Knox County Comprehensive Plan

2018 Update

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EXECUTIVE SUMMARY

The following document is the Knox County Comprehensive Plan Update, formally adopted by the Board of Commissioners on _____, 2018 (the "**Plan Update**"). This document provides a snapshot of Knox County, Ohio, in early 2018, and sets forth a blueprint for a realistic vision for Knox County's future development, health and environment during the next five to ten years.

A thorough analysis of aspects of Knox County's existing conditions appear on the following pages, including land use maps and transportation and bike path corridors, among others. The existing conditions in each chapter then inform the respective goals, strategies, and target outcomes set forth to guide Knox County decision-makers. The following is a summary of key plan considerations.

Key Plan Considerations

- **Manufacturing** represents a significant portion of Knox County's economy; this sector of the economy generally pays good wages and benefits, but future technologies are expected to impact this sector, among others.

- For its population and location, Knox County has remarkably strong assets in its primary, secondary, and post-secondary **educational institutions**; these resources will be integral in assisting employees and businesses with coming changes in the workforce.

- Knox County's **workforce is less resilient** to fast-paced economic changes; more than 40 percent of the county's residents have only a high school education, limiting their ability to adapt to a highly technological workplace.

- With more than half of the County classified as prime farmland, **agriculture** will continue to be a major economic sector in the County.

- As **development pressures increase within the Columbus Region**, a part of which Knox County is considered, we should be mindful of the fiscal impacts of different types of development and how they impact our rural character and environment.

- With single-family homes the predominant housing type in Knox County, we should consider **diversifying our community's housing stock** in the face of changing population demographics or financial burdens.

- A very popular amenity in Knox County are its **parks and trails**, which should continue to be expanded upon to improve quality of life throughout the County as well as bolster an inclusive and strategic approach to **tourism**.

CHAPTER 1: INTRODUCTION

1.1.1 The Knox County Regional Planning Commission and Planning, Generally

The Knox County Board of Commissioners created the Knox County Regional Planning Commission ("**RPC**") in 1971 to plan and coordinate land use and development across Knox County to improve the health, safety and welfare of its citizens. The Planning Commission produces studies, maps, plans and makes recommendations regarding Knox County's development. The work of the Planning Commission may include setting county-wide goals, analyzing economic and social conditions, identifying natural resources and planning for long-range capital projects. The Commission may provide planning assistance to governmental units within Knox County and help coordinate planning within the larger region (Meck, et al., 2017).

One of the important services performed by the RPC is the platting of subdivided parcels in unincorporated parts of Knox County. In Ohio, land parcels in unincorporated townships may be subdivided so long as they receive the approval of a subdivision plat by the respective RPC.[1] Such approval by the RPC is not required in the following instances: if the subdivision of land within an unincorporated area involves parcels *each more than five acres*; if the parcels are exchanged among adjacent owners and will not create new building sites; if the subdivision of parcels is done for private streets serving industrial end users; or if a parcel was already subdivided and further involves no more than five lots (Riehl, 2017).

Townships choosing to regulate land use within their jurisdictions – using zoning codes – are required to base their regulations *in accordance with comprehensive planning* by the RPC. Although current law in Ohio states that independently prepared comprehensive plans (e.g., this Plan Update) need not be adopted separately by each zoned township, the better approach for partner townships is to each adopt this stand-alone Plan Update, separate from their zoning resolutions (Meck, et al., 2017 p. 127). This will be discussed in more detail below.

It has been the case recently that municipalities in Knox County have completed their own **professionally prepared plans**, outside the scope of this Plan Update. Both the Village of Fredericktown and the City of Mount Vernon undertook such professional planning efforts during the past year.

[1] The procedure for approving platting of subdivided parcels requires the RPC to schedule a meeting once a subdivision plat has been submitted; the RPC meeting to approve or refuse to approve the plat must occur within 30 days. If the RPC refuses to approve a subdivision plat, the individual seeking the subdivision plat appeals the decision in the Knox County Common Pleas Court. Note that the township trustees *cannot* appeal the RPC's refusal decision in this way (Riehl, 2017).

In early 2017, the Fredericktown Community Development Foundation commissioned a downtown revitalization study for the Village of Fredericktown. Grants from both the U.S. Department of Agriculture and the Community Foundation of Mount Vernon & Knox County covered the cost of the planning work. The resulting plan, written by the non-profit, Columbus-based planning firm, Neighborhood Design Center (link: http://columbusndc.org/), surveyed the community as to their hopes and desires for downtown Fredericktown. In response, the planning consultant developed a series of scenarios for renovating and rehabilitating the central business district of Fredericktown along North Main Street. At the time of this writing, the community was identifying the best funding sources to pay for the improvements suggested by the revitalization study. The completed study is available online: http://knoxadf.com/wp-content/uploads/2016/02/Fredericktown-Downtown-Revitalization-Study-2017.pdf

Soon thereafter, in late 2017, the Mount Vernon Development Company, a non-profit land development organization active in Mount Vernon, received a grant from the Ariel Foundation to complete a Mount Vernon Downtown Plan. The plan, developed by the Columbus office of OHM Advisors (link: http://www.ohm-advisors.com/), is intended to guide future development within Mount Vernon's central core, leveraging more than $38 million in private investment since 2010 along South Main Street. The planning consultant made use of a steering committee of Mount Vernon stakeholders and decision-makers, as well as facilitated public workshops, to collect residents' feedback on the future of downtown Mount Vernon. The plan will be published in early 2018.

1.1.2 Why does Knox County Plan for Different Land Uses, and Where They are Located?

This Plan Update is intended to identify a set of goals and strategies to advance the entire Knox County community. This Plan Update should address the tensions that arise among neighbors as to who we are as individuals – "what can I do with my land?" – and what kind of community in which we want to live. Land is intimately connected to peoples' livelihoods, sense of self and community, and health and well-being. It is true that with any land use change, *someone will be affected*. For example, one person may have concerns about ecosystem protection and longer-term impacts like damage to wetlands and water quality, and another person may be frustrated that valuable land sits fallow, not yet having been developed by a job-creating heavy industrial end user (Ferguson, et al., 2013).

Land development has fiscal impacts on townships, cities and taxpayers. It is important to point out, both here and elsewhere in this Plan Update, that residential land uses do not pay for themselves, but commercial and industrial development does. Put another way, new residential developments cost local governments more – in road maintenances expenses, and fire and EMS runs, among others – than the offsetting revenues received from residential development in the form of local property, income and sales taxes. Commercial, Industrial and Agricultural development tends to bring in more local government revenue than they cost to provide services.

This fact has been shown time and again in various studies performed by different groups across the country over many years (Ferguson, et al., 2013 p. 54). All things being equal, this Plan Update stands for the notion that large-scale residential development opportunities should, when appropriate, be given lower priority or consideration to quality commercial, industrial or agricultural development within Knox County. Further, when residential development is proposed, on a sufficiently large scale, this Plan Update urges the impacted local governments to create **public-private partnerships** with the respective developers to share in the extensive costs to install and upgrade the required infrastructure. Such partnership structures are readily available under Ohio law and include mechanisms like *New Community Authorities* (Ohio Revised Code ("**ORC**") Chapter 349) and *tax increment financing* (ORC Sections 5709.40, 5709.41, 5709.73, and 5709.78).

In addition to fiscal impacts, land development can also have an impact on the health and safety of the residents of Knox County. Natural hazards such as flooding can tremendously impact the community. In 2015, Knox County adopted a Hazard Mitigation Plan following guidance established by the Federal Emergency Management Agency ("**FEMA**") that identified strategies to lessen the impact of these type of events. Several of the strategies identified involve land uses.

Local land use is not uniformly set across Knox County, but rather is determined among a complex and loose-knit group of townships, municipalities and incorporated villages, with each government entity ideally relying on the RPC for uniform guidance. Because land uses are determined by officials within each jurisdiction, it is fair to say the public may fear favoritism, backroom deals and other biases among land use decision-makers at the township, municipal or county-levels (Ferguson, et al., 2013 p. 56). It is also fair to say that many land use conflicts are driven by deeply held and sometimes irreconcilable differences because each of us has strong opinions about what it means to be a community within Knox County. Therefore, this Plan Update attempts to lay-out, in a fully transparent way, the land use priorities and goals Knox County should pursue across all our township and municipal jurisdictions to provide a clear sense of direction to private land owners, developers and others who ask, "What can I do with my land?"

1.1.3 What is a Comprehensive Plan, Why is it Updated, and Why Does it Matter?

A comprehensive plan serves as a vision for the community as to how it expects land use to occur in the future. That is, comprehensive plans should clearly state the goals, objectives and policies, along with maps and charts, to guide public and private development over the long term (Meck, et al., 2017 p. 102). If done correctly, comprehensive plans gather and analyze data and reports regarding land uses, expected population growth, the economy, transportation patterns and other factors that affect communities' physical development. The resulting plan is a statement of options for future land use and community growth and development over time (Meck, et al., 2017 p. 127).

Comprehensive plans are valuable when they are sufficiently detailed and provide enough vision to **guide a potential purchaser of land on how to use the property**. But a comprehensive plan is *not* a zoning map. What a comprehensive plan does is provide the general data and information to guide zoning.

Think of this 2018 Comprehensive Plan Update as looking 20 years into the future, guiding Knox County's growth and development through the use of economic and population data, charts and maps. In this way, this Plan Update stands as Knox County's deliberate, thoughtful statement on what we wish to look like during the next two decades, and how we envision Knox County to be developed and/or preserved (Ohio Supreme Court, 2015).

Interestingly, Ohio law does not actually say what a **comprehensive plan** should include. Without an actual definition, many folks confuse a comprehensive plan with a zoning map. Although unincorporated areas of Knox County can choose to impose zoning through the actions of their respective township trustees, Ohio law does not give townships any formal role in adopting comprehensive plans written by the RPC; townships are only empowered to adopt their own zoning plans. That said, townships' zoning plans under Ohio law must be adopted *in accordance with a comprehensive plan*. As one might expect, the fact Ohio law does not statutorily define "comprehensive plan" but requires townships to zone in accordance with one, has led to confusion across the State, with relevant court cases dating back to the 1950s (Meck, et al., 2017).

One recent court case declared that a countywide comprehensive plan written by the regional planning commission meets the required plan for townships to adopt their own zoning (Ohio Supreme Court, 2009). More recently, the Ohio Supreme Court held that a comprehensive plan, like this Plan Update, may be included in a township's zoning resolution but is not required to be separately adopted by the township trustees (Ohio Supreme Court, 2015). Having said that, planning experts in Ohio believe the *better approach is for townships to separately adopt comprehensive plans and then adopt their zoning resolutions that are consistent with such plans* (Meck, et al., 2017 p. 126). It is the sincere hope of this Plan Update's authors that zoned townships in Knox County not only formally adopt this document but also abide by its suggestions and recommendations for smart growth going forward.

As to municipalities' use of comprehensive plans, cities and incorporated villages are *not* required to adopt zoning in accordance with a comprehensive plan. Although adoption of a comprehensive plan, like this Plan Update, by Knox County's city and villages would support their councils' zoning in the event of a legal challenge, cities and villages need only show their zoning laws are in line with a coherent land use policy based on the community's needs (Meck, et al., 2017 pp. 112-113).

1.2 Knox County's Comprehensive Plan – 1998

The Focus 2100 initiative, led by the Knox County Chamber of Commerce, guided the 1998 update to Knox County's first comprehensive plan written in 1974. At the time of its writing, the 1998 Plan represented a growing awareness that development pressures were increasing, and that undesirable development might occur without good planning.

The 1998 Plan identified four fundamental guiding purposes:

1. To develop a plan that would help direct future development and redevelopment in a way that would enhance the physical, social and economic environment of Knox County;
2. To serve as *the beginning of an ongoing planning process* that would define a long-term community vision (emphasis added);
3. To view the completion of the Comprehensive Plan as the beginning of dedicated implementation efforts; and
4. To define both countywide and local planning perspectives.

More discussion of the 1998 Plan, including how it was informed by substantial public input and community-based feedback, follows in Chapter 2.

1.3 Knox County's Comprehensive Plan Updates – 2006 and 2012

The 2006 Update acknowledged that some of the initiatives and recommendations for action in the 1998 Plan had not been fully achieved. But progress was evident at the time on many fronts: (1) use of the RPC as a more effective and relevant voice in local planning; (2) the creation of a Farmland Preservation Task Force Report in 2000; (3) a Cost of Community Services Study in 2003; and (4) a Comprehensive Study of the Kokosing River Watershed in 2004. Important to note is the RPC engaged a professional firm to assist in the writing of the 2006 Update, but there was (and remains) a general disappointment in the deliverables produced by the firm. In fact, after discarding much of the consultants' initial work, the 2006 Update was largely rewritten by RPC staff and volunteers.

A Steering Committee, composed of RPC members, elected officials and volunteer community leaders, wrote the 2012 Update. The Steering Committee chose to not hire a consultant to help with writing the document. Using several subcommittees, each writing a portion of the Plan to address different subjects, the work ultimately took two (2) years to complete. Although public input was solicited – using directed and internet surveys, personal interviews, and posting the Plan draft online – the Steering Committee acknowledged relatively little involvement by members of the general public. Unsurprisingly, upon its completion and formal adoption, the 2012 Update was promptly filed away, without much reference or any acknowledgement within the county.

Acknowledgements

This Plan Update was supported by the generous financial assistance of the following organizations, without whose contributions this report could neither have been completed nor published on-time and in the manner written:

- AEP Ohio
- Community Foundation of Mount Vernon & Knox County
- United Way of Knox County

CHAPTER 2: PLAN FRAMEWORK AND PRINCIPLES

2.1. Planning Process

This document is a strategic plan that builds upon Knox County's 1998 Comprehensive Plan and subsequent updates. As discussed in Chapter 1, comprehensive plans are general in nature and set forth a number of planning recommendations guiding the County's townships, city, and villages in areas such as land use, development, transportation, infrastructure, safety services, education, parks and recreation, and cultural resources. **Comprehensive** means this Plan Update encompasses all geographic parts of Knox County, and it is **long range** in the sense we look beyond the pressing issues of the immediate day to the perspective of issues and opportunities as far out as twenty years (Meck, et al., 2017).

This Plan Update will be different from several of the most recent updates in that it addresses a smaller number of *specific challenges* and *particular needs* facing Knox County within the next several years. To that point, this Plan Update is *not* intended as the final, end-all, be-all statement on development in Knox County. Due to the rather unique drafting process employed in this Plan Update (addressed below), the Steering Committee fully acknowledges and expects another planning and revision process to occur within the next five years. Unlike previous updates to the County's Comprehensive Plan, this document does not provide as in-depth a discussion of land use. Instead, this version intentionally sets forth key stances and announces clear calls-to-action in the areas of economic and workforce development, healthy communities, and preservation of our rural character.

The Focus 2100 initiative involved a wide segment of the Knox County community to create the 1998 update to the county's first comprehensive plan written in 1974. Led by the Knox County Chamber of Commerce, the effort was noteworthy for convening a number of public discussions in response to the first whiffs of development pressure coming out of Columbus. Focus 2100's leaders wisely acknowledged their plan's successful implementation would depend on public buy-in and consensus built throughout the planning process (Focus 2100, 1998). Three appointed task forces were formed around the subjects of land use, transportation/utilities, and quality of life. Upon completion of the draft plan, 300 copies were distributed to elected officials and stakeholders throughout Knox County, and a summary of the draft plan was published in the Mount Vernon News. In response, more than 25 pages of comments were received from individuals (Focus 2100, 1998).

The effort surrounding the 1998 Comprehensive Plan was largely successful. Historical files show a robust level of public discourse helped produce the Plan's vision for Knox County's future. Several elements of the Comprehensive Plan were successfully implemented and remain firmly in place, including strengthening the RPC and developing a "local foods" movement (manifesting itself in the farmers' markets that occur during the summer months in Knox County).

Several updates have been published since 1998 to guide local zoning decisions. With this Plan Update, our community again recognizes it is time to update the Comprehensive Plan in the context of current conditions and the regional climate.

1Figure 2:1 - Map of Knox County, OH

The study area for this comprehensive plan is the land contained within the geographic boundaries of Knox County (see Figure 2:1). This is an area of approximately 532 square miles, located at the geographic center of Ohio. Knox County is comprised of one city (the City of Mount Vernon), several incorporated villages (Centerburg, Danville, Fredericktown, Gambier, Gann/ Brinkhaven and Martinsburg), and 22 townships.

For economic development, transportation and regional planning purposes, Knox County is part of the 11-county Columbus Region (see Figure 2:2) (Columbus2020). Culturally, Knox County is more deeply tied to the Columbus metro than neighboring northeast Ohio or Appalachian regions, despite the fact it is slightly more than a one-hour drive (assuming good weather and little traffic congestion) from downtown Mount Vernon to the downtown Columbus intersection of Broad and High Streets. Our residents regularly commute to jobs in Franklin County and its neighboring counties, travel in and out of John Glenn International Airport, drive to Easton Town

Center or Polaris Fashion Place for occasional shopping and dining, view Columbus' local television affiliates, and listen to Columbus' local radio stations.

This connection to Columbus is critically important for our community's health and growth prospects. Clearly, there is no other metro in Ohio, if not the Midwest, which we would want to be in its orbit. Columbus is the fastest growing metropolitan area in the Midwest; since 2010, the Columbus Region, which includes Knox County, has led the Midwest's largest metros in the growth of jobs and population. The Columbus metro's gross domestic product ("**GDP**") — the value of goods and services produced in the region – grew at a 2.5 percent rate in 2016. This was one of the fastest rates of growth in Ohio, and served to push the size of Columbus' economy past that of Cleveland's for the first time (Columbus2020). By population, Columbus now is the second biggest in the Midwest, after Chicago (Newpoff, 2017). And during the past decade or so, Columbus consistently scored in the top one-third among its 34 peer metro areas (i.e., those with populations of 1 to 3 million) (Williams, 2017).

As will be discussed in Chapter 3, planners estimate the Columbus Region will grow by *at least* 500,000 new residents by 2050 (MORPC; Columbus2020; ULI-Columbus; Calthorpe Associates, 2015). It is highly likely that some proportion of these new residents to the region will desire to live in an intact rural community offering a cheaper cost of living and a quieter lifestyle; that is, a home in Knox County.

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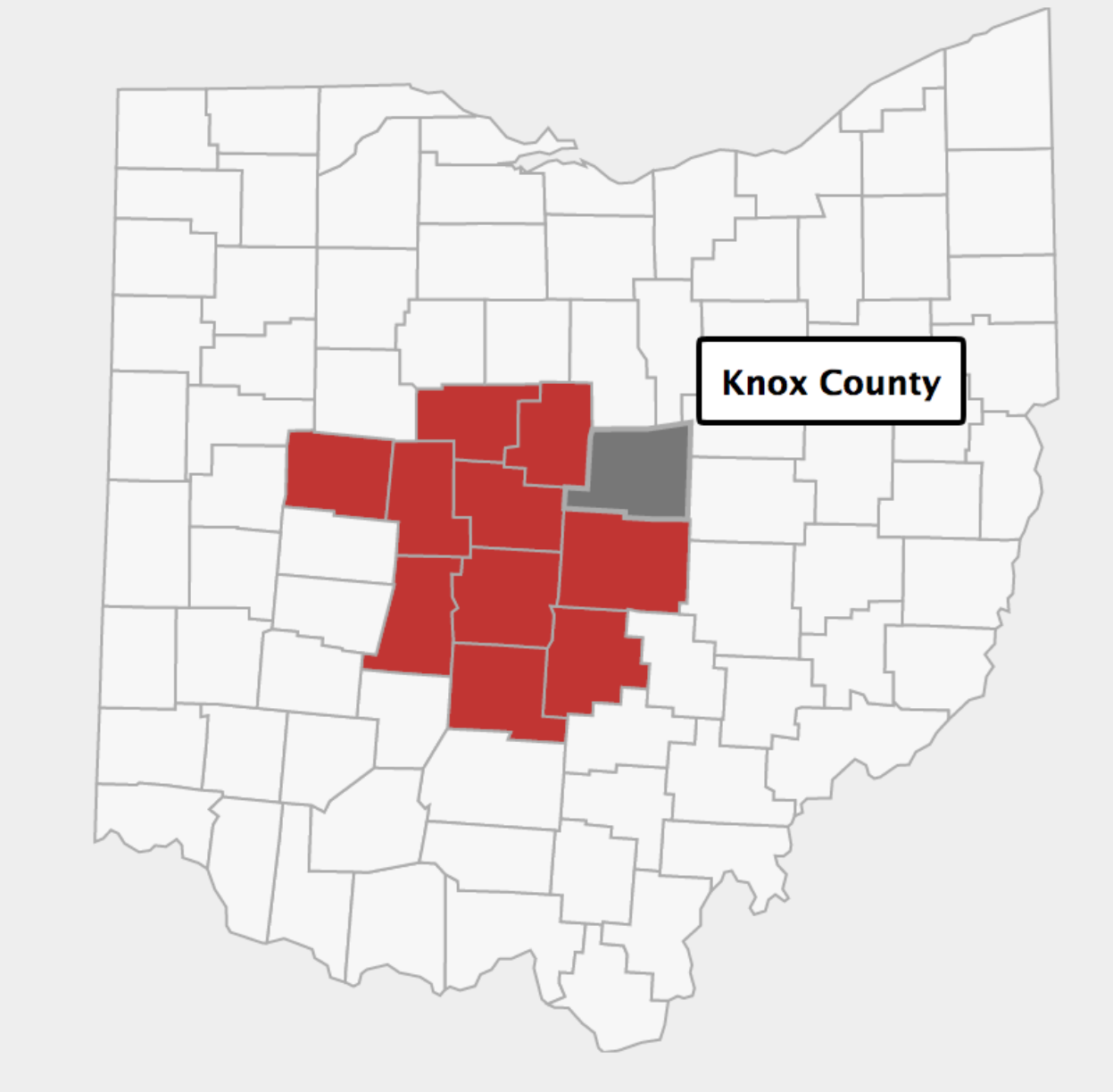
2 Figure 2:2 - Knox County's relative location and inclusion in the 11 county Columbus Region



(Columbus2020)

Knox County must confront directly its place in this growing region. This Plan Update is intended to clearly state how Knox County wishes to grow as the surrounding Columbus Region grows. We seek to identify steps to maintain our intact rural character, celebrate and enhance our unique qualities, and preserve our generally pleasant way of life. This Plan Update is a schematic document meant to inspire the community, guide public policy, and encourage wise development decisions; the following chapters examine specific improvement opportunities and resource allocations to accommodate smart growth and maintain Knox County's high quality of life.

Steering Committee Process

For this Plan Update, a Steering Committee was again employed to manage the drafting process. As was the case with previous updates, this Steering Committee was composed of RPC members, elected officials, and volunteer community leaders representing a broad spectrum of community services, business, and industry (see Table 2:1, below).

1 Table 2:1 - 2017 Plan Update Steering Committee Members

Name	Position
Vic Turner (*Chair*)	Zoning Inspector, Brown Township
Jeffry Harris (*Vice-Chair, Editor & Lead Author, Ch's 1, 2, 3 & 4*)	President, Area Development Foundation, Inc.
Brian Ball	City Engineer, City of Mount Vernon
Honorable Teresa Bemiller	Knox County Commissioner
Rob Clendening (*Lead Author, Ch. 6*)	Program Administrator, Knox County Soil & Water Conservation District
Cameron Keaton	County Engineer, Knox County
Mark Maxwell	Director, Knox County Emergency Management Agency
Honorable Richard Mavis	Mayor, City of Mount Vernon
Julie Miller	Knox County Health Commissioner
John Owens	Resident, City of Mount Vernon
Jeff Pickrell	Superintendent, Knox County Water/Wastewater
Mark Ramser	Resident, Village of Gambier
Tami Ruhl	Creating Healthy Communities Coordinator, Knox County Health Department
Darrel Severns	Secretary, Knox County RPC
Lori Totman	Director, Knox County Park District
Honorable Nancy Vail	Council Member, City of Mount Vernon

There was general agreement among Steering Committee members that the 2012 Plan Update was well-written, but neither stood for any particular notions nor set forth clear development goals and objectives. By way of example, the 2012 Plan Update devoted less than one-page discussing the county's economic development strategy and focus.

The Steering Committee debated and eventually chose to hire planning professionals to better identify and emphasize a set of goals, strategies, and objectives for this Plan Update. After

releasing a Request for Proposals, the Columbus office of OHM Advisors (link: http://www.ohm-advisors.com/) was selected to assist the Steering Committee. Due to budgetary constraints, the firm was not hired to write the entire Plan Update. Rather, the consultants were engaged to both jump-start the writing process early on (by facilitating mapping and goal-setting exercises), and to help complete discrete parts and elements during the Plan Update's finalization in early 2018. Specific appreciation is shown by the authors to Jason Sudy, Conor Willis and Alyssa Sexton at OHM Advisors who provided valuable assistance during the final drafting process. In addition, John McFarlane, a Kenyon College student with a deep interest in urban and regional planning, provided substantial help with research and editing tasks.

Public Engagement

The following is a record of the various public meetings and writing sessions convened for this Plan Update.

2 ***Table 2:2 - 2017 Plan Update Steering Committee Meetings***

Date	Meeting Type	Location*
October 2016	Steering Committee Mtg. No. 1	Knox County Commissioners office, 117 East High Street
November 2016	Steering Committee Mtg. No. 2	
January 2017	Steering Committee Mtg. No. 3	
February 2017	Steering Committee Mtg. No. 4	
March 2017	Steering Committee Mtg. No. 5	
April 2017	Steering Committee Mtg. No. 6	
May 2017	Mapping session w/ OHM Advisors	
June 2017	Goals & Objectives session w/ OHM Advisors	
July 2017	Chapter writing team meetings	Various
August 2017	Chapter writing team meetings	Various
September 2017	Chapter writing team meetings	Various
October 2017	Chapter writing team meetings	Various
November 2017	Steering Committee Mtg. No. 7	
February 2018	County Commissioners' public hearing & Plan Update adoption	

*Unless otherwise indicated, all Steering Committee meetings were held in the Knox County Commissioners' office at 117 East High Street, Mount Vernon.

