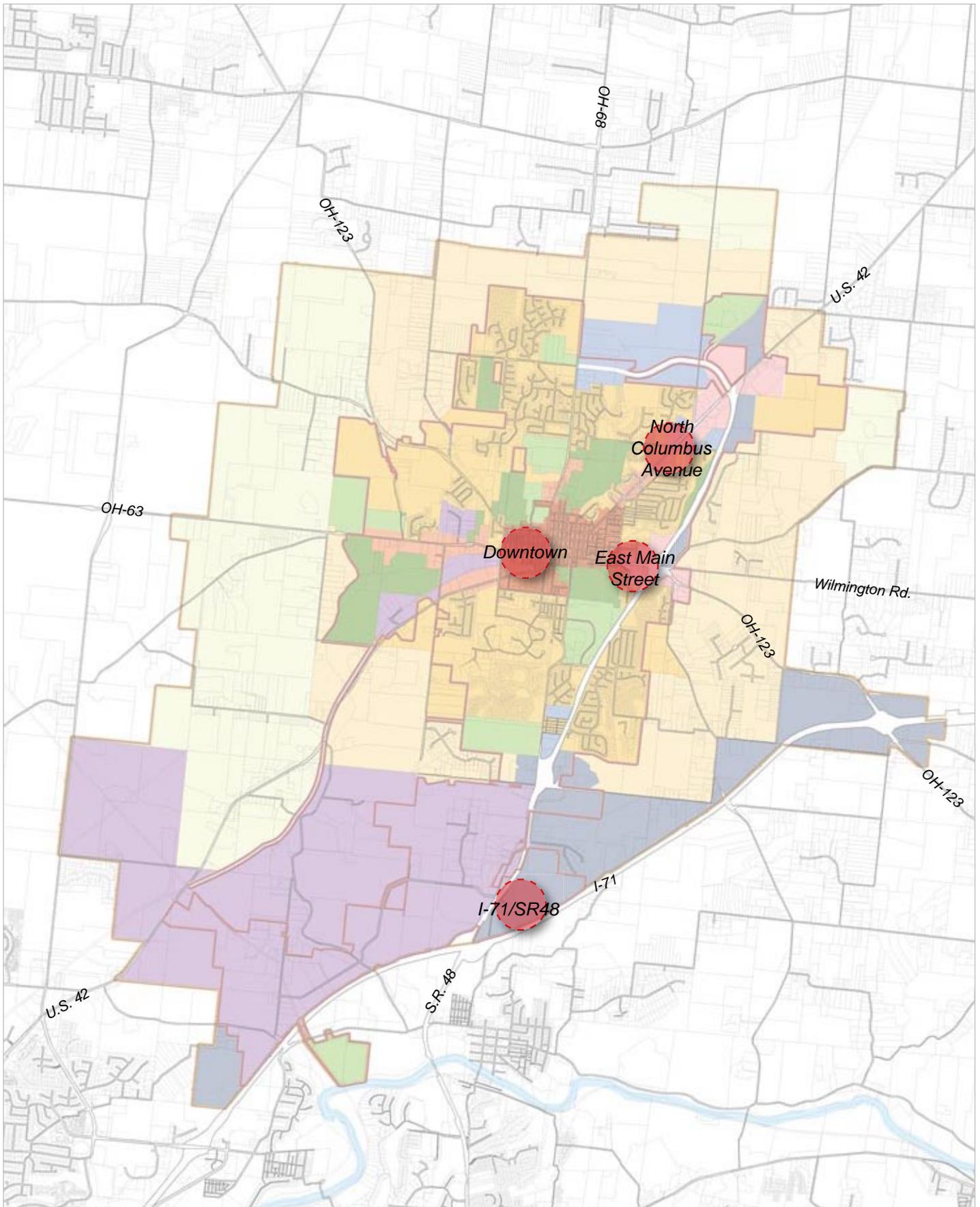


Figure 19: Focus Area Map

↑ N 1" = 6000'



## DOWNTOWN FOCUS AREA

Lebanon is in a favorable position in the downtown to build upon a substantial historic downtown fabric. Infill development can either contribute to the success or degradation of the downtown. There are many challenges to getting quality infill, including property acquisition, site constraints, and contemporary needs like parking. Additionally, siting infill buildings and getting the massing and architecture correct often proves difficult.

In communities seeking infill development downtown it is helpful to conceptualize a possible redevelopment scenario; it can serve as an example and an inspiration for the private sector and identify opportunities for the city to facilitate the redevelopment.

The downtown focus area sketch to the right shows the possible redevelopment of two blocks of west downtown. This set of blocks is not the only possible redevelopment site, but it is one that creates a number of positive consequences for downtown as a whole.

The focus area blocks are located between the Golden Lamb to the east, Main Street on the south, Mulberry Street on the north and Water Street on the west.



Mixed use projects add needed residential units to downtown while also creating new storefronts for businesses to support new residents.

Currently the blocks are underutilized and do not effectively reflect their location in downtown Lebanon. Based on the strategies of the downtown district, a redevelopment of these blocks was envisioned.



Downtown Infill Option 1 Perspective Rendering: View looking Northwest.



Figure 20: Downtown Infill Option 1

→ N 1" = 100'

The primary elements of the redevelopment are high density residential, storefronts, office space, and a parking garage. The orange color on the sketch indicates mixed use buildings housing residential and office on the upper stories and storefronts at the street level. The yellow color shows residential units that would front Mulberry and Water Street as well as Sycamore Street. The red color indicates retail uses on the first floor with upper stories for residential.

The proposed garage indicated in gray and is located behind the Golden Lamb. There is an opportunity to locate residential units or offices along the Sycamore Street side of the garage. A new building is located on the site currently used for parking for the Golden Lamb. The sketch also indicates improvements along the creek to create a natural amenity downtown.

The location of the garage is ideal to serve the downtown businesses along Main Street and relieve parking requirements for additional infill that would occur downtown. The garage should be a maximum of four stories in height and the architecture should reflect the surrounding historic buildings. On the southeast corner of the garage a prominent architectural element should be included as a wayfinding element for the garage.

The garage is located close to the Golden Lamb, the prime attraction for many visitors to downtown Lebanon. The arrangement also allows for bus drop off behind the Golden Lamb, which would allow the buses to drop passengers off safely and then park elsewhere in the city. Bus parking should not occur in the downtown fabric.

Although the garage would be a significant investment, it is a key element to the long term success of downtown. By pooling parking in an appropriate and convenient location new development can capitalize on the garage and not have to provide parking for their individual uses.

The residential uses identified on the plan provides the residents needed to have a vibrant downtown. Providing a unique housing product downtown provides the lifespan housing the community is also seeking. The units should be historic in character and be a minimum of three stories, with their entrances facing the public roadways.

The mixed use portions of the redevelopment have retail storefronts on the first floor which extend the Main Street retail west. The upper floors must be either office or residential. The buildings must be at least 3 stories and should reflect the Main Street commercial architecture found elsewhere downtown. Traditional storefront architectural elements must be utilized including bulkheads and windows, and the prominent entrance located on Main Street. Activating amenities like patio seating are encouraged along the Main Street side.



Downtown redevelopment can create strong ties between an urban 'Main Street' and natural stream corridor.



High density residential infill brings activity and life to downtown beyond normal business hours.



With infill will come a increased demand for parking. To avoid excess surface parking small garages or decks should be considered.



Figure 21: Downtown Infill Option 2

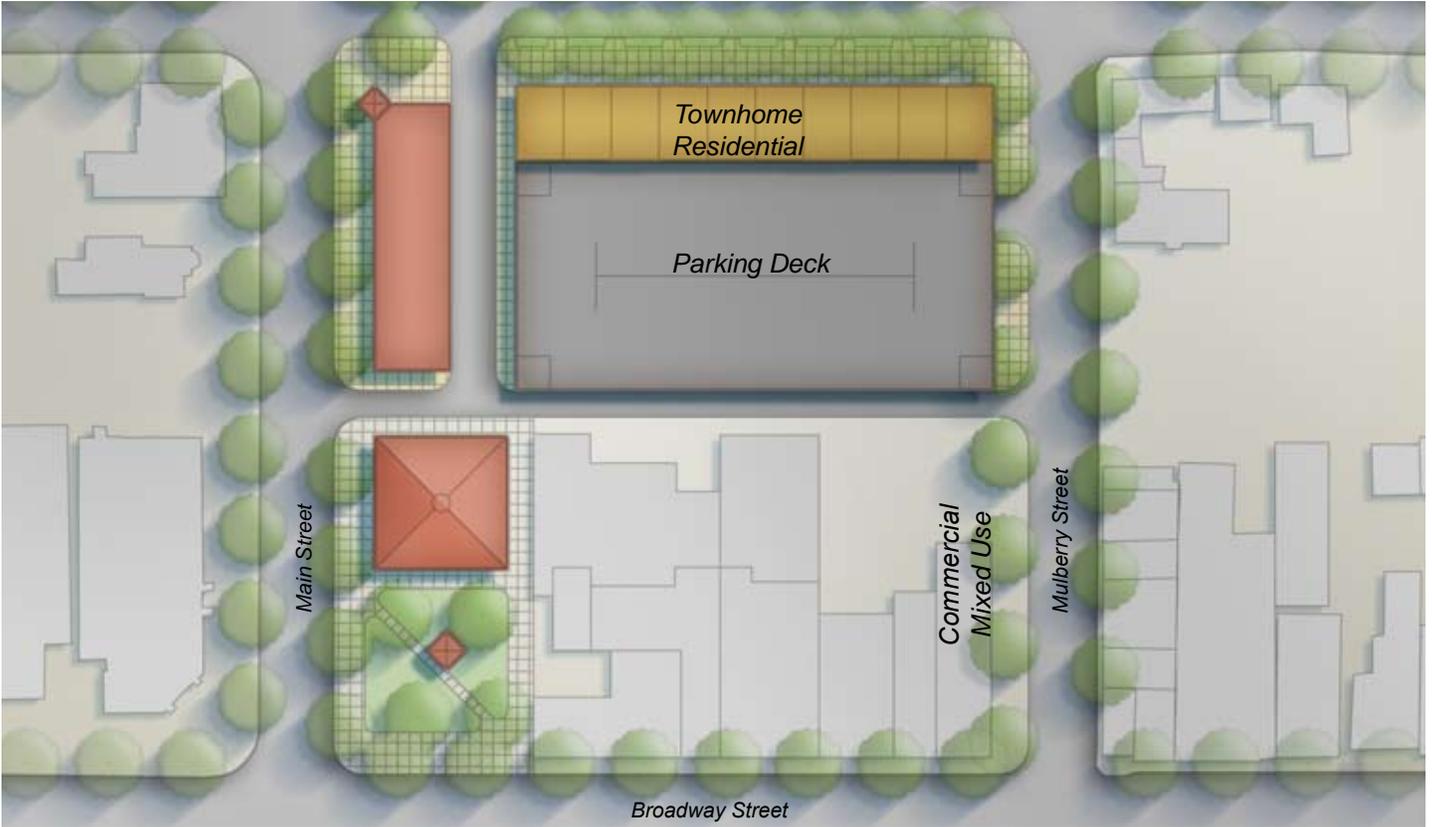


Figure 22: Downtown Infill Option 3

→ N 1" = 100'

## EAST MAIN STREET

Among the challenges faced by Lebanon are the aging commercial corridors that are underperforming. East Main Street is a prominent gateway into Lebanon, especially downtown, and it is not reflective of the character of the community. However, unlike failing commercial corridors where private redevelopment is possible, East Main Street is occupied by viable successful businesses that are not likely to redevelop in the near term. Therefore, in this case the remedy for the corridor falls to the public.

The recommendation of this focus area is for the city to initiate improvements within the public right-of-way that will organize the corridor and improve the overall character.

Commercial corridors like East Main Street suffer from a lack of organizing elements, a domination of parking and curb cuts along the corridor, and unrelated site designs. Creating an access management plan and removing some of the problematic curb cuts will create a less chaotic aesthetic and improve the safety conditions for vehicles, pedestrians and bicycles.



Urban elements such as lighting, benches, and bollards can help create a strong streetscape.

To organize the corridor street trees should be added the length of the corridor on both sides in a tree lawn. Sidewalks should be improved and possibly a bicycle path added. A low wall to block parking and create an edge would significantly improve the character. Finally,



Figure 23: East Main Street Concept



Lush landscaping can soften harsh edges of a streetscape.

at the entrance to East Main Street to the west of SR 48 a gateway feature should be designed and constructed including signage and plantings. Crosswalks and intersection treatments are also recommended.



Short walls can provide screening for exiting parking lots as well as being an aesthetic element along a streetscape.

East Main Street is a prominent gateway into the city and its improvement would be an important step to reaching the goals of the city.



↑ N 1" = 100'

## NORTH COLUMBUS AVENUE

North Columbus Avenue between Ridge Road and Monroe Road is an underperforming commercial corridor that this focus area reinvents as a successful corridor for retail, residential and office opportunities. Unlike East Main Street there is potential for site redevelopment along the corridor. There are vacant and aging structures that could be prime redevelopment sites.

Currently the corridor is predominately zoned for retail which contributes to the current failings as described in the retail land use district. Therefore, a new organization of uses is required. The focus area plan envisions a node of neighborhood retail located on the east side of Columbus Avenue at the corner of Southline Drive. It is indicated in red on the plan.

New townhomes are located along the west side of Columbus Avenue on the south side of the corridor. This provides an opportunity to provide new housing products as well as supply additional residents near downtown. The units must be high quality construction reflecting the character of Lebanon. The units should front on Columbus Avenue and create a smooth transition from the suburban commercial pattern into historic downtown.

Columbus Avenue redevelopment is an ideal location for small scale office development. With the Kettering Medical facility nearby and the Warren County complex, a market is available for office condominiums for doctors offices, law practices and other incidental uses. The Lebanon market study identified this sector as a strong market in Lebanon. Small scale office uses would also be compatible with the surrounding residential areas. Buffering should be included for all redevelopment that is contiguous to existing or planned residential. Additional single family residential could also be included to infill some of the land around the corridor.

Access management should also be integrated into redevelopment plans for the corridor. Elimination of curb cuts and improvement of pedestrian and bicycle amenities will greatly improve the viability and livability of a corridor designed solely for the automobile. Also, including a planted boulevard along the overly wide corridor would create a corridor that is human in scale and attractive. The focus area plan also includes additional road connections for improved safety, access and usability.



The architecture along Columbus Avenue should be neighborhood in scale.



Large setbacks could create an excellent opportunity for outdoor seating and a place that people could gather.



Buildings located at corners should have a strong presence.



Figure 24: North Columbus Avenue Concept

↑ N 1" = 200'

Legend

- Office
- Townhomes
- Single family Residential
- Retail

## SR 48 / I-71

One of the best opportunities for office development in Lebanon is between I-71 and SR 48 on the south side of the study area. This area is challenged by natural features and steep slopes as well as by a lack of sufficient access. However, the visibility from the freeway provides a significant advantage for office location.

This focus area plans for significant office development at a large scale. The plan takes into consideration the site constraints and protects much of the natural features present there today. Many office users today seek sites with interesting natural elements. Those constraints become the amenities for the site.

The plan requires the construction of an access road through the center of the site to provide access to sites along both sides. The plan includes parking sufficient for the proposed build-out of the offices with floorplates matching the plan and rising 2-3 stories.

The area is a prime site for corporate headquarters or other large users. Many companies seek unique locations and the opportunity to brand their buildings. Lebanon is in a good position to cater to these needs; the site is interesting, and its separation from the rest of the community means that iconic architecture can be permitted.

Also, retail uses are included to serve the office users. Providing some nearby opportunities for restaurants and convenience retail will improve the attractiveness of the site for prospective businesses.

The plan also requires the relocation of the fire station and state highway patrol station to the other side of SR 48.



A small amount of retail should be permitted in this area to serve the office workers.



The I-71 and SR 42 Concept is an opportunity for iconic architecture.



The existing natural environment of the area creates an interesting opportunity for siting buildings.



Visibility from Interstate 71 makes this a prime location for corporate offices.



Figure 25: I-71 and SR48 Concept

↑ N 1" = 300'

Legend					
	Signature Office		Retail		Parking
	Medical Office		Relocated Highway Patrol and Fire Station		



chapter 6  
ECONOMIC DEVELOPMENT



## ECONOMIC DEVELOPMENT

In order to be a prosperous city Lebanon must invest in developing the community's economy. This is often a difficult and elusive task for communities. Cities need revenue-generating land uses to offset the services provided to the residents. However, the economic development climate in Ohio creates an atmosphere of competition and results in cities being forced to poach companies from one another. The long term sustainability of cities suffers.

Lebanon must establish a long term economic development strategy to grow and locate business that will add revenue to the city budget and provide funds to serve the community. The city must balance the revenue it is able to take in with the services it provides to the residents at a level that makes Lebanon a quality community in which to live.

This chapter of the plan evaluates the existing land use imbalance and utilizes the fiscal impact analysis model (see appendix I) to verify that the future land use provides a more balanced land use distribution that provides greater revenue for the city. In the analysis residential land use is evaluated against all non-residential land uses due to the limits of available statistical information for commercial land uses.

Today, that balance is not being maintained. The city must add new businesses to cover the expenses of the services it provides currently and any future improvements in service levels. Lebanon is additionally handicapped

by not having a reciprocal income tax. Not capturing that revenue creates a circumstance where new office development is critical.

### Revenue

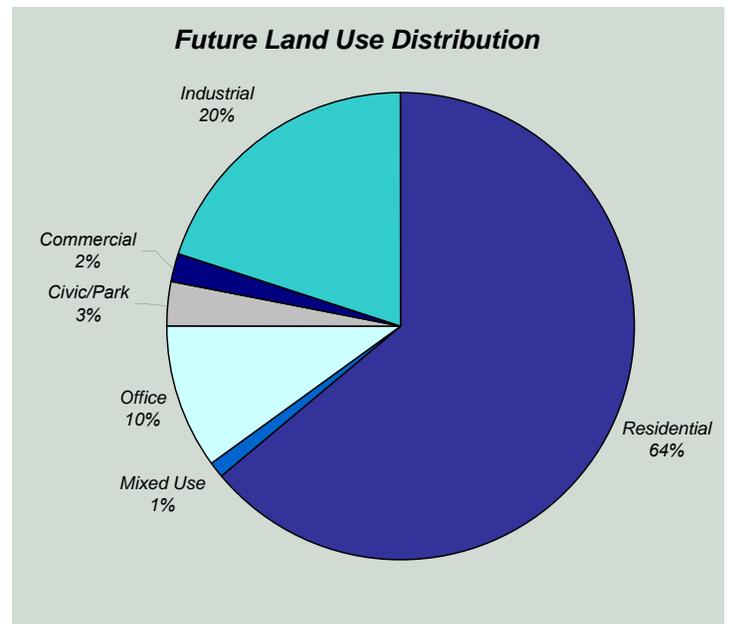
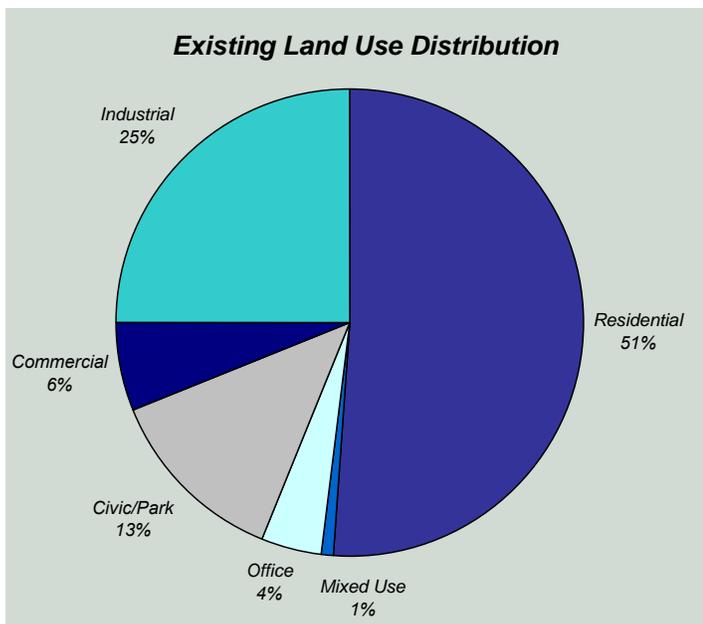
Due to the state taxing structure in Ohio, municipalities receive the majority of their revenue from income taxes. Property taxes largely fund the school system. Typically 50 to 70% of city revenues come from income taxes; in Lebanon only 43% of the revenue is from income tax. Typically 75 to 85% of property taxes go to the school district, and 3 to 6% go to the city. Therefore, employment-based land uses help the city by providing more employees.

The structure of tax incentives in Ohio limits the time cities can offer tax incentives to companies on existing employees. This encourages companies to relocate to other cities to continuously receive the tax benefits.

### Services

Each city is different in the types of services they need. In a community like Lebanon where the Countryside YMCA is a part of the community the city does not need to provide that service. However, Lebanon may be very interested in establishing a strong greenway network throughout the community and connecting to the greater regional network.

It is also critical when establishing the balance of land use for the city to understand and acknowledge the available market of revenue-generating land uses in the area. Lebanon has many attractive elements for new business



location. However, there are also challenges in Lebanon like the distance from Dayton and Cincinnati as well as the competition from neighboring cities like Mason. The office market in Lebanon is somewhat limited and slow growing. The community must then manage the growth of residential land uses and maintain responsible service levels.

**Current Economic Conditions**

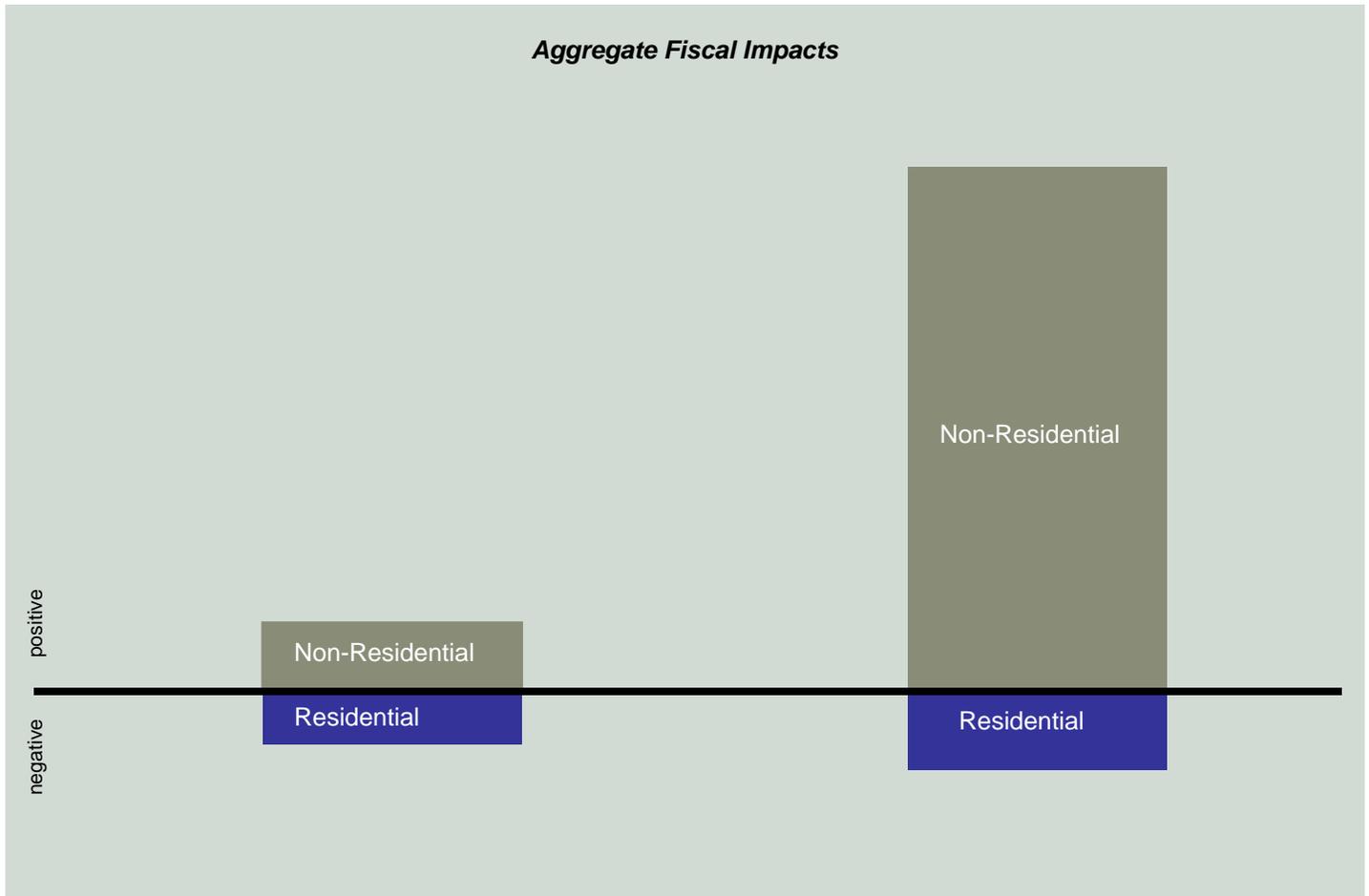
In Lebanon today, the land uses are not balanced. The community, like many, is heavy with residential and lacking the revenue-generating sources necessary to provide a high level of service.

Residential today makes up 51% of the land in Lebanon while office only constitutes 4% of the total land. Industrial is 25% of the ground but, as discussed before, its low density and low salaries make it less valuable to the city than office ground. This condition contributes to a lopsided balance sheet for Lebanon. In order to create a land use balance in the city it is important to understand the existing conditions in detail.

**Residential**

Residential land in Lebanon is prevalent. During much of the growth of the city the residential market was strong. Lebanon was an attractive community in which to locate for people working in both Dayton and Cincinnati. The growth in Lebanon resulted in a primarily residential community with an average density of 1.68 units/acre and an median house value of \$129,000. This condition, combined with the current taxing structure in Lebanon, creates an estimated, average impact of -\$150.00 per resident in Lebanon and a -\$475.00 per household.

In order for a residence in Lebanon to pay in property tax as much as it requires in services it must be worth at least \$500,000. It is unrealistic in Lebanon, as in all other Ohio cities, for residential to pay for itself. This is especially true in the aggregate.



Despite the increase in percentage of land dedicated to residential in the future land use plan the aggregate fiscal impact of the future land use will be far better for the City. The increase in office ground and the low density designation of the future residential will put Lebanon in a far better fiscal position than today.

### *Commercial*

Today, in Lebanon, commercial land constitutes 2,645 acres or 35% of the total land area. There is 7,450,000 sq ft of gross commercial floor space for lease. Approximately 10,600 people are employed by the businesses at an average of approximately \$29,600 annually. Based on those conditions and the existing tax structure in Lebanon the average, estimated impact is +\$2.00 per square foot and +\$11,000 per acre.