Table 2:2 details the Steering Committee's many public meetings regularly held during a 15-month period. And it is true the Steering Committee was composed of members who served in their capacities as elected officials; presumably representing the needs and desires of their community constituencies. But this Plan Update lacks public input, community discourse, and widespread consensus. The only public-facing effort made for this 2018 Plan Update was in the form of the Steering Committee's public meetings, held as they were in the evenings in the Knox County Commissioner's offices. As one would expect, virtually nobody but Steering Committee members attended these meetings. Unfortunately, the general public, nominally made aware of Steering Committee meetings via required notices by the RPC, was not a factor in this document's preparation as public input sessions were discussed but never implemented. This point is highlighted because future planning efforts *must do more* to solicit input from members of the public and community leaders – prior to the start of any drafting. Such feedback is essential to collectively set Knox County's course and validate future plans' visions. Without widespread buy-in to the approaches set forth in this document, the time and attention paid to writing this Plan Update may be in vain.

The lack of public input to this Plan Update is related to a larger issue with its drafting: simply, each member of the Steering Committee served as a volunteer, with pressing day-job responsibilities that limited the time and energy they could devote to completing such an undertaking. To correct for this, we strongly urge the next update to take place (a) within the next six years and to (b) hire professional planning consultants from the outset, to manage the drafting process and administer a full-fledged public outreach campaign (including social media posts, use of web-based resources, facilitated focus groups, and statistically valid survey instruments).

Despite the drawbacks acknowledged here, the reader should be assured that a faithful effort was made, by the many volunteers and RPC staff members involved, to produce a useful, timely, and realistic comprehensive plan for Knox County. As with all things, there is room for improvement.

2.2 Plan Framework

To help set the goals, strategies, and objectives for this Plan Update, OHM Advisors developed an overview diagram for the process. Each element of this Plan Update was written according to the outlined approach appearing on the following page.

3 ***Table 2:3 - Plan Principles, Goals and Strategies***

Ensure Responsible Growth	
GOAL	**STRATEGY**
3.3.1 Help create *Good Jobs*	Avoid offering financial incentives to projects unless they commit to *Good Jobs*
3.3.2 Improve the county's economic diversity	Seed and cultivate innovation and entrepreneurship
3.3.3 Control the scale and scope of development	• Encourage development in areas *already* on the grid; • Create an inventory of shovel ready sites
3.3.4 Continue to promote tourism	Develop an inclusive tourism strategy featuring a shared services approach
3.3.5 Link transportation planning to economic development	Participate fully in Columbus Region's CORPO process[1]
Prioritize Education	
GOAL	**STRATEGY**
4.3.1 Break down silos	Who's on the bus?
4.3.2 Implement the WorkDev Mission[2]	Help businesses and job-seekers
4.3.3 Instill worker pride	There is pride and dignity in full-time employment
4.3.4 Make well-informed local workforce development policies	Data drives WorkDev actions

[1] CORPO = Central Ohio Regional Planning Organization

[2] WorkDev = Workforce Development Mission

Strengthening Quality of Life	
GOAL	**STRATEGY**
5.3.1 Diversify the County's housing stock	Study the possible implementation of building codes across Knox County
5.3.2 Improve health outcomes related to opioid use and abuse	Support ongoing KSAAT efforts
5.3.3 County parks and trails to meet the needs of Knox County residents and visitors	Prioritize capital improvement projects for parks and trails
Preserve Environmental Character	
GOAL	**STRATEGY**
6.3.1 Seek to understand the fiscal impacts of land uses	Update the *Cost of Community Services* study
6.3.2 Educate Knox County residents about land use and development issues	Mitigate conflicts and educate stakeholders as to realities of living in an agricultural community
6.3.3 Conduct a comprehensive review and update of county land use regulations	• Incorporate viewshed analyses into local subdivision rules; • Update subdivision design standards and employ incentives promoting conservation of open space and agricultural land; • Review township zoning codes and encourage rural development and design options; • Develop templates and encourage township-level regulatory farmland preservation efforts; • Update the Existing *Plan of Future Land Use* map and encourage residential development accordingly; • Develop a county farmland preservation plan

2.3 Planning Principles

Based on the framework depicted on the previous page, this Plan Update provides guidance to the Knox County community as to each of the following elements, arranged according to the principles indicated:

- **Ensure Responsible Growth** (Chapter 3)
    - Raise awareness within Knox County as to planning and development issues;
    - Provide direction for future development – industrial, commercial and residential – because *it is coming*; and
    - Introduce the notion of creating public-private partnerships to handle the inevitable costs of new and updated infrastructure as development pressures increase;
- **Prioritize Education** (Chapter 4)
    - Discuss Knox County's education system in the context of developing a high-quality local workforce; and
    - Break down silos of Knox County's various workforce contributors to align vision and maximize efficiencies;
- **Strengthen Quality of Life** (Chapter 5)
    - Tabulate and improve Knox County's quality of life factors; and
    - Align these attributes with the overall vision for a healthy Knox County community; and
- **Preserve Environmental Character** (Chapter 6)
    - Identify, preserve, and enhance the critically important rural attributes of our community.

Generally speaking, this document seeks to raise and help answer questions such as the following: *Where does Knox County foresee – and desire – future industrial, commercial, agricultural and residential development? What kinds of jobs should be encouraged to be created or maintained in Knox County? How does Knox County want to be positioned in the next 20 years? What can be done to best preserve our rural character and natural beauty?*

The results of this endeavor appear in the following pages. We encourage and support active and repeated use and reference to this planning document.

CHAPTER 3: ENSURE RESPONSIBLE GROWTH

3.1. VISION STATEMENT

We envision a thriving and uniquely intact rural community that accommodates appropriately located economic growth that pays our residents financially sustainable wages, and is diverse enough to guard against single-industry boom-and-bust cycles.

3.2 EXISTING CONDITIONS

Knox County is located in the geographic center of Ohio, approximately 50 miles northeast of Columbus and 100 miles southwest of Cleveland. The county measures 527 square miles (Ohio Development Services Agency, 2017), contains 29 political subdivisions (U.S. Census Bureau, 2000), and five school districts (ODSA - Office of Research, 2017). In 2017, residential property was valued at $775 million, the highest in Knox County, with agricultural valuations next at $344 million, followed by industrial and commercial property totaling $125 million in value (Ohio Development Services Agency, 2017).

Economic development efforts across Knox County are led by the Area Development Foundation, Inc. (link: www.knoxadf.com). Established in 1955, the Foundation serves as the central clearinghouse within Knox County for economic and community development expertise and activities. The Foundation seeks to retain and grow commercial and industrial economic opportunities within Knox County. In its efforts, the Foundation is a full partner with Columbus2020 (link: http://columbusregion.com/columbus-2020/), the economic development organization for the 11-county Columbus Region, now considered the fastest growing metro in the Midwest (Columbus2020, 2016).

KNOX COUNTY
Area Development Foundation

The Knox County community is unlike many of its rural peers in Ohio given the strong presence of heavy industrial employers, institutions of higher education and a top of the line independently owned healthcare institution (The Ohio State University City and Regional Planning Economic Development Studio, 2016).

In 2016, the total gross regional product ("**GRP**")[2] in Knox County was $1.8 billion. Of this amount, 42 percent was generated by so-called economic base companies[3] (compared to only 35 percent of GRP generated from economic base industries across the entire Columbus region). Also, manufacturing represented fully one-third of Knox County's entire economic output in 2016 ($578 million) (Columbus2020, 2017).

Agriculture is the dominant land use in Knox County. According to the U.S. Department of Agriculture's Census of Agriculture, which last reported county-specific data in 2012, there were 1,374 farms in Knox County, cultivating 186,047 acres (54.6 percent of the county's total land mass), with an average farm size in Knox County of 135 acres. Of the farms in Knox County, an overwhelming majority of them, fully 75 percent, were sized 10 to 179 acres; only 24 farms were active on at least 1,000 acres in Knox County. On 278 reporting farms, there were 951 employed farm laborers. If farm labor was included in Knox County's Top 25 Employers list (*see* Table 3:4, below), it would be the second-highest ranked "employer" in the community (National Agricultural Statistics Service, 2012).

During the 2012 reporting period, the market value of agricultural products in Knox County was $121.4 million, with the value of **crops** sold equaling $80.2 million (66 percent) and the value of **livestock and poultry** sold equaling $41.2 million (34 percent). Interestingly, the split between crops and livestock became more pronounced in 2012 as compared to the American Farmland Trust's analysis of Knox County's land uses in October 2003, when it was found that one-half (50 percent) of the county's agricultural revenues came from crops and one-half from livestock (American Farmland Trust, 2003). Drilling down into the 2012 data, crop production in Knox County was split into corn (47,628 acres, or 40 percent of crop acreage); soybeans (44,451 acres, or 38 percent); food forages, such as hay (19,767 acres, or 17 percent); and wheat (3,096 acres, or 3 percent).

The 2012 reporting period was too early to capture the much more recent – and ongoing – expansion of poultry production operations in Knox County. It was reported at the time of writing this Plan Update that one poultry producer alone maintained 39 broiler barns, three pullet houses and nine breeder (i.e., egg-laying) facilities in Knox County. The total estimated live weight production of poultry in the community was estimated at approximately 67 million pounds per year, of which 50.9 million pounds (or 76 percent) were dressed (i.e., ready-to-cook) chicken. This represented enough poultry production in Knox County to supply the annual consumption needs of approximately 467,000 people! Further, there has been proposed at least two more broiler facilities – totaling six such barns – within the community. By way of economic

[2] Gross regional product ("**GRP**") is the market value of all final goods and services produced within an area and measures the size of the local economy.

[3] ***Economic base*** companies and industries export goods or services out of the county, thereby bringing wealth in from outside the community. By way of example, a manufacturing facility increases wealth for the local economy by serving businesses or consumers in external markets. ***Non-economic base*** businesses, such as retail, recirculate local disposable income within the community, providing value for quality of life purposes but are less impactful to growing community wealth (Columbus2020, 2017).

impact, each three-barn broiler site involves an average investment by the operator of $1.5 million (Clendening, 2017).

Along this line, Knox County is set-apart in the Columbus Region by its **intact rural community** and character. This means that first, much of Knox County is green space: cultivated fields, rolling landscape, low noise and air pollution, and the ability to see stars at night in much of our community. Second, our economy and land use largely are agricultural in nature. To lose our agricultural character would be to lose our rural sensibilities. Third, Knox County has a distinct advantage in its overlapping, informal social network, in which virtually everybody knows everybody, our residents are neighborly and kind, where facetime with friends and business colleagues is critical, and word-of-mouth is the ultimate reputation maker. Finally, Knox County's culture is one of hard work, independence, general "goodness" and tolerance (Sacks, 2017). These various traits overlap and intertwine to create a social fabric that is enduring, but not indestructible. It is the desire to keep this rural character intact that drives much of the discussion in this Chapter 3.

See Figure 3:1 on the next page for a graphical representation of land use in Knox County.

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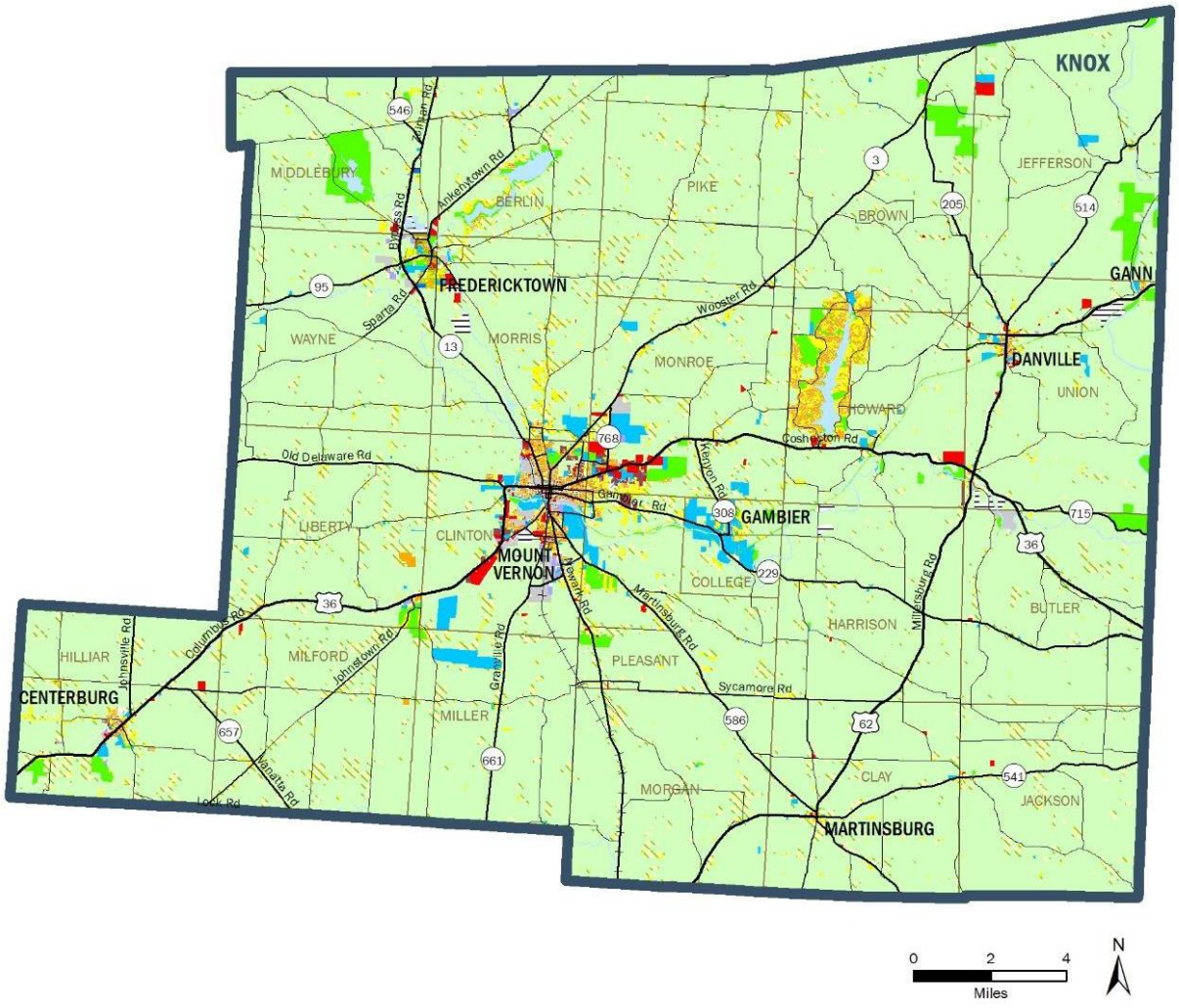
3 ***Figure 3:1 - Land uses in Knox County, Ohio***



CENTRAL OHIO RURAL PLANNING ORGANIZATION

Existing Land Use

- Commercial
- Office
- Industrial
- Park/Open Space
- Urban (8-20+ units per acre)
- Res High Suburban (3-8 units per acre)
- Res Suburban (0.5-3 units per acre)
- Res Rural (2-20 acre lots)
- Agriculture
- Public Service
- Quarry
- Warehouse
- Vacant
- Water
- CORPO County
- Township Boundary

Source: MORPC, 2014

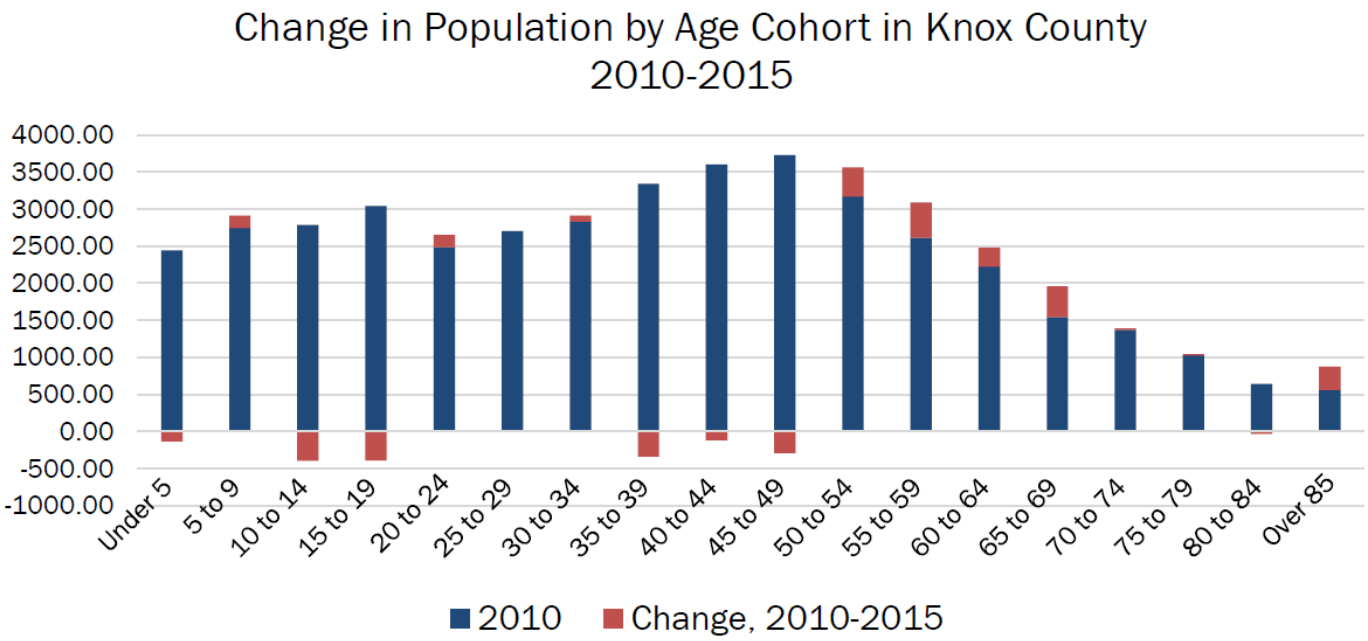
The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
N:\ArcGIS\CORE\RTPO\CORPO_KNO_LU.mxd
6/20/2017

(Mid-Ohio Regional Planning Commission, 2017)

The **population of Knox County** was reported to be 60,814 residents under the most recent U.S. Census Bureau update (Columbus2020, 2017). Interestingly, as the Columbus region grew by 6.7 percent from 2010 to 2016, the population of Knox County *shrank* by 0.4 percent during the same time period. And Knox County's total population is marked by a higher median age (38.7 years old) than that in the Columbus Region (median: 36 years old). On the plus side, Knox County's per capita income (i.e., dollars earned per resident) has grown by 27 percent since 2010, far outpacing not only the Columbus Region (21.5 percent growth), but Ohio and the nation.

Knox County's **residents are aging** and will face challenges in the future as Baby Boomers leave the workforce and enter retirement. This is true for all of Ohio. Data clearly show the 55+ age cohort in Knox County is increasing. (See Figure 3:2). Changes in our population are consistent with the findings published by insight2050 (link: http://getinsight2050.org/the-report/), a collaborative initiative among public and private partners in the Columbus Region helping communities proactively plan for development and population growth. The insight2050 initiative published data showing that during the next 30 years, the Columbus Region's development patterns are likely to be dramatically different from the past, with a spike in the number of single-person households and a drop in the number of nuclear families with children (Mid-Ohio Regional Planning Commission, 2017).

4 ***Figure 3:2 - Change in Population by Age in Knox County, 2010 - 2015***

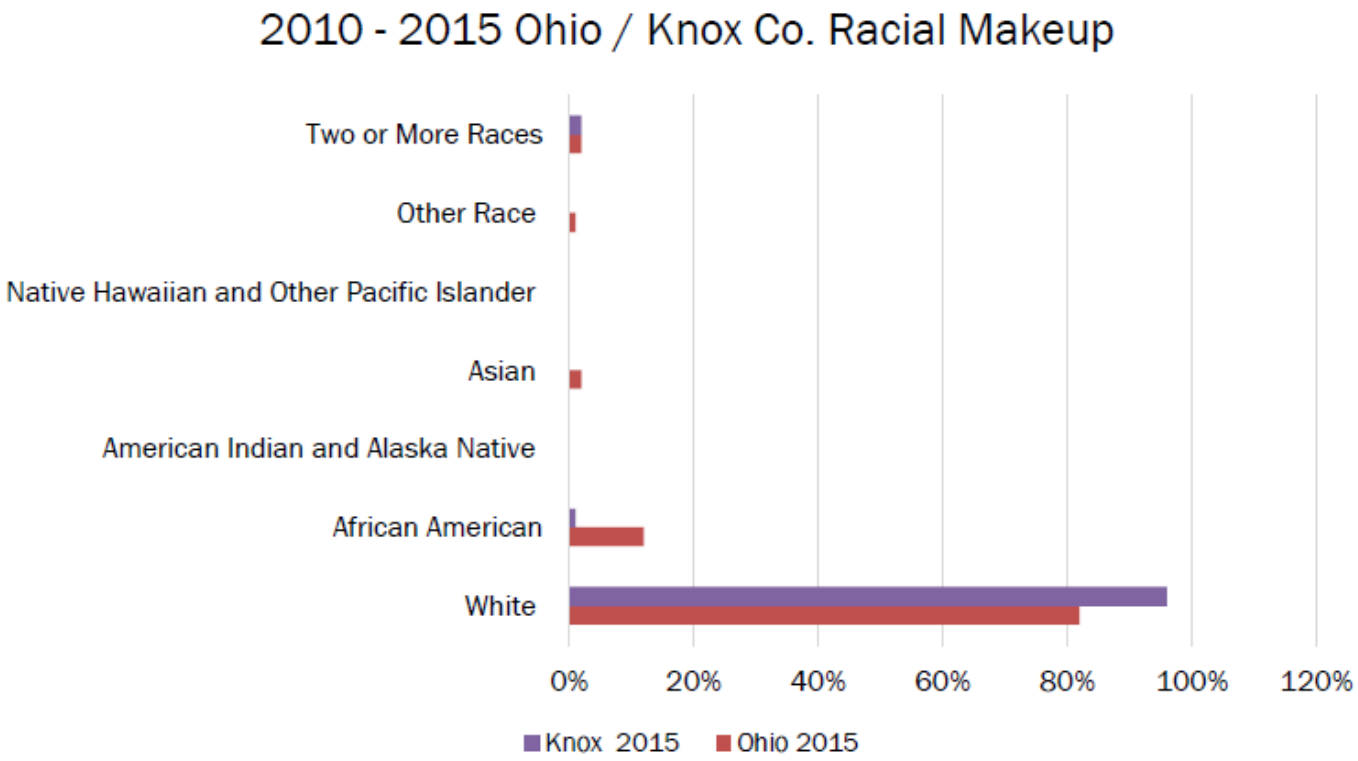


(Mid-Ohio Regional Planning Commission, 2017)

An element of Knox County's population that must be acknowledged is our community's relative lack of **racial diversity**. In 2015, Knox County's population was 96 percent white (Mid-Ohio Regional Planning Commission, 2017). Knox County is less diverse when compared to Ohio as a whole. (See Figure 3:3)

The fact our rural community is homogenously white is not necessarily uncommon, particularly in the Midwest. However, this Plan Update acknowledges the high likelihood that Knox County's population will diversify in the coming decades as a result of larger population trends occurring nationally and in the Columbus Region. It is important for our community to prepare itself for such population demographic changes. This includes fostering community conversations and open dialogue around how well-positioned we are to new faces and different cultures and life experiences as new residents choose Knox County in the coming years.

5 ***Figure 3:3 - 2010-2015 Ohio / Knox Co. Racial Makeup***



(Mid-Ohio Regional Planning Commission, 2017)

Another important measurement for Knox County is the **rate of homeownership**. For example, if large numbers of residents seek to own single-family homes – following the traditional residential development patterns of the past 75 years – we should expect to see increasing volumes of home construction, residential subdivision developments and a greater expansion of the built environment as the community grows. It has been true that for decades, outlying communities exploded as people moved out of central, urbanized areas and commuted to work from bedroom suburbs and exurbs. Although homeownership has traditionally been a goal for most Americans, we are beginning to see changes, particularly since the Great Recession.

Mirroring national data trends, homeownership rates are *declining* in the Columbus Region. With increased traffic congestion, higher fuel prices, a recovering housing market and more Millennials and Empty-Nesters desiring to live closer to (walkable) amenities, the demand for in-town, dense,

centrally located *rental-based* housing options has increased. Recent data for Ohio indicate an overall increase in renters; Knox County similarly experienced an increase in its renter population during the period 2010 to 2015 (Mid-Ohio Regional Planning Commission, 2017). (See Table 3:1)

4 ***Table 3:1 - Knox County Housing Tenure Table***

Knox County Housing Tenure		
Year	**% Rent**	**% Own**
2010	**25%**	**75%**
2015	**29%**	**71%**
10 to 15 Change	**+4%**	**-4%**

(Mid-Ohio Regional Planning Commission, 2017)

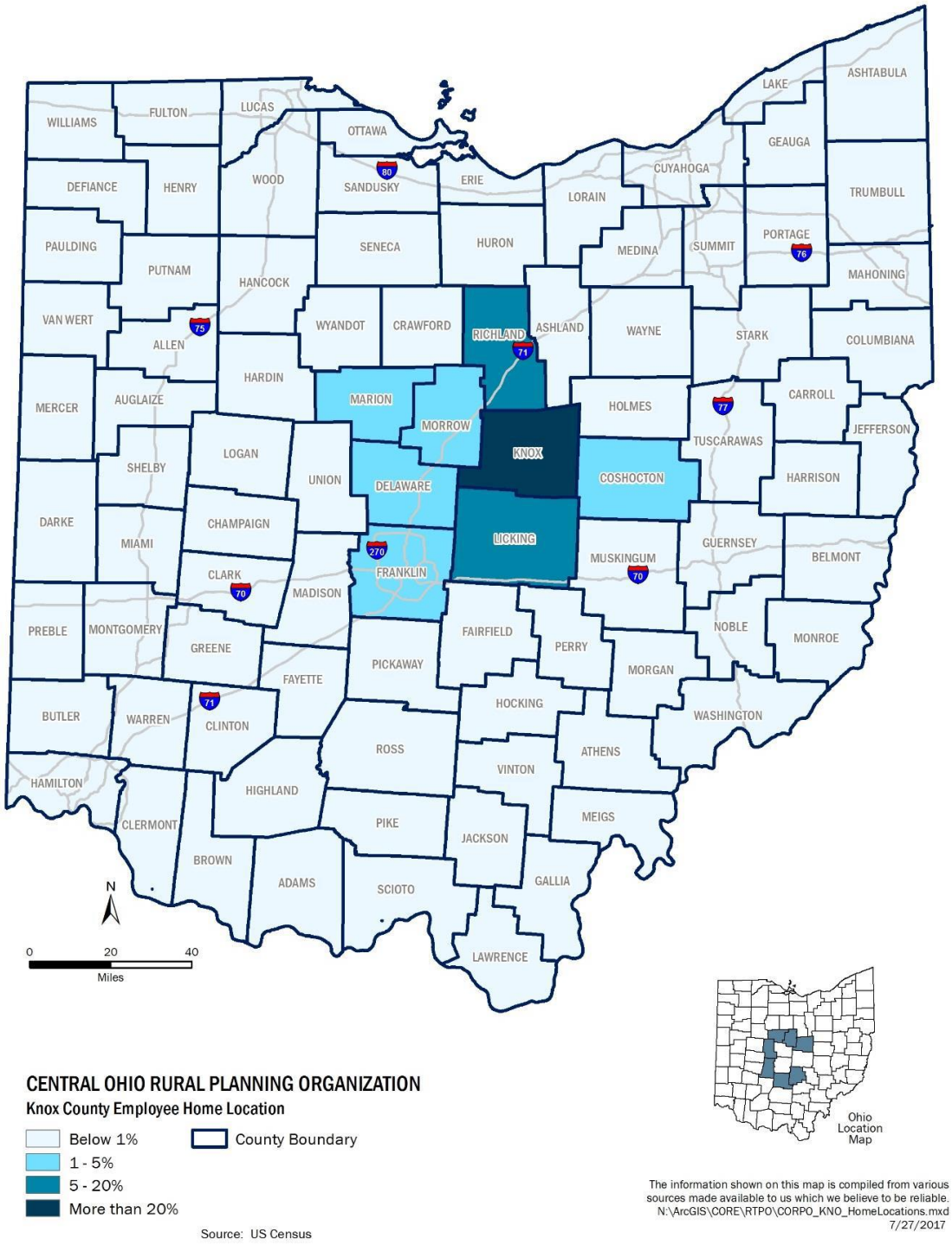
As for **worker-commuting patterns**, everyday Knox County exports more of its residents *out* to jobs located in neighboring counties than it imports workers to jobs *in* the county. Using 2014 data, Columbus2020 calculated that approximately 10,300 Knox County residents commute to jobs *outside* the county. And the same data show that approximately 8,000 residents of other counties commute to jobs *inside* Knox County. The outflow of workers thus surpasses the inflow of workers by roughly 2,300. By way of comparison, approximately 10,800 Knox County residents commute *within* their home county to jobs (Columbus2020, 2017).

A substantial number of persons who live elsewhere and commute *into* Knox County are driving to manufacturing jobs (roughly one-third, or approximately 2,500, of the jobs in Knox County). For those Knox County residents who *leave* our county for work, only 21 percent (or approximately 2,100 workers) are driving to manufacturing jobs; more than half (55 percent) head off for jobs in other industry sectors.

Where are workers driving from? Where are Knox County residents driving to jobs? Figures 3:4 and 3:5, on the following pages, depict those counties *to which* Knox County residents drive daily to work, or *from which* other residents drive in for their jobs. Most workers arriving each day for work in Knox County are heading to jobs in Mount Vernon, Fredericktown, Danville and Gambier. Knox County residents tend to commute north to Mansfield and Wooster, as well as south to Newark and southwest to Franklin County (Columbus2020, 2017).

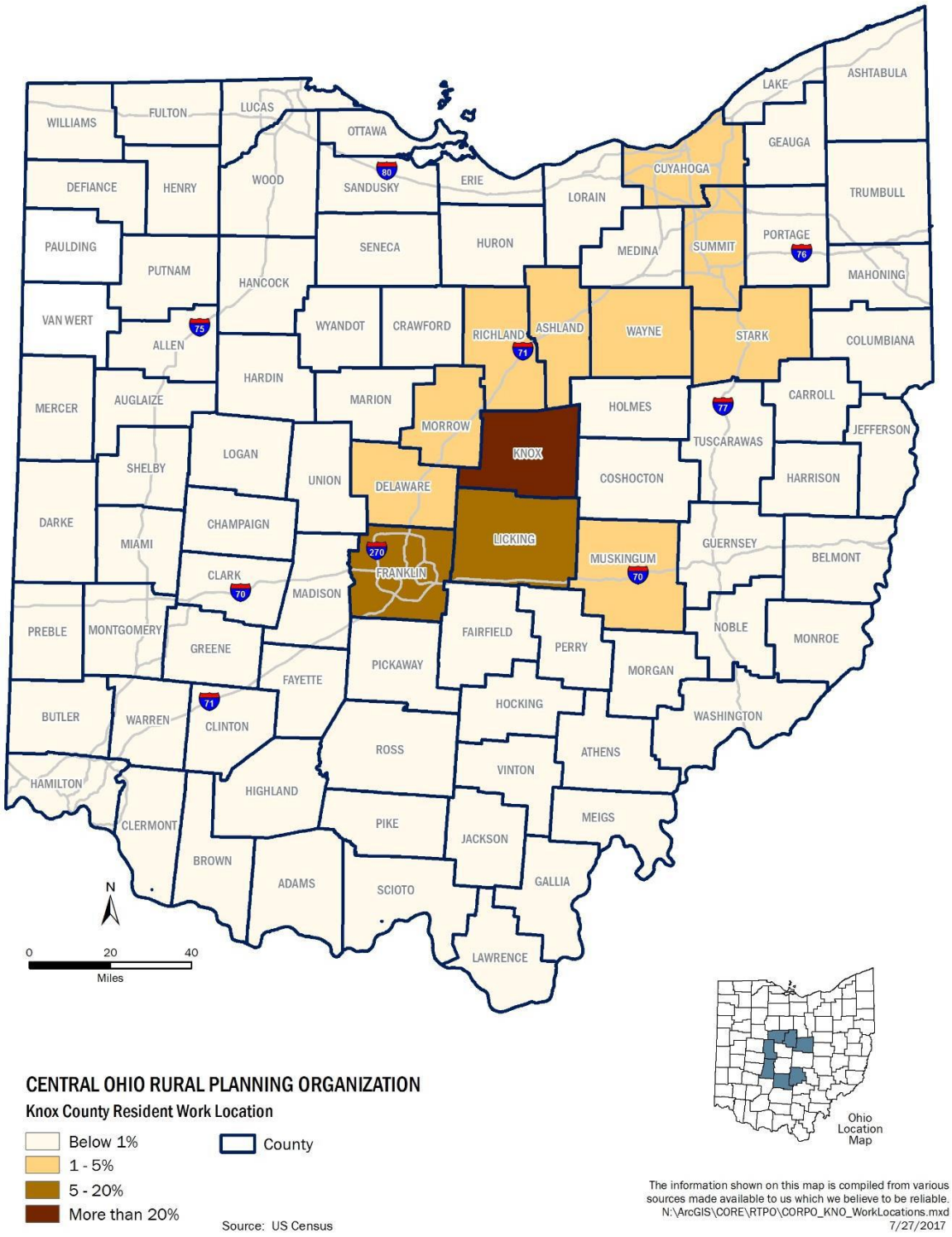
These data suggest Knox County is something of a bedroom community – a place to sleep and raise one's children – for a very large segment of our working age population. This Plan Update stands for the notion that Knox County residents who drive outbound to work may not be as engaged in our local community because they arrive home each evening having spent the day elsewhere; they may lack the energy and time to become very involved in matters and issues in their home community.

6 Figure 3:4 - Where Knox County Workers Daily Commute From



(Mid-Ohio Regional Planning Commission, 2017)

7 ***Figure 3:5 - Where Knox County Workers Daily Commute To***



(Mid-Ohio Regional Planning Commission, 2017)

Knox County, like all communities across the nation, has clear socio-economic divisions. Planners and policy makers often use poverty rates to measure a community's economic condition and to evaluate trends (Bishaw, et al., 2016). Although Knox County boasted "full employment" of workers at the time of drafting this Plan Update, the county's **rate of poverty** has remained stubbornly high at 15.3 percent (approximately 9,300 county residents lived on reported earnings below the federal poverty line in 2015). Worryingly, Knox County's poverty rate has *increased* since 2012 (from 14.6 percent) at a time when the national poverty rate declined (Bishaw, et al., 2016).

Also, during 2016, individuals making less than $12,228 annually, or a family of three making less than $19,105, were deemed to live in poverty within Knox County (U.S. Census Bureau, 2017). This means that 9,334 Knox County residents lived below the poverty line last year (Data USA, 2017). However, this figure likely includes students at local colleges (who traditionally do not earn much as they attend school), but the number is nonetheless troubling.

This Plan Update does not attempt to define an anti-poverty agenda; the issue has bedeviled planners and policy makers at the federal, state and regional levels since well before President Lyndon Johnson's *War on Poverty* initiatives in the 1960s. But the fact remains Knox County has a sizable population who live in poverty. There has been much discussion over the years among county residents as to whether those in need elsewhere in Ohio identify Knox County as a welcoming community in which to locate; there is thought to be a favorable opinion of local generosity in social networks. For this Plan Update, no data were compiled or analyzed to determine if this is fact or urban legend. But data were analyzed in one area relating to poverty in Knox County: *wages jobs pay* in the community. (See Figure 3:6 on the next page.)

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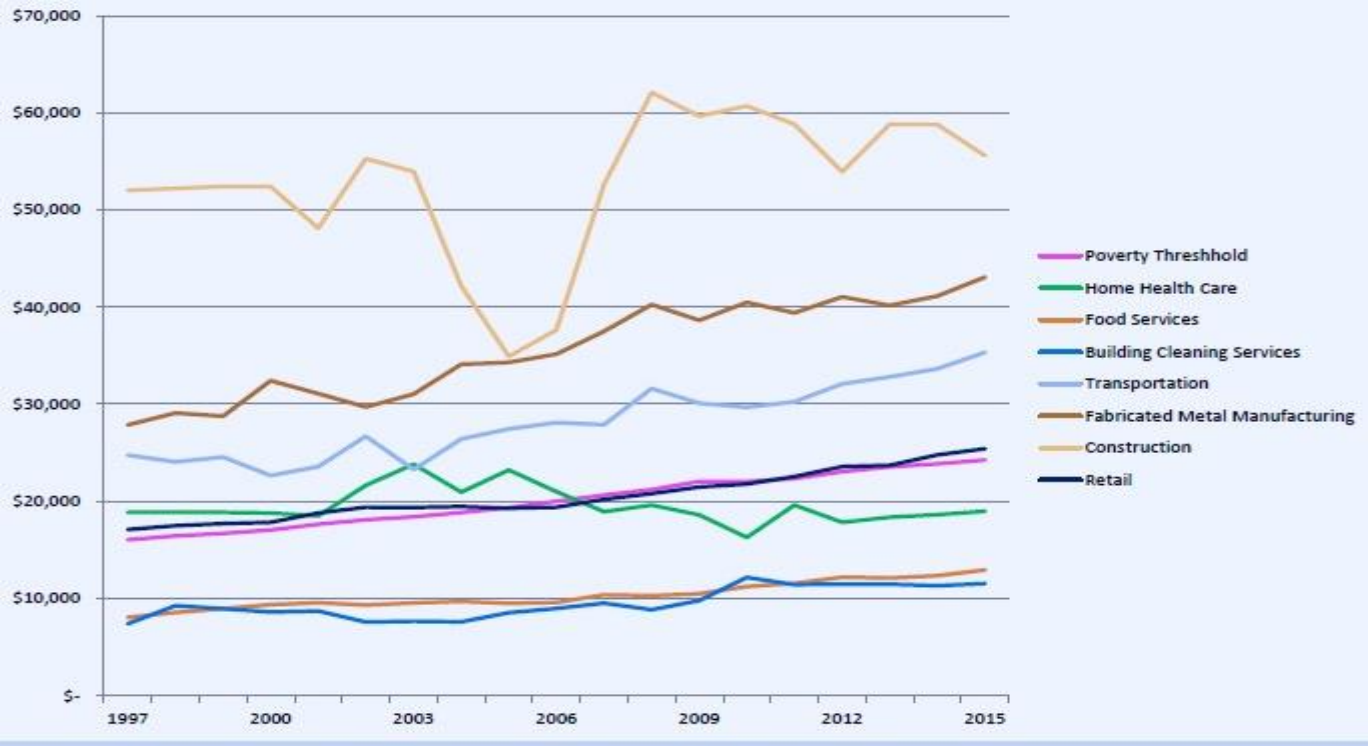
*8**Figure 3:6 - Compare Poverty Level with Wages Paid in Knox County***



(Celmar, 2017)

Employment data for 2016 indicate *economic base industry employers* comprised 26 percent of employment in Knox County (6,609 workers), with manufacturing jobs representing the largest share (4,486 workers, or 23 percent of the county's workforce). The proportion of jobs in Knox County that are manufacturing-based (again, 23 percent) is higher than the rates reported in the other ten counties comprising the Columbus Region (Columbus2020, 2017).

As shown in Figure 3:5, above, several job types in Knox County pay wages that are lower than defined federal poverty thresholds. Building cleaning services, food services and home health care-related jobs paid wages in Knox County *lower than the poverty level*; retail jobs paid wages *roughly equal to the poverty level*. At the same time, transportation, fabricated metal manufacturing and construction jobs paid much higher wages.

The information depicted in Table 3:2 on the following page describes approximately 9,300 of the most common jobs in Knox County, spread across 20 broad categories during 2016. The table includes corresponding wage data, which are annualized and depicted with color-coded cells, indicating whether jobs on average pay *less than the federal poverty level* (red) or *less than 150 percent of the federal poverty level* (yellow).

*5**Table 3:2 - Top 20 Most Common Job Types in Knox County***

Rank No.	Job Type	No. of Jobs	Average Hourly Wage	Annual Wages
1	Fast Food and Counter Workers	856	$9.32	**$19,386**
2	Nursing, Psychiatric, and Home Health Aides	776	$10.44	**$21,715**
3	Miscellaneous Assemblers and Fabricators	757	$17.15	**$35,672**
4	Secretaries and Administrative Assistants	614	$16.08	**$33,446**
5	Laborers and Material Movers, Hand	587	$12.01	**$24,981**
6	Driver/Sales Workers and Truck Drivers	562	$14.42	**$29,994**
7	Retail Salespersons	550	$9.78	**$20,342**
8	Postsecondary Teachers	491	$37.09	**$77,147**
9	Cashiers	463	$9.35	**$19,448**
10	Building Cleaning Workers	456	$10.80	**$22,464**
11	Elementary and Middle School Teachers	443	$26.44	**$54,995**
12	Office Clerks, General	414	$12.32	**$25,626**
13	Registered Nurses	409	$30.87	**$64,210**
14	Construction Laborers	345	$14.73	**$30,638**
15	Cooks	332	$9.72	**$20,218**
16	Waiters and Waitresses	281	$8.71	**$18,117**
17	Maintenance and Repair Workers, General	265	$18.08	**$37,606**
18	Stock Clerks and Order Fillers	255	$10.75	**$22,360**
19	Miscellaneous Production Workers	253	$14.44	**$30,035**
20	Bookkeeping, Accounting, and Auditing Clerks	250	$16.30	**$33,904**
	Totals	***9,359***	***$15.21***	***$31,645***

(Celmar, 2017)

In reviewing these data, the following can be said:

- Of the Top 10 most common jobs in Knox County, seven (7) categories *paid wages less than 150 percent of the federal poverty threshold*.

- Altogether, the Top 10 most common job categories in Knox County paid a weighted average wage of $29,585, which is *less than 150 percent of the federal poverty threshold* for a family of three in 2015.

- Two of the Top 10 most common jobs, fast food counter workers and cashiers, *paid wages that are below the federal poverty threshold*.

- Among the entire list of Top 20 most common jobs in Knox County, the weighted average annual wage is $31,645, which is more than the 150 percent federal poverty threshold, but not by much (only approximately $1,500 higher).

- Among the most common jobs, the *best-paying* were registered nurses, teachers (including post-secondary / college level), and maintenance techs.

3.2.1 Strengths, Weaknesses, Opportunities & Threats ("SWOT") Analysis

A so-called SWOT analysis was performed by students with the City and Regional Planning Department at The Ohio State University during spring 2016 (the "**OSU Report**"). This effort reviewed and analyzed Knox County's *Strengths*, *Weaknesses*, *Opportunities*, and *Threats*.[4] The students' research was somewhat limited in scope, and as such did not capture certain elements of the local economy, such as government employment and political jurisdictions' budgets. But the resulting study has tremendous value for an overview of the county for purposes of this Plan Update.

Under a SWOT approach to community analysis, **strengths** are what a community is successful at doing or being. The OSU Report described Knox County's strengths as the following:

> *The strong presence of **community involvement** is an important resource for development and contributes to a **high quality of life**. Knox County performs especially well in terms of **higher education** and **job training** that lead to a capable*

[4] The SWOT analysis was conducted by speaking with county officials, business owners, and other key organizational leaders that were identified as having valuable knowledge and opinions of the current economic conditions in Knox County. Eighteen of these stakeholders were interviewed either over the phone or via email. Their responses were combined with tax and demographic data in order to complete the analysis (The Ohio State University City and Regional Planning Economic Development Studio, 2016)(report available at: http://knoxadf.com/wp-content/uploads/2016/02/Foundations-for-the-Future-Report-The-Ohio-State-University-April-2016.pdf).

*workforce faced with **low unemployment**. The county also has access to the resources necessary to successfully conduct a **robust manufacturing sector**.*

The Knox County community is marked by a great deal of *pride and philanthropic spirit*. Many local companies and businesses are reliable funding partners for many local events and initiatives. This helps contribute to Knox County's character while providing opportunities for residents to come together and celebrate the community (The Ohio State University City and Regional Planning Economic Development Studio, 2016).

Rural Knox County is uncommon in Ohio for the large number of global and national market leaders located in the community and engaged in the manufacturing and construction sectors, as well as institutions of higher education and health care. These corporate and institutional members of the community employ a large number of people – both Knox County residents and in-bound commuters. Table 3:3, below, details the 12 most rapidly growing job categories in Knox County, as measured between 2010 and 2017.

In terms of job growth, across all industry sectors, Knox County added 9.3 percent more jobs since 2010, which is a faster rate of growth than Ohio (7.8 percent), but lagged behind the Columbus Region, which added jobs at a clip of 12.3 percent during the same period.

*6**Table 3:3 - Top Job Gains, Ranked by Growth, in Knox County (2010-2017)***

Description	2010 Jobs	2017 Jobs	2010 - 2017 Change	2017 Wages & Salaries
Employment Services	128	698	570	$22,113
Other General-Purpose Machinery Manufacturing	819	1,090	271	$74,212
Motor Vehicle Parts Manufacturing	374	604	230	$46,851
Restaurants and Other Eating Places	1,404	1,624	220	$13,407
Animal Production	561	741	180	$20,419
Oil and Gas Extraction	338	505	167	$32,936
Utility System Construction	24	156	132	$67,585
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	113	236	123	$27,517
General Medical and Surgical Hospitals	824	939	115	$58,918
Other Wood Product Manufacturing	325	435	110	$34,963
Other Miscellaneous Store Retailers	131	234	103	$24,426
Other Residential Care Facilities	34	125	91	$28,550
			Average	***$37,658***

(Columbus2020, 2017)

It is important to note *employment services* represented the strongest job category growth in Knox County since 2010. This suggests most new jobs created in Knox County since 2010 were temporary / job placement services-based (Columbus2020, 2017).

This Plan Update places an emphasis on helping create so-called **Good Jobs**, which in many ways are different from *employment services*-based jobs. As made clear by Table 3:3, employment services-based jobs are lower-pay than most types of full-time work with a particular employer. By way of example, one recent study reviewed 2014 data showing the median wage for production workers employed by employment services (i.e., temp-staffing agencies) was $11.27, which was *30 percent less* than the median for production workers whose employers directly hired them (Ruckelshaus & Leberstein, 2014).

The Top 25 Employers list, shown in Table 3:4 on the next page, along with data compiled by Columbus2020 in Table 3:5, indicate that Knox County boasts a higher proportion of skilled manufacturing jobs than the rest of the Central Ohio region. And many of these jobs, as more specifically described in Table 3:5, constitute Good Jobs (i.e., a worker in one of these jobs, earning the rate of pay described, can support their family with up to two children without reliance on public assistance to fill any gaps).

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*7**Table 3:4 - Top 25 Employers in Knox County (2017)***

Rank	Company Name	No. of Employees	Location
1	Ariel Corporation	1,500	Mount Vernon
2	Knox Community Hospital	900	Mount Vernon
3	Kenyon College	575	Gambier
4	Jeld-Wen, Inc.	470	Mount Vernon
5	Knox County	425	County-wide
6	Mount Vernon City Schools	400	Mount Vernon
7	FT Precision Inc.	370	Fredericktown
8	Mount Vernon Nazarene University	370	Mount Vernon
9	Wal-Mart Stores, Inc.	325	Mount Vernon
10	Siemens Energy, Inc.	275	Mount Vernon
11	Sanoh America, Inc.	230	Mount Vernon
12	Mount Vernon Developmental Center	230	Mount Vernon
13	First-Knox National Bank	200	County-wide
14	The Ohio Eastern Star Home	200	Mount Vernon
15	Kokosing Construction Company, Inc.	200	Fredericktown
16	City of Mount Vernon	165	Mount Vernon
17	AMG Industries, LLC	125	Mount Vernon
18	Prestress Services Industries, LLC	115	Mount Vernon
19	Schafer Driveline, LLC	100	Fredericktown
20	Heating & Cooling Products Company	95	Mount Vernon
21	Burrows Paper Corporation	95	Mount Vernon
22	International Paper Company	85	Mount Vernon
23	UMD Automated Systems, Inc.	80	Fredericktown
24	Mauser USA, LLC	80	Mount Vernon
25	Ver-Mac Industries, Inc.	55	Mount Vernon
	Total Employment	***7,665***	

(Area Development Foundation, Inc., 2017)

Agricultural related employment in Knox County = 951

*8**Table 3:5 - Top Economic Base Occupations in Knox County***

Occupation Description	No. of Jobs	Average Hourly Wage
Misc. Assemblers & Fabricators	759	$17.21
Misc. Production Workers	245	$15.06
Machinists	225	$20.18
Machine Tool Cutting Setters, Operators & Tenders	185	$18.13
First-line Supervisors of Production	182	$27.46
Woodworking Machine Setters	179	$13.09

(Columbus2020, 2017)

****

Of course, there are chinks in the armor as to Knox County's economy and its ability to attract new development or successfully serve existing uses. In particular, the OSU Report described Knox County's **weaknesses** as the following:

> *Knox County **lacks proper infrastructure** that supports trade and transportation for industry. The real estate market is also limited in terms of **available commercial and residential properties**. Perceptions within and around the county may inhibit further expansion and development. The county currently **relies on few employers and a single economy**. Similar industries that are not diversified lead to a **workforce that is not resilient** to economic changes*.

The *infrastructure weakness* detailed by the OSU Report is in reference to cargo and freight hauling transportation infrastructure. It is both a blessing and a curse that Knox County is not interwoven by four or six-lane highways. The blessing takes the form of the "intactness" of our rural character. The curse is in the fact cargo trucks, freight haulers, and even everyday drivers are left to access distant interstate routes using two-lane roads throughout most of the county. On the other hand, Knox County in general and Mount Vernon in particular are well situated to accommodate additional burden on the water and wastewater infrastructure from commercial and/or industrial end users.

Although Fredericktown's western boundary features a high-quality, four-lane interstate-grade highway, most truck routes, particularly in Mount Vernon, rely exclusively on roads that weave through our communities' downtowns. As for eastern portions of Knox County, there is a lack of truck-friendly routes for the efficient movement of goods; this likely contributes to the modest levels of economic growth in this portion of the county.

Regarding the OSU Report's assertion that Knox County relies on *too few employers and a single economy*, there are data to support this notion (see Table 3:6). Information published by Columbus2020 details recent job losses concentrated in the skilled trades. It is most likely these job losses – which include Siemens reduction-in-force – are related to the downturn in the oil and gas industry that preceded this Plan Update's drafting. Because the Knox County community relies (too) heavily on the oil and gas industry, our community experiences the cyclical feasts and famines common for that industry.