### *Future Economic Conditions*

The future land use map, as recommended by this plan, achieves a far greater land use balance. The chart for existing land use distribution is heavy on the single family land use at 51%. However the bigger issue is the lack of office development which is only 4% of the total land.

The future acreage distribution is more balanced for two main reasons; the additional residential is being planned at a far lower density than is currently in Lebanon. Which accounts for more acreage, but less homes. Also, the office acreage increases to 10% of the land in the city. This increase combined with strategies to attract larger scale offices and higher salary jobs helps balance the overall fiscal condition of the City of Lebanon.

To make a finer point, today there are 6,200 residential units being supported by 1,700,000 square feet of commercial. The future land use map, at build-out, supports 8,923 units with 13,620,064 square feet of commercial. From present to future residential increases 43% while commercial increases 701%.

A sustainable office market can be created by focusing on business incubation and promoting owner-occupied office buildings. Lebanon can set itself apart from the competition by providing amenities that employees can enjoy like bike paths and parks. And by allowing iconic architecture and encouraging LEED (Leadership in Energy and Environmental Design) buildings, it will promote owner-occupation and contribute further to its competitive edge.

## ***Ohio Economic Development Tools***

**Roadwork Development (629) Account:** These grant funds are available for public roadway improvements, including engineering and design costs. This fund is available for projects primarily involving manufacturing, R&D, high technology, corporate headquarters, and distribution activity. Projects must typically create or retain jobs. Grants are usually provided to the local jurisdiction and require local participation.

**Ohio Rail Development Commission:** Loan and grant funds are available for public or private rail improvements, including engineering and design work. The amount and type of funding available for a project will depend on job creation and rail traffic volume generated by the project.

**Ohio Water Development Authority:** Local Economic Development Fund: Low-interest financing is available to communities for public water and sanitary sewer improvements. Loans are made directly to local communities on favorable interest rates and terms.

**Community Development Block Grant:** Federal grant funds are available through the state to assist with public road, water, and sanitary sewer improvements specifically benefiting economic development projects. Job creation must be involved, and companies must commit to hiring at least 51 percent of employees from low- to moderate-income populations in the county where the project is located.

**Expedited Permitting Assistance:** Collaborative efforts led by the Ohio Department of Development and involving the Ohio Environmental Protection Agency, Ohio Department of Commerce, Ohio Department of Transportation, and Public Utilities Commission of Ohio, will assure that all necessary industrial, building, environmental, and related permits are processed in a timely, business-friendly manner. Where possible, ombudsman services can be offered to further streamline any multi-agency permitting processes.

*source: Ohio Department of Development*

## ***Available Tax Incentives***

**Job Creation Tax Credit (JCTC):** The Job Creation Tax Credit is a refundable tax credit to companies creating at least 25 new full-time jobs (within 3 years) in Ohio. The credit may also be available for certain high-wage industries creating 10 or more new full-time jobs within 3 years.

**Job Retention Tax Credit (JRTC):** The Job Retention Tax Credit is a non-refundable tax credit to companies retaining at least 1,000 full-time jobs in Ohio.

**Research and Development Investment Tax Credit:** The R&D Investment Tax Credit is a non-refundable Ohio commercial activity tax credit for all investment in qualified research expenses incurred in Ohio by eligible "C" corporations.

**Local Property Tax Exemptions:** Local communities in Ohio are authorized to collect local property taxes on real property (land and buildings) and tangible personal property (machinery and equipment, furniture and fixtures, and inventory). Through the Ohio Enterprise Zone and Community Reinvestment Area programs, local communities can elect to abate a portion of property taxes owed by a company.

**Sales and Inventory Tax Exemptions:** State and local sales taxes are exempted on certain types of purchases, including machinery and equipment used in the manufacturing process; material handling equipment used in the warehousing of inventory that is primarily (51 percent or greater) distributed to retail operations associated with the warehouse operator; and equipment used for research and development purposes.

*source: Ohio Department of Development*



chapter 7  
THE PUBLIC REALM



## THE PUBLIC REALM

The public realm of a community is that space which is publicly owned and shared by all. It is often experienced when traveling from one privately owned place to another and it is at times viewed simply as “in between space.” Public land is most often owned to provide space for needed infrastructure like roads and utilities. Aside from being necessary to support the use of private spaces, the public realm is also a space where one experiences the community as a whole. The way public space is created and managed can leave a lasting impression not only on visitors to Lebanon but also on those who spend time daily in the City of Lebanon.

A number of elements occupy space within the public realm, some to serve a needed function such as roadways and utilities, but others as amenities such as bike paths, walking trails and park space. The character of a community is often defined by both the types of elements found within the public realm and the condition of those elements. For instance, street trees and plantings along a roadway can give an image of environmental appreciation in a community. Bike paths along roadways may give the image of an active and health-conscious community. At the same time, the level of care and maintenance given to these elements speaks to the overall state of the community.

Other examples of the public realm are the roadway corridors which serve many functions to the community. While their main focus is to allow for travel into, out of, and within a community, roadways also play an important role in defining the character. As one travels along a roadway a certain sense of place is observed. Arrival is noted by natural features or built structures, which may be intentional or happenstance. Community values are observed by the elements which are visible from roadway corridors. Views and vistas provide glimpses into the lifestyle that the community provides.

### *The Public Realm*

1. *Roadway Corridors*
2. *Gateways*
3. *Parks and Open Spaces*
4. *Infrastructure*



Connecting parks and destinations with bike trail is critical to the pedestrian connectivity of a community.



Infrastructure is an important part of the public realm that can provide opportunities to communicate the personality of the city.

## GATEWAYS

Gateways are important to define the arrival into Lebanon. They set the tone for the community and give the first and often a lasting impression of what the community is about. In Lebanon there are existing gateways, some intentional and others happenstance, that mark arrival into parts of the City. These gateways can be broken down into three different types: Freeway Gateways, City Gateways, and Downtown Gateways. Each gateway should have a different treatment appropriate to the condition.

### *Freeway Gateways*

At these gateway locations it is appropriate to use signage, landscaping, and/or a monument feature. Due to the heavy volume of traffic any other treatment would likely not be feasible. It is also critical that the experience of getting off the freeway and coming into Lebanon set the tone that is desired by the community. Any signage or landscaping should coincide with the desired aesthetic of Lebanon. Material and/or plant selection should be specifically chosen due to its native and natural existence in the region. Foreign materials, although they can be eye-catching, often detract from the genuine experience of arriving at an established community. All too often communities choose gateway features that appear out of place and foreign with the natural setting of the location. This can lead to a conflicting sense of place, which would otherwise be easily understood and observed.

### *City Gateways*

City Gateways serve as entry points into Lebanon at the municipal boundary along major roadways that are not freeways. Unlike the freeway gateways these do present an opportunity to signify the entrance into Lebanon through an experience rather than only signage and/or landscaping. When crossing into Lebanon along these



Signature gateway features define the community for visitors and residents.

major roadways it should be intuitively understood that you have entered another place even without the use of signage or landscaping. In fact this distinctive experience is better experienced without a sign, but rather with a collection of events that the resident or visitor experiences while traveling along the roadway.

By using the roadway character, views and vistas, and preserving natural features the resident or visitor will experience the transition from the mixed character of the surrounding communities into a consistent and genuine character that is Lebanon. This can provide a much more memorable experience than simply receiving a cue from a sign. Any markers should be subtle and integrate with the surrounding landscape defined by the roadway typologies.

Rather than introducing a foreign element into the landscape to denote a gateway, other opportunities exist. The entry may be realized through a signature bridge at a stream crossing, a change in pavement material banded across the road, a well landscaped roadway itself, or even the openness created by a corridor setback or adjacent greenspace. By incorporating and preserving the natural character of the community a legitimate break is created and a transition moment is experienced. This can also define and express the rural history and character of Lebanon.

### *Downtown Gateways*

Downtown Gateways signal the transition from the rural or semi rural condition which is most of Lebanon into the more urban fabric of Downtown. This transition should also be subtle and intuitive. One example is that Downtown roadways should include sidewalks rather than trails. Where this transitions occurs should be carefully located as it will convey the transition from a lower density auto-oriented roadway to a higher density more pedestrian oriented streetscape. Another example is the change in building setback. Downtown buildings should be located closer to the street and should be more dense. Many communities have recently redeveloped at key intersections to denote the entry point into downtown. At these key locations, larger buildings are encouraged to be constructed close to the street in order to create a "gateway building". These larger developments signify the transition that takes place.

Other strategies simply include changing materials or element forms. Tree lawns may transition into tree grates along the sidewalk. Street lights may become smaller and more pedestrian in scale rather than larger and auto-oriented. Gateway elements may include pillars or walls as opposed to landscaping.



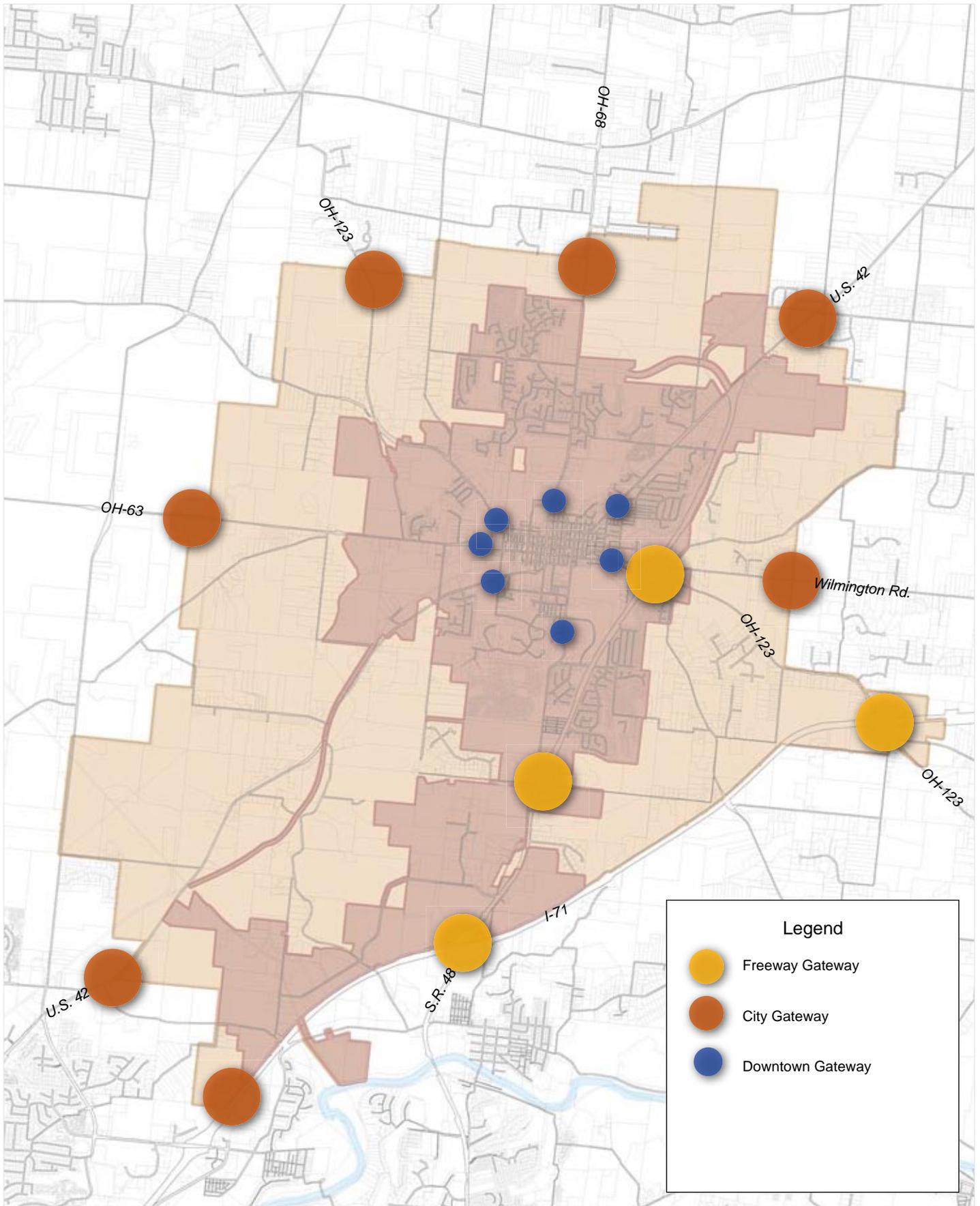


Figure 26: Gateway Plan

↑N 1" = 6000'

## PARKS AND OPEN SPACE

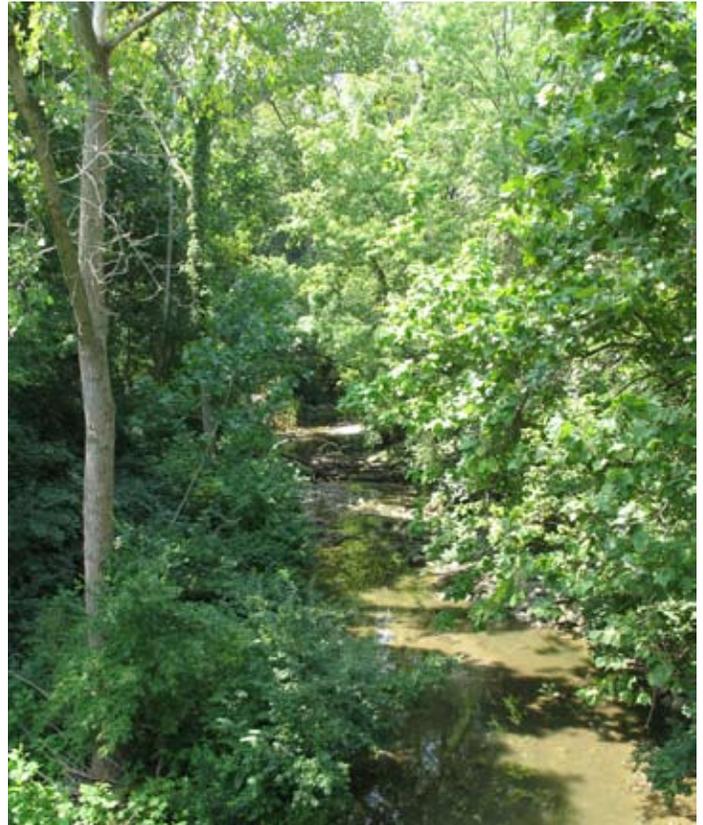
The City of Lebanon has a unique and significant amount of natural features well worth protecting. Waterways along with floodplains, tree stands, and steep topographic changes all contribute to a scenic and inspiring landscape.

In order to protect the important waterways in Lebanon building or construction within the floodplain should be restricted. Development should be designed to protect the streams and their water quality. Construction and development, especially in floodplains, lead to increased levels of run-off and decreased water quality. One of the best ways to preserve these delicate natural features is to strategically expand and acquire park space in these environmentally sensitive areas.

Areas which include streams, tree stands, and sharp topography change are ideal for passive recreation such as trails and parks. Stream corridors also contribute to the aesthetic of Lebanon as a whole and the inclusion of these streams in park space would preserve these features and keep them as part of the public realm for all to experience and admire.

Setting aside land for park space contributes to the aesthetic, recreational, and environmental goals of the community. Open spaces located throughout Lebanon help to maintain rural vistas of the areas and protect the agricultural aesthetic of the area.

Lebanon has a strong history of promoting parks and open space. The City is currently involved in a Parks Master Plan process that coincides with this Comprehensive Plan Update.



Stream corridors contribute to the aesthetic and environmental value of Lebanon and should be preserved whenever possible.



Trails are important amenities for residents. They provide recreational opportunities as well as preserve natural areas.

## INFRASTRUCTURE

Like most healthy communities, Lebanon will continue to grow and develop as time goes on. New development, which is essential to community success, also tends to come with growing pains. As development occurs in a community it can change the landscape, create stress on infrastructure and at times change the quality of life for residents. However, guided and anticipated growth and development will nearly always improve the community and quality of life for its residents.

Roadways are often the pieces of infrastructure that see the most stress when new development occurs. And while it is essential to improve and expand roadways to accommodate increased traffic, it is also important to remember that roadways are not only places for cars. Successful roadways provide places for people whether they be bike paths, trails, or sidewalks. These elements add an additional level of infrastructure to a community, and they are a highly valuable amenity that successful communities appreciate and make sure to incorporate.



High quality infrastructure such as roadways and bridges provide an opportunity for communities to showcase their health and value.

Dependable infrastructure is needed in every community to maintain a level of success and health. Infrastructure however should be seen as more than just a standard necessity. Decisions regarding infrastructure can also affect the image of the City and quality of life in a community. When infrastructure is developed to the highest quality and with attention to aesthetics, it is recognizable. When infrastructure is done at the minimum standards, it is nearly always evident.

All types of infrastructure should be done with aesthetic concern and high standards. Stormwater facilities should be engineered to be natural in appearance and contain marginal, emergent plantings around the perimeter. Public utilities should be buried underground and screened from view whenever possible. Internal roads should include pedestrian amenities whenever improvements are made or new roads are constructed.

High quality infrastructure gives a community the opportunity to showcase its health and value. Successful communities value the public realm and invest in themselves. This nearly always results in further investment into the city by businesses and residents alike.

## ROADWAY CORRIDORS

As the City of Lebanon grows and matures, it is essential to consider the way that roadway corridors within the city define the community. A number of strategies can be followed in order to create a cohesive and functional roadway corridor system that acts as a community asset rather than a liability.

Growing communities are often challenged with managing the impacts of growth. New development occurs in different places, at different times, by different developers. It is often difficult for a community to coordinate and plan for the different effects resulting from these independent projects. Population growth and development results in increased traffic, safety concerns, and infrastructure costs. When the impacts of these are managed one at a time the result is often a landscape that appears piecemeal and haphazard.

The traditional strategy of managing new development within a community has been to widen and improve a few select roadways which are designated to carry the burden of all new development. These roadways then become overly wide in order to accommodate peak hour traffic flows, resulting in an excess of roadway during off peak hours. The excess roadway then becomes a maintenance burden and also detracts from the pedestrian and neighborhood scale often desired by the community. This also tends to result in increased travel speeds and create safety concerns.

The alternative to relying on the traditional strategy of roadway hierarchy that funnels a majority of traffic onto a select few high-capacity roadways is to construct

and require a larger number of roadway connections. These connections allow traffic to be dispersed in a number of different directions and routes in order to lessen the burden on any one or two major roads. The result is a larger number of smaller roadways which are more attractive, efficient, and safe. Smaller roadways decrease the speed of traffic and create more intimate and pedestrian-scale spaces.

Another benefit to increased roadway connections is the improved sense of community. Many "dead-end" subdivisions which rely on a majority of cul-de-sac streets disconnect their residents from other neighboring subdivisions and parts of the community. This disconnect can lead to individuals identifying themselves only with their subdivision rather than the community as a whole.

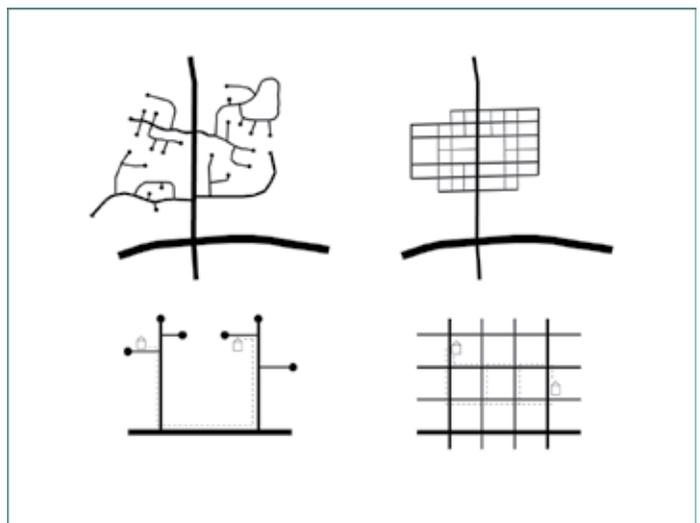
In order to maintain the small town aesthetic and character of Lebanon, it will be critical to employ the strategy of multiple roadway connections. Multiple connections will aid in managing the impacts of growth on the community's roadways so that overly large and unattractive roadways are not the result. Therefore it should be a continued practice in Lebanon to construct connections whenever possible. A multiplicity of connections will ensure that the roadways of Lebanon are not forced to respond retroactively to growth and lose their character.

### Trails

Trails for biking, jogging, and walking are becoming an ever more important amenity in communities throughout the United States. Trails allow for recreational and leisure travel throughout a community. In some cases, they even provide an alternative means of transportation for those who may live and work in the same community. In order to be an effective amenity however, trails and paths need to have complete connections throughout the community.



Connections are a critical component in maintaining a small town feel with small scale roads.



Traditional Roadway Hierarchy versus Traditional Roadway Grid

Important activity centers within the community must be interconnected with neighborhoods through safe, dedicated bike paths and walking trails.

Although it is common for communities to invest in trails located in neighborhood parks, the unfortunate reality is that many residents are still required to drive to the park in order to use the trail system or must risk unsafe conditions along roadways in order to bike or walk to the park. Children and adults who wish to use bikes, jog, or walk close to home rather than at a park are often concerned with safety issues when forced to ride or walk on roads. The public realm in the form of roadways provides a community with the opportunity to link up parks, neighborhoods, and other community amenities with infrastructure other than roads. Publicly owned land in the form of rights-of-way already exist along roadways. In some communities it has become the standard practice to include trails, paths, and sidewalks within this right-of-way to provide alternative transportation opportunities. In the end these trails and paths also end up being used as a recreational and leisure amenity.

It is not always necessary for a community to construct a complete trail network all at once. Many communities have used a strategy whereby trails are built piece by piece as roadways are widened or updated or where new development occurs. New developments and redevelopment are required to construct trail pieces along their particular roadways frontage, even though it may not connect at the time. The end result is a complete trail network which has evolved over time in a more cost efficient and equitable manner.

#### *Thoroughfare Plan*

The adoption of a Thoroughfare Plan gives a community the opportunity to voice its desired street network and character. Often communities are left reacting to development by widening and improving roadways after development occurs and streets are clogged. With the adoption of a Thoroughfare Plan, any new development should be evaluated against the thoroughfare plan to ensure that there is enough road right-of-way available for necessary improvements. In some cases the developer must construct those improvements and/or dedicate a portion of the property to the City to achieve the necessary improvements. This can include trail and path systems.

#### *Corridor Typologies*

Roadways in Lebanon should not only strive to efficiently move traffic, but should also help to define the community character. Although roadways may have the same function, they should not all be identical in form and style. A roadway in downtown Lebanon should look and feel different than a roadway on the outer edge of the city.



Rural Corridors should follow a naturalized aesthetic.



Semi Rural Corridors manage higher levels of traffic while promoting community character.



Downtown Corridors should promote comfortable streetscapes for pedestrian traffic.

Likewise a roadway in a residential area should look and be different than a roadway along a commercial district.

Aside from designating roadways by their level of service or amount of traffic, roadways should also be given character typologies. These typologies indicate the appearance and style that is desired along the roadway in each part of the city.

When roadways are unplanned the result is often a disorganized roadway system which evolves from a piecemeal approach to construction and roadway improvements. Piece by piece roadways are expanded and improved to relieve pressure points of traffic congestion at specific locations rather than analyzing the larger system as a whole. The desired character and experience of drivers is forgotten and set aside in order to achieve a goal of moving cars through a community as quickly as possible.

As a community grows it is critical to guide how roadways look and function so that the result is a cohesive and attractive road network that speaks to the character of the community rather than just efficiency of traffic movement. To inform the development of the roadway corridors in Lebanon this plan includes corridor typology recommendations. Illustrations are also included to define the character and components of each typology.

Rural Corridors are intended to accommodate traffic that is entering or leaving Lebanon. Traffic volumes are generally lower so they should be maintained at 2 lanes. A setback should be regulated at 250' from the center line whenever possible. Plantings should be native and naturalized, not formal. Curb and gutter is not necessary and drainage ditches located along roadways should be gradually sloped to appear natural. Trails should be constructed along the road, or, due to the lower traffic volumes, a bike lane may be added in lieu of a trail. These roadways will denote transition from city to township and are intended to preserve the rural, scenic character of Lebanon's edges.

Semi Rural Corridors are intended to manage a higher level of traffic while also maintaining the aesthetic of Lebanon. Four lanes are allowable along these corridors with either a boulevard or turn lanes when necessary. The recommended setback is 185' from the center line whenever possible. The street tree pattern is formalized. Street lights and a trail should be included along these roadways. Curb and gutter may also be recommended due to the larger number of access points and higher level of development along these roads. These roadways denote transition from a rural character to a more developed suburban character.

## ***Roadway Corridor Typologies***

1. *Downtown Typology*
2. *Conservation Residential/Transitional Residential Typology*
3. *Freeway Commerce/Industrial Typology*
4. *Professional Office/Retail Typology*
5. *Corridor Mixed Use*
6. *Neighborhood Residential*

Downtown Corridors are intended to manage a moderate level of traffic while also creating a pedestrian friendly environment. Above all things downtown corridors should promote comfortable streetscapes for pedestrian traffic. Two travel lanes should be paired with two parking lanes along with street trees, street lights, and other streetscape elements. A small amount of traffic congestion may actually be beneficial along downtown corridors in order to slow travel speeds which would benefit downtown retailers and shoppers. Slower speeds also create a safer environment for pedestrians. One-way roads which increase automobile travel efficiency and speeds are discouraged. Rather than regulating a setback, a "built-to" line should be considered in order to create an urban envelope and streetscape building edge.

The following pages contain the specific roadway typologies associated with the future land use districts.

## DOWNTOWN TYPOLOGY

The Downtown Typology is appropriate for the following Land use Districts:

- Downtown

**Road Type:** The Downtown Street is a two to four lane road, with on-street parking where possible, lined with large inviting sidewalks, street trees, and storefronts.