*9**Table 3:6 - Economic Job Losses, Ranked by Decline, in Knox County (2010-2017)***

Description	2010 Jobs	2017 Jobs	2010 - 2017 Change	2017 Wages & Salaries
Cement and Concrete Product Manufacturing	237	105	(132)	$41,327
Machine Shops; Turned Product; and Screw, Nut, and Bolt Mfg.	163	48	(115)	$35,065
Crop Production	652	542	(110)	$22,870
Motor Vehicle Body and Trailer Manufacturing	366	285	(81)	$50,376
Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	69	0	(69)	
Metalworking Machinery Manufacturing	80	20	(60)	$49,322
Management of Companies and Enterprises	119	75	(44)	$43,525
Sawmills and Wood Preservation	79	45	(34)	$38,326
Nonmetallic Mineral Mining and Quarrying	78	47	(31)	$51,745
Petroleum and Coal Products Manufacturing	102	74	(28)	$61,586
General Freight Trucking	341	314	(27)	$36,926
Engine, Turbine, and Power Transmission Equipment Mfg.	1,036	1,010	(26)	$78,804
Highway, Street, and Bridge Construction	223	199	(24)	$99,125
Other Electrical Equipment and Component Manufacturing	36	12	(24)	$41,628
Electrical Equipment Manufacturing	82	59	(23)	$42,922
			Average	***$49,539***

(Columbus2020, 2017)

A key example of the *local workforce's lack of resiliency* was demonstrated in Siemens' permanent layoffs during 2016 and 2017. This reduction-in-force by one of Knox County's largest employers of Good Jobs was, and remains, very challenging to a group of employees arguably the least prepared for such a life-altering change, as shown in Table 3:7 on the next page.

*10**Table 3:7 - Siemens Energy, Inc. lay-off demographics***

Laid-off workers	300	
- Lowest wage rate	$25/hour	$52,000/year
- Age	85% at least 50-years-old	
- Gender	96% male	
- Educational attainment	88% lack college degree	

(Ohio Means Jobs, 2016)

As first discussed above, Knox County's population is older than the State and national averages. Among *working age adults*, Knox County's *largest proportion* of residents are aged 35 to 54 years (15,005 persons, or 40 percent), followed by residents aged 55 to 64 years (8,237, or 22 percent).

This community does not currently retain its 25 to 34-year-old adults; younger persons who are born or go to school here leave Knox County and many never return. Worryingly, the 25 to 34-year-old cohort is the *smallest population* of working age adults in Knox County (6,585, or 18 percent). The youngest group of working age adults – 18 to 24 years-old – is slightly larger (7,237, or 20 percent) and likely is comprised by students attending local colleges (Columbus2020, 2017).

Knox County's workforce has a markedly higher concentration of high school-only graduates (41 percent of residents) than the Columbus Region (30 percent), Ohio *and* national rates (Columbus2020, 2017). (See Table 3:8, below.) This higher proportion of high school diploma-only residents is likely a legacy of Knox County's strong manufacturing employment base; such jobs historically did not require advanced education to fill high-paying jobs. The flip-side of the same coin is that Knox County lags the Columbus Region, Ohio *and* national rates in the proportion of residents possessing an associate, bachelor or advanced degrees (Columbus2020, 2017).

*9**Table 3:8 - Knox County Residents who were 25 years and over, 2016 (39,473 population)***

No high school diploma	4,358	11.0%
High school graduate	16,278	41.2%
Some college, no degree	7,554	19.1%
Associate degree	2,660	6.7%
Bachelor's degree	5,762	14.6%
Master's degree or higher	2,861	7.2%

(Ohio Development Services Agency, 2017)

These less than encouraging depictions of Knox County are completely in-line with national trends seen in rural communities. A study published by the University of Virginia during the writing of this Plan Update pointedly noted that "[s]ince 1990, the overall number of college graduates in the nation has grown, but the gap between the share of them living in central cities

and smaller places is widening" (Brownstein, 2017). National demographers are seeing large numbers of young, educated people moving to central cities from outlying communities like Knox County. This trend is true irrespective of college education, too. That is, when measuring population shifts on the basis of age, not education, it still is the case that across the top 50 metro areas in the U.S., the population of residents aged 22 to 34 years-old has increased 33 percent in central cities, while only increasing approximately 16 percent in communities located 30 miles outside metro city centers. Interestingly, and directly in-line with our county's aging population trend, nationwide, communities on the periphery of large metros have seen larger shares of seniors comprising their populations (Brownstein, 2017).

Another indicator of workforce resiliency, or lack thereof, is the turnover of positions in Knox County which was recently calculated at 17.8 percent.[5] The categories of jobs with the highest turnover were hospitality (28.6 percent turnover), healthcare (19.9 percent), and banking and finance (18.1 percent) (Celmar, 2017).

Turnover of jobs is an important concept, as it has real costs for employers, typically measured by the sunk costs of screening and interviewing applicants, lost time in training them as employees, and reduced employee morale (for those who do not quit). In one analysis of Knox County, the cost to an employer was found to be as high at $12,000 during a two-month period when one employee gives notice to quit and their replacement is hired and trained (assuming the subject job paid $17/hour) (Celmar, 2017).

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In considering how to grow the economy of Knox County, the OSU Report described the following **opportunities**:

> *The entrepreneurial spirit should be nurtured to **encourage the growth of small businesses**. **Unused vacant land** and the untapped real estate market are places for new development. The reutilization of existing **local assets such as tourism and health care** would make Knox County an appealing place for new residents*.

We lack resources for small business development in the community, and as such, we may not be properly encouraging a spirit of entrepreneurship. Economic development practitioners view *small business growth* as a reliable and true pathway to creating jobs, increasing tax base and generating new investment in a community. In support of this notion, small businesses have been found to account for nearly two-thirds of all net new job creation. (Small businesses are defined by the federal Small Business Administration as companies with fewer than 500 employees.) They also contribute disproportionately to innovation, generating 13 times as many patents, per employee, as large companies do (Horn, et al., 2012). By way of example, the creation of Knox County's current largest employer, Ariel Corporation, was the result of an

[5] Turnover was calculated as the number of exiting employees for a given firm divided by the average number of employees at that firm for the year.

entrepreneur working independently to develop a new two-cylinder compressor line (Buchwald, 2016).

Increasing investment opportunities and support to local entrepreneurs – who have compelling concepts and viable business opportunities – should help expand local businesses and encourage more start-ups. The idea is that small businesses will increase the diversity of the county's economy, thus making it more resilient (The Ohio State University City and Regional Planning Economic Development Studio, 2016).

The availability of affordable housing in Knox County is limited and does not meet the current population's needs. Further, unlike other communities in the Central Ohio region, Knox County's real estate market lacks organizational structure (i.e. readily identifiable commercial real estate brokers within the community with whom to list, and from whom to purchase real property). The OSU Report uncovered frustration among stakeholders with maneuvering the localized, informal network to find and purchase available commercial property (The Ohio State University City and Regional Planning Economic Development Studio, 2016).

Knox County is not seen as a high-volume land development community. It largely lacks an active market in the site assembly and construction of large residential and commercial developments. Couple this fact with the notion many residents of Knox County value and seek to protect the rural, farm-focused land use patterns that predominate. As such, the community may be better suited to meet its future residential and commercial needs via *repurposing vacant and abandoned land* and buildings, as well as developing sites already serviced by infrastructure.

Surreptitiously, development patterns within Knox County tend to have occurred within the already-built environment, with a long-standing local tradition of re-using buildings for new purposes. This represents an opportunity for Knox County to take steps to protect its rural character by encouraging the development of sites already "on the grid," or served by existing utility and transportation infrastructure.

In many ways, living in Knox County provides a high quality of life. We are a close-knit community that is conveniently situated near, but slightly afar from, Columbus. Preserving our rural character is helpful in attracting potential incoming residents. *Outdoor activity tourism*, such as hiking, fishing, biking, kayaking and canoeing, creates a compelling reason to visit and spend money in Knox County. Further, the beautiful natural scenery provides opportunities for new developments such as sustainable riverfront development and uniquely scenic workplaces (The Ohio State University City and Regional Planning Economic Development Studio, 2016).

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Every community faces storm clouds on their respective horizons. As for our own **threats**, the OSU Report detailed the following:

> *Knox County should be concerned with **disjointed participation**, **lack of economic diversity**, and **image** that could harm the potential for future economic development. Improving the county's cohesiveness in **economic development goals** across key players and residents will assist in developing towards a single goal. Relying on one primary industry sector and providing workforce training singularly focused on this industry provides little resilience. The **county's image** is crucial when working to attract both economic opportunity and new population with its development efforts*.

At the time of this writing, Knox County was marked by "full employment." Practically speaking, any resident who wants a job has a job. Knox County's unemployment rate in July 2017 was 5.0 percent (Ohio Department of Job and Family Services, 2017). Economists generally refer to unemployment rates of five percent or less as full, or universal, employment.

Full employment is an optimal condition, in most respects. Residents are gainfully employed, earning wages, paying taxes, and buying goods and services locally, which reintroduces their earnings back into the community. Those interested in finding work, generally speaking, are able to do so within Knox County (absent those residents with highly specialized career skills for which few jobs may exist locally). This means that employers have had a harder time finding willing-and-capable workers to fill open positions.

Perhaps one of the biggest threats facing Knox County – and common to most other communities in Ohio and the Midwest – is a lack of available, trained and capable workers. This Plan Update further acknowledges that some Knox County residents do not participate in the local workforce, for various reasons. Recently reported numbers – for the entire Columbus Region – suggest a rate of 13 percent of potentially eligible, working age adults are not working in formal employment. This equates to approximately 134,000 adults aged 16 – 64 years who are not engaged in meaningful employment in the region (Orrell, 2017). If one extrapolates that figure – 13 percent – to Knox County, we can estimate that approximately 4,800 working age adults are neither working nor looking for work. Those not in the local workforce may be drug users prevented from working due to altered states, a lack of desire to work, or employers' drug-screening practices. Others may be incarcerated or formerly incarcerated who have criminal records preventing employers (particularly large, institutional organizations) from considering them for employment. Still others may be opting out of work by choice – to raise children, tend to sick family members, or just a general mindset that working is not their thing. The estimated number of residents opting out of the local workforce figure, however accurate, represents a threat to the community's ability to fully staff-up existing employers as well as new employers considering locations in Knox County.

3.3 GOALS AND STRATEGIES

There are few career pursuits in the area of public policy that are higher profile or more exciting than that of **economic development**. Even in an era of deep antagonism between the national political parties, officials on both sides of the aisle frequently cite their efforts to *create jobs!* and *make government more business-friendly!* Largely, the work of helping create jobs and making one's community open to business is performed by the economic development agencies and individuals operating in virtually every local community in the country. Knox County is no different.

Interestingly, economic development, as a field of practice, is not guided by a set of unified theories, common core principles, or accepted truths, as is the case in other fields like engineering and accounting. To become an economic developer, one does not pursue a clear academic path, hone a defined set of skills, or take rigorous instruction in the field's theories. Rather, practitioners enter the field with varied backgrounds in sales, urban planning, law, public policy, and banking, to name a few. Because economic development is not guided by a common understanding, tested and polished in the academic process, there is much debate as to the best ways to conduct economic development.

The field of economic development formally arose during the 1960s and 1970s, as states sought to grow their job and tax bases. A key player was Ohio Governor Jim Rhodes, who established his vaunted "Rhodes' Raiders" in the early 1960s, dispatching business leaders across the country to convince manufacturing companies to relocate to Ohio (Ohio History Connection, 2017).

This history manifests today in a continued reliance on old rules of thumb, set forth decades ago, and faulty assumptions guiding the practice of economic development. Oftentimes, economic development practitioners are viewed as "incentives jockeys," handing over substantial sums of taxpayer dollars to private companies for their new location or expansion projects. There is truth to this characterization, as questionable public benefits frequently are received in exchange. In a well-regarded set of articles on the subject, the New York Times recently examined and tallied thousands of local incentives granted nationwide, finding that states, counties and cities collectively provide *more than $80 billion in incentives each year* to private companies. Most alarming, the study found that many of the economic development organizations providing these incentives did not know the true value of their awards, and rarely tracked projects' performance against job and investment commitments (Story, 2012)

As this Plan Update was being written, Amazon was in the midst of searching for sites for its proposed "HQ2," or second headquarters facility, promising up to 50,000 jobs and $5 billion in fixed asset investment. As detailed extensively in a contemporary series of articles, Amazon's model is to push for steep tax breaks from local governments, by warning that other locations are being considered. In the reporting, many local government officials who successfully landed Amazon facilities have been "left with buyers' remorse when job totals fall short of expectations – or when wages are so low they do little to buoy the local economy" (Coombs, 2017). An article

published in *The Atlantic*, to a national reading audience, highlighted Knox County's own economic development approach – set forth in this Chapter 3 –as prioritizing investments in community assets and institutions over simply offering taxpayer support via financial incentives (Alexander, 2018).

This Chapter 3, along with Chapter 4's discussion of workforce development, serves as an **economic development plan for Knox County**. At base, the plan stands for the notion that economic development is much more than providing incentives to private companies choosing to locate here. And when taxpayer investments are employed, in the forms of financial incentives, this Plan Update states they should be doled out carefully. Moreover, this Plan Update asserts that incentives often are not needed anyway, because a given jobs or investment project is likely to occur without government investment.

How then should Knox County best measure and justify its economic development activities? Traditionally, answers to these questions have been in the form of measuring raw numbers of jobs created and retained in a community. But this Plan Update sets forth a much wider context, beginning with a **working definition of "economic development"** as *a public-sector intervention in the private marketplace* to *grow a local political jurisdiction's tax base* or to *solve imperfections in the free market*. We expand upon this definition as follows.

First, one should consider Knox County's economic development efforts as attempting to grow the community's respective income tax, sales tax and property tax bases. One way to measure economic development efforts is to ask whether more employers are remitting more income taxes to the local municipality. Or to ask whether investors are making substantial investments in commercial real property, which then result in increased property tax collections by the County Treasurer. Still another question may be whether more workers are employed locally, who then buy more goods and services in Knox County, thus paying higher sales taxes.

Second, Knox County's economic development efforts should result in real solutions to problems for which there is no answer in the private marketplace. Consider the case of vacant and abandoned industrial properties. In these instances, private business owners may have made fully rational, market-based decisions to leave behind polluted sites. These decisions, however supported by financial analyses, nonetheless burden the local community with finding solutions to what now becomes the public's problem. Consider also the lack of a free market "value" to the work of improving and strengthening community groups and assets. It is hard to clearly monetize in free market terms the pay-off from better aligned non-profit organizations and their more professionalized boards.

Third, economic development services should, at least in part, provide our political jurisdictions – townships, villages, city and county – with the skills and know-how to effectively interact with commercial and residential developers. It is a far too common occurrence in Ohio that communities feel outgunned and overwhelmed by out-of-town land developers who then eke out overly generous deals. This Plan Update stands for the notion that *good* development can

be had, and even-keeled negotiations must occur between political jurisdictions and land developers to structure the best deals for all.

This Plan Update does not stand for the idea that economic development efforts, in and of themselves, *create jobs*. Rather, economic development succeeds by building relationships at the local, regional, state and federal levels; fostering a professional, business friendly environment; developing inventories of high quality available land and buildings; and connecting the local workforce to fill existing and new jobs. At base, this Plan Update approaches the practice of economic development by polishing-up Knox County's aesthetic "curb appeal" for the day an investor or site selector drives through on the look-out for business opportunities.

3.3.1 GOAL: Help Create *Good Jobs*

The Knox County community should pursue economic development opportunities that create and retain jobs paying residents financially sustainable wages, with benefits and long-term employment prospects baked in. At the same time, the county should *not* be in the business of aggressively attracting, with financial incentives (i.e., taxpayer funds), projects marked by lower-quality jobs (namely, those jobs at the low-end of the wage spectrum, that lack long-term employment prospects, that are part-time, and/or lack health and retirement benefits).

This Plan Update emphasizes that to access financial incentives, projects should create or retain high-quality **Good Jobs**, based in large measure on the wages paid. As an example of higher paying jobs, one need only look back to the Top 20 Most Common Jobs in Knox County (see Table 3:2) to note the pay differential between retail or service-based jobs (i.e., low pay) and manufacturing jobs (i.e., higher pay). It makes sense, therefore, that we should encourage manufacturing jobs over retail jobs, given the median wage for all Ohio manufacturing workers was $16.13/hour in 2014 (a rate of pay that exceeds the average across Knox County's most common types of jobs) (Perkins, 2014).

3.3.1 STRATEGY: Avoid Offering Financial Incentives to Projects Unless They Commit to *Good Jobs*

Cities, townships, incorporated villages and counties in Ohio involve themselves directly in efforts to attract investments and jobs into their jurisdictions. These local government actions take the form of Enterprise Zone ("**EZ**"), Community Reinvestment Area ("**CRA**"), and tax increment financing ("**TIF**") programs. There also can be municipal income tax credits ("**MITC**") and low or no-interest loans made from local Revolving Loan Funds ("**RLF**").

Simply offering financial incentives, by request, at fully-loaded benefit levels (e.g., 100 percent property tax abatements), is poor practice. The better option is to hold back on property tax

exemptions and other financial assistance tools, making them available only after underwriting analyses show that such incentives are necessary to *close a high-quality project's financing gap*. Remember that in most economic development situations, there is good reason businesses are approaching the community: they already like the given site, community or development opportunity. It may be the project can be accomplished without unnecessarily injecting overly generous financial assistance packages, if any at all (Harris, 2016).

Tool: Property Tax Exemptions

Property tax abatements are some of the most heavily used tools in the economic development kit. Economic development practitioners across Ohio employ these mechanisms to attract business investment, induce the creation of jobs, and eliminate blight. In Knox County, there are two primary forms of financial incentives:

- **Community Reinvestment Areas** provide property tax exemptions of up to 100 percent for up to 15 years within cities for those owners making improvements to their property. The only CRA areas in Knox County currently are within the City of Mount Vernon. Most of the property value abated from CRAs is for industrial and commercial properties; cities can also employ abatements for residential properties.

- **Enterprise Zones** provide property tax exemptions of up to 100 percent for up to 15 years for industrial and commercial properties. While EZs officially have geographic boundaries, Knox County's four (4) EZ areas have been drawn to cover most of its land area and thus are not geographically targeted in practice.

(Kenyon, et al., 2017)

In 2016, communities in Knox County abated $437,142 of property tax revenue under EZs, and the City of Mount Vernon abated $30,859 in property taxes under CRAs; together, these tools abated 2.9 percent of total property taxes paid that year in Knox County[6]. Interestingly, the percentage of taxes abated in Knox County under EZs and CRAs is identical to that abated in the much more urbanized and densely populated Franklin County, which encompasses Columbus and its suburbs (Kenyon, et al., 2017).

Tool: Municipal Income Tax Credits

To induce job creation within their boundaries, municipal corporations may grant either refundable or nonrefundable credits against their tax on the incomes of workers at a project location. The credits accrue to the benefit of the project company (*see* Ohio Revised Code Section 718.15). These types of credits are not actively used in Knox County, and they are relatively rare around Ohio. But if used, a company can receive a percentage of the new income tax revenue generated by its workers from an economic development project. Such credits can be for terms

[6] The full tax rate for all Knox County operations for the year-ended December 31, 2014 was $12.99 per $1,000 of assessed value. For that period, the assessed value of real property upon which 2014 property tax receipts were based was $1,242,274,970 (Knox County Auditor's Office, 2014 p. 58)

of up to 15 years. Municipalities may award such credits by ordinance, with a formal tax credit agreement executed between the company and the municipality.

Tool: Revolving Loan Fund

The Knox County RLF is a county-wide non-profit financing tool established in 1989. It makes loans from the State of Ohio's Community Development Block Grant program meeting the following goals: promote new economic development within Knox County; encourage the expansion and stability of the County's economic base; encourage increased employment opportunities, particularly for low to moderate-income residents; and diversify the County's economy, so as to not rely on a single industry.

The RLF is intended to fill financing gaps in development projects within Knox County by providing liberal financing options and are repaid at lower fixed-rates and across longer-terms.

Eligible types of financing under the RLF include fixed-asset loans to acquire and improve land and buildings, obtain machinery and equipment, and site preparation and demolition. Loans from the RLF must be provided to projects that will create or retain jobs. The RLF makes loans only to those projects for which there is a demonstrated need for financial assistance; without RLF support, the project will not move forward.

TARGET OUTCOME

In its economic development efforts, the Knox County community should offer projects neither automatic (i.e., available by simple request) nor fully loaded (e.g., maximum statutory value) financial incentives. Rather, each and every project that requests financial incentives should be fully negotiated. An emphasis should be placed, first and foremost, on solving the issues that prevent a project from occurring in the community, whether the solution involves an investment of taxpayer dollars or not. When employed, financial incentive tools should be structured to achieve the best return on the taxpayers' investment.

To best guide outcomes, Knox County's economic development activities should follow this general rule-of-thumb:

> *Our economic development efforts, when job creation and retention commitments are involved, should focus on **Good Jobs**, defined here as positions that pay an hourly wage rate of at least $12.93 ($26,984/year in 2017 dollars), are characterized as full-time and employed by the project company (not an employment service provider or temp-staffing agency), and that offer health and retirement benefits. To have a Good Job is to earn an amount necessary for a Knox County household (two working parents and two children), to be financially sustainable and remain off public assistance* (Williams, 2017).

3.3.2 GOAL: Improve the County's Economic Diversity

The Knox County community should engage in economic development efforts that support our existing commercial and industrial base, while at the same time develop and reinforce business opportunities in new industrial sectors, involving entrepreneurial pursuits and innovative ideas. Our community has proven relatively resilient during the past several decades, staying economically healthy even while much of the industrial landscape hollowed out across the Midwest. That said, our economy remains somewhat tethered to the cyclical ups-and-downs of one primary industry sector: oil-and-gas. During the course of our community's history, this connection to the oil-and-gas economy has resulted in world-class employers paying their workers good wages. But the hard lesson learned during the wholesale elimination of the glass industry from Knox County in the 20th Century should lead us towards accommodating more industry sectors, with more diverse market participants, business lines, and product offerings.

3.3.2 STRATEGY: Seed and Cultivate Innovation and Entrepreneurship

To guard against single-industry boom-and-bust economic cycles, Knox County should strategically and intentionally develop an open and encouraging environment for business innovation and entrepreneurship.

Most economic development programs include innovation and entrepreneurship strategies to generate economic growth. In Athens County, Ohio, a researcher recently calculated an Ohio University-affiliated business incubator generated 140 new jobs and $6.1 million in annual revenues, generating approximately $650,000 in state and local tax revenues (Jolley, 2015). Other researchers have found that self-employment in rural areas is positively correlated with future economic growth (Cho, et al., 2015). This Plan Update stands for encouraging and cultivating entrepreneurship through investment in asset infrastructure (e.g., making available physical space and equipment) and wrap-around support services (e.g., access to local investors, pro bono business advising, and loan programs to capitalize viable business ideas).

Put simply, who will be the next Jim Buchwald? The founder of Ariel Corporation worked independently to develop a new compressor line that launched a very successful manufacturing company with global command of the market. Admittedly, such success stories occur once every couple generations. But Knox County should develop the mechanisms to nurture the next generation of entrepreneurial business leaders.[7]

[7] Here, it is important to distinguish between "necessary" self-employment, driven by an inability to find other employment (perhaps from being laid off), and "opportunity" entrepreneurs who have the potential to employ others in the community and contribute new ideas and business concepts (Cho, et al., 2015). We should target the latter, the business owners who will hire others and invest in the community.

How to do this? Innovation assets should be created within Knox County that allow for members of the creative class to casually mingle, cross-pollinate ideas, and build a viable and attractive social network and community. Assets worthy of investment include *makerspaces* and *business incubators*, *office co-working centers* and *incubator farms*.

Makerspaces are full-octane work-shops that function with dues-paying members. The spaces are equipped with programmable prototyping tools, milling machines, 3-D printers, and CNC (Computer Numerical Control) laser cutters, and have ready access to the Internet and crowdfunding opportunities. "Makers" benefit from the stimulation, collaboration, encouragement, and competition of makerspace participants. They also benefit from economies-of-scale through shared equipment and space. (See Figure 3:7)

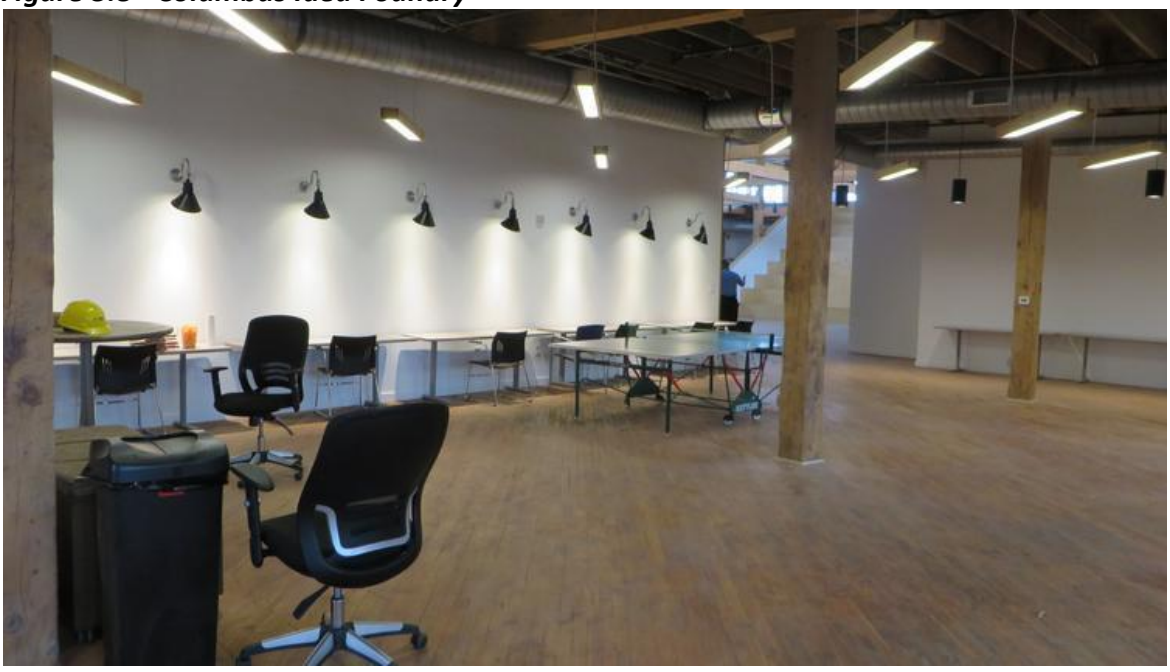
9 ***Figure 3:7 - think[box] Fab Lab makerspace, Case Western Reserve University***

(Harris, 2017)

Business incubators are public-private partnerships that commonly rely on universities and local partner industries to help grow small and emerging businesses in a collaborative and supportive ecosystem. These facilities offer an environment for peers and group events, cheap or free space, and access to business formation resources and venture capital networks. Users are typically start-up companies tied to specific industry segments (e.g., advanced materials; life sciences). A local example within the Central Ohio region is the well-regarded Rev1 Ventures. This incubator space is located on the Ohio State University's west campus and offers reduced rent and business coaching to commercial start-ups for a defined time period (e.g., up to three (3) years). Participants have access to intensive programming and events, meeting rooms, state-funded technology assistance, business coaches and back-office support (such as accounting and legal services) with relatively inexpensive space from which to launch their concepts.

Co-working centers are membership-based workplaces providing independent workers with a sense of community and a place at which to focus on creativity. These centers pair the professional service firms' "desk hoteling" concept with a fitness club membership model. The result is an affordable, amenity-rich workspace for the public. Membership fees can range from those providing free-range space within the facility to dedicated workspace with attached meeting rooms. Co-working involves member participants independently working in a collective environment and sharing resources (facilities, catered food, classes and events). It has its roots in the tech start-up world and appeals to freelancers and work telecommuters. Large corporations have recently taken to posting their employees at such sites for limited stints of off-campus, creative-thinking endeavors; some co-working centers offer corporations bulk memberships for blocks of designated employees. (See Figure 3:8)

10 ***Figure 3:8 - Columbus Idea Foundry***



Incubator farms exist in response to the decreasing number and increasing age of farmers across the country and the growing demand for locally grown food. Organizations active in the incubator farm space seek to train the next generation of farmers, as well as support, promote and revitalize local food economies. Under models similar to the other innovation assets described here, "farmer in training" participants have time-limited access (e.g., a couple years) to programming, education, land and equipment to start their own farm businesses (Carolina Farm Stewardship Assocation, 2017).

The creation of innovation assets within our community ties directly to the U.S. Department of Commerce, Economic Development Agency's Comprehensive Economic Development Strategy (2014), or "**CEDS**," plan in-place for the Columbus Region (see link: http://columbusregion.com/columbus-2020/strategy/). Of particular relevance for Knox County, the CEDS plan calls-out rural communities to establish more public-private business incubators and innovation assets to foster business formation and technology start-ups.

TARGET OUTCOMES

The Knox County community should support the opening in fall 2018, by Knox Labs, Inc., of a makerspace and business incubator in partnership with the Mount Vernon Nazarene University's Engineering Department. Sufficient resources should be directed to ensure the successful launch of 5,500 square feet of maker- and business incubation-space on the main floor of the former J.C. Penney's department store in downtown Mount Vernon. Specifically, philanthropic, corporate, and public-sector funding partners should invest in Knox Labs' efforts to equip the space with programmable prototyping tools, milling machines, 3-D printers, CNC laser cutters, and related equipment, and provide for professional, paid staff.

Related to the Knox Labs effort, the county should invest sufficient resources – time, talent and treasure – in rolling out a fully developed and programmed business incubation program within five years. As "makers" use the Knox Labs space, they can pursue product design, manufacture, and commercialization opportunities. Our community should invest in helping these future entrepreneurs in their design of new products, limited-scale manufacturing, and launching new business concepts.

Further, our community's economic development efforts should focus attention in helping create multiple co-working office spaces across Knox County. As technology improves and the corporate world adopts more telecommuting and work-from-home models, Knox County stands to benefit. The typical telecommuter is said to be a 49-year-old college graduate – man or woman – who earns approximately $58,000 per year and belongs to a company with more than 100 employees (Tugend, 2014). This is somebody who possesses a Good Job and could raise a family in Knox County and become involved in the community. Telecommuters sometimes report a feeling of disconnect and loneliness from not being in the office. Supporting the creation of co-working spaces would offer telecommuters, who have the general ability to live anywhere they want, a

place to gather and commune. And they could choose Knox County as their home without fear of losing out on amenities available in other, denser urban communities.

Finally, Knox County must address the affordability issues for the beginning farmer; several years ago, it was determined the average farmer in Knox County was 58 years old (Sacks, 2010). The creation of a sustainable local food system, first discussed in the 1998 Comprehensive Plan as an implementation goal, resulted in the successful Mount Vernon Farmers Market during the summer months. This Plan Update suggests building on that success by further researching the development of one or more incubator farms to reintroduce farming practices to the next generation of Knox County residents. The community should work to understand the concept of incubation farming and fully inform a go-no go decision on the subject within five (5) years.

3.3.3 GOAL: Control the Scale and Scope of Development

Passing conversations with residents of Knox County reveal a general worry that unchecked growth leads to traffic congestion, a more hectic way of life, and a loss of our *rural character*. This Plan Update attempts to chart a course to avoid the loss of favorite places and the paving over of our scenic landscape, a situation described in song by The Pretenders a generation ago:

I went back to Ohio
But my pretty countryside
Had been paved down the middle…
The farms of Ohio
Had been replaced by shopping malls…
Said, a, o, oh way to go Ohio

(Pretenders, 1982)

Development pressures will continue in the coming decades given the Columbus Region's burgeoning growth. Planners estimate this region will grow by *at least* 500,000 net, new residents by 2050 (MORPC; Columbus2020; ULI-Columbus; Calthorpe Associates, 2015). It is highly likely that some proportion of these new residents will desire to live in an intact rural community offering a cheaper cost of living and a quieter lifestyle – Knox County fits that bill.

As we can expect development to occur in Knox County in the future, it makes sense to direct such development into areas of Knox County already served by existing utility and roadwork infrastructure. Remember our working definition of economic development, set forth above, focuses in part on growing local governments' tax base. Because extending infrastructure to out-of-the-way project site locations costs local governments money, we should avoid locating new, large-scale developments hundreds or thousands of feet away from existing utility and roadwork infrastructure. A better, more sustainable development approach is to encourage those growth opportunities that do not require extensive – and expensive - roadwork and utility extensions. When development is proposed in Knox County that *will* need to extend new infrastructure (i.e., in areas where it does not already exist), local governments should consider forming public-

private partnerships to share infrastructure costs between the developer and the community (e.g., form a New Community Authority under Ohio law).

Encouraging development in the built environment (i.e., already-served by existing infrastructure) coincides with residential development patterns observed since the Great Recession. Market forces now are demanding that housing be located in closer proximity to restaurant, grocery, entertainment, and cultural amenities. Traditional housing developments built during the mid to late- 20th Century may not satisfy changing housing demands. Rising energy costs, changing household size and composition, emerging technologies and design concepts, and a growing desire for mixed-use, higher-density locations, are all contributing to major shifts in the Columbus Region's housing market (Urban Land Institute Columbus, 2012). It is reasonable to expect similar housing pressures in Knox County, albeit at much smaller scale.

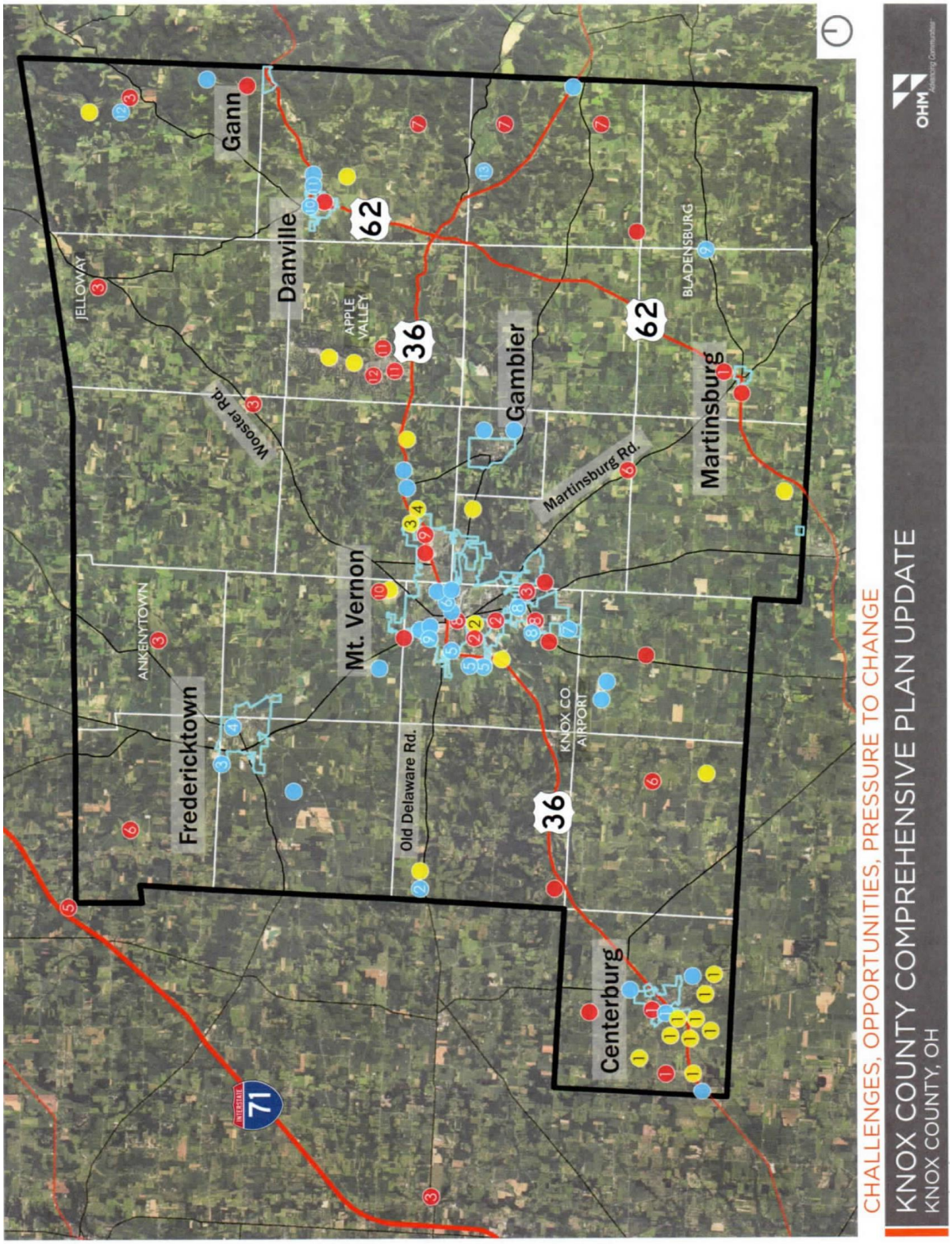
The path forward in this regard was similarly mapped out by the Focus 2100 initiative. The authors of the 1998 Comprehensive Plan likewise acknowledged that Knox County would continue to grow. Their goal – like ours in this Plan Update – was to ensure *economic growth would be accommodated, not encouraged*, to preserve Knox County's outstanding quality of life (Heine, 1998). Having spent considerable effort building public consensus, the Focus 2100 initiative identified two **land use goals** that remain as relevant today as 20 years ago:

- To develop and redevelop attractive, accessible, and viable commercial areas to serve the needs of Knox County residents (Goal 4); and
- To establish areas for residential growth throughout Knox County in a manner consistent with desires to preserve farmland and rural character (Goal 5).

(Focus 2100, 1998)

To visually represent the geographic areas of Knox County facing development opportunities and challenges, our Steering Committee participated in a mapping exercise with OHM Advisors to denote **hot spot areas**. The resulting map and legend is included as Figure 3:9 on the following pages.

11 ***Figure 3:9 - Knox County Challenges, Opportunities, and Pressure to Change***



Challenges

R1	Water and Sewer Challenges
R2	Water Challenge
R3	Sewer Challenge
R4	Improved access needed
R5	Drug Access Route
R6	Confined Animal Feeding Operations
R7	Lack of public interest
R8	Commercial traffic route (trucks) through the city
R9	Coshocton Ave highly congested
R10	Fairgrounds
R11	No stormwater management
R12	Inadequate infrastructure and roadways

Themes

1. Development exists but infrastructure is inadequate
2. Ensure transportation, traffic systems, and infrastructure can accommodate growth
3. CAFO's

Pressure to Change

Y1	Future development growth
Y2	Bike Trail
Y3	Development outside city boundries
Y4	Recent Annexation

Themes

1. Pressure to change in Centerburg, primarily from growth in the Columbus metropolitan area
2. Development pressure in Northeast Centerburg

Opportunities

B1	Land near high school can be utilized as a commercial development corridor
B2	Opportunity to improve access throughout the County
B3	Fredericktown Industrial Park
B4	Former Foot Foundry can be reused
B5	Existing Sewer provides an opportunity for growth
B6	Truck Traffic
B7	Potential for light manufacturing
B8	Development opportunity
B9	Old School Facilities
B10	Economic Development Growth: Business + Residential
B11	Bike Trail (Mt. Vernon/ Danville)
B12	Recreational opportunity
B13	Kokosing River recreational opportunity

Themes

1. Opportunity for targeted growth
2. Opportunity for adaptive reuse
3. Opportunity to increase recreation opportunities

3.3.3A STRATEGY: Encourage Development in Areas *Already on the Grid*

Continuing the recommendations set forth in the 1998 Comprehensive Plan, this document stands for the notion Knox County should avoid rampant, piecemeal development. Likely, Knox County's population will increase during the next 30 years. But it is possible to accommodate quality commercial, industrial, and residential growth by working with developers and businesses to develop areas already served by sufficient infrastructure. Put simply, Knox County decision-makers should encourage commercial, industrial, and residential development to occur in connected areas *already on the grid* or in close proximity to existing infrastructure. When developments are proposed requiring new infrastructure, the impacted local government should form a public-private partnership to share the costs with developers.

Knox County remains committed to the land development initiatives set forth in the 1998 Comprehensive Plan:

- New major commercial development should **occur in and adjacent to existing** commercial areas;
- Defined **limits on commercial expansion** should be encouraged; and
- Develop existing **vacant commercial property**.

(Focus 2100, 1998)

12 ***Table 3:9 - Water and Sewer Services, Knox County***

Knox County Area	Provider	Services Provided
Bladensburg	Knox County	Sewer Only
Centerburg	Centerburg	Water and Sewer
Danville	Danville	Water and Sewer
Fredericktown	Fredericktown	Water and Sewer
Gambier	Gambier	Water and Sewer
Howard (including Apple Valley)	Knox County	Water and Sewer
Martinsburg	Martinsburg	Water Only
Millwood	Knox County	Sewer Only
Mount Vernon	Mount Vernon	Water and Sewer
Pleasant View Acres	Knox County	Sewer Only

(Pickrell, 2018)

Generally speaking, residential land uses do not pay for themselves, but commercial and industrial uses do. In terms of road maintenances expenses, fire department, EMS runs, and water and sewer line upkeep, new residential developments cost local governments more than they return in the form of property, income and sales taxes. The opposite is true for commercial and industrial development; they typically generate more in local government revenues than it costs to provide services such as police, fire protection, and roadwork (Ferguson, Field, & Nolon, 2013, p. 54).

Most of Knox County's existing inventory of commercial and industrial development sites are infill and redevelopment in nature; they are site locations already served by abundant utility and roadwork infrastructure. Unlike peer rural communities around Ohio, Knox County boasts a significant manufacturing legacy that remains viable and in place. The utility infrastructure put in the ground to serve manufacturers (both past and present) means a number of factory sites across the county are readily hooked-in to appropriately sized natural gas, water, storm, and sanitary sewer connections. This means Knox County does not have to rely on "spec" sites several miles away from utility and roadwork infrastructure for its development opportunities; the community already has a number of high-quality sites connected to the grid and **shovel ready** for development.

As for Knox County's residential development prospects, housing should be encouraged that offers a diversity of options, including denser mixed-use and cluster home development within walkable city and village cores. Looking within the Columbus Region, thriving communities provide a full spectrum of housing prices and types, catering to shifting demographic preferences. Buyers and renters will balance lifestyle choices with market options: Empty Nester retirees will downsize; families with children will move without changing schools; Millennials just starting out may have less interest in owning their own home; and employees may be more apt to find homes near their jobs. The community should plan to meet the housing demands of an increasingly diverse and multigenerational population, encouraging such development within the existing built environment (Urban Land Institute Columbus, 2012). This may mean doing our part to de-emphasize large-scale residential subdivision developments – the "old" way of building housing opportunities – preferring to encourage more housing within our core city and villages, of varying types and styles, both ownership and rental-based.

When new, large-scale residential development is proposed – and desired – requiring utility and roadwork infrastructure upgrades and extensions, political subdivisions should form public-private partnerships to share such costs with developers. One preferred form is that of **New Community Authorities** established under Ohio Revised Code Chapter 349. These quasi-public entities are formed by developers to help pay for and maintain infrastructure, such as roads and school facilities. Specifically, New Community Authorities can levy charges on each newly platted subdivision lot to help pay for needed infrastructure, including the following: public buildings and plazas; auditoriums and day care centers; hospitals and cultural facilities; parks and open space; community streets, off-street parking, bikeways, lighting facilities; and water, wastewater, gas and electric lines or installation.

This Plan Update fully acknowledges that Knox County's rural character does not exactly matchup with many of the planning principles taking hold in urban neighborhoods in the Columbus Region. Moreover, beyond zoning regulations, the community oftentimes is not in a position to dictate when and how properties can be sold and developed. But this Plan Update asserts a preference – first voiced in 1998 – that, when possible, Knox County should advocate smart growth approaches to limit the impact of development and avoid expansion of utilities and infrastructure to new areas as yet untouched by outward growth and expansive development.

TARGET OUTCOMES

The Knox County community should take a smart growth approach to new commercial, industrial and residential development opportunities. We should help direct development to vacant, abandoned parcels and land already developed and/or served by existing utility infrastructure. When new development is proposed – and desired – requiring infrastructure extensions and new construction, we advocate the use of public-private partnerships to share in the costs.

A. Because of the cost-of-service differential between residential and commercial developments, large-scale residential development opportunities (e.g., 140+ single-family subdivision units) should, when appropriate, be given lower priority. Rather, Knox County stakeholders ought to prioritize quality commercial or industrial developments because they tend to pay for themselves. Commercial, industrial, and residential development in our community is best placed in areas **already served** by sufficient water, wastewater, rail, electric, and natural gas utility infrastructure.

B. When new, large-scale residential development is proposed and desired, the impacted local government should form a public-private partnership with the developer to cost-share in the required utility and roadwork infrastructure upgrades and extensions. One preferred form is that of **New Community Authorities** established under Ohio Revised Code Chapter 349.

C. As a means of responding to the community's need for affordable, high-quality housing, Knox County should support and perhaps enlarge a pilot program now active in Mount Vernon's near east side historic neighborhood. The Reinvesting in Historic Homes Update Program, or **ReHHUP**, partially funds exterior-improvement projects to secure houses against further devaluation and disinvestment. Funds are available, in the form of one-half loan (at 0 percent) and one-half grant, to homeowners within the defined subject area to make necessary exterior improvements otherwise delayed or deferred over time. This program was developed in direct response to anecdotal evidence in the community that professionals were opting out of living in Knox County, in favor of Granville and New Albany, because we lack certain high quality, historic housing stock.

D. During 2018, Knox County should establish and fully operationalize a **Land Bank** (known under Ohio law as a Land Reutilization Corporation) to assume title to vacant, abandoned and tax delinquent properties (both residential and commercial). With its unique funding stream

of delinquent tax and penalty payments, a land bank can acquire properties via tax foreclosure processes, without the need to go through the Sheriff's sale process. Once acquired, foreclosed properties' titles are cleared of virtually all clouds. A Knox County Land bank could then choose to sell the properties at fair market value, demolish buildings, donate properties, or site-assemble properties for commercial and industrial development.

A land bank would be well positioned to provide low-cost, existing residential properties, in need of renovation, to homeowners and investors. Alternatively, the land bank could demolish and clear dilapidated buildings for new uses. In theory, our community's future development needs could be met, in part, by an active and successful land bank partnering with businesses in need of more space, young homeowners seeking a first home, and entrepreneurs flipping houses (renovated to certain standards). This would mitigate some of the market pressures in Knox County for undeveloped land to accommodate new commercial, industrial, and residential development.

E. Knox County's economic development efforts should be keyed to encourage development of land and buildings already on the grid. Financial incentives could be offered, or even sweetened, to those projects proposed to occur on land already served by sufficient public infrastructure. When available, a local government's planning document (e.g., Fredericktown's Downtown Revitalization Study and the Mount Vernon Downtown Plan) should guide local development decisions, including financial incentives assistance availability and amounts offered.

3.3.3B STRATEGY: Create an Inventory of Shovel Ready Sites

Manufacturing is critical to Knox County, comprising a higher proportion of jobs (23 percent) than the other ten counties in the Columbus Region (Columbus2020, 2017). And manufacturing jobs tend to pay above-average wages; when employed directly by employers (and not by employment services firms) they represent Good Jobs as defined in this document.

This Plan Update emphasizes manufacturing jobs while acknowledging the national economy is in many ways moving more towards warehousing and logistics. With the growth in direct-to-consumer online retail deliveries, "[s]ellers like Zulily, Amazon and Walmart are competing to get goods to the buyer's doorstep as quickly as possible, giving rise to a constellation of vast warehouses that have fueled a boom for workers without college degrees" (Kitroeff, 2017). As this recent reporting describes, much of the growth in warehousing jobs has occurred in counties outside large metropolitan areas. We believe Knox County's relative isolation from four or six-lane interstate highways precludes us from becoming a center of warehouse and logistics activity. Better for us to concentrate on what we do best: manufacturing.

Knox County's significant manufacturing presence means the utility infrastructure in the ground is appropriately sized and designed to accommodate additional heavy industrial end users. We

are in the enviable position of not having to rely for our future development opportunities on "spec" sites situated miles outside of town, lacking sufficient utility or roadwork infrastructure. Instead, we have a number of high quality sites already on the grid and **shovel ready** for development.

Our economic development efforts are keyed to retaining and attracting new or expanded manufacturing investment. In this competitive environment, in which virtually every community across the country has an economic development practitioner extolling the virtues of their own sites and communities, we must take all reasonable steps to gather information, complete due diligence tasks, market, and upgrade an inventory of sites ready for new end users (Columbus2020, 2014).

TARGET OUTCOME

Within five (5) years, Knox County's economic development efforts should result in an inventory of ten (10) shovel ready sites compiled across the county. Sites included in this list should follow the thresholds in place for the *SiteOhio* authentication program (but need not necessarily be enrolled in that statewide program). This means each site will be zoned for industrial development (or have a clear pathway to such zoning), have its own set of due diligence studies completed, will be the subject of professionally prepared marketing materials, will be listed with commercial brokers, and will appear on all relevant JobsOhio site search databases. The sites maintained on this list will be regularly featured in marketing efforts managed by both the Area Development Foundation (for prospects within the Columbus Region) and Columbus2020 (for national and global market prospects).

3.3.4 GOAL: Continue to promote tourism

Arts, outdoor recreation and cultural assets provide a strong value proposition to residents of, and visitors to, Knox County. They provide a sense of place, entertainment, and worthwhile destinations to visit. As such, the community should continue to invest and improve upon these assets, and appropriately market them, as a distinct element of our economic development efforts. An active and inviting arts scene, attractive event spaces, bike paths, hiking trails, river access and well-attended festivals directly contribute to the overall sense that our community has done much to prepare for the day an investor or site selector drives through on the look-out for business opportunities.

This approach has real value to attracting talent to Knox County. As recently relayed by a Mount Vernon-based employer, it seems that for some, Knox County has a somewhat negative

connotation.[8] This has very real economic development consequences, as local companies – especially high-tech firms – looking to grow will be limited in their ability to hire top-notch talent from elsewhere. This could force companies to move outside our community or otherwise miss-out on growth opportunities.

An article recently appeared in the *New Yorker* magazine detailing the successful rural economy of Orange City, Iowa. This small college-town community accommodated a relatively healthy economic base, retained many of its high school and college graduates, and had an intact downtown shopping district. In many ways, the experiences of this town in Iowa correspond to our own Knox County community. It was noted by a business leader in Orange City that one "had to have another reason, a non-business reason to be there. 'If your motivation is only to maximize returns, then you go elsewhere, and ultimately that leads to moving to Mexico or Morocco…. But it's not always pure maximize profits'" (MacFarqhuar, 2017). An **extra something** that marked Orange City's success is also present in our own community: our arts, outdoor recreation and cultural assets – along with family bonds and emotional attachment – have real meaning in luring and keeping talent in Knox County. We should work to ensure Knox County's various arts, recreation and cultural organizations and their activities are fully aligned and in sync.

Do we have an easily found, attractively designed one-stop online presence on which <u>all</u> the given day's events, shows, festivals and community forums in Knox County are listed, and from which a casual visitor can quickly plan his or her day and evening? Should our organizations be outwardly communicating with larger markets, such as Cleveland and Columbus, to alert residents of those areas that we have compelling destination opportunities? How well do our arts, recreation and cultural organizations, including the Ariel-Foundation Park Conservancy, the Brown Family Environmental Center, the Convention and Visitors' Bureau, the Fredericktown Tourism Committee, the Knox County Park District, Main Street Mount Vernon, the Memorial Building, MTVArts, various town festivals, and the Woodward, among others, *truly* interact and coordinate messaging, events planning, cross-promotions and marketing efforts? And if we are doing all these things, can those efforts be improved?