### Physical Characteristics:

- **Number of Lanes:**  
*2 to 4 lanes, total*
- **Driving Lane:**  
*10 to 11 feet wide, each*
- **On-street Parking:**  
*Yes, where possible*
- **Parallel Parking Lane:**  
*9 feet wide*
- **Stormwater Control:**  
*Curb & gutter*
- **Bike Area:**  
*Share with vehicle lanes or add dedicated 4-foot bike lane on street.*
- **Sidewalk & Street Trees:**  
*10 to 20 feet wide*
- **Pedestrian Area:**  
*Sidewalk (concrete)*
- **Sidewalk Width:**  
*Min. 6-foot wide clear walking zone wider in front of stores, up to 20 feet (incl. seating, display, trees, etc.).*
- **Street Trees:**  
*Regularly spaced, deciduous; can be placed in planters, grates, etc.*
- **Street Tree Area:**  
*4 to 8 feet wide (street amenities such as light poles, signs, etc. go here as well).*
- **Notes:**  
*In areas w/ on-street parking, include 2-foot wide (or larger) paved surface next to curb for disembarking.*
- **Utilities:**  
*Should be buried, or located along rear alleys.*
- **Building Envelope/Setback:**  
*Buildings adjacent to sidewalk edge; zero setback from sidewalk.*
- **Outdoor seating/dining:**  
*Encouraged.*
- **Curb Cuts:**  
*Minimize or eliminate, use rear alley access.*

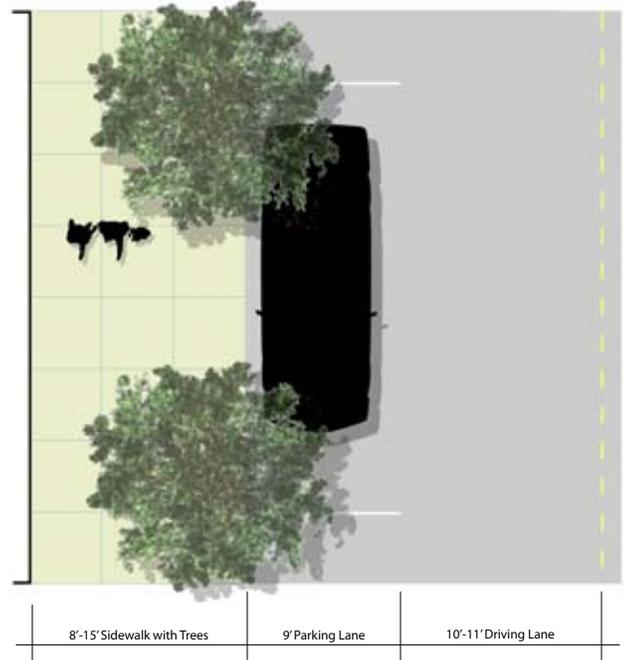


Figure 27: Downtown Typology



Typical downtown street condition with large sidewalks, trees in planters, and buildings pulled up to the street.

## RURAL TYPOLOGY

The Rural Typology is appropriate for the following Land Use Districts:

- Transitional Rural Residential
- Conservation Residential

**Road Type:** The Rural Roadway is a two lane road that travels through rural areas and the natural landscape, lined with swales, a leisure trail, and scattered rural homesteads.

### Physical Characteristics:

- **Number of Lanes:**  
*2 lanes total, possibly with occasional turn lane*
- **Driving Lane:**  
*11 feet wide, each*
- **On-street Parking:**  
*No*
- **Stormwater Control:**  
*Ditch & swale, naturalized.*
- **Bike Area:**  
*Share with leisure trail, or add dedicated 4-foot wide striped bike lane on each side of street.*
- **Pedestrian Area:**  
*Leisure trail/bike path (asphalt).*
- **Leisure Trail Width:**  
*8 feet wide, on at least one side of the corridor, setback from road edge, meandering course to take advantage of natural features & topography.*
- **Street Trees:**  
*Natural placement and irregularly spaced/grouped, use native species.*
- **Street Tree Area:**  
*Setback at least 15 feet from road edge (back side of swale).*
- **Building Envelope/Setback:**  
*Large setback, buildings placed at least 250 feet from road edge where possible.*
- **Curb Cuts:**  
*Minimize, clear site lines.*

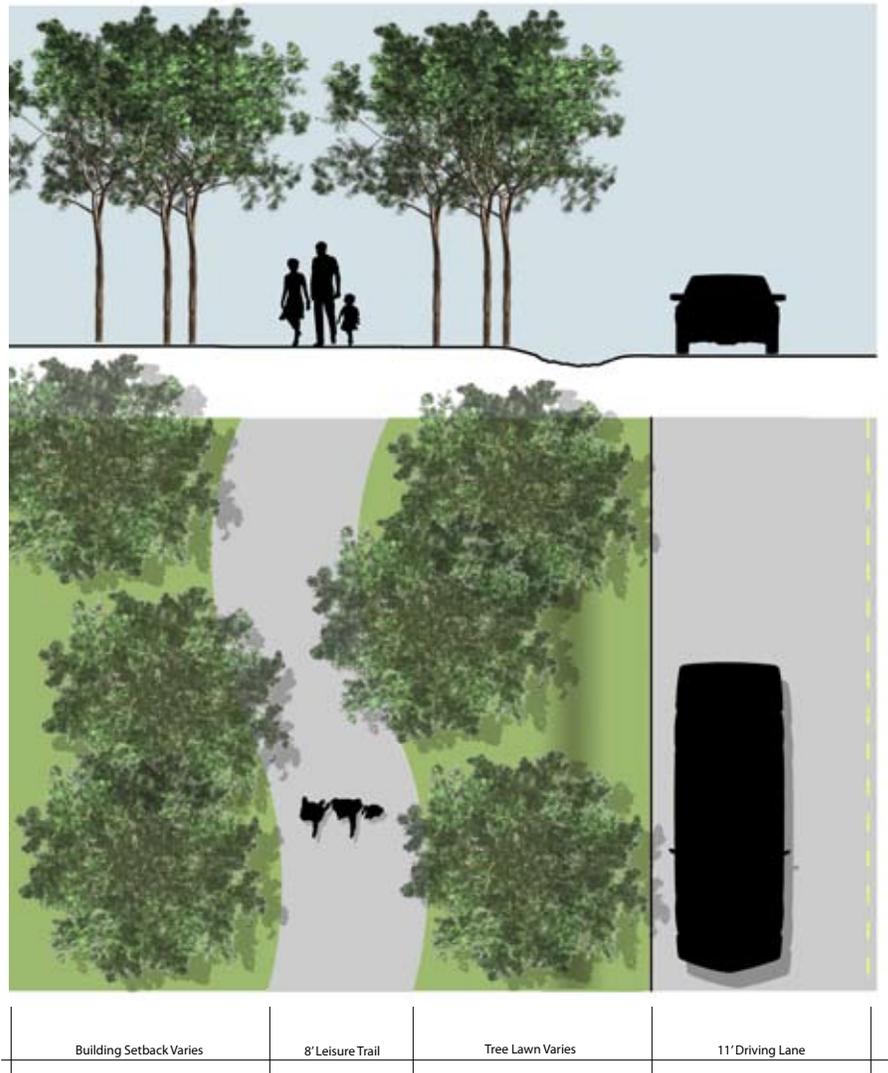


Figure 28: Rural Typology



A rural typology is organic in nature with irregular tree plantings, meandering bike paths, and roadways without curbs.

## FORMALIZED RURAL TYPOLOGY

The Formalized Rural Typology is appropriate for the following Land use Districts:

- Freeway Commerce
- Industrial

**Road Type:** The Formalized Rural Roadway is a two to three lane road that travels through rural and large lot areas, and hints at the presence of man with its more formal edge within the natural landscape.

### Physical Characteristics:

- **Number of Lanes:**  
2 to 3 lanes total, third lane is middle turn lane
- **Driving Lane:**  
11 feet wide, each
- **On-street Parking:**  
No
- **Stormwater Control:**  
Curb and gutter
- **Bike Area:**  
Share with leisure trail, or add dedicated 4-foot wide striped bike lane on each side of street.
- **Pedestrian Area:**  
Leisure trail/bike path (asphalt).
- **Leisure Trail Width:**  
8 feet wide, on at least one side of the corridor, setback from road edge, relatively parallel to roadway.
- **Street Trees:**  
Regularly spaced, deciduous, use native species.
- **Street Tree Area:**  
6 to 20 feet wide
- **Utilities:**  
Should be buried, or located to rear of property.
- **Building Envelope/Setback:**  
Substantial building setback, edge of right-of-way could be demarcated with fence or other landscape feature.
- **Curb Cuts:**  
Minimize and consolidate, clear site lines.

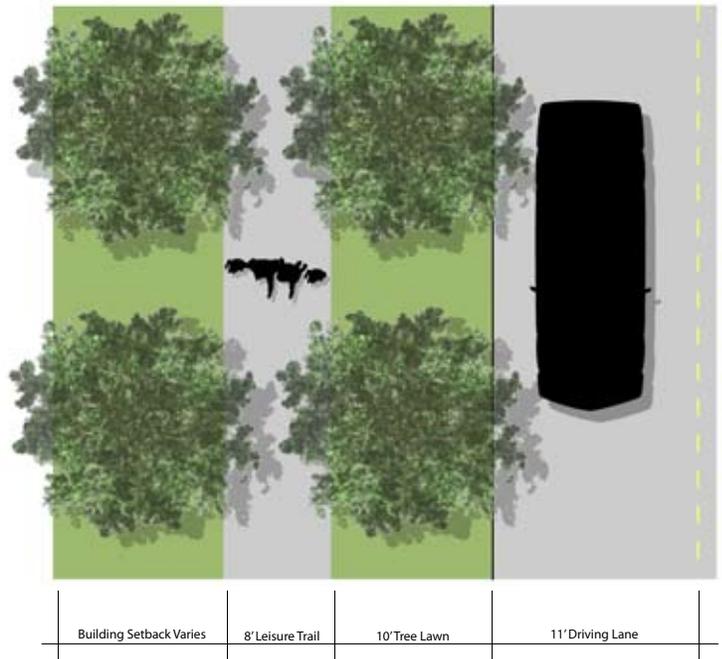


Figure 29: Formalized Rural Typology



Formalized rural typology is rural in nature but with a more rhythmic street edge including regular space trees.

## SUBURBAN TYPOLOGY

The Suburban Typology is appropriate for the following Land Use Districts:

- Professional Office
- Retail

**Road Type:** The Suburban Street is a two to four lane road lined with sidewalks and tree lawns with buildings set back behind manicured lawns.

### Physical Characteristics:

- **Number of Lanes:**  
2 to 4 lanes, total
- **Driving Lane:**  
11 feet wide, each
- **On-street Parking:**  
No
- **Stormwater Control:**  
Curb & gutter
- **Bike Area:**  
Share with leisure trail, or add dedicated 4-foot wide striped bike lane on each side of street.
- **Sidewalk & Street Trees:**  
18 to 30 feet wide
- **Pedestrian Area:**  
Sidewalk (concrete) on one side; leisure trail (asphalt) on other side.
- **Sidewalk Width:**  
4 to 6 feet wide on one side, setback from road edge.
- **Leisure Trail Width:**  
8 feet wide, parallel to roadway, setback from road edge.
- **Street Trees:**  
Regularly spaced, deciduous; placed in tree lawn.
- **Street Tree Area:**  
10 to 15 feet wide (street amenities such as light poles, signs, etc. go here as well).
- **Utilities:**  
Should be buried, or located along rear of lots.
- **Building Envelope/Setback:**  
Varies, but should be greater than 30 feet and have manicured lawn/front yard
- **Curb Cuts:**  
Consolidate and/or share as possible.

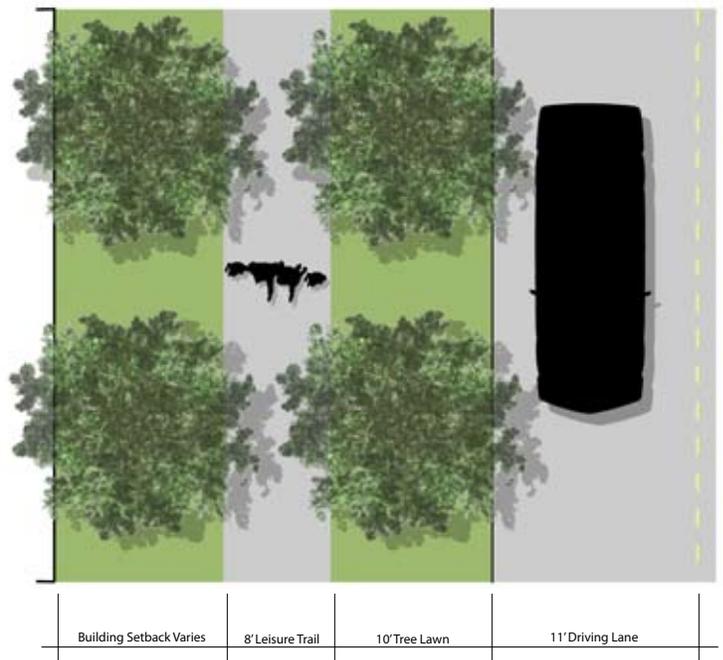


Figure 30: Suburban Typology



In a suburban typology there should be a larger green setback and tree lawns with parking located at the rear of the building.



## CORRIDOR MIXED USE TYPOLOGY

The Corridor Mixed Use Typology is appropriate for the following Land use Districts:

- Corridor Mixed Use

**Road Type:** The Corridor Mixed-Use Street is a two to four lane road, with on-street parking in concentrated areas, lined with large inviting sidewalks, street trees, and commercial and residential establishments.

### Physical Characteristics:

- **Number of Lanes:**  
*2 to 4 lanes, total*
- **Driving Lane:**  
*11 feet wide, each*
- **On-street Parking:**  
*Yes, where possible; behind protective bump-outs.*
- **Parallel Parking Lane:**  
*9 feet wide*
- **Stormwater Control:**  
*Curb & gutter*
- **Bike Area:**  
*Share with leisure trail, or add dedicated 4-foot wide striped bike lane on each side of street.*
- **Sidewalk & Street Trees:**  
*10 to 20 feet wide*
- **Pedestrian Area:**  
*Sidewalk (concrete)*
- **Sidewalk Width:**  
*6 to 10 feet wide, setback from road edge*
- **Street Trees:**  
*Regularly spaced, deciduous; placed in tree lawn.*
- **Street Tree Area:**  
*5 to 8 feet wide (street amenities such as light poles, signs, etc. go here as well).*
- **Utilities:**  
*Should be buried, or located along rear alleys .*
- **Building Envelope/Setback:**  
*Buildings adjacent to sidewalk edge; zero or minimal setback from sidewalk.*
- **Outdoor seating/dining:**  
*Encouraged*
- **Curb Cuts:**  
*Minimize or eliminate, use side street or rear alley access.*

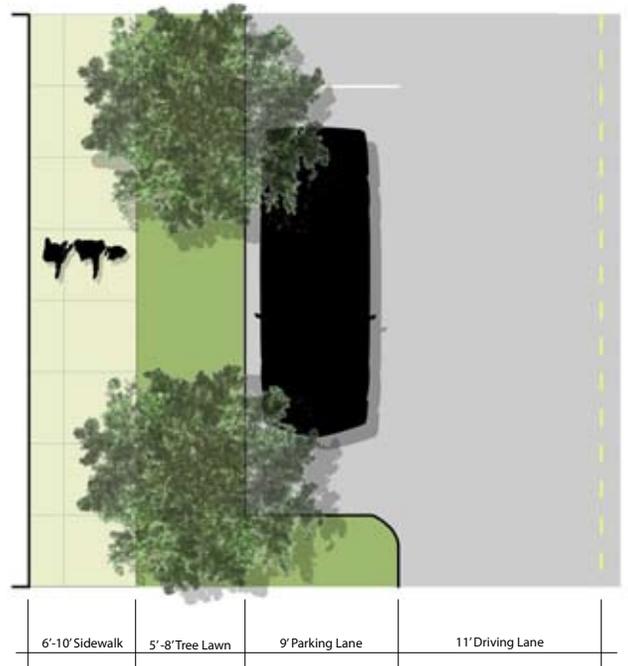


Figure 31: Corridor Mixed Use Typology



A corridor mixed use typology should be neighborhood scale architecture with large setbacks and a tree lawn.

## NEIGHBORHOOD RESIDENTIAL TYPOLOGY

The Neighborhood Residential Typology is appropriate for the following Land use Districts:

- Neighborhood Residential

**Road Type:** The Residential Street is a two lane road lined with homes, sidewalks and tree lawns.

### Physical Characteristics:

- **Number of Lanes:**  
2 lanes, total
- **Driving Lane:**  
12 to 13 feet wide, each
- **On-street Parking:**  
Yes, shared w/driving lane.
- **Stormwater Control:**  
curb & gutter
- **Bike Area:**  
Share with vehicle lanes, or add dedicated 4-foot wide striped bike lane on each side of street.
- **Sidewalk & Street Trees:**  
10 to 20 feet wide
- **Pedestrian Area:**  
Sidewalk (concrete).
- **Sidewalk Width:**  
4 to 6 feet wide, setback from road edge
- **Street Trees:**  
Regularly spaced, deciduous; placed in tree lawn.
- **Street Tree Area:**  
4 to 6 feet wide (street amenities such as light poles, signs, etc. go here as well).
- **Utilities:**  
Should be buried, or located along rear of lots.
- **Building Envelope/Setback:**  
Varies, but should be greater than 6 feet and have landscaped lawn/front yard.
- **Curb Cuts:**  
Individual per lot, or access from rear alley.

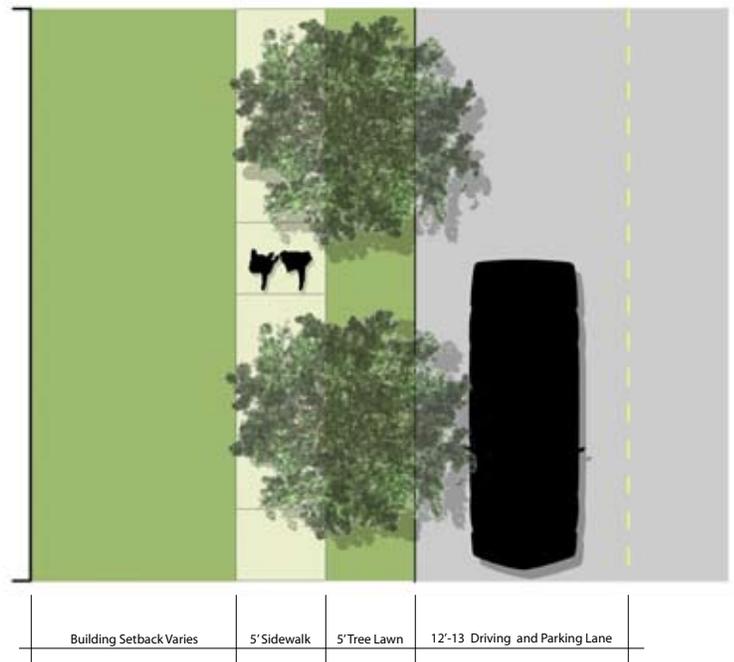


Figure 32: Neighborhood Residential Typology



A typical neighborhood residential typology should emphasize the relationship between the homes and the street.





chapter 8  
THOROUGHFARE PLAN



## TRANSPORTATION PLAN

The Comprehensive Plan is the key policy document for decision making about Lebanon's built and natural environments. The Comprehensive Plan text and related maps contain detailed recommendations for future development including the appropriate location and density/intensity of residential and commercial uses; the general location and character of roads; and the general location of parks and open space. Throughout the plan, recommendations are based upon a review of existing conditions and evaluation of future development scenarios for their impact on infrastructure and roads. The transportation plan and the land use plan form the foundation of the Comprehensive Plan document.

The thoroughfare plan is the primary reference tool within the transportation plan, while the future land use map is the primary planning instrument within the land use plan. Both of these primary planning elements provide the foundation to guide decision-making regarding the appropriateness of development proposals and infrastructure improvements necessary to support future development.

### *Relationship with Other Planning Documents*

The Lebanon Thoroughfare Plan was developed in concert with other planning documents - - which include:

- The Warren County Thoroughfare Plan, and
- ODOT's Functional Classification Map for Warren County.

The following documents were referenced in the Warren County Thoroughfare Plan:

- Warren County Transportation Plan,
- OKI Regional Transportation Plan, and
- Southwest Warren County Transportation Study.

As a result of the updated Thoroughfare Plan, changes were recommended to Lebanon's Land Development Design & Construction Standards Manual (Section 5 - Roadway and Pavement Design). Other recommendations included: (1) updating the Traffic Impact Study Guidelines, (2) adding Access Management Standards and Guidelines, and (3) revising the Traffic Calming Standards and Guidelines.

## THE THOROUGHFARE PLAN

The City of Lebanon has defined a Thoroughfare Plan:

- To establish and maintain a roadway system as a component of a balanced and integrated area-wide transportation system,
- To promote the development and maintenance of a safe, effective, and efficient roadway system,
- To promote the development of roadway services and facilities which will serve to support the economic growth of the area, and
- To achieve compatibility between the roadway system and land uses as envisioned by the City and other jurisdictions.

The Thoroughfare Plan is composed of two elements: (1) Exhibit 1 (Figure 33) showing existing and planned roads by functional classification and right-of-way width, and (2) Exhibit 2 (Figure 34) showing the number of through lanes required on each roadway link. The roadway network shown on Exhibit 2 graphically identifies the number of lanes needed to accommodate projected year 2030 development in Lebanon. Larger format printout of Exhibit 1 is contained in the back pocket of this report.

All highways, roads and streets within Lebanon and the surrounding area form a hierarchy according to the function they theoretically should serve. They serve traffic mobility, land access, or some combination of these two. Interstates and expressways are at the highest level; their primary function is mobility, so they have the strictest access controls. At the other end of the scale are local streets serving low traffic volumes at low speeds over short distances. Their primary purpose is to give frequent, direct access to adjacent land, so restrictions are minimal. Between these extremes are the classes of arterials and collectors that make up the bulk of the transportation network. They include many of the most important roadways in Lebanon and Warren County -- and they are often expected to perform multiple and conflicting traffic services. They must serve both the demand for mobility and the demand for land access.

The City's Thoroughfare Plan recognizes five basic roadway functional classifications, as follows:

**Major Arterial:** Carries regional traffic, links cities, and carries long-distance statewide trips.

**Minor Arterial:** Carries local and regional traffic, links communities, and carries intermediate and long-distance trips.

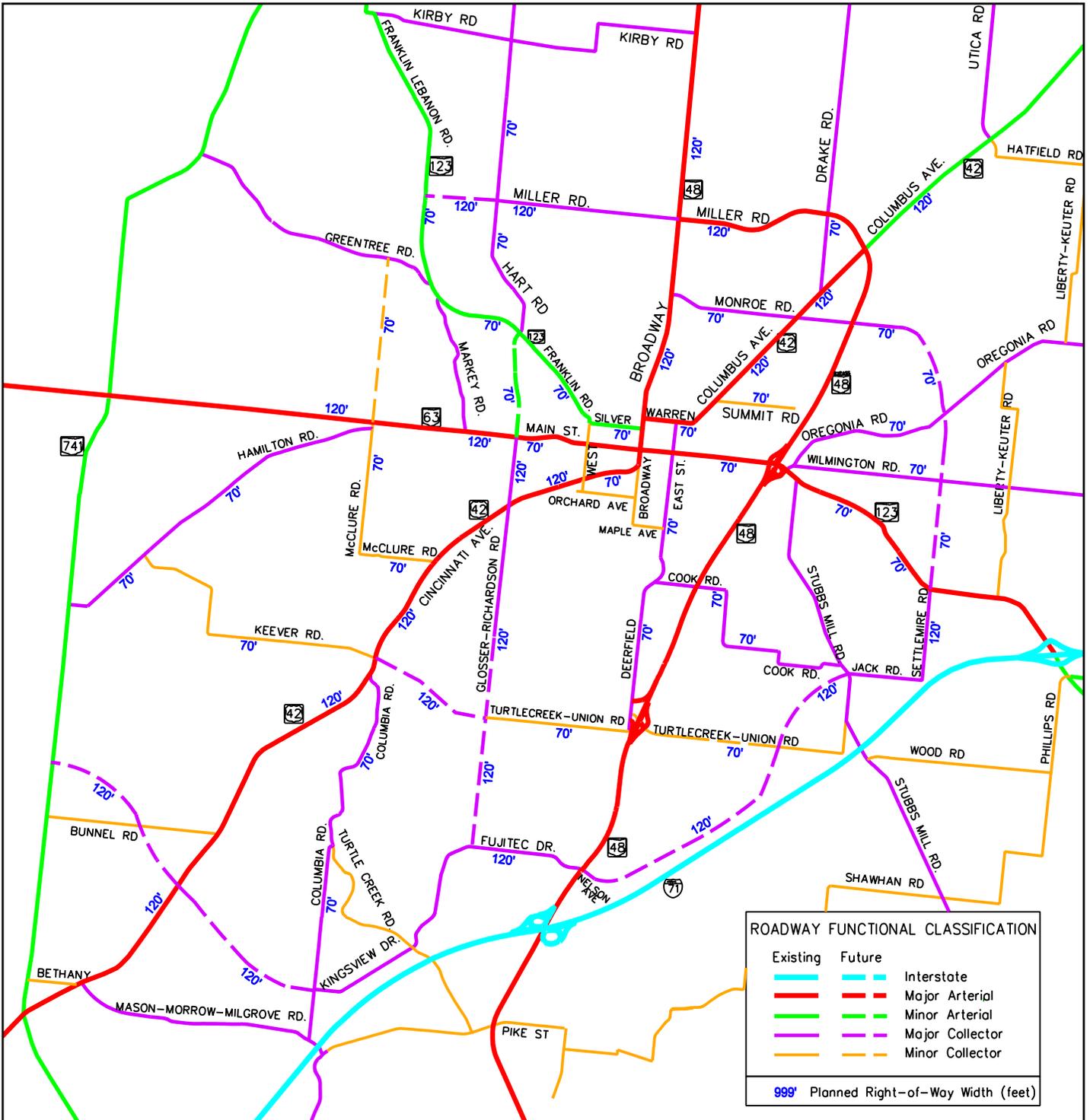


Figure 33: Exhibit 1, Thoroughfare Plan

**Major Collector:** Collects and distributes traffic to arterials. They also provide access to specific traffic destinations, allow easy movement from one neighborhood to another, and provide cross-town traffic movement.

**Minor Collector:** Takes traffic from local roads, carries it a short distance, and distributes it to arterials and major collectors.

**Local:** Provides access to individual properties that abut the street.

The Lebanon Thoroughfare Plan identifies each major roadway in terms of its functional classification along with the basic number of travel lanes to meet long-term needs. Right-of-way widths are also specified in conjunction with basic design standards. Right-of-way widths are defined for potential build-out conditions. As development occurs and as roadways are considered for construction/reconstruction, right-of-ways can be requested or preserved to facilitate the future construction of the ultimate roadway system. The number of travel lanes defined in the Thoroughfare Plan, however, relate to lane needs in an expected 20-year horizon – where potential development levels have been estimated for this horizon year.

#### *Traffic Volume Projections*

Estimating traffic in future years for the Lebanon area was accomplished through a travel demand forecasting process that models travel behavior (i.e., how many trips are made and how these trips are distributed in the region). Using information from the OKI model, these travel characteristics were quantified. The computer model (VISUM) used this information, combined with land use data, to estimate when and where vehicles will travel.

The overall study area was subdivided into smaller geographic areas called Traffic Analysis Zones (TAZ) for travel demand analysis. The TAZs as obtained from OKI were very large; therefore, they were sub-divided into smaller areas. The existing roadway network, as in the OKI model, was also refined by adding more roadways to the system. The anticipated future land uses were then defined for each TAZ. Vehicle-trips generated by the land uses were then assigned to the roadway network.

Travel demand modeling is traditionally a four-step process: (1) person-trip generation, (2) mode choice, (3) trip distribution, and (4) trip assignment. The Transportation Planning Handbook, Second Edition, published by the Institute of Transportation Engineers,

provides the following definitions for each of the four steps in the process:

**Trip Generation:** predicts the number of person/vehicle-trip ends that are generated by and attracted to each defined zone in a study area.