As was suggested by the OSU Report, Knox County should increase its efforts promoting tourism. By highlighting our existing arts, outdoor recreation and cultural assets and continuing to improve upon them over time, the OSU Report noted such efforts may result in retaining young adults in the community (instead of watching them leave upon graduation) and attracting nonresidents to spend money at our local restaurants, hotels, and shops. And the nonresidents who come here and have a nice time could, in theory, someday become productive Knox County residents. This opportunity may be enhanced once the three multi-use trails in Knox County are connected with our neighboring Delaware, Holmes, and Licking Counties' trail systems.

[8] This situation played out in the owner's efforts to hire new information technology positions from within the Columbus Region; the owner met with several prospective new hires and came to understand (quickly) the interviewees knew virtually nothing about Knox County, and they wrinkled their noses at the idea of living out in our rural community.

Outdoor activity tourism offerings, such as hiking, fishing, kayaking, canoeing, and biking, can be very successful in creating a compelling image of Knox County and providing a reason for people to come here. As a prime example, the redevelopment of Ariel-Foundation Park into a site increasingly in demand for outdoor concerts, festivals, and events is a community game-changer. With significant gumption, the community privately funded the redevelopment of a former heavy industrial facility into a world-class cultural amenity (The Ohio State University City and Regional Planning Economic Development Studio, 2016). But are we fully satisfied with the extent to which the Ariel-Foundation Park has been incorporated into Knox County's overall tourism strategy? Put more broadly, does Knox County <u>have</u> an overall tourism strategy?

3.3.4 STRATEGY: Develop an Inclusive Tourism Strategy Featuring a Shared Services Approach

We can do a better job aligning all our various arts, outdoor recreation, and cultural organizations and efforts. Although we have several online presences providing local events information, not everything is offered on one inclusive website. Community conversations have taken place recently in which stakeholders and decision-makers have sought to understand how they can better work together in the arts, outdoor recreation, and cultural sandbox.

It may be the Knox County organizations which operate in these areas believe their efforts are aligned and coordinated. It could also be that similar alignment efforts were attempted way-back-when; "we tried that years ago, and it didn't work out then." But the world in which we live is filled with competition; there are communities out there – perhaps right next door, or across the state – who are doing a better job than we are in strategically and thoughtfully attracting visitors, inclusively inviting local residents to participate, and continually building on those successes. Our community deserves to have its substantial and diverse arts, outdoor recreation, and cultural assets shouted from the mountaintop, with full-throated marketing efforts, according to an inclusive and aligned tourism strategy developed by all our community's relevant stakeholders and decision-makers.

There needs to be developed, outside the scope of this Plan Update, a comprehensive and inclusive strategy to align arts, outdoor recreation, and cultural organizations and their efforts in Knox County. Within this rural community, Knox County is served by a relatively large number of such organizations, including MTVArts, various town festivals, the Ariel-Foundation Park Conservancy, the Convention and Visitors' Bureau, Fredericktown Tourism Committee, Main Street Mount Vernon, the Memorial Building, and the Knox County Park District, to name a few. These organizations each have their own histories, cultures, patrons, missions and visions. But there may be value to a formalized coordination among these organizations as a Knox County Arts Council. To view a national model in this respect, one needs only look within the Columbus Region.

Formed in 1969 initially to save the historic Ohio Theatre from demolition, the Columbus Association for the Performing Arts ("**CAPA**") has matured into a professional organization that offers shared services and operational support to a myriad of arts, recreation and cultural entities in Columbus (and nationally). In this respect, CAPA provides operational and financial back-office services, allowing smaller arts and recreation organizations to instead focus on providing quality programming for their audiences. Each organization enters into a service agreement with CAPA, receiving in turn centralized services in the areas of marketing, publicity, ticketing, finance, human resources, IT, management, operations, and development (CAPA, 2017). Although CAPA does not include the Columbus metro's park districts, our own approach could (and should) involve outdoor recreation organizations in Knox County.

TARGET OUTCOMES

The Knox County community should take meaningful steps to inclusively align and strategically coordinate all the various arts, outdoor recreation, and cultural assets and organizations comprising Knox County's social and artistic fabric. Within three (3) years, a professionally prepared study should occur as to the opportunities available from a CAPA-like approach to aligning our arts, outdoor recreation, and culture organizations and assets.

In addition, this Plan Update advocates the following outcomes as additive to Knox County's efforts to attract visitors and engage local residents. Collectively, the following should be achieved within five years.

A. Take full advantage of **Mount Vernon's Best Hometown 2017** designation by Ohio Magazine. The award to the City of Mount Vernon as one of the five top hometown communities in Ohio in fall 2017 is an occasion that must be leveraged in our marketing and community awareness efforts.

   When other Ohio communities have won this distinction in the past, it has been common for them to fully incorporate the award into their marketing efforts. In some cases, the designation has become baked into those communities' identities. Likewise, this earned media needs to be thoughtfully incorporated into messaging and marketing efforts.

B. Double-down on efforts to market **Ariel-Foundation Park** to regional, state and national audiences. From an urban planning perspective, there are few similar examples of such adaptive reuse on this scale within the Columbus Region. (See Figure 3:12)

   Further efforts should be taken to grow the level of awareness of Ariel-Foundation Park within the Columbus Region, Ohio, and the nation. The Knox County community should work collaboratively to pursue urban planning and design award recognitions from organizations like the Urban Land Institute and the American Institute of Architects, among others.

13 ***Figure 3:12 - Ariel Foundation Park***

(Conservancy, 2015)

C. Obtain sufficient funding to implement the recommendations set forth in recent planning work completed for the revitalization of **downtown Fredericktown**. With the construction of the Route 13 four-lane divided highway bypass around downtown Fredericktown, completed in 1970, the Village's central business district experienced decline (Fredericktown, 2018). Although recent additions to North Main Street's retail corridor are promising, the Village's core is in need of façade updates, new street and parking amenities, sidewalk enhancements, and similar investments. It is incumbent on the Fredericktown community, working with Knox County stakeholders, to locate sufficient funds to implement the planners' recommendations for new curbs, street planters, roadway markers, way-finding signage, and the like.

D. Strengthen and support **Main Street Mount Vernon** into becoming a best-in-class Main Street organization within the Heritage Ohio network. Formerly known as the Heritage Centre, this downtown Mount Vernon-focused organization has recently gone through substantial changes in its staffing, board make-up and mission focus. With a new intensity and energy taking hold at Main Street Mount Vernon, this Plan Update advocates that sufficient time, treasure, and talent be devoted to advancing the organization into an award-winning best-practice model. Full use should be made by Main Street Mount Vernon of Heritage Ohio's readily available resources, including staff support, programming ideas, and training opportunities.

E. Develop plans and recommendations, as well as obtain sufficient funding, to redevelop **Blackberry Alley** in downtown Mount Vernon into a multi-modal arts,

outdoor recreation, and cultural asset. Building on concepts widely adopted by urban planners and architects in Europe and the United States, this Plan Update advocates that a mix of uses along the urban blocks of downtown Mount Vernon, immediately east of South Main Street, be pulled together by an intensification of Blackberry Alley. This largely vacant alleyway runs north-south in parallel to South Main Street, the latter of which has experienced at least $38 million in private investment since 2010. There is significant potential to redevelop elements of the alleyway into a complementary corridor for pedestrians, bicyclists, and drivers as a form of adaptive reuse from its current status as a back-of-house access point. Indeed, as in examples found elsewhere, this alleyway is filled with sunshine, its east and west walls protect from winds, and its proximity provides possibility for alley-facing retail spaces, outdoor dining nodes, and pedestrian access points (Macht, 2017). (See Figure 3: 13) With proper planning, this redeveloped alleyway could create a branded, continuous bike and pedestrian connection between downtown Mount Vernon and Ariel-Foundation Park.

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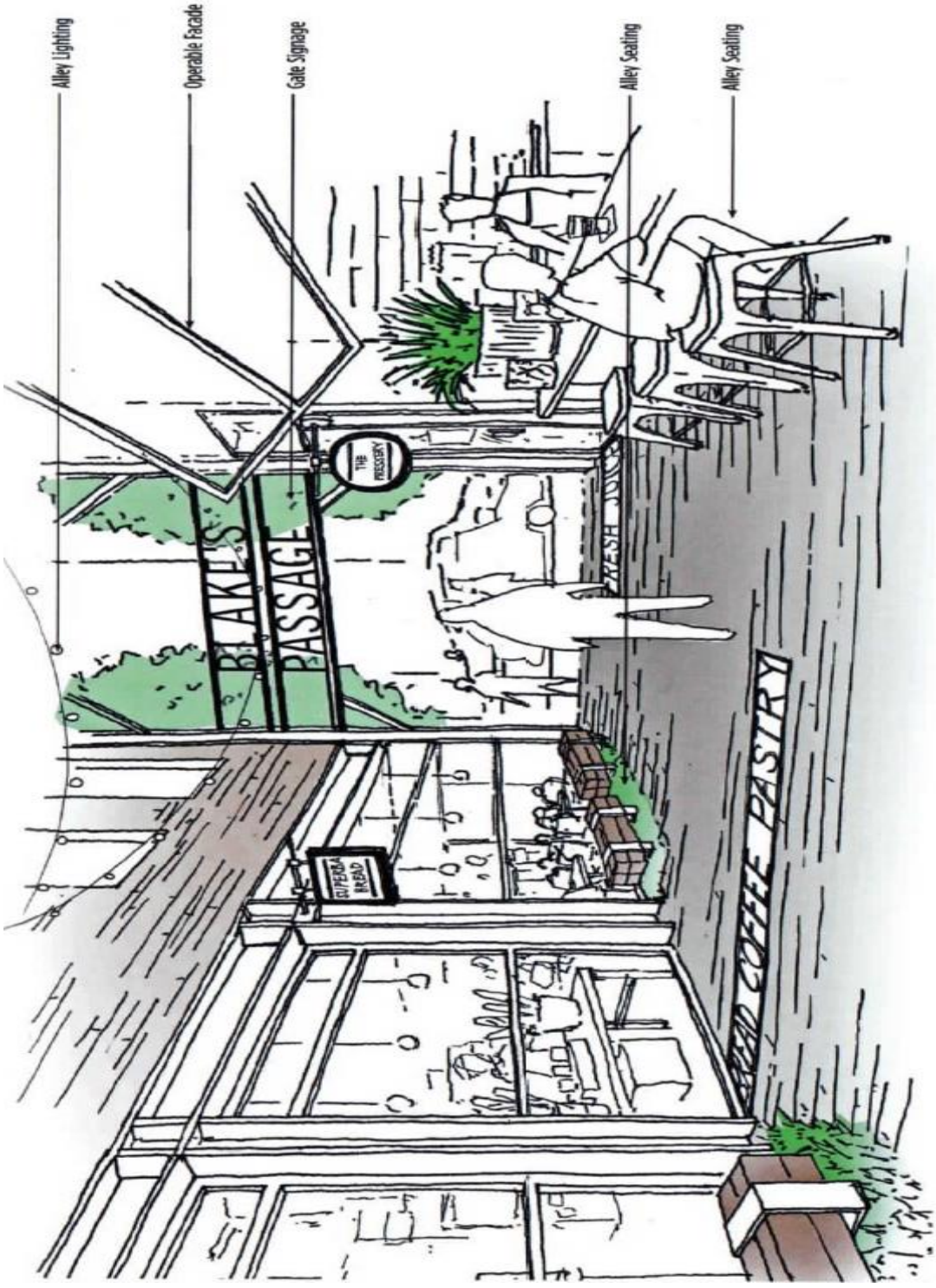
14 ***Figure 3:13 - Example: planning concept for retail space flanking 15-foot wide alley, Blake Street, Denver***



(Macht, 2017)

3.3.5 GOAL: Link Transportation Planning to Economic Development

Knox County is not interwoven with four or six-lane divided interstate routes and highways. The lack of such highway infrastructure can count against us in attracting new industrial and commercial development. But there is a compelling counterargument: Knox County benefits from not having developed according to an interstate highway-focused commoditization of our land and buildings; our development patterns are not overrepresented by faceless and (often poorly designed) buildings intended to be seen by motorists passing by at high speed. Such has been the case with many other communities across the country, as the author of *The Geography of Nowhere* noted,

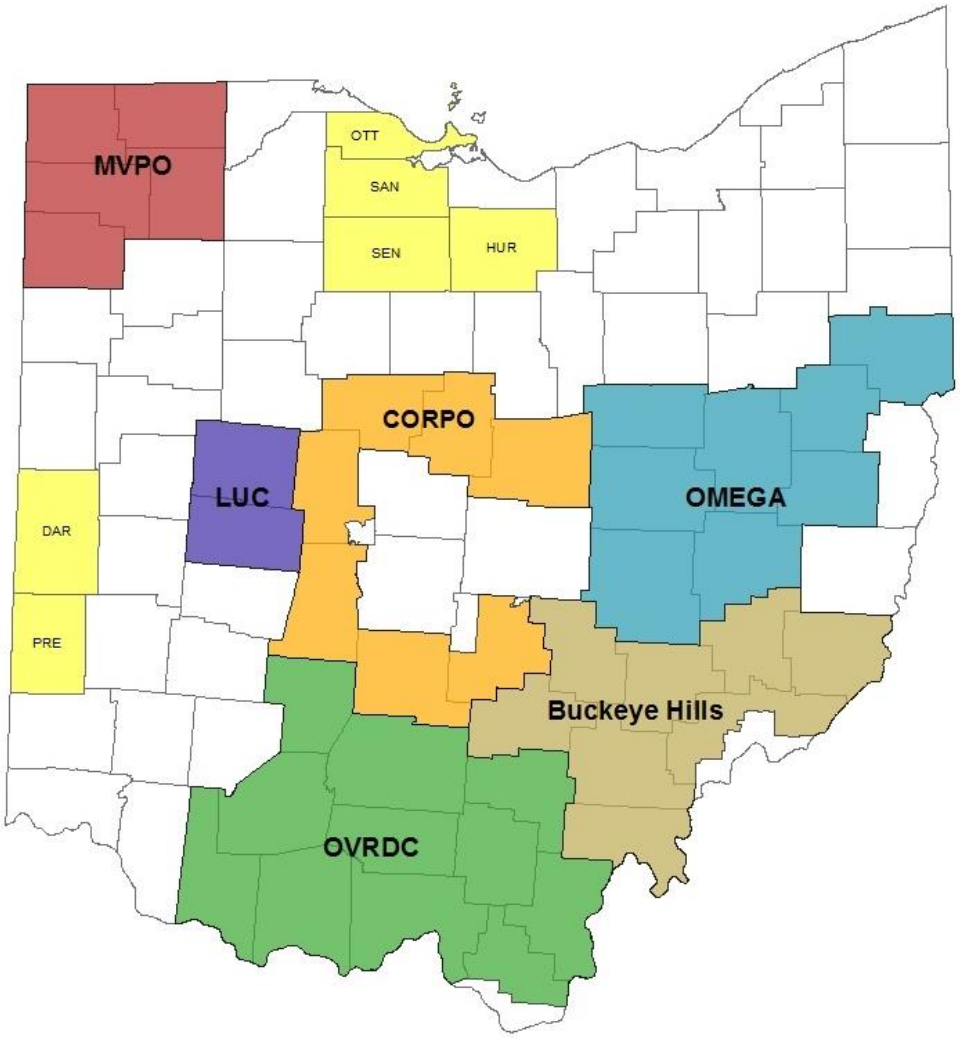
> "The landscape… is littered with cartoon buildings and commercial messages. We whiz by them at 55 miles an hour and forget them, because one convenience store looks like the next…. We did not savor the approach and we were not rewarded upon reaching the destination…. There is little sense of having arrived anywhere, because everyplace looks like no place in particular" (Kunstler, 1993).

Our community tends to attract certain kinds of businesses, investors, and site selectors; namely, those for whom being within eyesight of a six-lane highway is not of critical importance. To support those businesses (and their workers) having chosen our community, it is critically important that Knox County's transportation system be appropriately planned and carefully aligned among traffic engineering, transit, and economic development leaders, as well as composed of well-maintained physical infrastructure.

3.3.5 STRATEGY: Participate Fully in the Columbus Region's CORPO Process

In 2013, the Ohio Department of Transportation ("**ODOT**") began to push for regionalized rural transportation planning. Following the success of a two-year pilot program covering 34 Ohio counties, ODOT further encouraged the creation of the Central Ohio Regional Planning Organization ("**CORPO**"). Since its founding in early 2017, Knox County has become an active member and serves the group in a leadership capacity. Staffed by planners at the Mid-Ohio Regional Planning Commission, CORPO is comprised of the seven rural counties encircling the Columbus metro. (See Figure 3: 14)

15 ***Figure 3:14 - Ohio's Rural Transportation Planning Organizations***



(Phinney, 2017)

The CORPO group is intended to formally align member counties' economic developers and transportation and transit officials. Through the CORPO process, each member county will develop a multi-modal, long-range transportation plan; each respective plan will roll-up to the larger CORPO group. At the multi-county level, transportation infrastructure projects will be prioritized, with funding from ODOT to be collectively requested by the seven-member CORPO counties for top projects. Although Knox County traditionally has done well in obtaining competitive funding for its own projects, ODOT continues to push its preference for capital funding opportunities tied to more regional-based approaches like that of CORPO.

Prior to going down the path of CORPO, Knox County facilitated a number of community conversations with county-wide elected officials and non-profit organizations during 2017. These meetings sparked conversation among stakeholders and decision-makers as to long-range transportation and transit planning and its relation to economic development. Staff members

from the Mid-Ohio Regional Planning Commission helped guide the planning meetings to create a list of Knox County's ranked-priority infrastructure projects. The resulting priority list, depicted in Table 3:9, identifies the five infrastructure projects requiring the greatest urgency at the time of writing this Plan Update for leveraging economic growth and improving the community's transportation and transit infrastructure.

TARGET OUTCOME

Knox County should continue to actively participate in – and help lead – the CORPO group and develop a long-range transportation plan by year-end 2018. After the plan is created, CORPO will approach federal and state funding sources with specific requests that are ready for construction. The seven-member counties are taking this collective approach with the idea that such aggregated requests will carry greater weight with federal and state funders.

A useful byproduct of the CORPO approach is the formal alignment of and regular interactions among economic development, transportation engineering, and transit operations in Knox County for long-range planning purposes. This result should be encouraged.

Within ten (10) years, each of the Top Five Priority Infrastructure Projects depicted in Table 3:10 will have been sufficiently funded, contracts let and (if appropriate) construction begun, if not completed.

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10 ***Table 3:1- - Top Five Priority Infrastructure Projects (2017-2022)***

Project Type	Name of Project	Description	Priority Source	Timeframe
Roads & Highways	Southeast Mount Vernon Corridor Improvement (Phase I)	Extend Upper Gilchrist Road; improve access onto Coshocton Avenue (east of Vernonview); improve intersection at Coshocton Avenue, Vernonview, and Yauger Road; and extend Edgewood Avenue to Coshocton Avenue	Knox County Comp Plan – 2012 Update	Mid-term
Roads & Highways	Sandusky Street Corridor	Improve corridor and connectivity to State Route 13 north of river and downtown, including upgraded and connected traffic signals	Knox County Comp Plan – 2012 Update	Mid-term
Transit	Transit facility	KAT bus storage and transit garage, possible partnership with Mount Vernon City Schools	CORPO-identified	Short-term
Water & Sewer	Fredericktown sewer extension	Expand capacity to handle Knox Lake area	Knox County Commissioners	Mid-term
Roads & Highways	Interstate Highway access study	Engage professional planners to study potential improvements & corridors to better connect Knox County to interstate system, including I-71, I-70 & I-77	CORPO-identified	Short-term

CHAPTER 4: PRIORITIZE EDUCATION

4.1. VISION STATEMENT

We envision a community that values access to quality education for all residents, from the youngest residents to lifelong learners, and enables critical thinking and the ability to meaningfully contribute to the county's workforce.

4.2 EXISTING CONDITIONS

For many people, access to a quality education is an important foundation for a successful career and life. Knox County benefits from a range of educational institutions that offer opportunities from preschool to post-secondary education. With more than 25 percent (15,620 people) of Knox County's total population currently enrolled in an educational institution (American Community Survey, 2016), it is important to ensure education in the county is of high quality, while remaining efficient with resources.[9]

Local School Districts

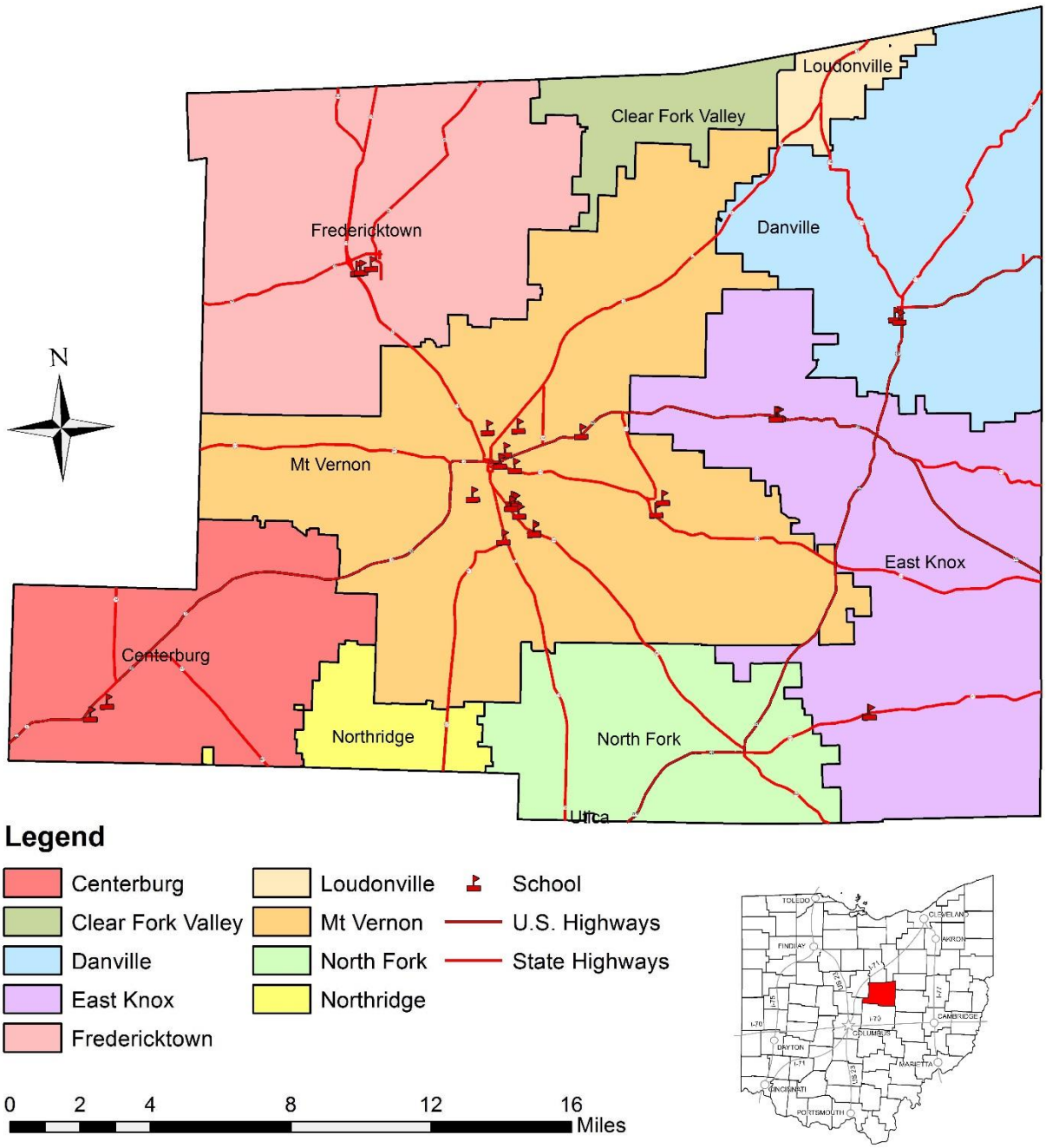
Knox County has five public school districts located completely within the county (Centerburg, Danville, East Knox, Fredericktown, and Mount Vernon). These school districts are served by the Knox County Educational Service Center (link: www.knoxesc.org) that provides shared educational services to the school districts to improve student learning, enhance the quality of instruction, expand access to resources, and reduce costs for the school districts. Knox County also encompasses parts of four other school districts (Clear Fork Valley, Loudonville-Perrysville, North Fork, and Northridge) located in Richland, Ashland, and Licking counties.

Enrollment numbers in the school districts vary widely. Danville, the smallest school district, enrolled more than 600 students in the 2016-2017 academic year, while Mount Vernon enrolled more than 3,500 students (Ohio Department of Education, 2017). County-wide, there are nearly 11,000 students enrolled in preschool to 12th grade, and of those, 85 percent are enrolled in public schools (American Community Survey, 2016).

(See Figure 4:1 and Tables 4:1 and 4:2 on the following pages)

[9] Of this figure, approximately 13,000 are enrolled in the county's primary and secondary schools, with the remaining balance enrolled in post-secondary education institutions.