**Mode choice:** determines the modes that will be used to travel on each zonal interchange.

**Trip Distribution:** connects trip ends (productions and attractions) estimated in the trip generation model to determine trip interchanges between each zonal pair.

**Trip assignment:** assigns trips to specific highway or transit routes and determines the resulting highway volumes and transit ridership.

The study area included 33 OKI traffic analysis zones (TAZs) which were again sub-divided to result in a total of 65 TAZs. Each small area or TAZ was tested for future conditions. The land use information for each TAZ was based on the mid-range (2030) scenario. Through an iteration process, the highway network was adjusted by adding new roadway links, and/or modifying the number of lanes until the network best accommodated vehicle-trips projected for development in Lebanon in 2030.

Land use and trip generation information for each TAZ based on a full-build scenario (i.e., build-out of all future land uses) was also tested on the roadway system to determine ultimate roadway needs and future right-of-way requirements on the Lebanon roadway system.

The transportation modeling effort was undertaken for existing conditions (2008), the 2030 planning horizon (which accounts for expected development by that year), and the future year (which accounts for full build-out of the area).

Initial travel demand modeling efforts were based on the current roadway network. The current network was found to be inadequate to handle the traffic associated with year 2030 development. As such, it was enhanced by adding new roads and by widening existing roadway segments (i.e., adding lanes) where widening seemed possible.

The 2030 testing coincides with the OKI planning horizon. It is also the basis for the Thoroughfare Plan shown on Exhibits 1 and 2, which represent the road network necessary to address the community's 2030 mobility requirements. Exhibit 1 also illustrates the right-of-way on



each roadway to accommodate expected traffic levels with the build-out of all land uses in each TAZ defined for the Lebanon area. Exhibit 2 illustrates the number of lanes needed to accommodate expected traffic levels in 2030.

#### *Key Elements of the Thoroughfare Plan*

It should be noted that the new roads (as shown in dashed lines) in the Thoroughfare Plan will not necessarily follow the alignments as shown. The dashed lines represent a concept of connectivity and future detailed engineering work will be needed to determine the exact path of the new roads.

The current roadway system in Lebanon lacks a good east-west connection. Also, all the State and US highways pass through the downtown area and a good “bypass” is not available for trucks and heavy vehicles. Given this, in conjunction with the need to serve future office and industrial developments (on the south side along I-71 as envisioned in the future land use map), various roadway systems were tested to assess their ability to properly accommodate future travel demands. The network that best accommodated future traffic demands on collector and arterial streets was selected as the “thoroughfare plan” – as illustrated in Exhibits 1 and 2.

It should be noted that a two-lane road (as defined in Exhibit 2) means one through lane in each direction with left turn lanes at intersections or center left turn lanes -- with a standard right-of-way (r-o-w) requirement of 70 feet. (A right-of-way of 70 feet is required by the City for a 36-foot wide pavement per the City code.) Similarly, a four-lane road means two through lanes in each direction and left turn lanes at intersections or center left turn lanes – with a r-o-w requirement of 120 feet (i.e., the code requirement for a pavement 60 feet in width).

The new roads and major improvements to the existing roads, as depicted in the Thoroughfare Plan (Exhibits 1 and 2) are as follows:

- Extension of Glosser-Richardson Road to Fujitec Drive as a four-lane roadway.
- Widening existing Glosser-Richardson Road from SR 63 to north of Turtle Creek Union Road to a four-lane roadway.
- A new two-lane roadway (extension of Hart Road) connecting SR 123 and SR 63 (at Glosser-Richardson Road).
- A new two-lane roadway (extension of McClure Road) connecting SR 63 and Greentree Road.
- Extension of Turtle-Creek Union Road to US 42 as a two-lane roadway.
- Widening of US 42 to a four-lane roadway from West Street all the way south to SR 741.

- A new four-lane road (extension of Kingsview Drive) that runs between Columbia Road and SR 741 -- intersecting US 42 and serving the industrial developments.
- Widening of Fujitec Drive and Kingsview Drive to a four-lane roadway.
- A new four-lane road that connects SR 48 and SR 123 on the south side and serves the future office developments.
- A new two-lane north-south road that connects SR 123 and Monroe Road (thereby connecting to the SR 48 bypass).
- Extension of Miller Road to SR 123 as a two-lane roadway.
- Widening of Miller Road to a four-lane roadway from US 42 to SR 48.
- Widening of SR 48 (Broadway) to a four-lane roadway north of Miller Road to SR 122.

As development and redevelopment occurs in the City, the supporting transportation system should be evaluated and appropriate improvements should be made in compliance with the Thoroughfare Plan. A Traffic Impact Study (TIS) should be performed for each development/redevelopment application, in accordance with the City's TIS guidelines, to determine what roadway system improvements are necessary to properly accommodate traffic generated by the subject development. Any roadway system improvements (including the construction of new roads) required to mitigate development traffic impacts should be compatible with the roadway system defined in the Thoroughfare Plan.

The supporting documents for the thoroughfare plan, which includes the projected traffic volumes, traffic operations and preliminary cost estimates, are presented in the Thoroughfare Plan Technical Appendix.

chapter 9  
IMPLEMENTATION



The comprehensive plan must provide benchmarks for the future development of the community and should also give strategies to the city staff, boards and commissions and elected officials to facilitate the implementation of the goals of the plan.

The following chapter outlines the strategies that the city could undertake to achieve the goals identified by the steering committee and the community for the future of Lebanon.

## GENERAL

1. Evaluate all development proposals against the uses, benchmarks, design and development patterns recommended in the comprehensive plan. Proposals not meeting the recommendations of the plan should not be approved.
2. Coordinate with neighboring jurisdictions on regional planning issues and share the Comprehensive Plan Update with them.
3. Share the plan with the school district and have continued conversations about future planning between the city and the school district.
4. Share the future land use map and the thoroughfare plan with Warren County and OKI Regional Council of Governments.

### *General Policy and Regulatory Changes*

Regulatory changes required to facilitate the development pattern desired by the plan recommendations.

1. Section 1133.06 shall be amended to require that all annexed land be brought into the municipal corporation with Rural Estate Residential Zoning Designation regardless of location. The land may be rezoned according to the recommendations of the comprehensive plan.
2. All new land to be annexed into the city shall contribute to the overall goals of the comprehensive plan and support a balanced growth of the city. All proposed annexations into the city shall be evaluated against the future land use map, thoroughfare plan and fiscal impacts.
3. Amend City capital improvement priorities to reflect the strategies and goals of the plan.
4. Conduct an income tax base analysis as it relates to the level of service provided by the city. Review the impacts of maintaining current income tax levels and the desires of the community for continued and improved city service levels.



Recreational opportunities provide an important element of community life.



A central, formal greenspace downtown would provide opportunities for gathering and civic events.

## RESIDENTIAL

The goal for residential development in Lebanon is to encourage sustainable, high quality development. The impacts of new housing development in Lebanon should be balanced to reduce the overall impact to the community and the services provided by the city.

### *Balanced Growth*

In order to achieve the overall goals for residential development, Lebanon shall require new residential areas be developed in accordance with the plan recommendations for densities, pattern and type. Also, growth of residential land use should correspond with revenue-generating land uses to provide the funds to maintain and improve city services provided to current and future residents.

1. Residential growth shall correspond with revenue-generating land uses to ensure funding for adequate service levels.
2. Encourage a wide range of housing price points in the community to provide a diversity of employees and residents.
3. Require developer contributions for infrastructure improvements at the time of development.
4. Investigate the possibility of establishing a community authority for new development that would help fund improvements to infrastructure based on the additional residential growth. (See Chapter 349 of the Ohio Revised Code)

### *Housing*

To achieve a diverse housing mix in the community that will provide life-span opportunities for housing in Lebanon, the city must consider unique housing products and require high quality design and development pattern.

1. Promote innovation and high quality design.
2. Encourage use of green building and site design initiatives to minimize the impact of new residential development on the environment.
3. Provide incentives to encourage development of single family homes where two plus unit dwellings are currently located. The exception is downtown where multi-family housing is encouraged.

### *Maintaining Character*

Maintaining the strong residential character of Lebanon is a priority as the city continues to grow.

1. Continue to invest public money into maintaining infrastructure in existing neighborhoods like roadways, sidewalks, street trees in the public R.O.W. Maintenance of the public realm is key to maintaining a high level of quality in the housing stock and the overall condition of the neighborhoods.
2. Investigate city residential rental property inspection program.

### *Conservation development*

A key component to the success of Lebanon's future development is creating a transition between the existing city development pattern and the rural character of the area. Creating this transition preserves the rural character, protects natural features and promotes the small town atmosphere of Lebanon.

1. Facilitate conservation development patterns by examining current codes and regulation of applicable agencies to identify conflicts and recommend changes.
2. Establish a policy for the maintenance of open space that is set aside in residential developments. The policy should most often place responsibility with the home owners association. The exception being if the city identifies a public benefit for the assumption of maintenance of the open space. Such a case would include opportunities for new public parks or greenway connections for trails, or preservation of key natural features.

### *Regulatory*

Regulatory changes required to facilitate the development pattern desired by the plan recommendations.

1. Provide a zoning classification permitting conservation subdivisions that is based on the development pattern recommended in the future land use plan. Create a *Conservation Subdivision Planned Unit Development District* be created in Section 1133.123 (Special Districts) of the Lebanon Zoning Code to facilitate the development of conservation subdivisions in the areas indicated by the future land use map. This zoning category should permit the development of both the Conservation Residential and the Transition Rural Future Land Use Districts.
2. Amend the cul-de-sac regulations to require a variance which would only be granted if developer proves that the physical constraints of the site necessitate the use of a cul-de-sac, rather than a stub street, to viably develop the parcel.



Unique residential products can position Lebanon as a life-span community.



## OFFICE

Successful office development in Lebanon should be sustainable, attractive, and contribute to the character of the community. It should also establish Lebanon as a premier office community.

### *Office Development*

1. Encourage the construction of owner-occupied office buildings and minimize speculative office building development.
2. Facilitate the construction of a service road in the freeway commerce district along I-71. Lebanon can establish a Tax Increment Financing (TIF) District in the area along I-71 designated for office development to fund the construction of the roadway as development occurs.
3. Establish a regional stormwater plan for areas designated for future professional office or freeway office where it could minimize the outlay of funds for stormwater infrastructure.

### *Amenities*

Establishing amenities in the community benefits businesses and their employees as well. Companies are more likely to remain in places where the community is an active and interesting place for their employees.

1. Encourage the development of “Third Places” in the community. Retail and restaurant development around office uses should be focused on places where off-site meetings could take place, not fast food establishments. There should also be opportunities in these areas for employees to accomplish errands like getting gas, groceries or dry cleaning.
2. Bike paths, trails and pedestrian connections should be made to all office developments and connect to the larger greenway network in the city and the county. It should also connect to downtown and the Countryside YMCA.

### *Regulatory*

Regulatory changes required to facilitate the development pattern desired by the plan recommendations.

1. Provide a zoning classification to the Lebanon Zoning Code in Section 1133.12; Office *Planned Unit Development District* to facilitate the development of quality office buildings and campuses in keeping with the recommendations of the Professional Office and Freeway Office Future Land Use Districts.

## ECONOMIC DEVELOPMENT

Lebanon’s ability to provide a high level of service for its residents is dependent upon the presence of revenue-generating land uses in the city. In Ohio those revenue-generating land uses are office developments. Therefore, it is important to Lebanon’s future to develop the businesses in the city and foster their growth.

### *Business Development Programs*

Lebanon must set up programs to encourage the development and retention of business.

1. Establish a business incubation program to encourage the growth of new businesses in Lebanon. Locate new businesses in buildings downtown or along corridors targeted for redevelopment to maximize the benefit to the community.

### *Incentives*

In order to create an environment that attractive to do business in, Lebanon must set up the programs and incentives needed to facilitate that environment.

1. Continue to use utility, infrastructure and tax incentives to locate businesses in Lebanon that would provide benefits to the city.
2. Evaluate current tax incentive packages offered by the city against comparable incentive packages in other like communities.



Providing opportunities for attractive iconic office buildings can set Lebanon apart from other communities

## RETAIL

Retail in Lebanon is currently over-zoned and over-developed. The existing retail must be improved and future retail should be balanced with a growing population and should follow the development recommendations of the comprehensive plan.

### *Limitations*

Retail uses are tenuous and therefore the city should limit additional retail in Lebanon.

1. Lebanon shall not allow additional ground to be zoned retail outside of what is currently designated on the future land use map.

### *Development Pattern*

Retail uses are most successful when clustered in nodes to create synergy, and therefore more sustainable.

1. Retail uses will be focused in nodes. The city should facilitate through rezoning or incentive programs the concentration of existing, under-performing retail that is not currently located within a node.
2. High quality buildings, site design and landscaping shall be required for all retail development. The design and pattern must be in keeping with the requirements of the comprehensive plan.



Faux facade treatments do not contribute to community character.

## DOWNTOWN REVITALIZATION

One of the most important goals to the residents and stakeholders in Lebanon is to preserve and enhance historic downtown Lebanon. It is recognized as one of the best assets of the community and the future development of Lebanon should support it, not compromise it.

### *General*

1. Update the 2001 Downtown Master Plan

### *Housing*

Housing within and close to downtown is a key factor in the revitalization of downtown. Downtown must be a neighborhood to create constant activity and a sense of vibrancy.

1. Allow quality higher density housing to occur in and in the immediate area surrounding downtown.
2. Provide tax incentives to encourage the location of new housing downtown.
3. Encourage the location of housing products downtown that will draw residents and provide lifespan housing options for all Lebanon residents.
4. Facilitate the preservation and maintenance of existing housing within the downtown district.

### *Amenities*

To be an attractive and desirable place to visit and live community amenities must be located to draw residents and visitors downtown.

1. Locate civic uses and institutional uses downtown whenever possible.
2. The city should locate and develop a central, formal greenspace for gatherings and civic events.
3. Improve conditions along the creek to provide a natural downtown amenity. Locate a boardwalk or other public access feature along the creek.
4. The community trail network should have connections to downtown.

### *Parking*

One of the most complicated elements of infill, redevelopment and tenant location in downtowns is solving the modern parking concerns in a historic development pattern. Parking must be addressed to court new retail, restaurants, office and residents downtown.

1. Facilitate the construction of a downtown parking garage to pool parking and encourage quality infill in an urban pattern.



### Regulatory

Regulatory changes required to facilitate the development pattern desired by the plan recommendations.

1. A Downtown Overlay Zoning District should replace the Architecture Review Overlay District 1133.14(B) and should be applied to all properties within the downtown district on the future land use map. The zoning district should foster a mixed use downtown district that encourages housing, retail and offices located within the downtown district. The zoning district should maintain separation of non-compatible uses.
2. A form based code should be developed to replace the Historic Preservation Standards (Section 1140). The new code should provide clear, illustrated direction for the maintenance of downtown and the development of new housing, retail and offices downtown. Preservation of existing historic buildings will remain a central element. The district standards should encourage infill and new development and not create unnecessary obstacles.
3. Neither the zoning code nor the city should distinguish between the Central Business District Subarea and the Historical Residential Subarea. Instead the code should recommend that non-compatible uses not be located proximate to one another, however, a vibrant mix of uses is encouraged.
4. The boundaries of historic preservation district should be extended to match the boundaries of the downtown district on the future land use plan.

### CORRIDOR REDEVELOPMENT

Redevelopment of the under-performing corridors in Lebanon is a high priority. They often function as gateways into the community and are not currently reflective of the high quality of Lebanon.

#### Improvements

In order to facilitate the redevelopment of the identified corridors some public investment may be required.

1. Implement streetscape improvements along Main Street East of Downtown as recommended by the Main Street East Focus Area Plan.

#### Regulatory

Regulatory changes required to facilitate the development pattern desired by the plan recommendations.

1. Establish development guidelines along major gateway corridors based on the focus area strategies laid out in the plan.
2. Establish a TIF Incentive District encouraging mixed use redevelopment along Columbus Avenue and Broadway north of downtown as indicated by the focus area plans.
3. Provide tax incentives to encourage the location of new residential and office uses to replace the existing retail uses outside of the established retail nodes.



Mixed use infill development should be of high architectural quality and contribute to the urban fabric.



Buildings must respond in character, architecture and site design to its existing surroundings in the community.

## PARKING

1. Identify locations for shared public parking in redevelopment areas along the commercial corridors and in downtown.
2. Impacts of parking should be mitigated throughout the city. No roadway corridor shall be dominated by parking.

## NATURAL FEATURES PRESERVATION AND SUSTAINABILITY

The preservation of natural features protects the environmental quality of the area, preserves the character of the area and provides amenities for the residents.

### *Development*

Preservation of land in the community must occur at the time of development.

1. Preservation of woodlots greater than 3 acres, steep slopes greater than 10%, and the riparian areas within the 100-year floodplain are encouraged.
2. Features associated with agricultural or farming located in the conservation residential district or the rural transitional district should be preserved whenever possible. These features may include, but are not limited to, fence rows or barns.
3. Public access to the area's prominent natural features like waterways shall be maintained.
4. Development in the Conservation Residential and the Transition Residential Future Land Use Districts should be designed to highlight and reflect the natural character of the area.

### *Green Building and Site Design Tools*

Minimizing the impact of Lebanon's growth will create a sustainable community for the long term.

1. Encourage the use of green building practices and site design whenever possible. Explore use of incentives to facilitate LEED practices be employed for new development.
2. Encourage the reuse of existing developed parcels and buildings over greenfield development
3. Encourage multi-modal transportation options for residents, visitors and employees to come into and travel within Lebanon.

## OPEN SPACE

### *Parks*

The development of a strong parks system is key to Lebanon being a successful and attractive city for residents, visitors and employees.

1. The Parks Master Plan shall guide the development of new parks and open spaces in the City.
2. Explore opportunities to work with the township and the county to create a joint parks board and levy for acquisition of land for open space preservation and parks.

### *Greenway Connections*

Creating a greenway network throughout Lebanon will create an attractive amenity that will be important to the long term success of the community.

1. Greenways should be identified and connected to create strong greenway linkages throughout the city. Once identified the city shall require preservation of greenway corridors within developments.
2. The city should prioritize the greenway connections needed to achieve a community wide network of greenways and work to make the connections.

### *Open Spaces*

Preservation of open spaces will contribute to the attractiveness of the community and preserve the character of the area as Lebanon grows.

1. Facilitate the preservation of open space and key natural features whenever possible.
2. Open spaces should be incorporated in all new developments in accordance with the recommendations of the future land use map.



Making greenway connections in the community provide preserved open spaces and recreational opportunities.



## ROADWAYS AND CORRIDORS

### *Character*

One of the most prominent elements of a community for visitors and residents are its roadway corridors. They should function well and be attractive.

1. Development shall adhere to the typologies designated in the Public Realm chapter of the plan.
2. All efforts should be made to minimize road widths.

### *Function*

The roadways should be functional and safe as well as attractive.

1. Facilitate improvements to the roadways system as growth occurs according to the recommendations of the Thoroughfare Plan.
2. Require the dedication of Rights-of-Way at the time of development as designated by the Thoroughfare Plan.
3. Provide safe pedestrian and bicycle accommodation and access along all roadway corridors.

### *Connections*

Strong connections in the city provide safe streets by spreading the traffic burden along multiple streets and create neighborhoods that function together as a whole community rather than separate subdivisions. Also, trail and pedestrian connections provide a key amenity that improves the quality of life for residents and the experience for visitors.

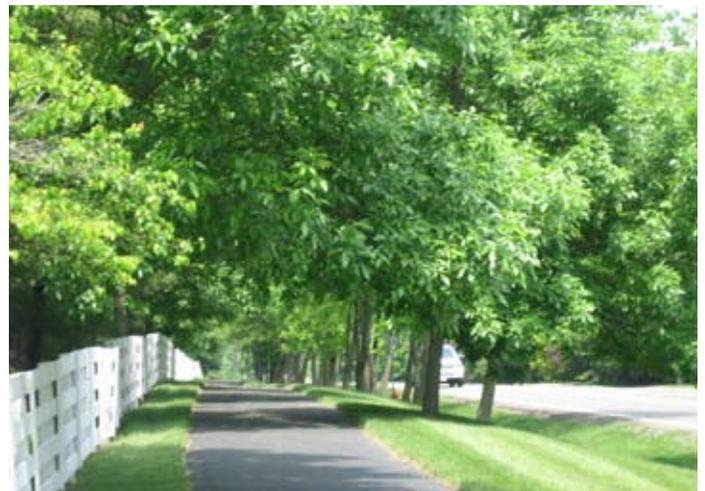
1. Create roadway connections at all possible opportunities
2. Connect all neighborhoods by trails and sidewalks to establish a community wide network allowing residents to have a full range of transportation options.
3. Sidewalk connections should be made when parcels are redeveloped even if not currently present.

## GATEWAYS

1. Gateways shall be managed at the time of development per the gateways section of the Lebanon Comprehensive Plan.
2. Lebanon shall work with ODOT to improve the landscaping and character of the exit/entrance ramps at SR 48/I-71 and SR48/SR123.
3. Improve wayfinding for visitors to downtown Lebanon from the nearby freeways and neighboring destinations.



Gateways should define the edges of the community and communicate the character of the city.



Managing corridors creates attractive corridors that speak to the quality of the community.

## PLAN AMENDMENT

The city is able to amend the comprehensive plan over as circumstances dictate prior to a future plan update process. Circumstances that may constitute a plan amendment are:

1. New technologies or market opportunities that can be incorporated into Lebanon's growth become available.
2. Regional influences change.
  1. Significant changes to procedures, policies, regulations and/or state or federal law that change the landscape in which the plan was designed.
  2. Unexpected and not desired impacts become evident.
  3. The established benchmarks of the plan are not being realized.

Changes should be more critically evaluated if proposed as a reaction to a specific development proposal.

### *Procedure*

Should an amendment to the plan be proposed the following procedure should govern the amendment process.

1. Amendments should originate from:
  - A. A staff recommendation to Planning Commission
  - B. A request by a member of Planning Commission or City Council
2. Staff Review  
Once request is made for an amendment staff will review the request and provide a staff recommendation on the proposed amendment based on the validity of the change and evaluated against the community goals for the future growth of Lebanon as outlined in the plan.
3. Planning Commission Review  
Planning Commission shall review the requested amendment and evaluate the change to determine whether it will better serve to meet the goals of the city. Planning Commission will provide a recommendation to Council for their review.
4. City Council Review  
City Council shall review the requested amendment and evaluate the change against the recommendation of staff and planning commission to determine whether it will better serve to meet the goals of the city. Council will make a determination and if approved the plan will be changed to reflect the amendment.



FIGURE 35: IMPLEMENTATION SUMMARY

Community Goal	Actions	Benchmarks
<p><i>Develop a quality community that is sustainable in the long term.</i></p>	<ul style="list-style-type: none"> <li>• Require high quality building and site design throughout the community.</li> <li>• Encourage innovative and progressive tools in community development.</li> <li>• Grow slowly so as to manage the impacts of new development on the community.</li> <li>• Develop according the future land use plan with a focus on the core and preserves of the surrounding rural character.</li> </ul>	<ul style="list-style-type: none"> <li>• There is a high quality of life for the residents in Lebanon.</li> <li>• Lebanon is a desirable and attractive place to live, work and recreate.</li> <li>• Lebanon is fiscally sustainable.</li> </ul>
<p><i>Achieve and overall land use balance</i></p>	<ul style="list-style-type: none"> <li>• Evaluate current incentive package.</li> <li>• Increase office development.</li> <li>• Evaluate new development using the fiscal impact analysis tool.</li> <li>• Provide amenities including ‘third places’ and recreational opportunities.</li> <li>• Establish a business incubation program.</li> <li>• Streamline regulatory impediments to new office development.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased revenue for the city with limited increase in cost of services.</li> <li>• Number of employees in the city increases.</li> <li>• Location of a large scale office in the city.</li> </ul>
<p><i>Improve condition of existing retail</i></p>	<ul style="list-style-type: none"> <li>• Not zone additional retail ground in the city.</li> <li>• Facilitate the concentration of existing retail corridors into nodes.</li> <li>• Require high quality buildings and site design that matches the surrounding character.</li> <li>• Invest in streetscape improvements along East Main Street and Columbus Avenue.</li> <li>• Establish development guidelines for development along the retail corridors.</li> <li>• Establish a TIF incentive district along the corridors.</li> </ul>	<ul style="list-style-type: none"> <li>• Retail corridors see redevelopment.</li> <li>• Businesses and new residential development outside of the identified retail nodes.</li> <li>• New retail is successful and attractive.</li> </ul>
<p><i>Revitalize Downtown</i></p>	<ul style="list-style-type: none"> <li>• Update the 2001 Downtown Master Plan.</li> <li>• Not zone additional retail ground outside of downtown.</li> <li>• Add new high quality residential downtown and in surrounding neighborhoods.</li> <li>• Develop a central, formal greenspace downtown.</li> <li>• Improve condition of creek and public access to it.</li> <li>• Connect community trail system to downtown.</li> <li>• Construct a centrally located parking garage.</li> <li>• Develop a Downtown Overlay Form Based Code.</li> <li>• Extend boundaries of ‘downtown’ according to the future land use map.</li> </ul>	<ul style="list-style-type: none"> <li>• New tenants locate downtown, both retail and offices.</li> <li>• Storefronts diversify downtown, not limited to the antique trade.</li> <li>• Goods and services are available downtown for residents of Lebanon.</li> <li>• Downtown is vibrant both day and night.</li> <li>• Infill development occurs.</li> <li>• New housing is built downtown and surrounding.</li> </ul>

## IMPLEMENTATION SUMMARY

Community Goal	Actions	Benchmarks
<i>Develop roadways that are functional and attractive</i>	<ul style="list-style-type: none"> <li>• Establish connections whenever possible between roadways and locate stub streets when necessary.</li> <li>• Require roadways be developed or improved according to recommendations of the thoroughfare plan and design them according to the character recommendations of the roadway typologies.</li> <li>• Require new development to adhere to the recommended treatment according to the typologies.</li> <li>• Include pedestrian and bicycle accommodations along all roadways.</li> </ul>	<ul style="list-style-type: none"> <li>• Roadways take on a cohesive and organized character that corresponds with the character of the area.</li> <li>• The overall roadway system handles traffic safely and efficiently.</li> <li>• Pedestrian and bicycle connections occur throughout the city on all roadways.</li> </ul>
<i>Increase Parks and Open Spaces</i>	<ul style="list-style-type: none"> <li>• Follow recommendations of the Parks Master Plan</li> <li>• Investigate opportunities to create a joint parks board with the township or county.</li> <li>• Create a city-wide greenway plan to identify opportunities for preservation at the time of development.</li> <li>• Require the preservation of open space and key natural features in all developments.</li> <li>• Preserve public access to natural features in the community.</li> <li>• Increase trail miles and create connections.</li> </ul>	<ul style="list-style-type: none"> <li>• New trail connections are created improving the overall system.</li> <li>• Natural features are preserved and maintained for public access.</li> <li>• New parks are developed to serve the community.</li> </ul>

<b>ACTION PLAN</b>	
<b>Timeline</b>	<b>Actions</b>
<i>Short Term</i>	<ul style="list-style-type: none"> <li>• Evaluate development proposals against the recommendations in the plan.</li> <li>• Share Comprehensive Plan with neighboring jurisdictions, Warren County, OKI and the school district.</li> <li>• Amend the Capital Improvements Plan based on plan recommendations.</li> <li>• Adopt new annexation policy that reflects the recommendations of the plan.</li> <li>• Investigate possibility of establishing a Community Authority.</li> <li>• Execute Residential Rental Property Inspection Program.</li> <li>• Examine codes and regulations of other agencies involved in development review and identify instances where their regulations impede implementation of the plan.</li> <li>• Establish a policy for open space maintenance.</li> <li>• Create Subdivision Planned Unit Development District in the zoning code.</li> <li>• Amend cul-de-sac regulations in the Subdivision Regulations.</li> <li>• Create an Office Planned Unit Development District in the zoning code for freeway office development.</li> <li>• Redefine the boundaries of downtown according to the future land use map.</li> </ul>
<i>MidTerm</i>	<ul style="list-style-type: none"> <li>• Conduct an income tax base analysis and service needs inventory for the city.</li> <li>• Establish incentives for conversion of two family dwellings to single family homes.</li> <li>• Establish a TIF district along I-71 for office development improvements.</li> <li>• Evaluate current tax incentives package provided by the city.</li> <li>• Develop design guidelines for the existing commercial corridors.</li> <li>• Update 2001 Downtown Master Plan.</li> <li>• Create a tax incentive package for development of new residential in the downtown district.</li> <li>• Develop a form based code for downtown.</li> <li>• Implement streetscape improvements along East Main Street.</li> <li>• Establish a TIF along existing retail corridors.</li> <li>• Explore opportunities to create a joint parks board with the county or townships.</li> <li>• Create a city greenways plan.</li> <li>• Conduct a city wayfinding inventory and create a plan to improve wayfinding.</li> </ul>
<i>Long Term</i>	<ul style="list-style-type: none"> <li>• Facilitate construction of a new road along I-71.</li> <li>• Create a regional stormwater master plan for the office district along I-71.</li> <li>• Establish a Business Incubation Program.</li> <li>• Develop incentives to redevelop existing retail along the corridors into office and high quality housing outside of the established retail nodes.</li> <li>• Develop a formal, central greenspace downtown.</li> <li>• Improve conditions along the creek downtown and improve public access.</li> <li>• Develop a downtown parking garage.</li> <li>• Work with ODOT to improve character of exit/entrance ramps at SR48/I-71 and SR48/SR 123.</li> </ul>

appendix 1  
FISCAL IMPACT ANALYSIS MODEL



## FISCAL IMPACT ANALYSIS MODEL

An often overlooked consideration in the planning for the future of a community is the impact of new development on the municipal budget. One reason for the lack of consideration for fiscal impacts is the difficulty in quantifying the impact with any certainty. There are many factors that influence the impact of a particular development including use, intensity, pattern and other particulars of the development. Making predictions about fiscal impacts is complicated and always admittedly imprecise. However, it is a worthwhile evaluation to perform and to consider for new development in the community, even if it is an approximation of the impact. An estimate of the impact can be established by using information about the city and the cost of services today as well as information from comparable communities.