16 Figure 4:1 - Local School District Map, Knox County



11 ***Table 4:1 - School District Data, 2016 - 2017****

School District	County	Service Location in Knox County	Number of schools	Website
Centerburg	Knox	Southwest	2	www.centerburgschools.org/index.php
Clear Fork Valley	Richland	North	4	www.clearfork.k12.oh.us/
Danville	Knox	Northeast	3	www.danvilleschools.org/
East Knox	Knox	Southeast	2	www.ekschools.org/
Fredericktown	Knox	Northwest	3	www.fredericktownschools.com/
Loudonville-Perrysville	Ashland	Northeast	4	www.lpschools.k12.oh.us/
Mount Vernon	Knox	Central	8	www.mvcsd.us/Default.aspx
North Fork	Licking	South	4	www.northfork.k12.oh.us/
Northridge	Licking	Southwest	4	www.northridge.k12.oh.us/

*__Bold__ indicates Knox County school district
(Ohio Department of Education; school district websites)

12 ***Table 4:2 - Student Data by School District, 2016 - 2017****

School District	Enrollment (Students)	Annual Budget	% Budget Classroom Spending	Graduation Rate
Centerburg	1,067	$12,098,492	65.3%	94.4%
Clear Fork Valley	1,647	$18,602,030	66.8%	97.0%
Danville	620	$9,121,519	66.7%	91.1%
East Knox	875	$12,242,240	61.4%	84.9%
Fredericktown	1,235	$13,170,473	70.0%	95.1%
Loudonville-Perrysville	1,118	$15,282,689	70.0%	93.0%
Mount Vernon	3,521	$42,416,103	68.6%	93.1%
North Fork	1,579	$19,177,551	63.9%	94.3%
Northridge	1,171	$15,073,177	56.9%	97.2%

*__Bold__ indicates Knox County school district
(Ohio Department of Education, 2017); school district websites)

Annual budgets for school districts are mostly funded via local real property taxes but there is also funding from state, federal, and other sources. A significant proportion of annual budgets are spent on classroom spending or student instruction, student support services, and instructional staff support services. The average percent-of-budget spent on classroom instruction in Ohio is 67.6 percent. While most of the Knox County school districts meet or nearly-meet the average, there are some that could improve in this area to ensure school district budgets are optimized for student success.

Overall, graduation rates in Knox County are strong. During the 2016-2017 academic year, all school districts located in Knox County scored above the state average (83.6 percent) for 4-year graduation rates (Ohio Department of Education, 2017).

Knox County Career Center and Knox Technical Center

The **Knox County Career Center** (link: www.knoxcc.org) offers high school students a high-quality classroom education with trades-based skills taught by veteran instructors using top-of-the-line equipment. During the 2017-2018 academic year, there were more than 550 students enrolled in 20 programs at the Career Center ranging from *Building Trades* and *Metal Fabrication* to *Digital Media* and *Sports Medicine* (Blubaugh, 2018). Students come from six partner schools: Centerburg, Clear Fork Valley, Danville, East Knox, Fredericktown, and Mount Vernon. Graduates from the programs benefit from high graduation rates (98.3 percent graduated in four years) and strong after-program placement, with 93.4 percent of students employed in work, in an apprenticeship, the military, or enrolled in post-secondary education or advanced training within six months of graduation (Ohio Department of Education, 2017).

The **Knox Technical Center**, an adult education center located in Mount Vernon on the Career Center's campus, is governed by the Ohio Department of Higher Education and provides labor market data-driven workforce education and training to high school graduates and adults. The Center offers fully customizable training for local businesses in Knox County, including job readiness instruction, job-placement, and credentialed training for workers in selected industries (Marlow, 2018).

As shown in Figure 4:2, in the year 2017 the Knox Technical Center had 236 full-time equivalent students in healthcare, industrial, and service programs during 2017.

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17 ***Figure 4:2 - Knox Technical Center Adult Enrollment for Career Training Programs, 2017***

	2013	2014	2015	2016	2017	Program Name
	✓		✓		✓	Automotive Technician
	✓	✓		✓		CNC Manufacturing Technologies
	✓					Computerized Office Technologies
	✓	✓	✓			Cosmetology
		✓		✓		Culinary
	✓	✓	✓	✓	✓	Emergency Medical Technician-Basic
		✓	✓	✓		Emergency Medical Technician-Adv
		✓	✓		✓	Emergency Medical Responder
	✓		✓		✓	Firefighter 1
	✓	✓		✓	✓	HVAC-R
	✓	✓		✓	✓	Massage Therapy
	✓	✓	✓	✓	✓	Medical Assistant
	✓	✓	✓	✓	✓	Medical Insurance Billing
	✓	✓	✓	✓	✓	Phlebotomy
	✓	✓	✓	✓	✓	Practical Nursing
		✓	✓	✓	✓	State Tested Nurse Aide
	✓	✓			✓	Volunteer Firefighter
	✓		✓	✓	✓	Welding Certification
FTE's	**327**	**357**	**310**	**271**	**236**	*Per Ohio Department of Higher Education Reporting System*

(Marlow, 2018)

Colleges and Universities

For its relatively small population and rural location, Knox County is remarkable for having four (4) post-secondary education institutions: Central Ohio Technical College, Kenyon College, Mount Vernon Nazarene University, and the Knox Technical Center. These institutions collectively stand as a bulwark against the de-population and disinvestment rampant in other communities across Ohio.

Central Ohio Technical College ("**COTC"**) (link: http://www.cotc.edu) has campuses in three (3) counties including Knox County's downtown Mount Vernon location. The college offers associate degree and certificate programs in business, computers, engineering, health care, and public service with a focus on educating and training students for success in the job market. The institution places a focus on educating and training students for success in the job market today and in the future. Once students have completed coursework at COTC, they have the ability to transition into bachelor's degree work with partner institutions like the Ohio State University (Knox County Convention & Visitors Bureau).

Kenyon College (link: www.kenyon.edu) is a prestigious, liberal arts-based institution located in Gambier, and is the oldest private institution of higher education in Ohio. Kenyon offers curriculum based in the liberal arts and sciences with the opportunity to pursue bachelor's

degrees in 33 majors. With only 60 percent of students from Ohio, Kenyon College attracts students from across the world and boasts a highly competitive admission's process (Kenyon College).

Mount Vernon Nazarene University ("**MVNU**") (link: www.mvnu.edu) is a private, religiously oriented university located near downtown Mount Vernon. The University offers more than 80 majors and programs leading to associate, bachelor's, and master's degrees in business, ministry, and education. Many students come to the University from Ohio, but also West Virginia, Pennsylvania, Kentucky, and Michigan (Mount Vernon Nazarene University).

Our rural character, with its many traditional aspects, generally tends to produce local residents with strong work ethics. Employers in the community often remark how much they benefit from hiring Knox County's "good farm kids" to work in their shops or on their work crews. However, our community has not been immune to the larger societal shifts of the past several decades as poverty has increased, drug abuse has proliferated, and family structures have eroded. But one may argue that many of our institutions and values – including that of a decent work ethic – remain generally in place. This will only be more important in the future as technology will bring shifts in employment, which will be discussed in Section 4.3.2.

4.3 GOALS AND STRATEGIES

Generally speaking, and as described in the preceding existing conditions overview, Knox County offers a variety of educational opportunities from early childhood education to collegiate degree programs. The County also provides a rich set of adult-oriented training programs and employer-specific training initiatives. Our community benefits from a rich tradition of producing students who are productive, high-quality members of society. Collaboration with and among school administrators is critical to operate the schools in a way the County taxpayers are assured their dollars are being spent in the most effective way.

The relative economic health of Knox County is aided by a set of unique, education-centered assets that set us apart from other communities in Ohio struggling to escape their Rust Belt legacy. This Chapter 4 of the Plan Update, read in conjunction with Chapter 3, comprises an **economic development plan for Knox County**. It is from such a perspective the following discussion focuses on developing and improving Knox County's workforce.

Workforce development programs and policies, designed to improve individuals' opportunities for employment through education, training, and support services, have existed in Ohio since the end of World War II. Most of the earliest programs grew out of federally created and funded initiatives, for which state-level participation required no more than an executive order from the sitting governor (Ohio Legislative Service Commission, 1996).

Beginning in the 1960s and continuing through the 2000s, states became even more involved in workforce development as changes altered the country's economic makeup. State and local agencies created numerous programs, aimed at offering general and specialized job training to fit employers' needs, as well as financial incentives tied to businesses' employment opportunities. By 1991, 15 state agencies in Ohio oversaw 51 different programs that either directly provided individuals with employment and skill-development services, or else provided the necessary supplements to complete a job training program (e.g., basic education and income support). This multitude of programs was funded through local and state taxes, as well as grants from the federal government to state agencies. Services were delivered in Ohio through a network of local service providers, specific state agencies, or non-profit agencies with funds from the state (Ohio Legislative Service Commission, 1996).

Recall that economic development can be said to lack unified theories and common core principles. The same can be said about the field of workforce development. Within the past decade, the State of Ohio has officially acknowledged its workforce development policy-making was inefficient and lacked a unified direction. Such was the case in November 2012, when Governor John Kasich announced the creation of a central workforce development office to streamline the *90 existing workforce programs spread across 13 state agencies* having formed by the time he took office (Wehrkamp, 2012).

This Plan Update stands for the notion that Knox County should align its workforce activities with the State's central workforce development office. We should seek to accomplish the same enumerated goals and strategies, to the extent they are applicable in our community. To that end, the Governor's Office of Workforce Transformation recently published a set of recommendations to guide the State's 2018 – 2019 biennial budget. Specifically, the Office seeks to align approaches to workforce development across three (3) main policy categories: **connecting business and education**; **creating a culture of continuous learning**; and **building career pathways**. The resulting overview appears on the following page.

Ohio | Governor's Office of Workforce Transformation

John R. Kasich, Governor
Ryan D. Burgess, Director

Providing all Ohioans with World-Class Preparation for Careers and College

How Governor Kasich's Budget is Transforming Workforce in Ohio

In September 2016, Governor John R. Kasich challenged his Executive Workforce Board to come up with ways to prepare and continuously retrain Ohioans of all ages for jobs today and tomorrow. Board members engaged their local communities for feedback and presented the following recommendations to the governor for incorporation into in the state budget. The following recommendations are included in the FY18-19 Executive Biennial Budget and fall within three main categories: connecting business and education, creating a culture of continuous learning, and building career pathways.

Connecting Business and Education

- Build a Regional Workforce Collaboration Model to guide communities in engaging stakeholders, developing partnerships, and implementing workforce best practices
- Create accountability by requiring Business Advisory Councils to meet at least quarterly and report progress annually to the local school board
- Develop a Workforce Supply Tool which shows higher education graduates by each in-demand occupation
- Develop an "OhioMeansJobs-Ready Certificate" to be awarded to students who demonstrate they are ready to work
- Allow students to earn simultaneous credit in multiple subjects through cross-disciplinary curriculum integration
- Establish a STEAM (Science, Technology, Engineering, Arts, and Math) designation for schools that integrate art and design into the STEM curriculum

Creating a Culture of Continuous Learning

- Position libraries as "Continuous Learning Centers" that offer information about in-demand jobs, relevant education and training
- Facilitate better coordination between county OhioMeansJobs Centers and local libraries
- Strengthen the Ohio Digital Library's online education resources to provide more accessible training materials to adult learners
- Allow and incentivize incarcerated individuals to complete a High School Diploma or Equivalency while incarcerated
- Increase the maximum award amount for the OhioMeansJobs Revolving Loan Fund and prioritize credit and non-credit certificate programs that align with in-demand jobs
- Report annually on progress toward Ohio's goal of achieving 65% of Ohio's adult-age workers attaining degrees, certificates, or other credentials of value by 2025

Building Career Pathways

- Engage businesses in developing industry-recognized credentials for high school students
- Align state recognized pre-apprenticeship programs with College Credit Plus and add recognized pre-apprenticeship as a pathway to high school graduation
- Inventory non-credit and credit certificate programs and prioritize funding for programs that align with in-demand jobs
- Work with the business community to increase the number of students in Ohio who pursue certificates or degrees in the field of advanced technology and cyber security
- Improve and expand Certificates of Qualification for Employment, which are awarded to qualified ex-offenders and serve as a reference letter from a judge, and provide businesses with legal protections
- Conduct an employer survey every two years to update Ohio's In-Demand Jobs List

In addition, the state is working to align language in the Ohio Revised Code with the 2014 Federal Workforce Innovation and Opportunity Act and enable state agencies to more effectively and efficiently share data to measure outcomes of state-funded programs.

18 Figure 4:3 –Providing all Ohioans with World-Class Preparation for Careers and College

Our community should foster real and meaningful collaboration among the disparate agencies, non-profit service providers, and educators comprising Knox County's workforce development system. With many programs, initiatives, and opportunities available even at the local level, we should take steps to gather them into a cohesive whole, with the end goal to produce high-quality and informed workers.

How should Knox County align its workforce development system? Which types of jobs should be planned for? Which training programs should be encouraged? Are we able to produce workers who enter the economy with the requisite skills, work ethic and base-level knowledge to be productive and contributing members of society?

Using the definition of **economic development** set forth in Chapter 3, workforce development comprises a set of *public-sector interventions* to help *solve free market imperfections*. Here, we are attempting to encourage high school students and adults to learn the skills necessary to acquire and hold employment, to thereby earn a paycheck, pay taxes and raise families in Knox County.

4.3.1 GOAL: Break Down Silos

Our community should fully support the operations of the Knox County Workforce Development Alliance and look to that group as a central clearinghouse for local workforce development solutions. Known by its shorthand, **WorkDev**, this local group began as a casual – yet effective – gathering of core professionals representing a handful of providers and agencies. With an emphasis on "brown bag lunch" programs and career fairs, WorkDev tended to take a more tactical approach. This Plan Update stands for the notion the collaborative initiative should be improved upon, using the connections and relationships of WorkDev to align strategies and break down operational silos in our community.

4.3.1 STRATEGY: Who's on the Bus?

Borrowing from Jim Collins' seminal business book, *Good to Great*, the WorkDev model functions best by having all the right people on the bus, so to speak. As the author notes, "if you begin with 'who,' rather than 'what,' you can more easily adapt to a changing world" (Collins, 2001). Good workforce development systems rely on connections and relationships to achieve success (but without succumbing to a *Good Ole Boys'* network). Who knows whom at which training program to identify high-achieving students for current job openings? Is there a personal relationship between an employer, needing specific job-skills, and the educator working with students? Ideally, WorkDev should be the connective tissue between high schools, vocational schools, post-secondary educators, economic developers, and employers. We can use a mnemonic device to list those groups who need to be part of the workforce discussion: the **Four E's** of *education*, *economic development*, *employees*, and (perhaps most importantly) *employers*.

Education:

One cannot overemphasize the critical importance of high school and post-secondary educators in a successful workforce development system. These professionals are the front-line resource in linking trained students to employers in need of good workers. They run the skills-training programs, base-line education curricula, and enrollment systems that ideally produce high-quality new workers within Knox County each year. Given their importance, WorkDev should strive for optimal representation from this group of contributors. And accountability should be built into the system, allowing for WorkDev members to regularly communicate with educational leaders on workforce trends and activities.

The following represents a non-inclusive list of organizations in the community which should be included in WorkDev:

*Central Ohio Technical College ("**COTC**")*
Kenyon College
*Knox County Career Center ("**KCCC**")*
KCCC – Digital Academy
Knox Education Service Center
Knox Technical Center
Knox Technical Center - Aspire Up / Adult Diploma Program
*Mount Vernon Nazarene University ("**MVNU**")*
School Superintendents

Economic Development:

Helping bridge the gap between employers and educators are the economic developers. They play a key role in ensuring employers' needs are clearly expressed to other elements of the workforce development system. What critical workforce needs are being raised by employers during routine business retention and expansion ("**BRE**") visits? How is that information being processed and shared with WorkDev contributors?

The following organizations should be included in WorkDev:

Area Development Foundation, Inc.
Knox County Chamber of Commerce
NextGen Partnership of Coshocton, Knox & Licking Counties

Employees:

If workforce development initiatives are meant to produce trained workers for good jobs, it should be that WorkDev includes professionals connected to groups of potential workers. This includes representatives of nontraditional labor pools, such as: adults challenged by histories of drug abuse or incarceration who are *willing and capable* of handling responsible employment;

residents with certain behavioral or physical disabilities; even local library patrons unaware of employment opportunities.

The following represents a non-inclusive list of potential employee pools which should be included in the WorkDev group:

Ariel Corporation Training Center
COTC Manufacturing Engineering Technology program
Knox County Job & Family Services / Opportunity Knox
Knox County Developmental Disabilities
Knox Labs makerspace
Knox Technical Center – Job Placement professionals
Knox Works
Ohio Laborers Training Center
Ohio Means Jobs
Public Library of Mount Vernon & Knox County

Employers:

WorkDev should include a representative number of private employers as key contributors. Ideally, WorkDev should feature input from employers which pay good wages and demonstrate sound human resources practices.

TARGET OUTCOMES

Using the WorkDev model, Knox County's workforce development system should accomplish the following within two (2) years of this Plan Update's publication:

- **Meet regularly** – at least quarterly – as a robust and active group comprised of educators, economic developers, employees and employers;
- During regular meetings, establish the following **permanent agenda items** for maximum information sharing among workforce development contributors:
    - Share *up-coming BRE visits* and gain participation by at least one (1) WorkDev partner at each visit;
    - Report on *high school and post-secondary student pipelines*, with updates from educators as to the numbers of students matriculating into programs, the numbers graduating and when, students committed to local employers, and those still looking for work in Knox County;
    - Report on progress made in any *NextGen Partnership initiatives* with partner counties; and
    - An *In-the-Know segment* detailing one (1) specific workforce development initiative and success story within Knox County;
- Develop a **one-page overview document**, branded and with contact information, that describes all programs, initiatives and resources comprising Knox County's workforce

development system. This document would serve as a leave-behind for local employers, providing them a succinct and regularly updated snapshot of the tools, professionals, and assets to which they may avail themselves when looking for new talent;

- **Report regularly** – at least *once (1X) per year* – to local school boards and/or school superintendents as to local and regional employers' needs and concerns with students entering the Knox County workforce; and
- **Conduct employer surveys** – at least *once (1X) every two years* – to update WorkDev on in-demand jobs and any skills gaps within the community.

WorkDev should enlist participation by human resources professionals from *at least three (3) of the largest private employers* in Knox County (*see* Table 3:4 - Top 25 Employers). In addition, WorkDev should encourage participation by other human resources managers and executives in Knox County, irrespective of employer size. Collectively, such private sector contributors form a sounding board against which WorkDev initiatives and policy approaches could be vetted prior to launch.

Finally, during 2018, WorkDev should take the necessary steps to serve in the role of **business advisory council** to each of the school districts in Knox County. During the drafting of this Plan Update, the Ohio General Assembly enacted new legislation requiring school districts to create so-called business advisory councils (*see* ORC Section 3313.821). The purpose of these councils is to convene, at least quarterly, business leaders and school administrators to align in-demand job skills with instruction. This Plan Update stands for the notion there is no need to reinvent the wheel; *such an organization already exists* within the County – WorkDev – and it should satisfy the new statutory requirement.

4.3.2 GOAL: Implement the WorkDev Mission

Knox County's workforce development system should take all steps necessary to implement WorkDev's defined **mission statement**, set forth in 2017:

> *Creating Local Solutions to Empower & Support the Knox County Workforce.*

4.3.2 STRATEGY: Help Businesses and Job-seekers

As it relates to **helping businesses**, WorkDev should devote its energies to helping private companies and employers which meet a couple key criteria. Put simply, *WorkDev should collaborate and work with those employers which are hiring in Knox County* to fill so-called *Good Jobs*. We expand on this notion, as follows.

First, WorkDev should help those employers *located in Knox County*. Recall from Chapter 3 that Knox County net exports 2,300 workers every day to jobs outside our community. It should be that a greater number of local residents hold comparable employment positions in our own community. Why? Because residents who live and work in Knox County arguably spend more of their income here and have more time to be involved in their families and the community. Achieving greater proportions of Knox County residents holding jobs in Knox County requires that we address the notion felt by many residents – either real or perceived – that they need to leave our community for better work opportunities. It may be true that one's daily commute to Columbus comes with higher wages and more abundant career advancement opportunities. But wage gains often are erased when one factors-in transportation costs. And daily two-hour, round-trip commutes take a toll. Commuters may not have the time or energy to be as fully involved in the lives of their children, spouses, and extended family, or knowledgeable of the goings-on in their home community. To the extent WorkDev plays a role in this dynamic – providing training for employment opportunities that tend to occur beyond our borders – we should re-assess such practices and consider more of an inward, Knox County-based focus.

Second, and directly in-line with the goals and strategies set forth in Chapter 3, WorkDev should prioritize its worker training resources for **Good Job** opportunities that pay a certain wage (at least $12.93/hour in 2017), are full-time and employed directly by the company, and offer health and retirement benefits. An emphasis on providing workforce development strategies for Good Jobs will advance the notion of creating better job opportunities locally, thereby retaining more of Knox County's talent and reducing daily commute patterns.

By way of example, Table 3:2's Top 20 most common jobs listed registered nurses, teachers (K – 12 and higher education) and maintenance technicians as among the best-paid in Knox County. WorkDev should help local employers fill these types of jobs, and others like them offering comparable wage rates and benefits, instead of expending valuable resources and time on training for lower-wage and lower-quality employment opportunities.

As to **helping job-seekers**, WorkDev should undertake initiatives and opportunities to connect local graduating seniors, both high school and collegiate, with Good Jobs in the community. And this approach should fully recognize that not all graduates possess the same abilities and same skill sets. Recall the OSU Report's analysis that Knox County has a rather dismal record of retaining its 25 to 34-year-old adults in the community. Young people who grow up here often leave Knox County and never return. To staunch the flow of young adults leaving our community,

WorkDev should take steps to support pairing up local recent graduates with available Good Jobs in Knox County.

At the same time, WorkDev should demonstrate to local students and young adults that good career opportunities can be had without traveling down the traditional four-year college degree pathway. Educators and career guidance professionals now generally acknowledge that our society's message, pounded into students since the 1960s, that everybody needs to go to college to succeed, may have been ill-advised. This Plan Update stands for the notion that not everybody should feel the need to pursue the traditional four-year college track. Many young adults may be better served working with their hands and (in many instances) making more money on factory floors or as members of the skilled trades, than with a bachelor's degree in sociology or history. It is the case that many factories today are not like the dirty, noisy and dangerous places they once were. Now they are "clean rooms" and spotless factory floors filled with robots and (very) high tech machines. It is a common refrain during BRE visits in Knox County that employers struggle to hire smart young people who are good at problem-solving with computers.

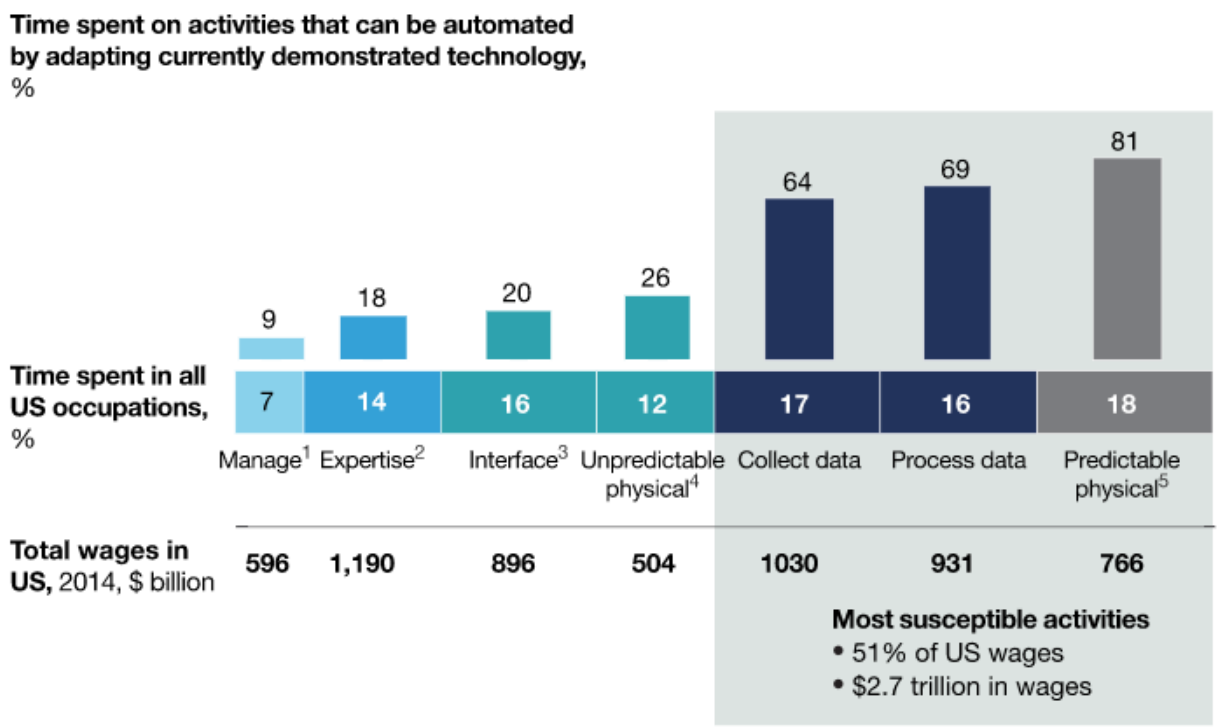
Similarly, WorkDev should advance initiatives and opportunities that connect Good Jobs in the community with career professionals who may have returned home, or otherwise are new, to Knox County. This is the flip-side of the young adult situation; sometimes young and mid-career-aged adults *do* come back or move into Knox County. What jobs are available for such working-age adults? Are these returning natives or newcomers leaving Knox County every day to commute to jobs elsewhere? How can WorkDev take a role in pairing Good Jobs in the community with such talented local residents?

Finally, and perhaps most critically, WorkDev should engage with workers in our community most at-risk of being displaced by automation and technological change. Remember Chapter 3 highlighted that Knox County has a markedly higher concentration of high school-only graduates (41 percent) than in in the Columbus Region, the State of Ohio and the country as a whole. We also have 4,400 working age adults (11 percent of such residents) who lack a high school diploma. This indicator of a less-than-resilient workforce is worrisome, given the changes forecast on the horizon.