In an effort to provide direction to citizens, planners, elected officials, and developers about the impact of new development on the fiscal health of the community the City of Lebanon developed and intends to utilize a fiscal impact analysis tool. The tool is a computer model that measures the revenues and costs of a proposed land use on a case-by-case basis and determines whether the proposed development is a net benefit or cost to the city of Lebanon's municipal budget. The tool was also used to evaluate the future land use map to ensure that it provided sufficient revenue generating land as compared with the amount of additional residential.

The most important caveat to the fiscal impact analysis model is that it is not intended to be the single driver of land use policy for the City of Lebanon. The results derived from the fiscal impact analysis model should be used during the development review process to determine an estimated impact of the proposed development on the fiscal health of the City.

### Costs

All new development in a city requires some level of city services in a large scale with police protection and infrastructure improvements and in a smaller scale with services like snow removal. As the city grows so do the service requirements. However, costs vary depending on the type of development added to the community as well as the intensity and pattern in which it is developed. An industrial development on 100 acres has far less police runs, public roads to maintain, and fire protection required than a residential development located on the same 100 acres.

Also, there are up front costs to some developments as well as continued service requirements that have different impacts on the municipal budgets. These impacts should

### Summary of Costs and Revenue Values

#### Costs\*

##### *Residential Uses*

Police	\$300/resident annually
Fire	\$150/resident annually
Roads	\$5,000/mile annually
Parks	\$2,500/acre annually

##### *Office Uses*

<i>Aggregate City Services</i>	<i>\$0.50/ gross leasable sq ft</i>
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##### *Industrial Uses*

<i>Aggregate City Services</i>	<i>\$0.30/ gross leasable sq ft</i>
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##### *Retail Uses*

<i>Aggregate City Services</i>	<i>\$1.50/ gross leasable sq ft</i>
--------------------------------	-------------------------------------

#### Revenues

City Property Tax	10.72%
Fire Levy	5.5 mils
City Earnings Tax	1%

\*Regional averages

be evaluated separately as one represents one-time, although often substantial costs, and the other sustained commitments for the city.

Each city is unique in the services and amenities they provide. There are the basic responsibilities that cities have like roadway improvements and police and fire protection. However, many cities choose to provide amenities above and beyond the basic services. Amenities like parkland, trails, and aesthetic improvements carry additional costs. The level of service and amenities provided by the city directly impacts the costs associated with a new development.

For the purposes of Lebanon's Fiscal Impact Analysis Model the following costs were attributed to new developments to meet public needs and the amenities provided by the City of Lebanon including (estimated):

- Roadway improvements
- Utility improvements
- Additional park acreage
- Police services
- Fire services
- Road maintenance
- Park maintenance

The values attributed to each of the costs for improvements would be based on the development parameters and needs. The maintenance costs in the model are based on existing cost of services provided by the City of Lebanon.

The value used for the cost of services in the model is unique to each land use which reflects the differing needs of each land use for services. The public roads constructed as part of a residential development will need to be maintained by the city whereas an industrial development that has only private, internal roadways will not cost the city in roadway maintenance. Retail land uses require more police and fire service dedication than an office building. Industrial development requires more utilities than an office building. The cost values associated with each land use are based on the cost of services to the City of Lebanon as well as cost information from comparable cities in the region.

#### *Current Land Use Balance*

The existing land use mix in Lebanon is an important base factor related to the current balance of land uses. New land uses should be evaluated against the current needs in the community to achieve or maintain the overall land use balance.

#### *Current Service Levels*

The current service levels for police, fire, road maintenance, snow removal, parks and recreation must be considered to evaluate the impact on those service levels of a new development.

Police: 1 Officer/ 526 residents  
Fire: 1 Station/ 10,000 residents  
Parks and Recreation: 21.7 acres/1,000 residents

#### *Roadways*

Because the roadway improvements in Lebanon are already challenged, roadway construction or improvements associated with a new development will be weighted more heavily than in comparable communities. This weight can be reduced if developer contributions are included to offset this cost. Additionally, continued maintenance for new roads has a sustained impact on the city's finances.

#### *Water and Sewer Infrastructure*

Because the water and sewer improvements in Lebanon are already challenged, construction or improvements to water and sewer lines associated with a new development are weighted more heavily than in comparable communities. This weight can be reduced if developer contributions are included to offset this cost.

## **Revenues**

All land also provides some type of revenue to the city budget through either property taxes or income taxes. The fiscal impact analysis model is limited to these two types of revenue most influenced by the proposed development. Alternative city revenue like state shared taxes, interest on investments, charges for services, fines, licenses and permits, and other miscellaneous were not included. Also, proprietary funds, which are fees charged for services including electric, sanitation, sewer, telecommunications, water and stormwater, were not included in the evaluation. These are charged by usage and may be altered to reflect increased need, so the continued service of these utilities is not a substantial consideration for fiscal impact to the community.

The city budget in Lebanon is largely funded by the City Earnings Tax. This tax is assessed at 1% for individuals employed within City limits. There is no reciprocal tax and therefore residents that work outside the city are given a credit for taxes paid to another municipality, not to exceed Lebanon's tax rate of 1%. For example, a Lebanon resident earning wages of \$10,000.00 in Cincinnati, would pay \$210.00 annually to Cincinnati (which has a 2.1% income tax) and receive a full credit for the 1% city earnings tax in Lebanon because the 2.1% income tax rate exceeds that of Lebanon. Lebanon has a low income tax rate relative to other municipalities making it likely that most residents employed elsewhere receive the tax credit. This creates an environment where Lebanon is extremely reliant on land uses associated with incomes.

Land uses with associated incomes are retail, office, commercial and some civic and institutional uses. In addition to city earnings tax revenue these land uses also provide property taxes. Residential land uses provide property tax revenue to the city but no city earnings tax revenue.

In addition to city earnings tax and property taxes there is a 5.5 mil fire levy resulting in \$2,987,650.00 in revenue for 2008 to fund fire protection services in the city.

Finally, in the course of the development developer contributions for improvements may defer the cost of the development.

## **Adjustments**

The developer may contribute to the up front cost of roadway and other infrastructure improvements which reduces the burden on the city. Also, revenue generating mechanisms can be put in place such as community

authorities, to assist with capital improvement costs or services across time. The fiscal impact analysis accounts for developer contributions but any continuing revenue stream would have to be accounted for outside of the model.

Also, the impact of infrastructure improvement costs can be reduced depending on the design of the development. Making efforts to minimize the length of sewer and water line extensions, minimizing the public roadway widths and lengths, utilizing existing infrastructure, and redeveloping existing parcels all lead to lower infrastructure improvements costs to develop the parcel.

**Proposal Viability**

In order to properly evaluate the impact of a proposed development some evaluation must be made about the likelihood of the full development reaching completion. Some developers sell a plan that includes both residential as well as commercial components to support the residential land uses. However, if the commercial component is never completed there will be no revenue generated to support the residential. It is therefore it is necessary to evaluate the proposal critically against the market and viability of the proposal.

**Value Factor**

The value is an impact factor of the proposed development on the fiscal health of the city. The factors are assigned weights based on the existing land use balance in the city. The applied factors are as follows:

	Capital	Annual
Residential	0.2	0.4
Office	0.1	0.2
Industrial	0.1	0.2
Retail	0.15	0.3

The weight is higher for the annual impacts since they will affect the city fiscal health in the long term. The capital factors are all lower reflecting their temporary impact on the city.

Residential is weighted at twice the factor of office and industrial due to the current over abundance of residential in Lebanon. Also, retail, although not as likely to be a negative fiscal impact for the city it is also over abundant in Lebanon.

**Input Terms Defined**

Acreage: Total acreage of proposed development site.

Assessed Value per Unit: Estimated average value of homes proposed in the development reduced by 30% for auditor appraisal value reduction.

Cost for Roadway Improvements by the City: Estimated total cost of improvements, on and off site, needed as a result of the proposed development based on the traffic impacts identified in the course of development review.

Cost for Utility Improvements By the City: Estimated total cost of improvements, on and off site, needed as a result of the proposed development based on infrastructure and utility needs identified in the course of development review.

Developer Contributions: Any monies contributed by the developer toward cost of improvements, on site or off, required by the proposed development.

Estimated Number of Employees: Number of full and part time employees anticipated in an office, industrial or retail development.

Gross Leasable Square Footage: Total floor area designed for tenant occupancy and exclusive use to be leased in an office, industrial or retail development.

Public Road Miles: Number of roadway lane miles proposed to be public within the proposed development.

Salary: Anticipated average annual salary for the total number of employees in an office, industrial or retail development.

Unit Count: Total number of single family and multifamily units in the proposed development.

**Output Terms Defined**

Estimated Revenue (Capital): Estimated revenue to pay for capital improvement costs associated with the development.

Estimated Revenue (Annual): Estimated annual revenue generated by the proposed development.

Estimated Costs (Capital): Estimated capital improvement costs associated with the proposed development.

Estimated Costs (Annual): Estimated annual costs associated with the services provided and maintenance required by the proposed development.

Estimated Impacts (Capital): Estimated capital impact to the city of the proposed development.

Estimated Impacts (Annual): Estimated annual fiscal impact to the city of the proposed development.

## FISCAL IMPACT VALUE FACTOR MATRIX

RESIDENTIAL	Capital Value		Annual Value	
	Less than -20	Very Poor	Less than -20	Very Poor
	-20 to -10	Very Poor	-20 to -10	Very Poor
	-10 to 0	Poor	-10 to 0	Poor
	0 to 5	Poor	0 to 5	Marginal
	5 - 10	Marginal	5 - 10	Satisfactory
	Greater than 10	Marginal	Greater than 10	Satisfactory
OFFICE	Capital Value		Annual Value	
	Less than -20	Poor	Less than -20	Very Poor
	-20 to -10	Marginal	-20 to -10	Poor
	-10 to 0	Satisfactory	-10 to 0	Marginal
	0 to 5	Excellent	0 to 5	Satisfactory
	5 - 10	Excellent	5 - 10	Excellent
	Greater than 10	Excellent	Greater than 10	Excellent
INDUSTRIAL	Capital Value		Annual Value	
	Less than -20	Poor	Less than -20	Very Poor
	-20 to -10	Marginal	-20 to -10	Poor
	-10 to 0	Satisfactory	-10 to 0	Marginal
	0 to 5	Excellent	0 to 5	Satisfactory
	5 - 10	Excellent	5 - 10	Excellent
	Greater than 10	Excellent	Greater than 10	Excellent
RETAIL	Capital Value		Annual Value	
	Less than -20	Very Poor	Less than -20	Very Poor
	-20 to -10	Poor	-20 to -10	Poor
	-10 to 0	Poor	-10 to 0	Poor
	0 to 5	Marginal	0 to 5	Marginal
	5 - 10	Satisfactory	5 - 10	Satisfactory
	Greater than 10	Satisfactory	Greater than 10	Excellent

Very Poor	Highly inadvisable for the city to permit the development.
Poor	Inadvisable for the city to permit the development
Marginal	Only advisable if development is providing other substantial benefits to the community.
Satisfactory	Limited benefit or cost to the city fiscally, the city should rely on other policies and goals to evaluate development.
Excellent	City should permit the development provided it is not contrary to other goals and policies of the city.

appendix 2  
THOROUGHFARE PLAN



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## OVERVIEW

The Comprehensive Plan is the key policy document for decision making about Lebanon's built and natural environments. The Comprehensive Plan text and related maps contain detailed recommendations for future development including the appropriate location and density/intensity of residential and commercial uses; the general location and character of roads; and the general location of parks and open space. Throughout the plan, recommendations are based upon a review of existing conditions and evaluation of future development scenarios for their impact on infrastructure and roads. The transportation plan and the land use plan form the foundation of the Comprehensive Plan document.

The thoroughfare plan is the primary reference tool within the transportation plan, while the future land use map is the primary planning instrument within the land use plan. Both of these primary planning elements provide the foundation to guide decision-making regarding the appropriateness of development proposals and infrastructure improvements necessary to support future development.

### *Relationship with Other Planning Documents*

The Lebanon Thoroughfare Plan was developed in concert with other planning documents which include:

- The Warren County Thoroughfare Plan, and
- ODOT's Functional Classification Map for Warren County.

The following documents were referenced in the Warren County Thoroughfare Plan:

- Warren County Transportation Plan,
- OKI Regional Transportation Plan, and
- Southwest Warren County Transportation Study.

As a result of the updated Thoroughfare Plan, changes were recommended to Lebanon's Land Development Design & Construction Standards Manual (Section 5 - Roadway and Pavement Design). Other recommendations included: (1) updating the Traffic Impact Study Guidelines, (2) adding Access Management Standards and Guidelines, and (3) revising the Traffic Calming Standards and Guidelines.

### *The Thoroughfare Plan*

The City of Lebanon has defined a Thoroughfare Plan:

- To establish and maintain a roadway system as a component of a balanced and integrated area-wide

transportation system,

- To promote the development and maintenance of a safe, effective, and efficient roadway system,
- To promote the development of roadway services and facilities which will serve to support the economic growth of the area, and
- To achieve compatibility between the roadway system and land uses as envisioned by the City and other jurisdictions.

The Thoroughfare Plan is composed of two elements: (1) Exhibit 1 showing existing and planned roads by functional classification and right-of-way width, and (2) Exhibit 2 showing the number of through lanes required on each roadway link. The roadway network shown on Exhibit 2 graphically identifies the number of lanes needed to accommodate projected year 2030 development in Lebanon. Larger format printout of Exhibit 1 is contained in the back pocket of this report.

All highways, roads and streets within Lebanon and the surrounding area form a hierarchy according to the function they theoretically should serve. They serve traffic mobility, land access, or some combination of these two. Interstates and expressways are at the highest level; their primary function is mobility, so they have the strictest access controls. At the other end of the scale are local streets serving low traffic volumes at low speeds over short distances. Their primary purpose is to give frequent, direct access to adjacent land, so restrictions are minimal. Between these extremes are the classes of arterials and collectors that make up the bulk of the transportation network. They include many of the most important roadways in Lebanon and Warren County -- and they are often expected to perform multiple and conflicting traffic services. They must serve both the demand for mobility and the demand for land access.

The City's Thoroughfare Plan recognizes five basic roadway functional classifications, as follows:

**Major Arterial:** Carries regional traffic, links cities, and carries long-distance statewide trips.

**Minor Arterial:** Carries local and regional traffic, links communities, and carries intermediate and long-distance trips.

**Major Collector:** Collects and distributes traffic to arterials. They also provide access to specific traffic destinations, allow easy movement from one neighborhood to another, and provide cross-town traffic movement.

**Minor Collector:** Takes traffic from local roads, carries

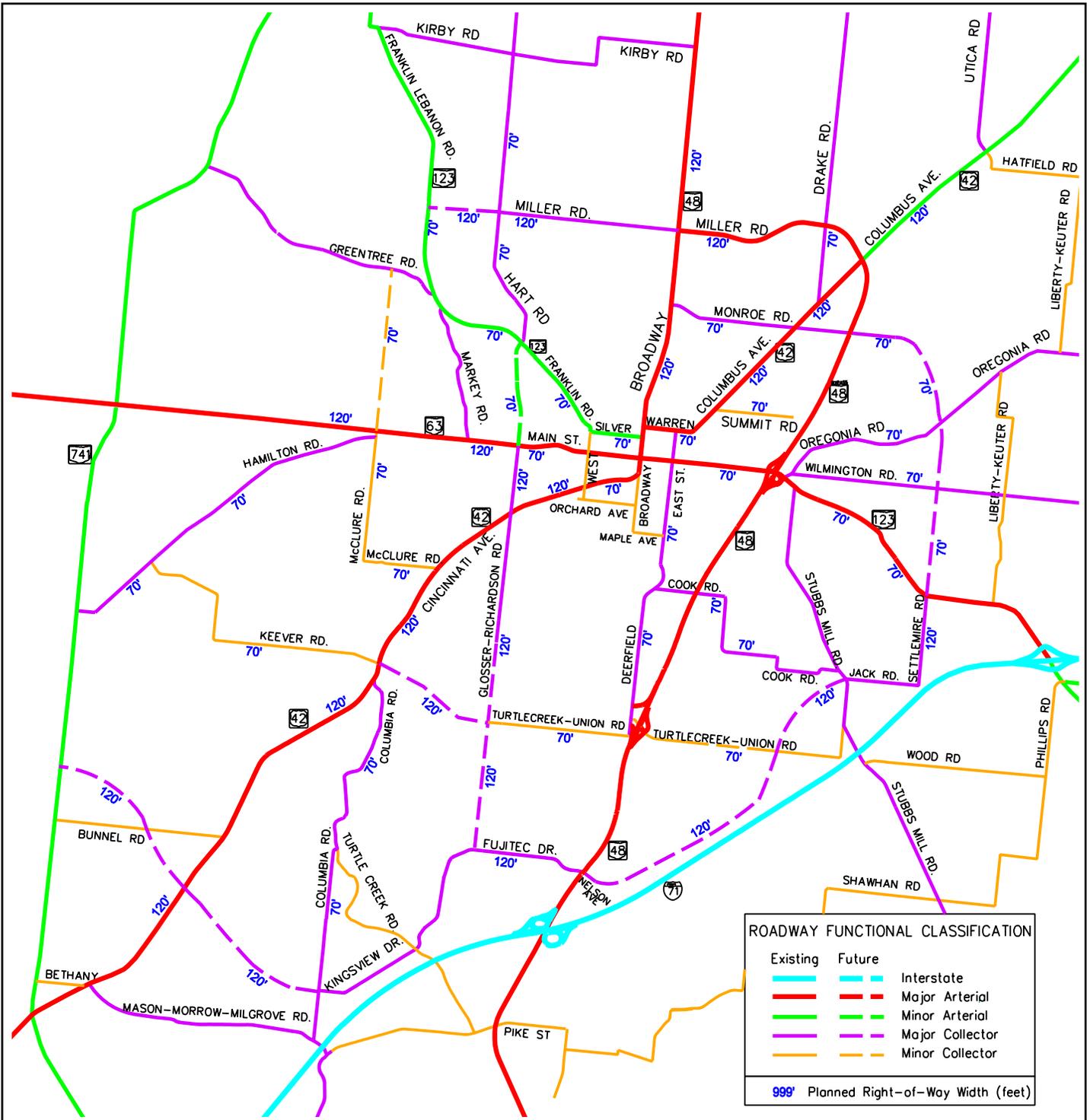


Exhibit 1: 2008 Lebanon Thoroughfare Plan

it a short distance, and distributes it to arterials and major collectors.

**Local:** Provides access to individual properties that abut the street.

The Lebanon Thoroughfare Plan identifies each major roadway in terms of its functional classification along with the basic number of travel lanes to meet long-term needs. Right-of-way widths are also specified in conjunction with basic design standards. Right-of-way widths are defined for potential build-out conditions. As development occurs and as roadways are considered for construction/reconstruction, right-of-ways can be requested or preserved to facilitate the future construction of the ultimate roadway system. The number of travel lanes defined in the Thoroughfare Plan, however, relate to lane needs in an expected 20-year horizon – where potential development levels have been estimated for this horizon year.

#### *Traffic Volume Projections*

Estimating traffic in future years for the Lebanon area was accomplished through a travel demand forecasting process that models travel behavior (i.e., how many trips are made and how these trips are distributed in the region). Using information from the OKI model, these travel characteristics were quantified. The computer model (VISUM) used this information, combined with land use data, to estimate when and where vehicles will travel.

The overall study area was subdivided into smaller geographic areas called Traffic Analysis Zones (TAZ) for travel demand analysis. The TAZs as obtained from OKI were very large; therefore, they were sub-divided into smaller areas. The existing roadway network, as in the OKI model, was also refined by adding more roadways to the system. The anticipated future land uses were then defined for each TAZ. Vehicle-trips generated by the land uses were then assigned to the roadway network.

Travel demand modeling is traditionally a four-step process: (1) person-trip generation, (2) mode choice, (3) trip distribution, and (4) trip assignment. The Transportation Planning Handbook, Second Edition, published by the Institute of Transportation Engineers, provides the following definitions for each of the four steps in the process:

- Trip Generation: predicts the number of person/vehicle-trip ends that are generated by and attracted to each defined zone in a study area.
- Mode choice: determines the modes that will be used to travel on each zonal interchange.

- Trip Distribution: connects trip ends (productions and attractions) estimated in the trip generation model to determine trip interchanges between each zonal pair.
- Trip assignment: assigns trips to specific highway or transit routes and determines the resulting highway volumes and transit ridership.

The study area included 33 OKI traffic analysis zones (TAZs) which were again sub-divided to result in a total of 65 TAZs. Each small area or TAZ was tested for future conditions. The land use information for each TAZ was based on the mid-range (2030) scenario. Through an iteration process, the highway network was adjusted by adding new roadway links, and/or modifying the number of lanes until the network best accommodated vehicle-trips projected for development in Lebanon in 2030.

Land use and trip generation information for each TAZ based on a full-build scenario (i.e., build-out of all future land uses) was also tested on the roadway system to determine ultimate roadway needs and future right-of-way requirements on the Lebanon roadway system. The transportation modeling effort was undertaken for existing conditions (2008), the 2030 planning horizon (which accounts for expected development by that year), and the future year (which accounts for full build-out of the area).

Initial travel demand modeling efforts were based on the current roadway network. The current network was found to be inadequate to handle the traffic associated with year 2030 development. As such, it was enhanced by adding new roads and by widening existing roadway segments (i.e., adding lanes) where widening seemed possible. The 2030 testing coincides with the OKI planning horizon. It is also the basis for the Thoroughfare Plan shown on Exhibits 1 and 2, which represent the road network necessary to address the community's 2030 mobility requirements. Exhibit 1 also illustrates the right-of-way on each roadway to accommodate expected traffic levels with the build-out of all land uses in each TAZ defined for the Lebanon area. Exhibit 2 illustrates the number of lanes needed to accommodate expected traffic levels in 2030.

#### *Key Elements of the Thoroughfare Plan*

It should be noted that the new roads (as shown in dashed lines) in the Thoroughfare Plan will not necessarily follow the alignments as shown. The dashed lines represent a concept of connectivity and future detailed engineering work will be needed to determine the exact path of the new roads.

The current roadway system in Lebanon lacks a good



east-west connection. Also, all the State and US highways pass through the downtown area and a good “bypass” is not available for trucks and heavy vehicles. Given this, in conjunction with the need to serve future office and industrial developments (on the south side along I-71 as envisioned in the future land use map), various roadway systems were tested to assess their ability to properly accommodate future travel demands. The network that best accommodated future traffic demands on collector and arterial streets was selected as the “thoroughfare plan” – as illustrated in Exhibits 1 and 2.

It should be noted that a two-lane road (as defined in Exhibit 2) means one through lane in each direction with left turn lanes at intersections or center left turn lanes -- with a standard right-of-way (r-o-w) requirement of 70 feet. (A right-of-way of 70 feet is required by the City for a 36-foot wide pavement per the City code.) Similarly, a four-lane road means two through lanes in each direction and left turn lanes at intersections or center left turn lanes – with a r-o-w requirement of 120 feet (i.e., the code requirement for a pavement 60 feet in width). The new roads and major improvements to the existing roads, as depicted in the Thoroughfare Plan (Exhibits 1 and 2) are as follows:

- Extension of Glosser-Richardson Road to Fujitec Drive as a four-lane roadway.
- Widening existing Glosser-Richardson Road from SR 63 to north of Turtle Creek Union Road to a four-lane roadway.
- A new two-lane roadway (extension of Hart Road) connecting SR 123 and SR 63 (at Glosser-Richardson Road).
- A new two-lane roadway (extension of McClure Road) connecting SR 63 and Greentree Road.
- Extension of Turtle–Creek Union Road to US 42 as a two-lane roadway.
- Widening of US 42 to a four-lane roadway from West Street all the way south to SR 741.
- A new four-lane road (extension of Kingsview Drive) that runs between Columbia Road and SR 741 -- intersecting US 42 and serving the industrial developments.
- Widening of Fujitec Drive and Kingsview Drive to a four-lane roadway.
- A new four-lane road that connects SR 48 and SR 123 on the south side and serves the future office developments.
- A new two-lane north-south road that connects SR 123 and Monroe Road (thereby connecting to the SR 48 bypass).
- Extension of Miller Road to SR 123 as a two-lane roadway.
- Widening of Miller Road to a four-lane roadway

from US 42 to SR 48.

- Widening of SR 48 (Broadway) to a four-lane roadway north of Miller Road to SR 122.

As development and redevelopment occurs in the City, the supporting transportation system should be evaluated and appropriate improvements should be made in compliance with the Thoroughfare Plan. A Traffic Impact Study (TIS) should be performed for each development/ redevelopment application, in accordance with the City's TIS guidelines, to determine what roadway system improvements are necessary to properly accommodate traffic generated by the subject development. Any roadway system improvements (including the construction of new roads) required to mitigate development traffic impacts should be compatible with the roadway system defined in the Thoroughfare Plan.

The following sections provide the supporting documents for the thoroughfare plan and present the projected traffic operations.

### THE OKI (OHIO KENTUCKY INDIANA) MODEL

As discussed previously, the OKI travel demand model created the foundation of traffic demand projections for the Lebanon thoroughfare planning efforts. The OKI roadway network and the OKI Traffic Analyses Zones (TAZs) for the Lebanon area are shown in Exhibit 3.

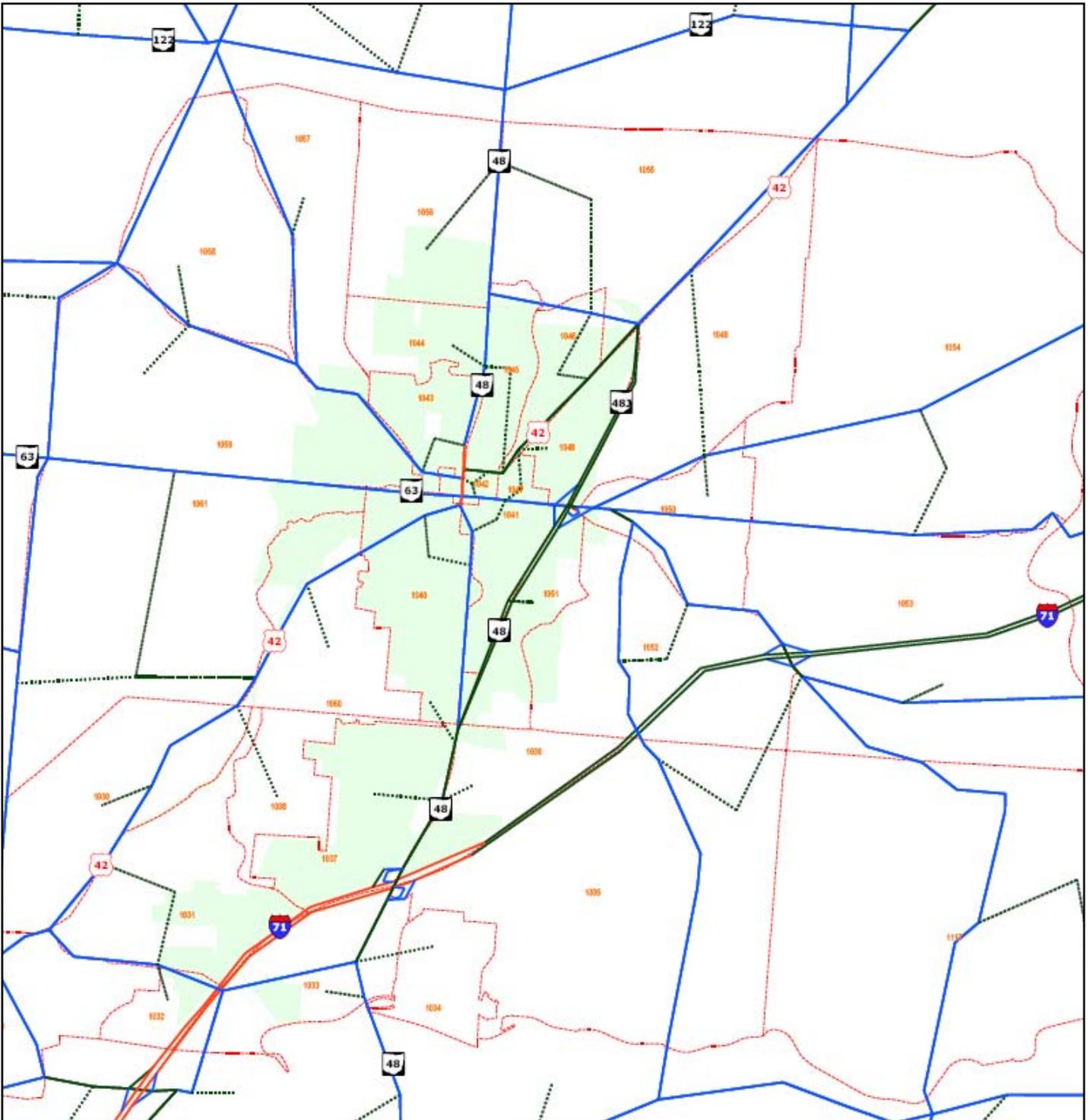


Exhibit 3: OKI Network

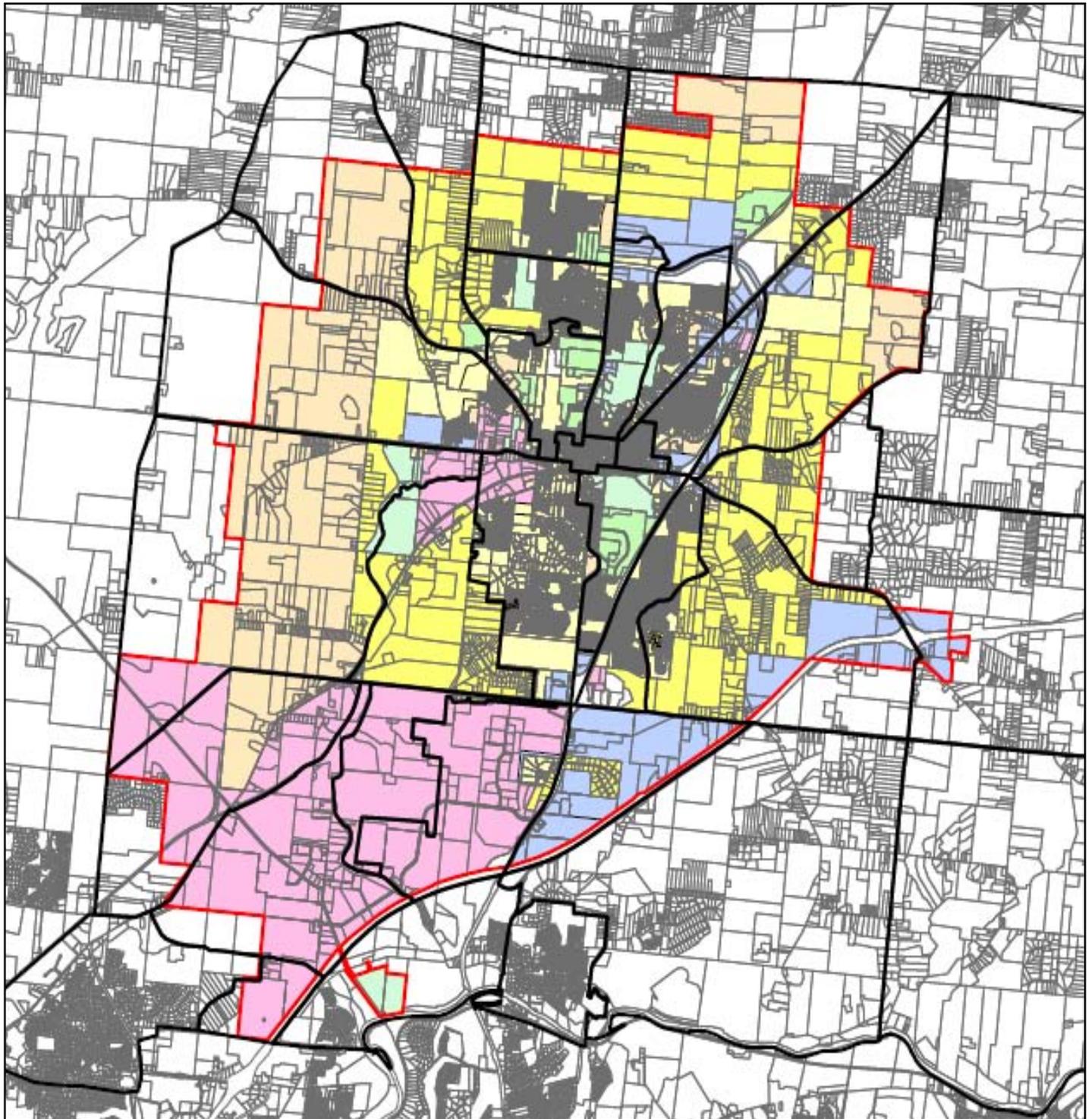


Exhibit 4: OKI TAZs on Future Land Use Map - TAZ lines are black and the Comprehensive Plan Boundary is in Red

## TRAFFIC DEMAND MODEL FOR LEBANON

Using base data and information from the OKI regional model, a travel demand model was created for the City of Lebanon. The creation of the model (in VISUM) involved the following processes:

1. Run the OKI model in its native software platform (Cube TranPlan) for 2005 and 2030 travel demand conditions with 2005 base roadway network conditions.
2. Extract sub-area origin-destination matrices representative of the Lebanon Thoroughfare Plan study area from the 2005 and 2030 loaded TranPlan networks.
3. Transfer the OKI model into the VISUM 10 software platform.
4. Add roadway links and disaggregate the OKI traffic analysis zones to the VISUM 10 network to provide required level of detail necessary for the Lebanon Thoroughfare Plan. (The refined roadway network is shown in Exhibit 5 and the disaggregated OKI traffic analyses zones are shown in Exhibit 6.)
5. Summarize the 24-hour traffic counts as obtained from various sources (e.g. City, Warren County, OKI and ODOT). Code the average daily traffic into the VISUM network by link and direction of traffic flow. (The traffic volumes are shown in the next section of this appendix.)
6. Finalize the traffic analysis zone structure for the VISUM model. Reference the year 2000 census and business lists by address obtained from a third party (Claritas Business Data) to disaggregate the OKI land use data to the detailed VISUM traffic analysis zone structure.
7. Calibrate the year 2005 sub-area origin-destination matrix from the OKI model to approximate current traffic levels and traffic analysis zone activity levels with the VISUM origin-destination matrix estimating procedures. Assign the resulting matrix to the VISUM network with the user equilibrium procedure and the volume-capacity-speed parameters suggested by OKI. Compare resulting traffic assignment to the available count data and identify relevant statistics (percent root mean squared error and coefficient of correlation). End the calibration process when the desired degree of precision is achieved. The final result of this step is a calibrated year 2008 baseline origin-destination matrix.
8. Project the 2008 baseline origin-destination matrix to future conditions based on land use projections by development type provided by MSI for each traffic analysis zone and the ITE Trip Generation Manual. Incorporate growth in regional travel demand based on a comparison of the year 2005 and year 2030 OKI sub-area matrices. Based on this comparison, through trips (those with both the origin and destination located outside of the Lebanon Thoroughfare Plan study area) would grow by 20 percent between year 2008 and year 2030.
9. Assign the Year 2030 origin-destination matrix to the baseline VISUM network. Identify level-of-service based upon the volume thresholds established by OKI by road-type.
10. Rerun the model with required thoroughfare improvements to achieve the desired level-of-performance. Continue to add thoroughfare improvements to the VISUM network until the performance standard is satisfied at all locations.
11. Report the results in graphical form.



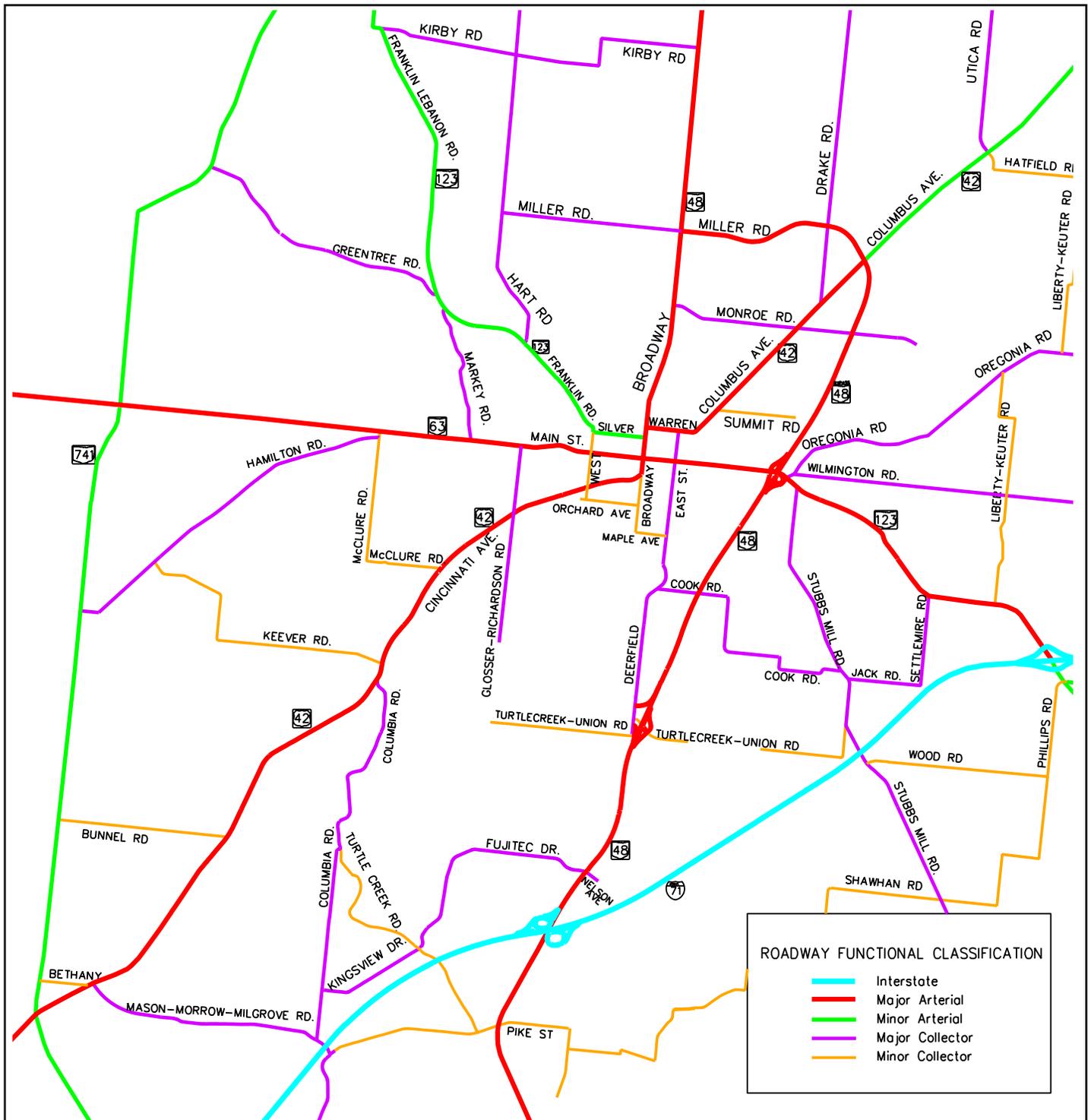


Exhibit 5: Refined Roadway Network and Functional Classification



## CURRENT AND FUTURE TRAFFIC VOLUMES

### Potential New Development

Future land use was estimated for each TAZ. Projected total new development within the study area (upon build-out)) is as follows:

- Residential: 7,115 dwelling units
- Retail: 1,676,625 square feet
- Office: 10,390,500 square feet
- Industrial: 9,128,250 square feet

The above data includes 2,150 dwelling units from a proposed development east of the City (San-Mar-Gale) and 1,335,000 sf of proposed retail in South Lebanon.

For the 2030 horizon year, the total new development (assumed to be around one-third of the build-out in the study area -- plus San-Mar-Gale and South Lebanon) is as follows:

- Residential: 3,805 dwelling units
- Retail: 1,448,885 square feet
- Office: 3,663,500 square feet
- Industrial: 3,042,750 square feet

### New Vehicle-Trips

Vehicle-trips generated by the new development were determined based on the average rates published in the Institute of Transportation Engineer's (ITE) Trip Generation Manual (Seventh Edition). Table 1 shows the ITE trip generation factors and the daily vehicle-trips generated by the new development for the full build (build-out of all land-uses) and the 2030 build conditions.

### Future Traffic Volumes

Earlier this report described how the traffic volumes were obtained for 2008 and 2030. Exhibit 8 shows the projected 2030 24-hour traffic volumes on the current roadway network. Exhibit 9 shows the projected 2030 traffic volumes on the Thoroughfare Plan roadway network. The projected 2030 24-hour turning movements at some of the critical intersections are shown in Exhibit 10.

**TABLE 1: DAILY VEHICLE TRIPS GENERATED BY NEW DEVELOPMENT**

Land Use	ITE LUC	ITE Vehicle Trip Rate	Full Build		2030 Build	
			Size	Daily Vehicle Trips	Size	Daily Vehicle Trips
Residential	210	9.57/DU	7,115 units	68,090	3,805 units	36,410
Retail	820	42.94/1000sf	1.68 million sf	71,990	1.45 million sf	62,210
Office	710	11.01/1000sf	10.39 million sf	114,400	3.66 million sf	40,330
Industrial	110	6.97/1000sf	9.13 million sf	63,620	3.04 million sf	21,210

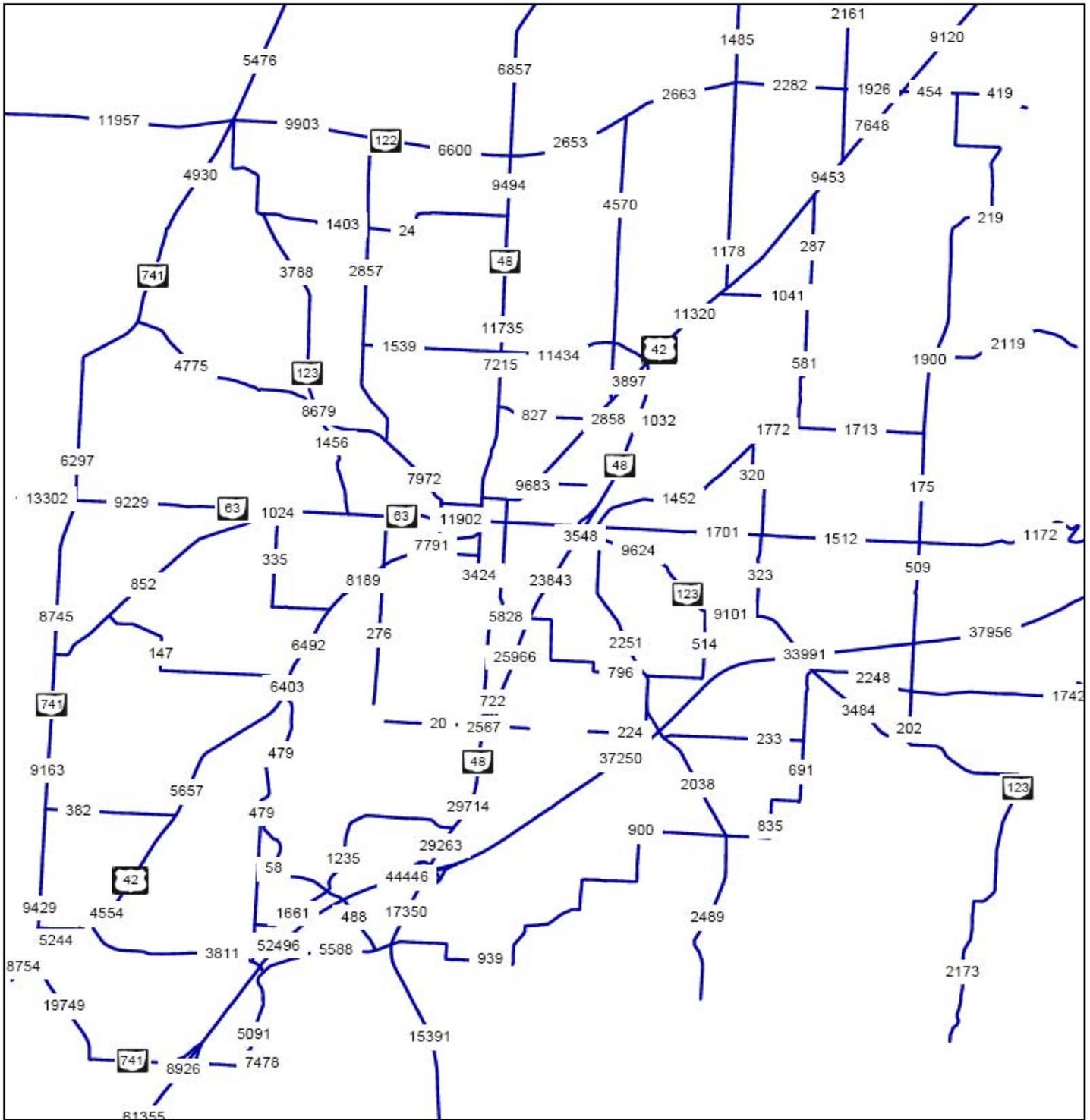


Exhibit 7: 2008 24-hour Traffic Volumes  
 source: Various sources which include – the City, Warren County, ODOT, and OKI.

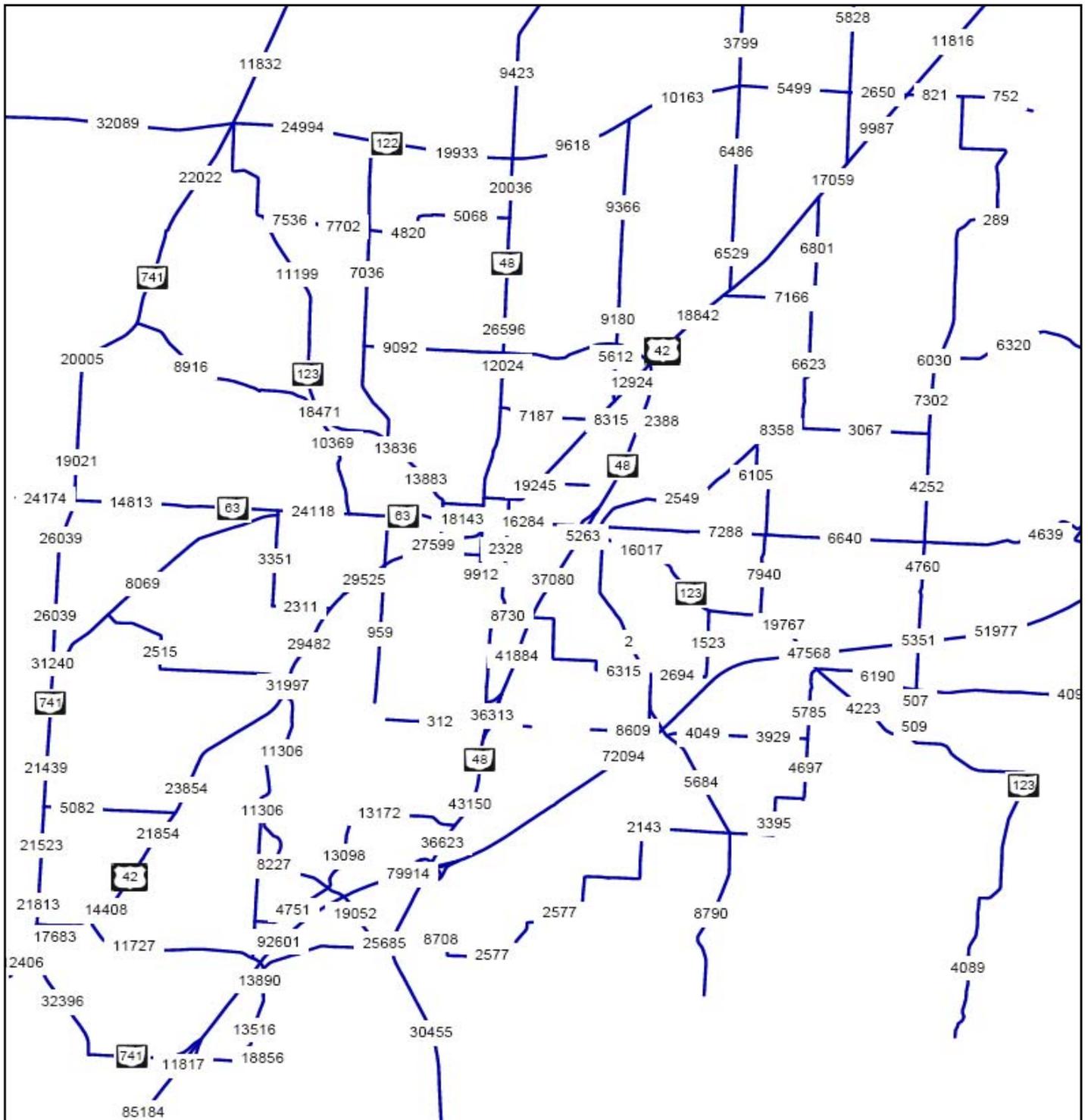


Exhibit 8: Projected 2030 24-hour traffic volumes on current roadway network

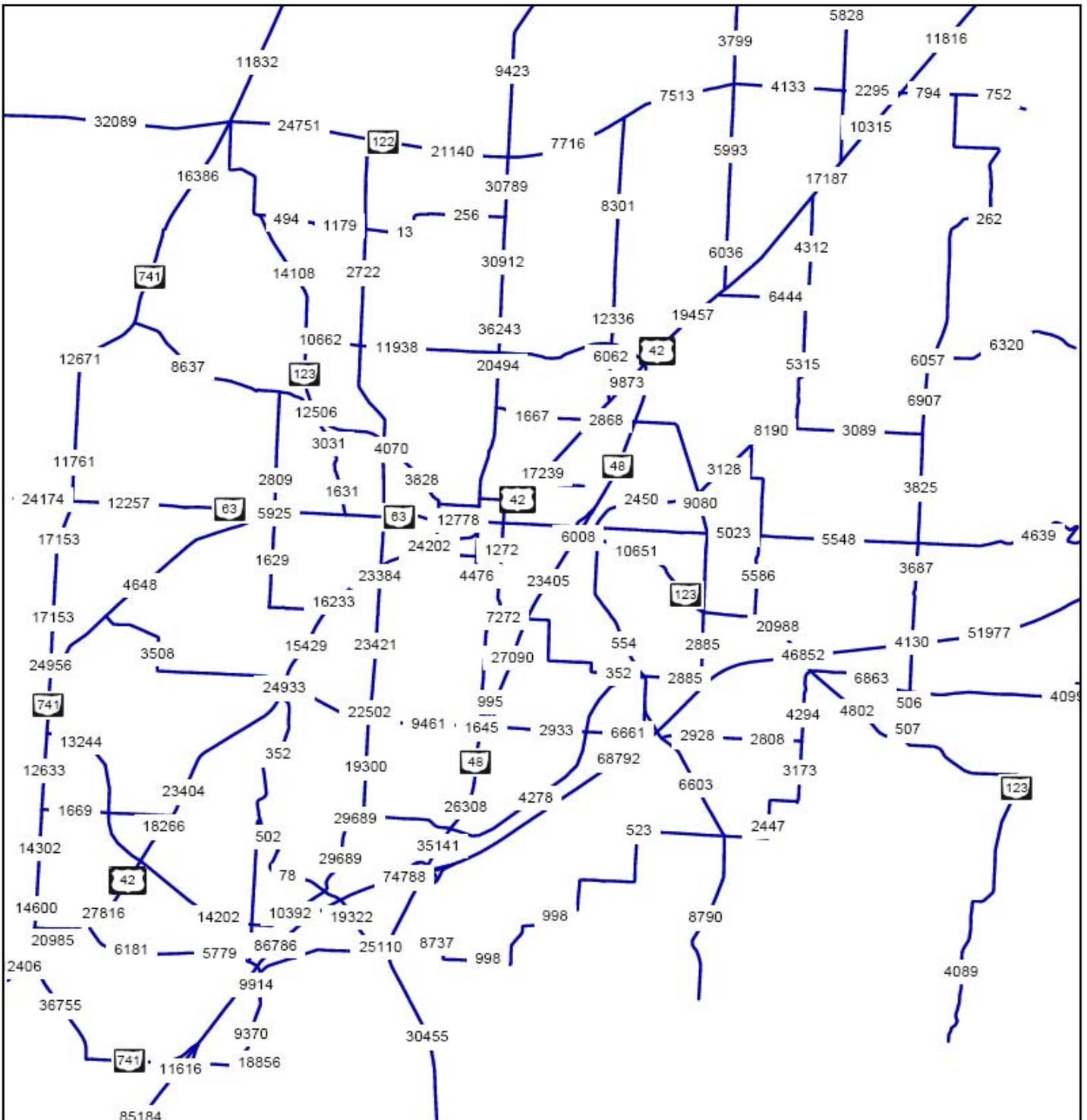


Exhibit 9: Projected 2030 24-hour traffic volumes on future roadway network

## TRAFFIC OPERATIONS AND ROADWAY NEEDS

### *Level of Service Criteria*

The purpose of establishing a level of service system is to identify operational definitions for driving conditions that motorists routinely experience and recognize. Level of service is a standard criterion used to define quality of traffic flow. The individual LOS is characterized by factors such as speed and travel time, freedom to maneuver, traffic interruptions, and driver comfort and convenience. Six LOS categories are commonly defined. Each is given a letter designation from “A” to “F”, with LOS “A” representing the best operating conditions and LOS “F” depicting the worst. For the purpose of future planning, it is desired that the roadway system operate at LOS D or better. The six level of service categories are defined below:

- “A” represents the best operating condition flow in which there is little or no restriction on speed and maneuverability. At intersections, there is little or no delay.
- “B” represents a condition of stable traffic flow, but operating speeds are beginning to be restricted. Short traffic delays occur at intersections.
- “C” is a condition of a stable flow, but most drivers are becoming restricted in their freedom to select speed, change lanes or pass other vehicles. Intersections experience average traffic delay.
- “D” represents unstable flow. Operating speeds are tolerable by the driver, but are subject to considerable and sudden variation. Freedom to maneuver is limited and driving comfort is low, as the probability of accidents has increased. Long traffic delays are experienced at intersections.
- “E” relates to maximum roadway capacity for carrying vehicles. Operations in this zone are unstable, speeds and flow rates fluctuate, and there is little independence of speed selection or maneuverability. Accident potential is high and driving comfort is low. The distance between vehicles is short. Very long delays are experienced at intersections.
- “F” is the worst operating condition and traffic demand exceeds capacity. Speeds and rate of traffic flow may drop to zero for short time periods. Extreme delays are experienced at intersections. This may cause severe congestion, affecting other adjacent roadways.

Volume-to-capacity (v/c) ratios are used to define LOS on the Thoroughfare Plan roadway network links. These ratios are calculated by dividing the modeled traffic volume on the link by the defined capacity of the link. The

OKI v/c thresholds for LOS were used which vary based on roadway class. In general the v/c ratios relate to LOS as follows:

- LOS “A” through “C”: v/c is less than 85 percent; the roadway has capacity to carry additional traffic.
- LOS “D”: v/c ranges from 86 percent to 95 percent; the roadway is nearing capacity.
- LOS “E”: v/c ranges between 96 percent to 100 percent; The roadway has reached capacity and is being utilized to its maximum design.
- LOS “F”: v/c is greater than 100 percent; traffic now exceeds the roadway capacity.

Exhibit 11 shows the 2008 level of service on the current roadway network. The levels of service are distinguished by colors, as follows:

- LOS “A” through “C” -- represented by green.
- LOS “D” -- represented by purple.
- LOS “E” -- represented by orange.
- LOS “F” -- represented by red.

Exhibit 12 shows the level of service on current roadway network using the projected 2030 traffic volumes (shown in Exhibit 8). As shown in this exhibit, the current roadway network cannot accommodate the future growth and development – with most of the roadway operating at LOS E and F.

Exhibit 13 shows the levels of service on the Thoroughfare Plan roadway network with year 2030 volumes (shown in Exhibit 9). A larger format of this exhibit (with 24-hour traffic volumes) is contained in the back pocket of this report.

### *Network Requirements*

Exhibit 2 showed the number of lanes on the future Thoroughfare Plan roadway network. The new roads and widened roads are depicted in Exhibit 14. Widened roadways could either mean additional through lanes or additional left turn lanes at intersection or center left turn lanes as discussed in section 1.3 of this report. The roadway network, as shown, can accommodate the projected 2030 traffic levels with roadways operating at levels of service C or D - - or better.

### *Turn Lane Requirements at Major Intersections*

Capacity analyses were performed (using Synchro 7 software) for key intersections using 2030 peak hour traffic volumes to determine future lane requirements. The peak hour volumes were obtained from the 24-hour turning movement volumes (shown in Exhibit 10) by

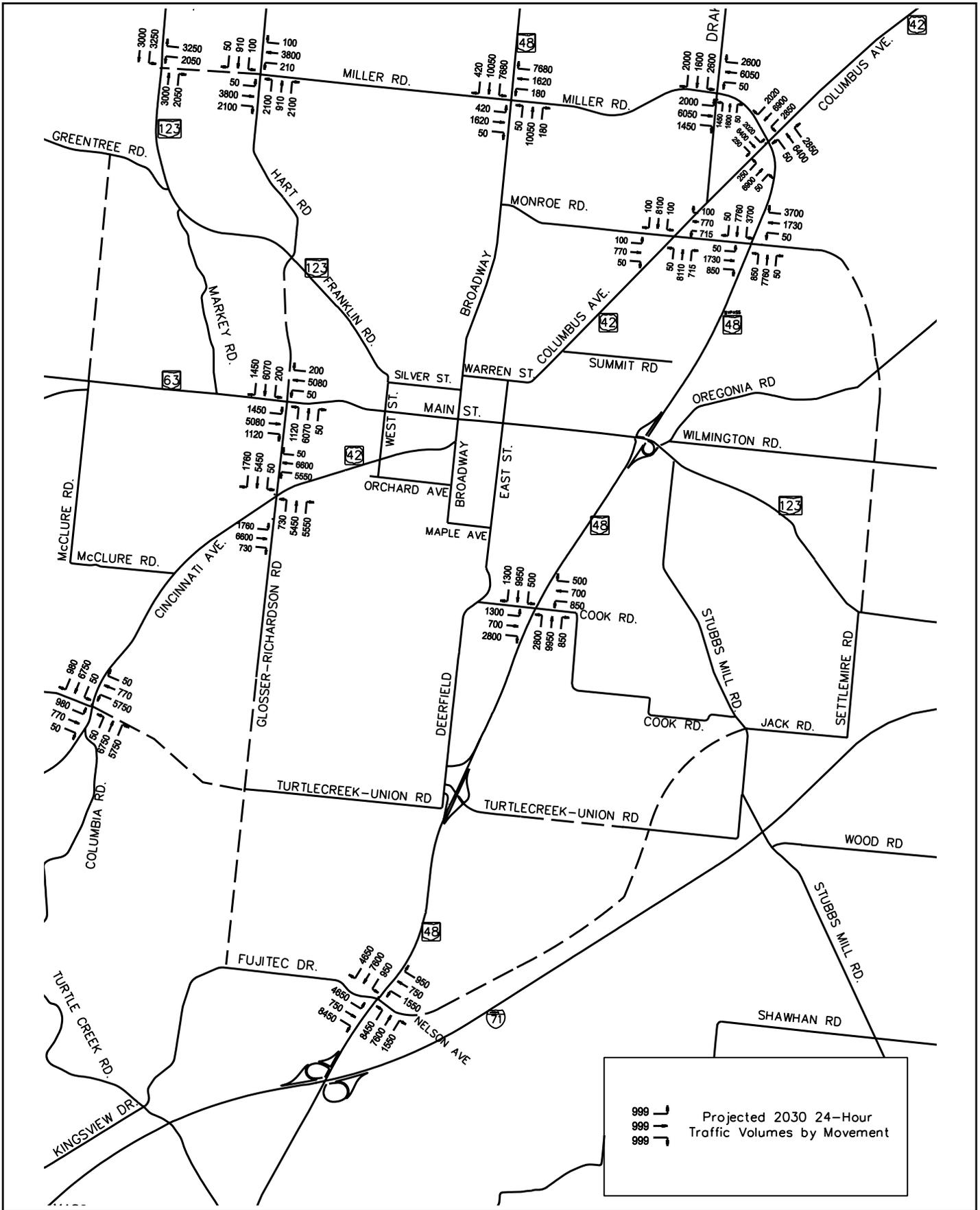


Exhibit 10: Projected 2030 Turning Movement Volumes at Major Intersections

using a K factor of 10 percent. It should be noted that these projected volumes relate to the Thoroughfare Plan roadway network.

Exhibit 15 shows the resulting lane usages. It was assumed that all these intersections are/will be signalized. With lane usages as shown in this exhibit, all the intersections will operate at an overall level of service (LOS) C with no individual movement worse than LOS D -- with the exception of SR 63/Glosser-Richardson Road and SR 48/Fujitech Drive intersections. These two intersections will operate at an overall LOS D with about two or three movements at level-of-service E.

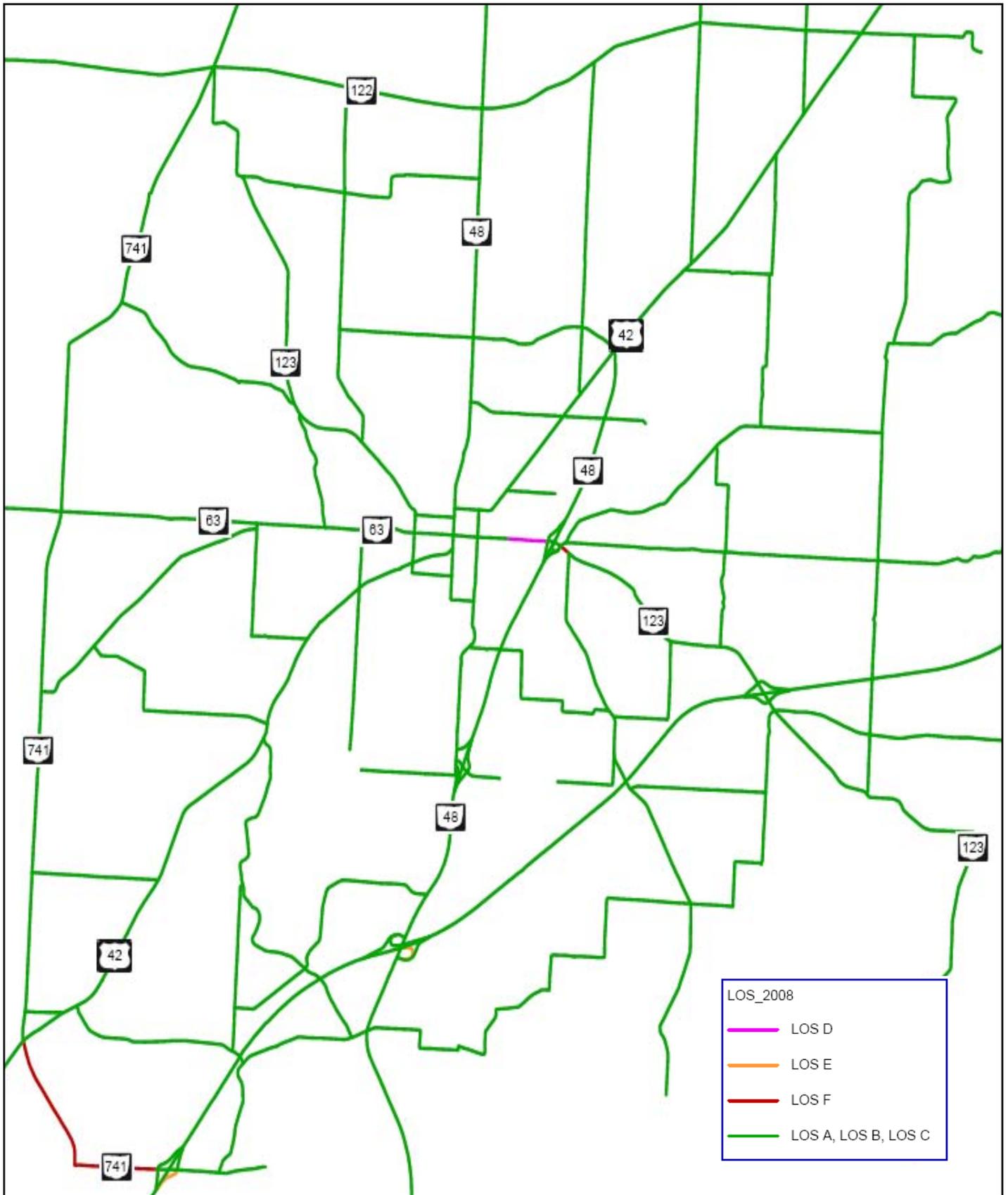


Exhibit 11: 2008 Level of Service on Current Roadway Network

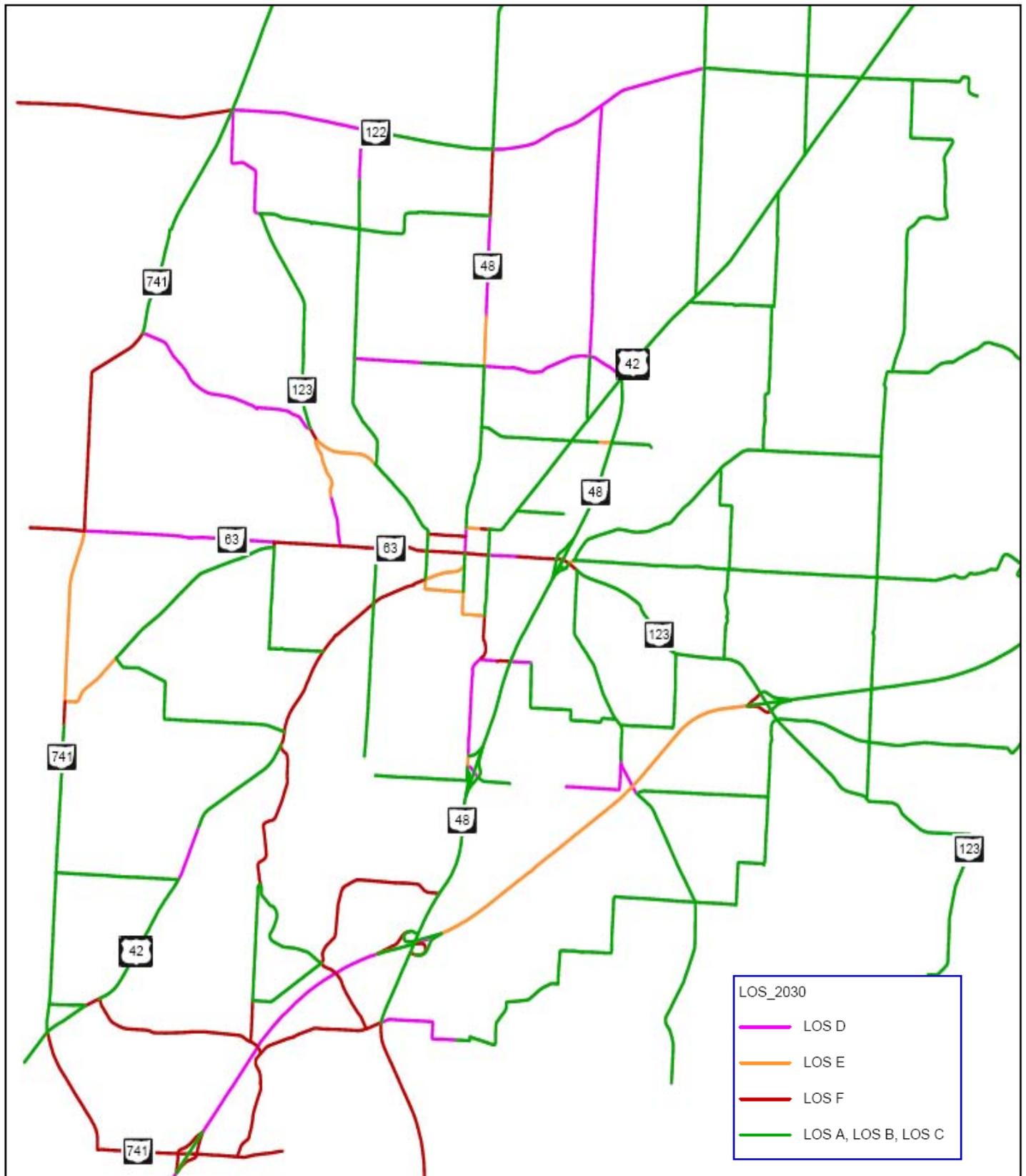


Exhibit 12: Projected 2030 Level of Service on Current Roadway Network

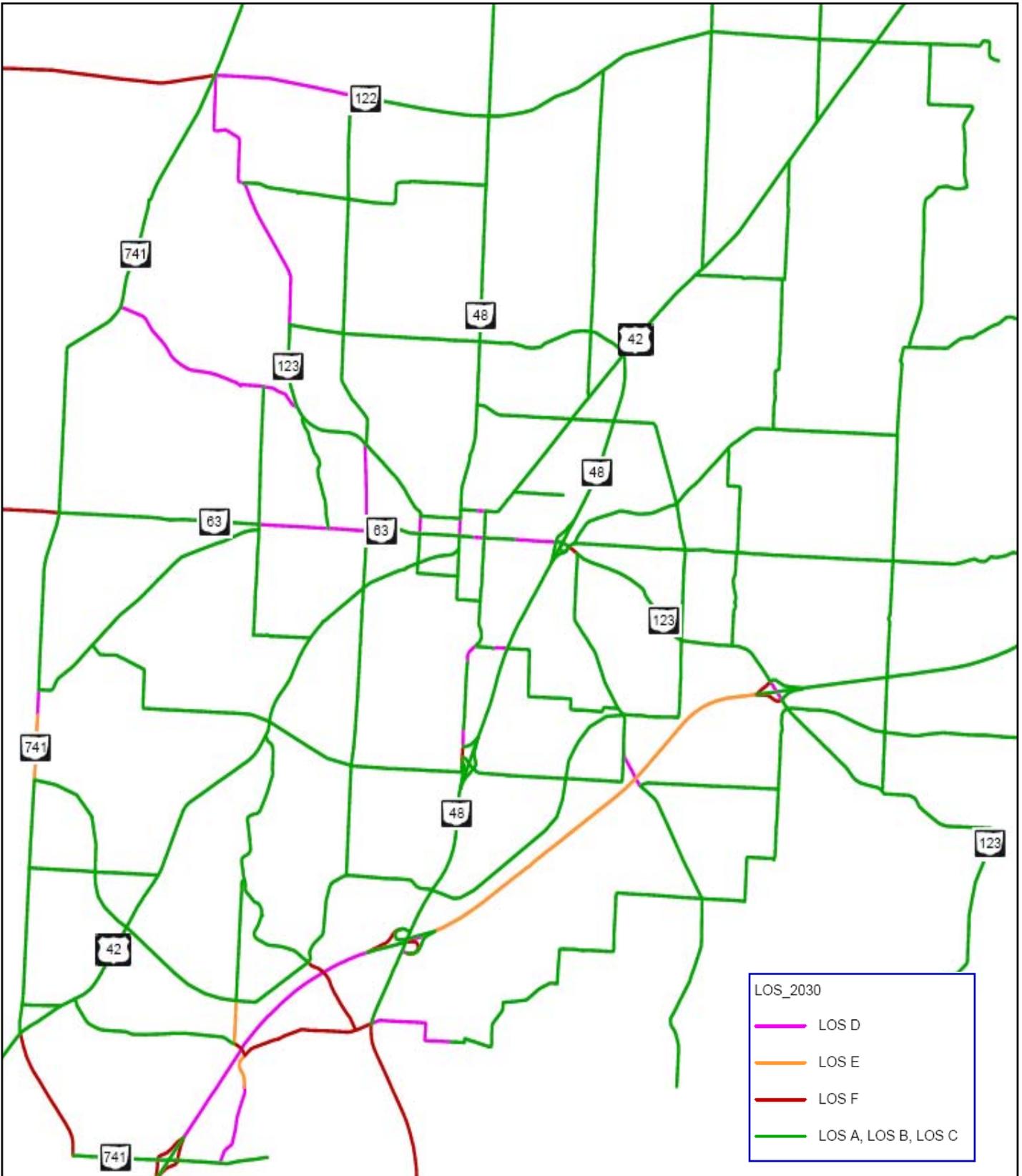


Exhibit 13: Projected 2030 Level of Service on Future Roadway Network

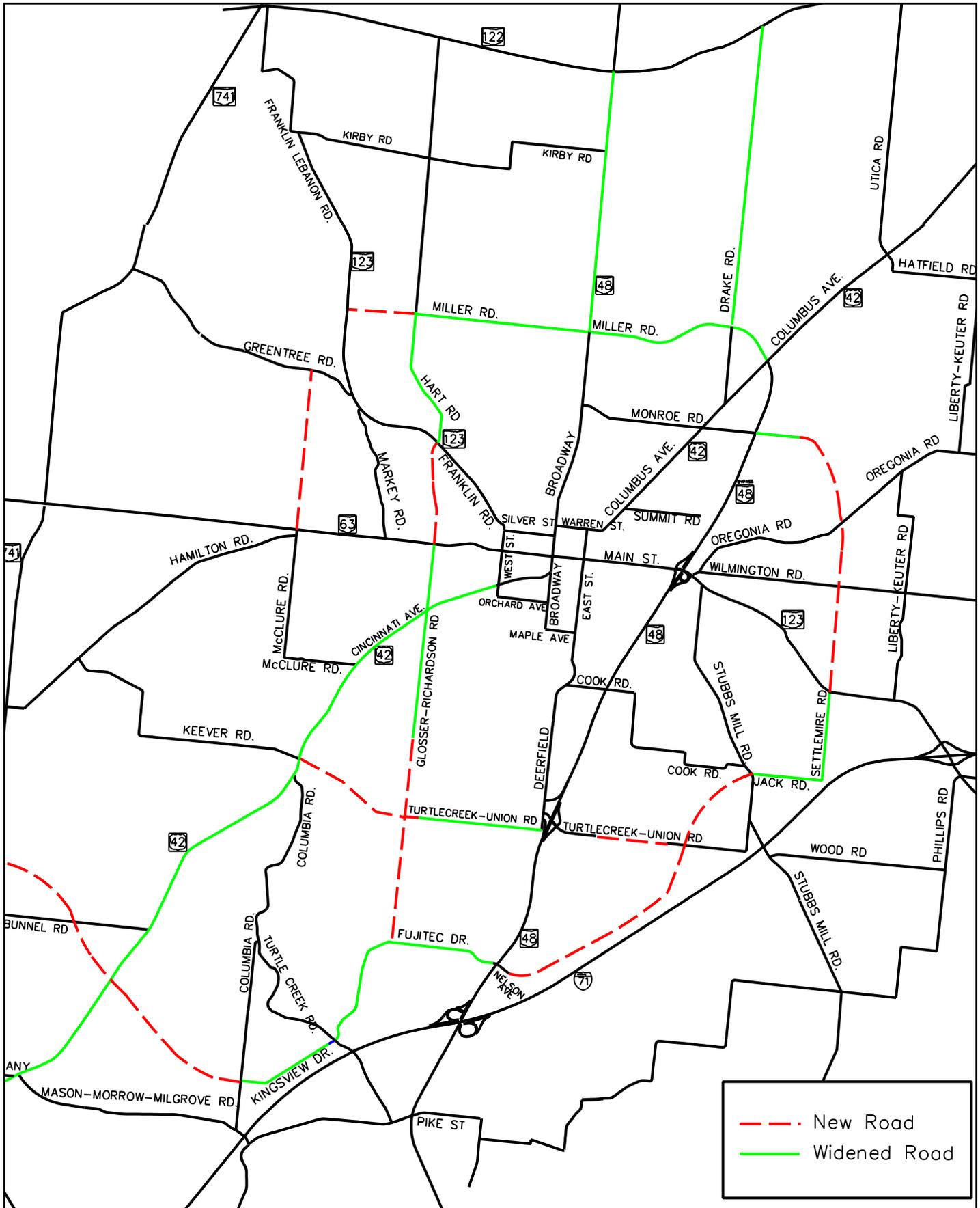


Exhibit 14: Potential new and widened roadways

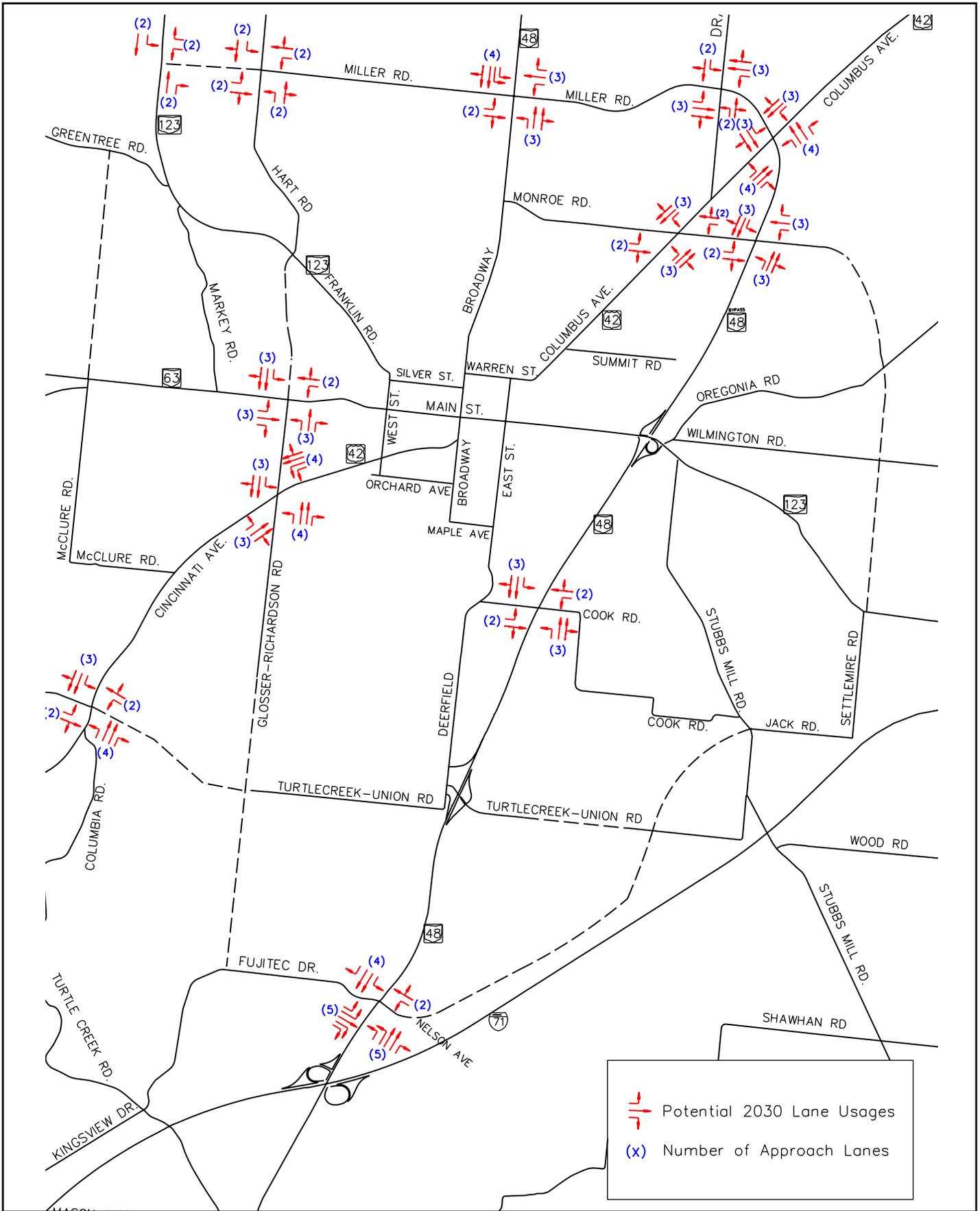


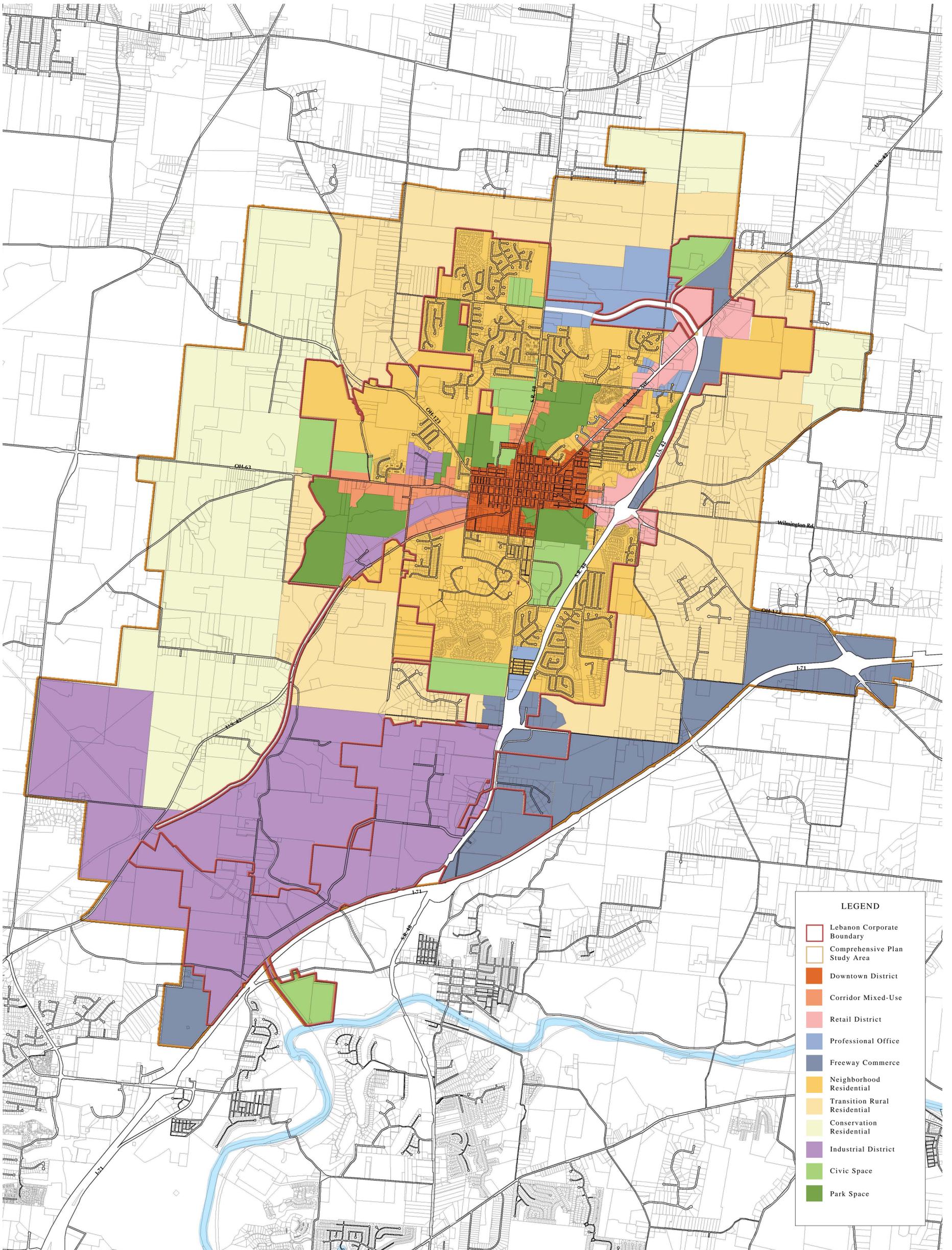
Exhibit 15: Future lane requirements at major intersections

## PLANNING LEVEL COST ESTIMATES

Preliminary cost estimates for future improvements were determined based on unit costs as used by Metropolitan Planning Organizations (MPOs). Table 2 shows the cost estimate for each improvement. In addition to these improvement costs, the cost for a new traffic signal at intersections could range between \$150,000 to \$250,000 and the cost for adding more turn lanes at intersections could be \$80,000 - \$100,000 per lane.

Roadway Improvements	Location	Cost per Lane per Mile	Number of Lanes	Distance (miles)	Total Estimated Cost
<i>Extension of Glosser-Richardson Rd</i>	<i>From its current location to Turtlecreek-Union Road</i>	\$1,005,300	5	0.6	\$3,015,900
	<i>From Turtlecreek-Union Rd to Fujitec Rd</i>	\$1,005,300	5	0.9	4,523,900
<i>Widening existing Glosser-Richardson Rd</i>	<i>From SR63 to US42</i>	\$583,700	3	0.5	\$875,600
	<i>From US42 to north of Turtlecreek-Union Rd</i>	\$583,700	3	0.9	\$1,576,000
<i>Extension of Hart Rd</i>	<i>From SR123 to SR63</i>	\$1,005,300	3	0.8	\$2,412,700
<i>Widening of Hart Rd</i>	<i>From Miller Rd to SR123</i>	\$583,700	1	1.0	\$583,700
<i>Extension of McClure Rd</i>	<i>From SR63 to Greentree Rd</i>	\$1,005,300	3	1.2	\$3,619,100
<i>Extension of Turtlecreek-Union Rd (west of SR 48)</i>	<i>From current location to Glosser Richardson Rd</i>	\$1,005,300	3	0.1	\$301,600
	<i>From Glosser Richardson to US 42</i>	\$1,005,300	3	0.9	\$2,714,300
<i>Widening of Turtlecreek-Union Rd (west of SR 48)</i>	<i>From SR48 to east of Glosser Richardson Rd</i>	\$583,700	1	0.9	\$525,300
<i>Extension of Turtlecreek-Union Rd (east of SR 48)</i>	<i>Connecting the 2 ends</i>	\$1,005,300	3	0.5	\$1,508,000
<i>Widening of SR 42</i>	<i>From West St to Glosser Richardson Rd</i>	\$583,700	3	0.6	\$1,050,700
	<i>From Glosser Richardson Rd to McClure Rd</i>	\$583,700	3	0.7	\$1,225,800
	<i>From McClure Rd to Keever Rd</i>	\$583,700	3	0.8	\$1,400,900
	<i>From Keever Rd to Bunnell Rd</i>	\$583,700	3	1.8	\$3,152,000
	<i>From Bunnell Rd to Bethany Rd</i>	\$583,700	3	1.5	\$2,626,700
	<i>From Bethany to SR 741</i>	\$583,700	3	0.4	\$700,400

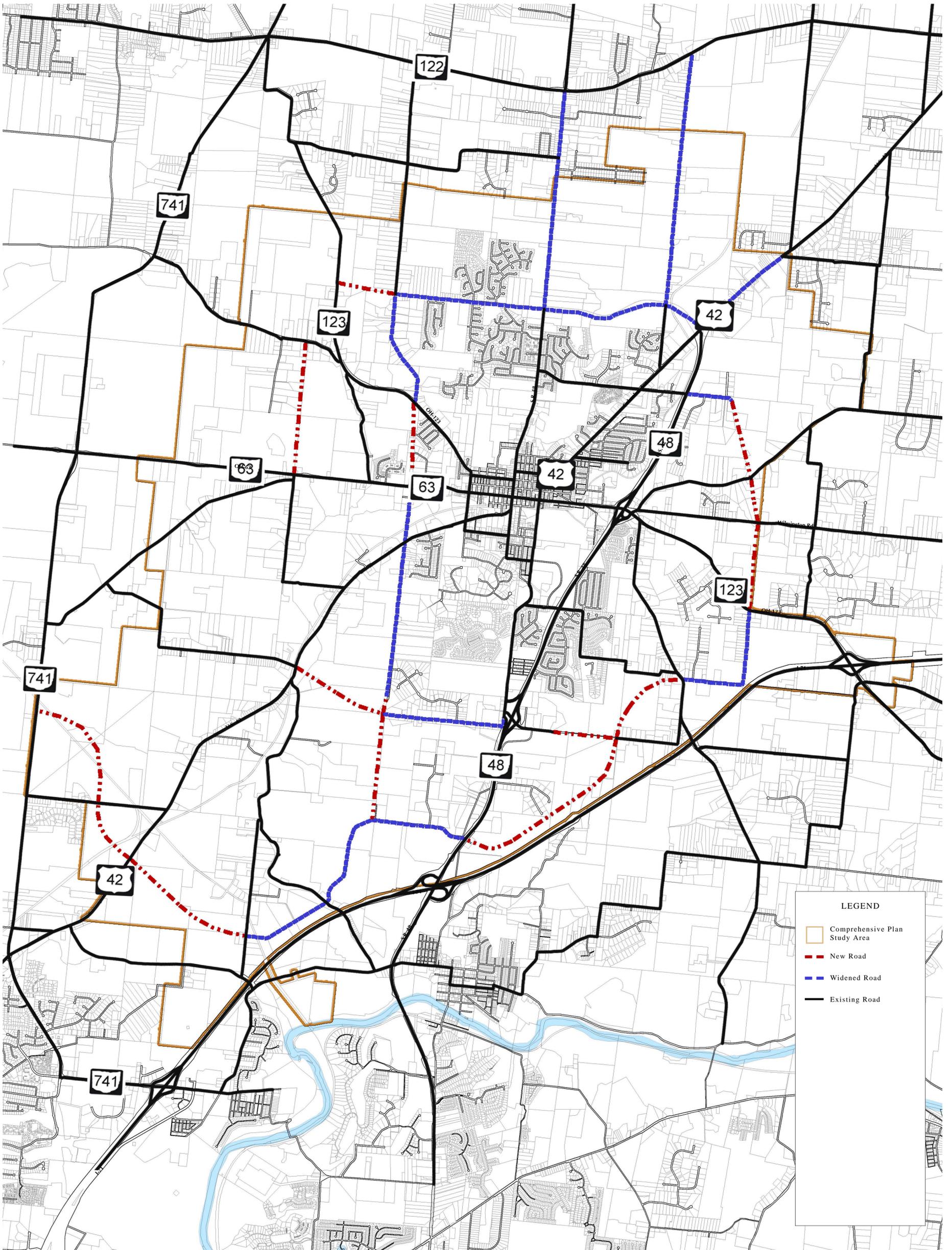
Roadway Improvements	Location	Cost per Lane per Mile	Number of Lanes	Distance (miles)	Total Estimated Cost
Extension of Kingsview Dr	From Columbia Rd to US42	\$1,005,300	5	1.3	\$6,534,500
	From US42 to Bunnell	\$1,005,300	5	0.5	\$2,513,300
	From Bunnell to SR741	\$1,005,300	5	0.8	\$4,021,200
Widening of Fujitec Drive	From SR48 to Glosser Richardson Rd Extension	\$583,700	3	0.8	\$1,400,900
	From Glosser Richardson Rd extension to Turtlecreek Rd	\$583,700	3	0.9	\$1,576,000
Widening of Kingsview Dr	From Turtlecreek to Columbia Rd	\$583,700	3	0.8	\$1,400,900
Extension of Nelson Dr	From SR48 to Turtlecreek-Union Rd	\$1,005,300	5	1.8	\$9,047,700
	From Turtlecreek Union Rd to Stubbs Mill Rd	\$1,005,300	5	0.8	\$4,021,200
Widening of Jack Rd	From Stubbs Mill Rd to Settlemire Rd	\$583,700	3	0.5	\$875,600
Widening of Settlemire Rd	From Jack Rd to SR123	\$583,700	3	0.7	\$1,225,800
Extension of Settlemire Rd	From SR 123 to Wilmington Rd	\$1,005,300	3	0.8	\$2,412,700
	From Wilmington Rd Oregonia	\$1,005,300	3	0.5	\$1,508,000
	From Oregonia Rd to Monroe Rd	\$1,005,300	3	0.8	\$2,412,700
Extension of Miller Rd	From Hart Rd to SR123	\$1,005,300	3	0.5	\$1,508,000
Widening of Miller Rd	From US42 to Drake Rd	\$583,700	3	0.4	\$700,400
	From Drake Rd SR48	\$583,700	3	1.1	\$1,926,200
	From SR48 to Hart Rd	\$583,700	1	1.3	\$758,800
Widening of Drake Rd	From Miller Rd to SR122	\$583,700	1	2.2	\$1,284,100
Widening of SR 48	From Miller Rd to Kirby Rd	\$583,700	3	1.3	\$2,276,400
	From Kirby Rd to SR122	\$583,700	3	0.6	\$1,050,700

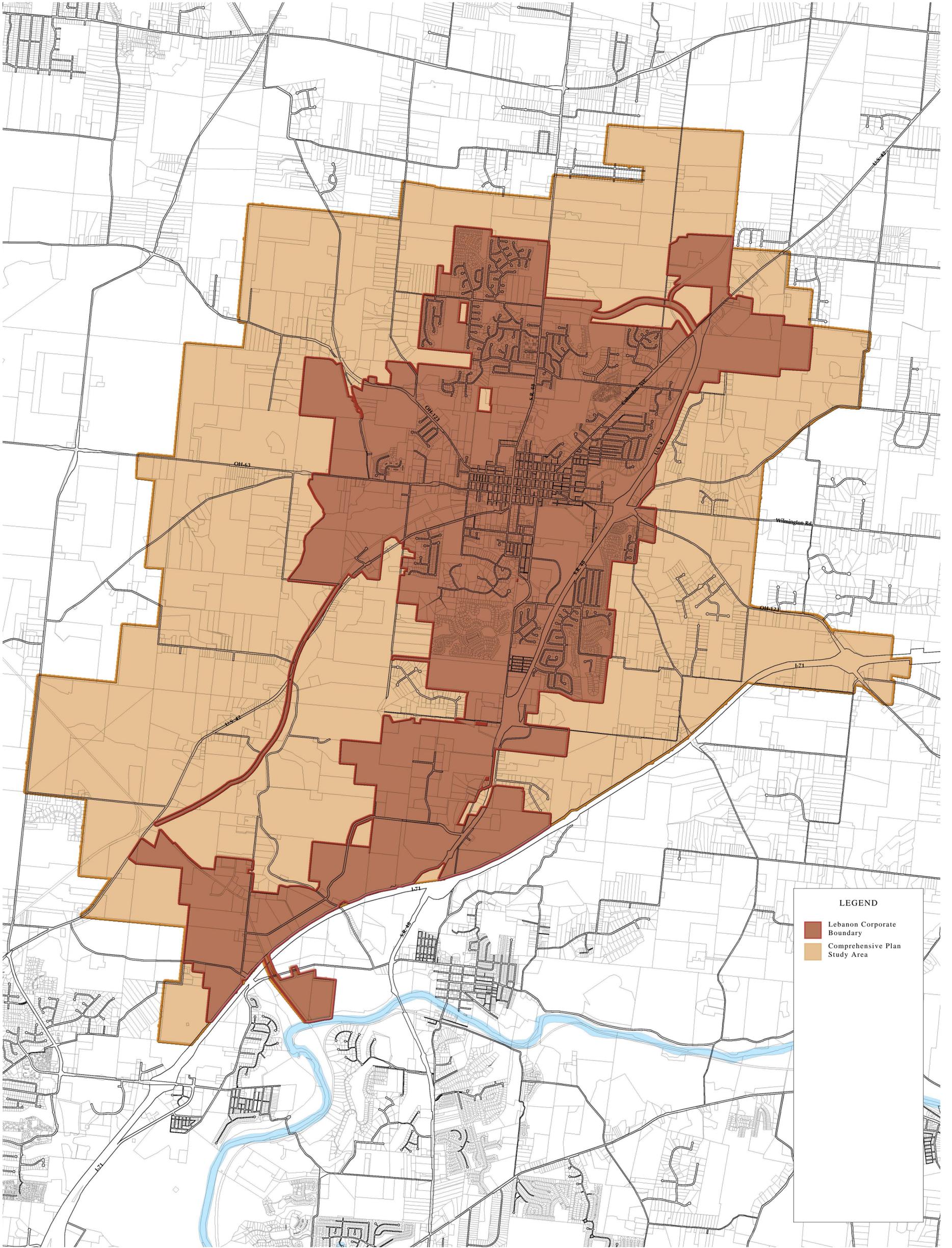


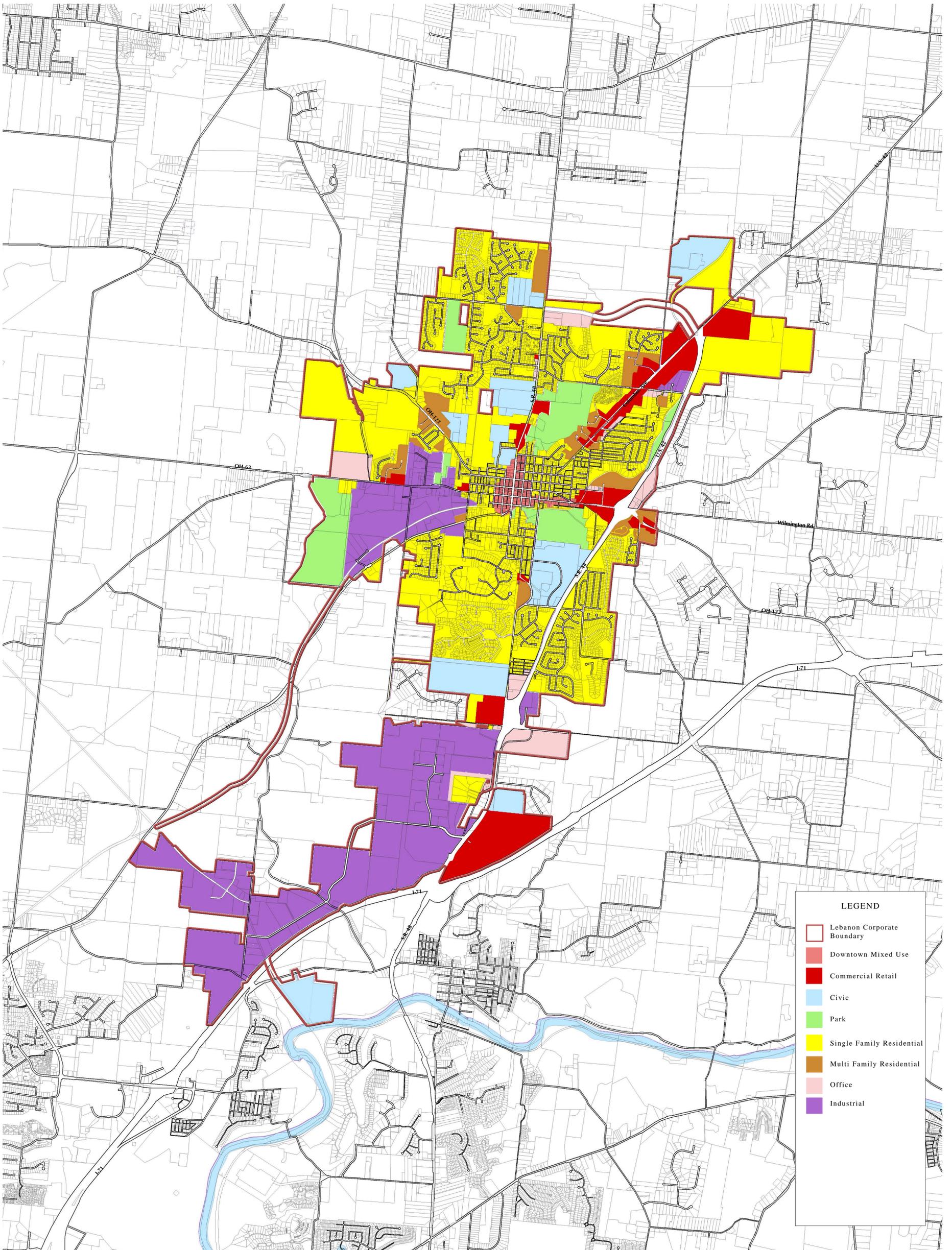
**LEGEND**

- Lebanon Corporate Boundary
- Comprehensive Plan Study Area
- Downtown District
- Corridor Mixed-Use
- Retail District
- Professional Office
- Freeway Commerce
- Neighborhood Residential
- Transition Rural Residential
- Conservation Residential
- Industrial District
- Civic Space
- Park Space







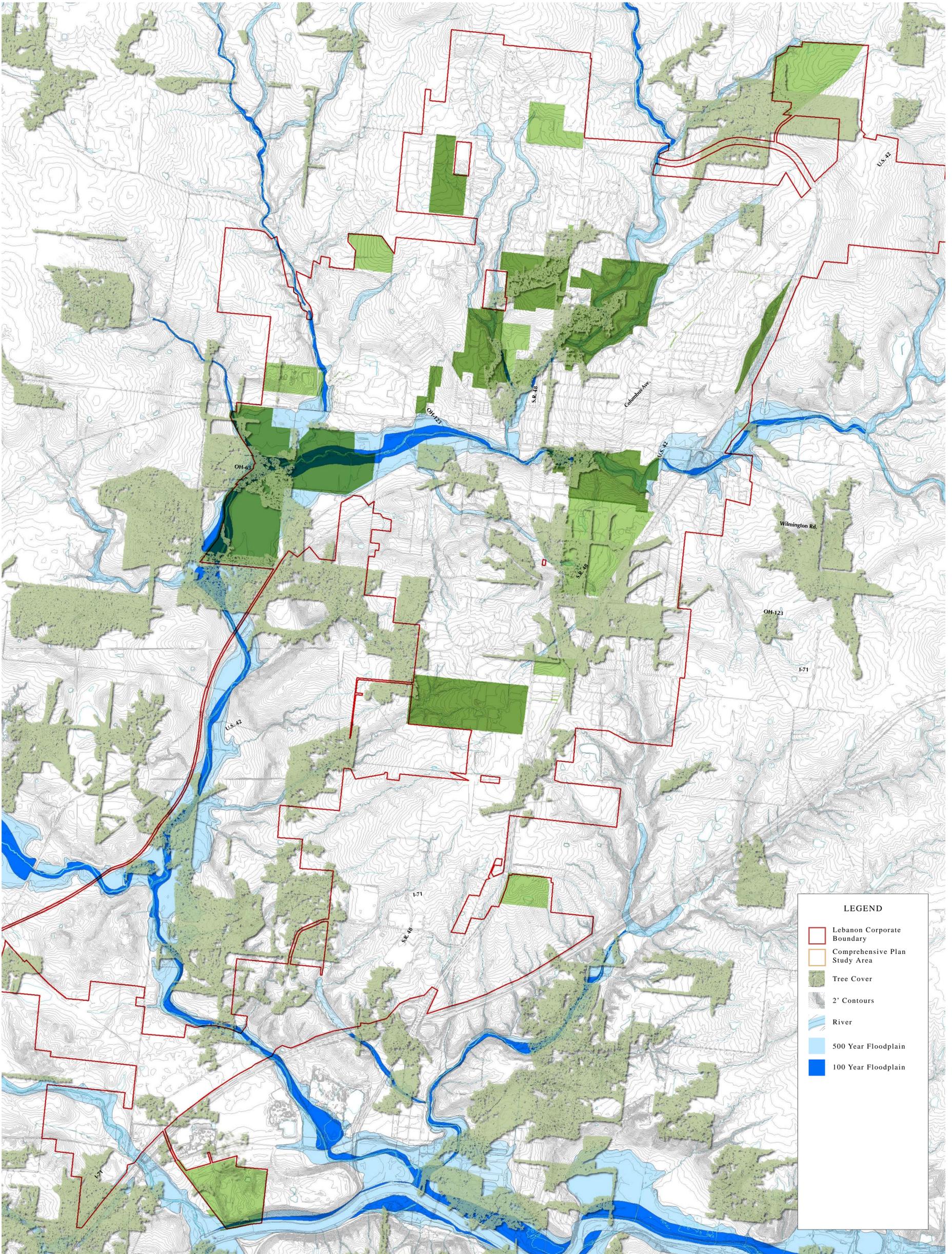


**LEGEND**

- Lebanon Corporate Boundary
- Downtown Mixed Use
- Commercial Retail
- Civic
- Park
- Single Family Residential
- Multi Family Residential
- Office
- Industrial



# EXISTING NATURAL FEATURES



**LEGEND**

- Lebanon Corporate Boundary
- Comprehensive Plan Study Area
- Tree Cover
- 2' Contours
- River
- 500 Year Floodplain
- 100 Year Floodplain