A study published in fall 2017 by the McKinsey Global Institute is typical of many: namely, that a very large number of workers in the U.S. may need to shift occupational categories and learn new skills in the near future, as up to one-third of job activities may be automated or replaced by technology. The report notes,

> "*Activities most susceptible to automation include ones in predictable environments, such as operating machinery and preparing fast food. Collecting and processing data are two other categories of activities that can be done better and faster with machines. This could displace large amounts of labor… in mortgage origination, paralegal work, accounting, and back-office transaction processing*" (Manyika, et al., 2017).

19 Figure 4:4 - Automation Potential by Type of Work



(Manyika, et al., 2017)

What steps should we be taking to prepare for a time when more work will be performed by less people, as automation takes hold? Calling out one industry, Table 4:3 below denotes the number of trucking-related jobs in Knox County, between 2010 and 2017. These are Good Jobs, as they pay an average wage of $17.53/hour on the low-end. And these jobs provide a middle-class lifestyle without need for an advanced education. But what should Knox County's workforce development system be doing – now – to prepare for the day elements of one's trucking job are automated by supercomputers and GPS? At the time of drafting of Plan Update, Tesla unveiled a driverless truck with its proprietary Enhanced Autopilot semiautonomous technology, featuring automatic braking, lane keeping, and lane departure warnings (Marshall, 2017). Most experts do not believe trucking jobs will go away, but we should be having active conversations about how prepared our residents are for new jobs requiring new skills in the near future.

13 ***Table 4:3 - Trucking Jobs in Knox County, 2010 and 2017***

Description	2010 Jobs	2017 Jobs	2010 - 2017 Change	2017 Wages & Salaries
General Freight Trucking	341	314	(27)	$36,926
Specialized Freight Trucking	44	55	11	$40,810

(Columbus2020, 2017)

TARGET OUTCOME

As WorkDev creates its one-page overview document listing all programs, initiatives and resources (from the previous section), the group should be asking the following question of each listed resource: *Does the program or initiative focus on businesses offering Good Jobs in Knox County? Does the program pair Good Job opportunities with graduating seniors, returning or new working professionals or workers most at-risk for displacement? Does the program direct students into new, high-growth fields, or is it geared towards older technologies and out-of-date employer needs?*

For any program, initiative or resource resulting in an answer of, *No*, WorkDev should consider whether to continue such efforts going forward or make changes to re-align the program's focus back to Good Jobs with employers located in Knox County.

4.3.3 GOAL: Instill Worker Pride

Passing conversations with employers in Knox County reveal a general sense that the attitudes of some new hires lack a sense of solemnity and pride in putting in a full day's work. Put another way, some employers bemoan the fact new hires – especially those younger in age – do not approach the notion of *work* as noble or dignified. This Plan Update does not expend effort trying to deconstruct the larger societal changes that may have caused mindsets to shift when it comes to the notion of work. But there is something to be said for the Knox County community to acknowledge the inherent pride and dignity in holding down a full-time job and earning an honest paycheck.

It has been widely reported that men between the ages of 25 and 54 have declined to participate in the American workforce in larger numbers. In fact, the United States now has the third-lowest participation rate for "prime-age men" among the world's developed countries; it had been as high as 98 percent participation in 1954, and it now stands at 88 percent. Male participation in the nation's workforce has been declining for decades, with the drop-off having accelerated during the Great Recession. One common explanation has been the prevalence of lower-paying jobs in the marketplace; the lower the wage, the more likely workers are to pass up the job altogether (Muyi, 2016). (All the more reason to focus WorkDev's efforts on Good Jobs in the community.) Another commonly cited reason is the large number of women in the workforce, which began in earnest in the 1970s and has accelerated to this day.

At the same time, the number of high school and college students who hold part-time jobs has diminished as well. For teens and young adults, labor force participation, employment, and median earnings are all declining. The drop in employment rates among teens is particularly

noteworthy: the number of employed teens nationwide dropped by *36 percent* between 2000 and 2014, even as the total number of teenagers increased by three percent. This Plan Update fully acknowledges that teen employment is not a magic bullet to fix our workforce problems. Nor do we believe part-time jobs held by high school students support one's basic living expenses. But low rates of teen-aged labor force participation and employment raise questions about future labor market success. Importantly, reduced work experience as a high school student, especially for those not going on to college, has been associated with lower employment rates and reduced earnings in later years. Most people spend most of their lives working; it is the activity by which most of us support ourselves and families. At least in this country, what one does for a living is a major part of one's adult identity. But a teen employment rate of only 26 percent suggests that most teens are missing key experiences that could help them prepare for the labor market (Ross, et al., 2015).

4.3.3 STRATEGY: There is Pride and Dignity in Full-time Employment

WorkDev should advance notions of pride, dignity, and seriousness when it comes to work. We acknowledge this is a completely amorphous concept, subject to multiple interpretations. But there is a role for WorkDev to play in facilitating candid discussions about the meaning and value to holding a full-time job to support oneself and one's family. Such conversations and encouragement should be focused at middle and high school students in our community and should occur on a regular basis. We further acknowledge this effort neither will result in a sudden awakening by more serious workers entering jobs nor immediately increase labor market participation. This approach should be taken simply because it is important. And WorkDev occupies a unique role in our community to lead discussions around one's work and the positive impact it can have throughout an adult's life.

TARGET OUTCOME

WorkDev should put in place regular programming focused on instilling pride in one's work. Because so much of the modern high school experience is focused on mandatory tests and advancing the academic achievements of top-tier students, perhaps this approach could be more casual, and geared towards those students "in the middle," for whom it is more likely they will remain in the community and take jobs upon graduation. Many students who finish high school graduate without the academic skills needed to pass college placement tests. These students are shunted into remedial courses, where many find themselves on a pathway to nowhere. As a community, we need to better understand and plan for what we are going to do for the many young people who will never go to college (Stone, 2012).

Within two years, WorkDev should put on at least one (1) program – either a compelling speaker or a defined pathway-to-a-job initiative – that identifies serious high school students and engages

them in a real way about work after graduation. Part of this effort should involve expectation-setting for students and their soon-to-be employers.

Ideally, such an initiative could grow over time into something much more meaningful to high school students, perhaps like the approach taken in Georgetown, Kentucky. The large Toyota manufacturing plant in that community worked with local educators to create a compelling, rigorous and relevant manufacturing career pathway—one that promises employment with Toyota after students from high school attend the local community college or four-year college programs in engineering or manufacturing management. Characterized as intensive work-based learning ("**WBL**"), this model provides an alternative for young people who do not intend to immediately proceed down the traditional four-year college track (Stone, 2012).

4.3.4 GOAL: Make Well-informed Local Workforce Development Policies

As discussed above, Ohio's workforce development system gained notoriety for its inefficient decision-making and fragmented programming. Knox County must make every effort to avoid succumbing to the same fate. Our task becomes particularly harder given this Plan Update's recommendation that WorkDev expand to include even more stakeholders at the table.

WorkDev should follow the well-informed policy goals and objectives set by the Governor's Office of Workforce Transformation, as appropriate to Knox County. And at all times, careful use of data and metrics should thoughtfully guide WorkDev's local efforts.

Contributors to WorkDev should get in the habit of regularly asking questions such as the following: *How many new jobs are available in Knox County each year? What wage rates do they pay? Which types of jobs are trending up, and which job categories are dwindling? How many students are matriculating each year into the in-demand training programs? How many students instead are entering lower-demand occupational training – and why? Which types of students are recruited – and hired – by local employers well before graduation?* And so on.

Open and candid conversations among our workforce development contributors, on a regular basis, will challenge WorkDev to employ best practices, address inefficiencies and break down silos. Members of WorkDev must feel empowered to say something if they see something: are policies aligned with our mission statement? Is the group getting too into the weeds on matters with lesser impact?

4.3.4 STRATEGY: Data Drives WorkDev Actions

Economic development and its sister, workforce development, is a highly competitive process. Business location decisions are based on many factors, including the availability of trained workers. WorkDev must demonstrate to our own community, as well as business prospects considering Knox County, that we are prepared to address workforce challenges head-on. This preparation includes understanding, in fairly specific detail, our existing conditions and gaps. At all times, WorkDev contributors should be well-informed and reasonably aware of the current state of workforce opportunities and challenges in the community. The best way to build such awareness is to **own the data** on which decisions are made.

TARGET OUTCOMES

Within two (2) years of this Plan Update's publication, our workforce development system should put in-place several data and metrics-sharing mechanisms. Specifically, WorkDev members should strive to accomplish the following:

- Clearly assign to individual WorkDev members the responsibility for **program-specific data collection and reporting**, with each contributor understanding the critical role they play in sharing accurate information;

- Facilitate the **review at each regular meeting of data** pertaining to student enrollment, by education provider and program, as well as pending graduation dates and the numbers of hired and uncommitted graduates;

- Assign at least one (1) member of WorkDev to the responsibility of **checking for updates and new initiatives announced by the Governor's Office of Workforce Transformation**, with such information shared at regular WorkDev meetings, as appropriate; and

- Request from Columbus2020 **annual job trend data** and **wage and occupation data**, as reported by Esri, with contributors working together to compile the data into informative reports and succinct summary tables.

CHAPTER 5: STRENGTHENING QUALITY OF LIFE

5.1. VISION STATEMENT

*We value and strive for a safe, healthy, accessible, and sustainable community where all residents have the opportunity for a high quality of life. Quality of life issues are **inherently related** to other portions of this Plan Update. Economic development, the growth of the local workforce, and environmental preservation all shape the daily lives of Knox County residents.*

5.2 EXISTING CONDITIONS

Knox County strives to balance individual interests with the greater good of the community, including preservation and sustainability of our open spaces, agriculture, natural resources, ecosystems, and cultural characteristics. This chapter specifically addresses two categories of quality of life issues: *community* issues, such as housing and health, and *environmental* issues, including parks and recreation and waste management.

Community Issues

Housing

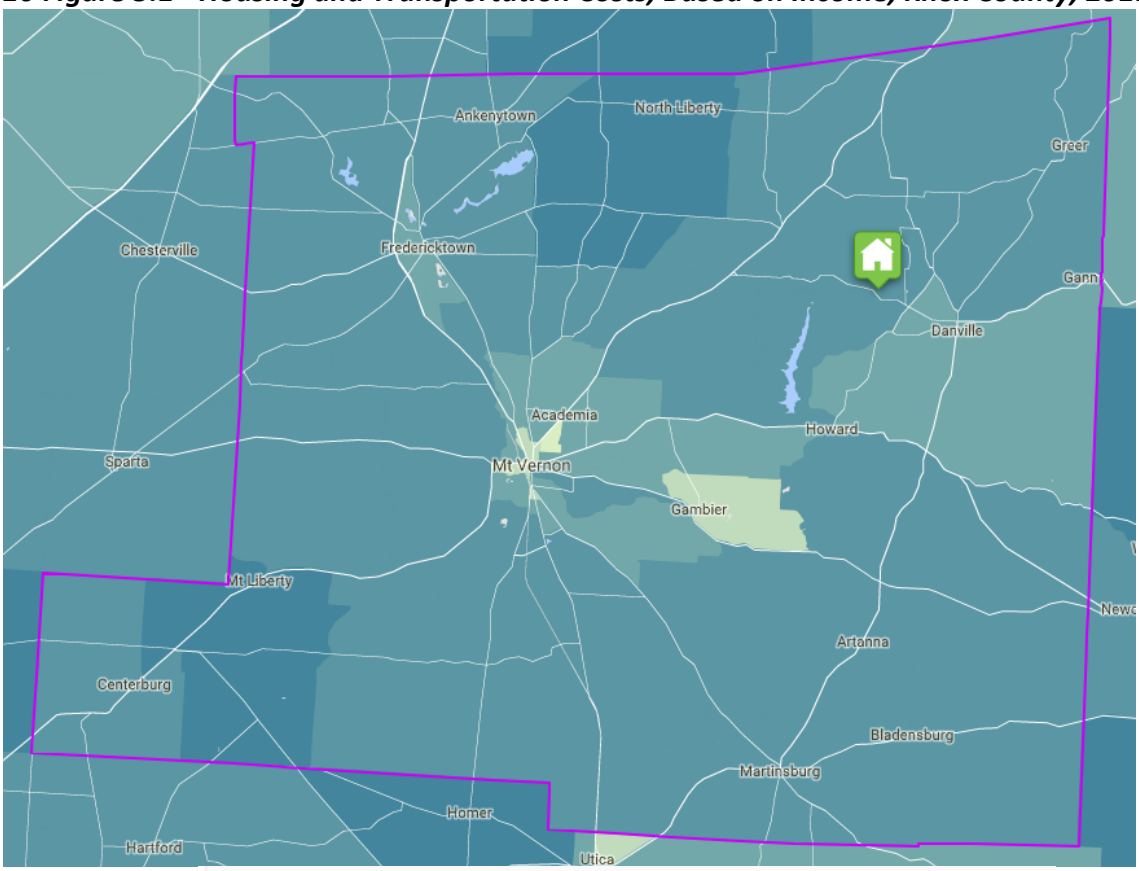
For residents of Knox County and beyond, a high quality of life requires the ability to afford a quality home with easy access to all of a family's basic needs. In existing housing and as development occurs, leaders in the county should work to ensure resident populations are afforded resources to live and work comfortably.

Using the *H+T Index*, a tool used to measure **affordability of an area** based on income, housing, and transportation costs, some Knox County residents arguably live in "location inefficient" places, meaning they face significant daily living cost burdens.[10] In areas with denser building footprints and walkability, such as in Mount Vernon and Gambier, housing and transportation

[10] The Center for Neighborhood Technology's *Housing and Transportation Affordability Index* ("**H+T Index**") provides a more comprehensive way of thinking about the true affordability of place. By taking into account the cost of housing as well as the cost of transportation, the H+T Index provides a more comprehensive understanding of the affordability of place. Dividing these costs by the representative income illustrates the cost burden of housing and transportation expenses placed on a typical household. While housing alone is traditionally deemed affordable when consuming no more than 30% of income, the H+T Index incorporates transportation costs—usually a household's second-largest expense—to show that location-efficient places can be more livable and affordable (Center for Neighborhood Technology, 2017).

costs are more affordable. But in wide swaths of the County, the combined costs of housing and transportation consume a family's resources within a range of 45 to 78 percent of reported household income. The calculated *H+T Index* spatial distribution can be seen in Figure 5:1.

20 ***Figure 5:1 - Housing and Transportation Costs, Based on Income, Knox County, 2017***



	Households	% of Households
< 24%	0	0%
24 - 36%	368	1.6%
36 - 45%	2,069	9.1%
45 - 54%	7,832	34.4%
54 - 66%	11,521	50.6%
66 - 78%	969	4.3%
78 - 87%	0	0%
87% +	0	0%
Total	22,759	100%

(Center for Neighborhood Technology, 2017)

More affordable housing may require building different **forms of housing**. Approximately 80 percent of Knox County's current housing is comprised of detached single-family homes (see Table 5:1). Although this follows the predominant housing development model of the mid to late-20th Century and helps support the rural character of the county, it may not provide the best

type of housing for many residents, especially those who are aging or struggling financially. And with just over 15 percent of Knox County residents considered living in poverty, housing costs are an important consideration for decision-makers in our community.

Knox County's housing stock is older. The average house in Knox County was constructed in 1973. (American Community Survey, 2016). This means the majority of housing in the community has required maintenance and potentially major renovations. However, if housing has not been renovated, it may be in sub-par condition and not meet health and safety standards. Although the county aims to retain its rural character, we must also deal with the reality that housing standards and upkeep require additional attention by policy makers.

14 ***Table 5:1 - Housing Type, Knox County (2016)***

Household Type	Count
1, *detached*	20,291
1, attached	366
2	994
3 or 4	1,524
5 to 9	604
10 to 19	139
20 or more	380
Mobile home	1,164
Total	***25,462***

(American Community Survey, 2016)

A number of trends at the national and regional levels are shaping **changes in residential development patterns**. As first discussed in Chapter 3, principal shifts include a growing number of households without children, an increasing proportion of senior households, and a growing preference for living in denser, walkable communities. Since 1970, the number of households in the U.S. without children has increased by almost 20 percent (American Community Survey, 2016). But as was shown in Table 5:1, Knox County's predominant housing stock (80 percent) is single-family, detached housing. A closer examination of the county's housing stock may be worthwhile moving forward, as household sizes continue to shift, rendering obsolete some of our single-family housing options.

As is the case in other communities in the Columbus Region, there is latent demand for new residential options in the downtowns of Knox County's communities. However, these concepts need to be proven in the private market first to convince developers and land owners to make investments. Facilitating downtown residential-catalyst projects, perhaps with economic

development financial incentives, will require informed dialogue among the general public, developers, and local and county leadership.

In addition to changing household sizes, the growing preference for walkable communities has shifted the geography of residential demand from primarily auto-centric developments to spaces that are both car and pedestrian-connected. In Ohio, recent survey data indicates approximately 56 percent of Ohioans desire to live in walkable communities, while fewer than 20 percent of respondents feel they currently have this option (Natural Resources Defense Council, 2014). This trend should encourage local decision-makers to seriously consider supporting cluster housing, mixed-use neighborhoods, and denser developments (i.e., more units per acre), with an emphasis on walkability, in close-in areas to our downtowns.

The share of Knox County households with at least one person over the age of 65 is 30 percent, slightly higher than the statewide average (American Community Survey, 2016). Generally, the U.S. will see an increase in the size of its aging population. By 2050, the nation's population over the age of 65 will increase to 84 million people, which is double the size of that population cohort in 2012 (Natural Resources Defense Council, 2014).

Knox County can benefit by looking to other communities to model new housing opportunities that address these population demographic changes. Renovated loft units above first floor retail spaces provide a sense of vibrancy in downtowns after business hours, while also providing a reliable customer base to support local retail. New and rehabilitated townhomes and apartments can provide smaller physical spaces for those looking to downsize. Assisted living facilities integrated into mixed-use neighborhoods can provide an elevated quality of life for residents. Development projects that feature these types of characteristics should be encouraged moving forward.

Health and Wellness

It is important for communities to provide lifestyle and health care choices that allow residents to live strong, healthy lives. While many factors impact length and quality of life, access to health care and social and economic factors can be strong indicators of community health.

Approximately 14 percent of residents in Knox County do not have health insurance, compared with the statewide average of 13 percent (County Health Rankings, 2016). Access to health insurance is important in determining access to health care. Those without health insurance are less likely to regularly visit a doctor or visit a doctor when a health problem arises. Those with health insurance are better able to prevent illness, control acute illness, and manage chronic conditions, which leads to better health outcomes and cost savings in the long-term (Center for Disease Control, 2017).

Although there are many important health issues facing Knox County, we must be prepared to fully respond to "**opioid addiction, abuse, and overdose** [which] has become one of the most pressing public health issues in Ohio" (Rembert, 2017). With estimates between 92,000 to

170,000 Ohio residents abusing or dependent on opioids in 2015, the state's drug overdoses *per capita* are the highest in the nation, costing the state between $6.6 - $8.8 billion in 2015 alone (Rembert, 2017).

Ohio researchers have found a relationship between rates of opioid overdose and certain economic and social factors, including unemployment rates, poverty rates, and educational attainment. Those counties with high unemployment and poverty rates, and lower education levels, show increased instances of opioid overdose (Rembert, 2017). In considering Knox County, the current unemployment rate is relatively low. However, the community is marked with a higher (and increasing) poverty rate of 15.3 percent and a large percentage of the population (41.2 percent) only having a high school education (American Community Survey, 2016). This increases the relative likelihood of opioid addiction, abuse, and overdose in Knox County.

Thankfully, overdose and youth use rates in Knox County compared to other Ohio counties are low to moderate, as shown in figures and tables appearing on the following pages. For example, Knox County's measured youth substance use rates are low, with 91.5 to 95.6 percent (depending on grade level) of students reporting *no* use of prescription drugs (see Figure 5:5).

But the County has experienced an increase in overdose rates during the past decade, and even then, overdose rates do not account for the total usage rates and costs of opioid addiction and abuse in the county. The current epidemic costs taxpayers money and severely disrupts local residents' lives. Coupled with the alarming prevalence of opioid overdose elsewhere across the state, Knox County must be vigilant in combatting this problem.

Knox County has convened a group that is actively helping those at-risk or involved in substance abuse. The Knox Substance Abuse Action Team ("**KSAAT**") was formed in 2011 and focuses on increasing community awareness about substance abuse and related problems. Several individuals and agencies are involved in KSAAT, including businesses, government and educational institutions, and nonprofits. The Knox Substance Abuse Action Team lists several local resources for those struggling with substance abuse, including the Knox County Health Department, Mental Health and Recovery for Licking and Knox Counties, Operation Prevention, TouchPointe, and Salvation Army, but also resources at the state and national level, too (Knox Substance Abuse Action Team, 2018).

In the past, KSAAT sponsored several community educational forums for healthcare workers, professionals, and parents and coordinated a county-wide media campaign aimed at educating the public on risk factors related to opioid overdoses. Additionally, in 2015, the organization received a grant from the federal Drug Free Communities Support Program that aimed to reduce youth substance abuse. The team also offers information resources about programs at the local, state, and national level for those dealing with addiction (Knox Substance Abuse Action Team, 2018).

15 ***Table 5:2 - Knox County Number of Unintential Drug Overdose Deaths and Age Adjusted Annual Death Rates Per 100,000 Population, 2006 - 2016***

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
# of deaths	5	8	10	12	7	10	11	10	10	13 (15)
Gender								F - 4 M -6	F - 5 M - 5	F – 5 M - 8
Age Range								37 - 72	28 - 65	21 - 62

(Knox County Coroner, 2017 Knox County Health Dept. 2018)

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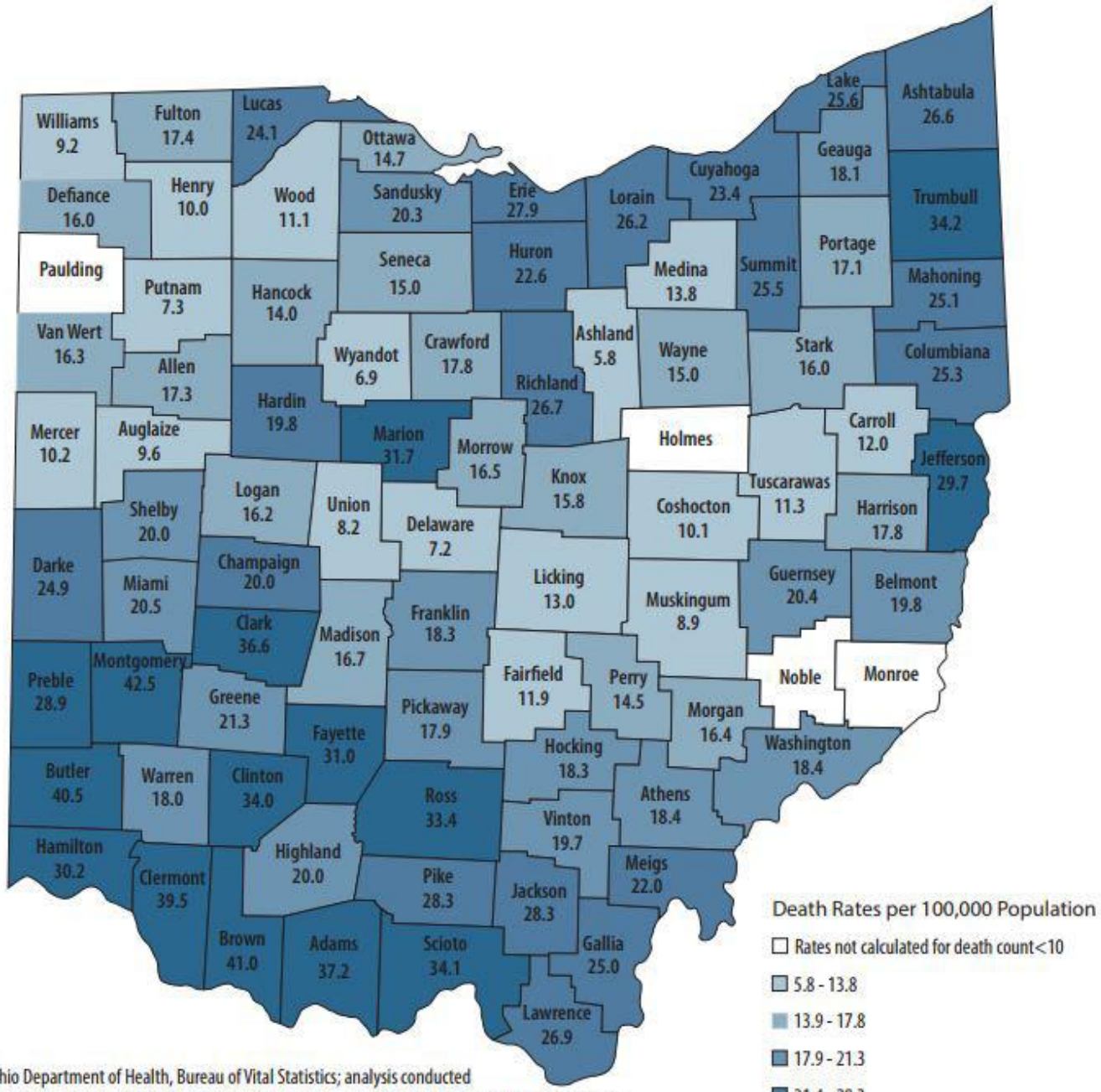
21 ***Figure 5:2 - Average Age-Adjusted Unintentional Drug Overdose Death Rate Per 100,000 Population, By County, 2011 – 2016[1, 2]***



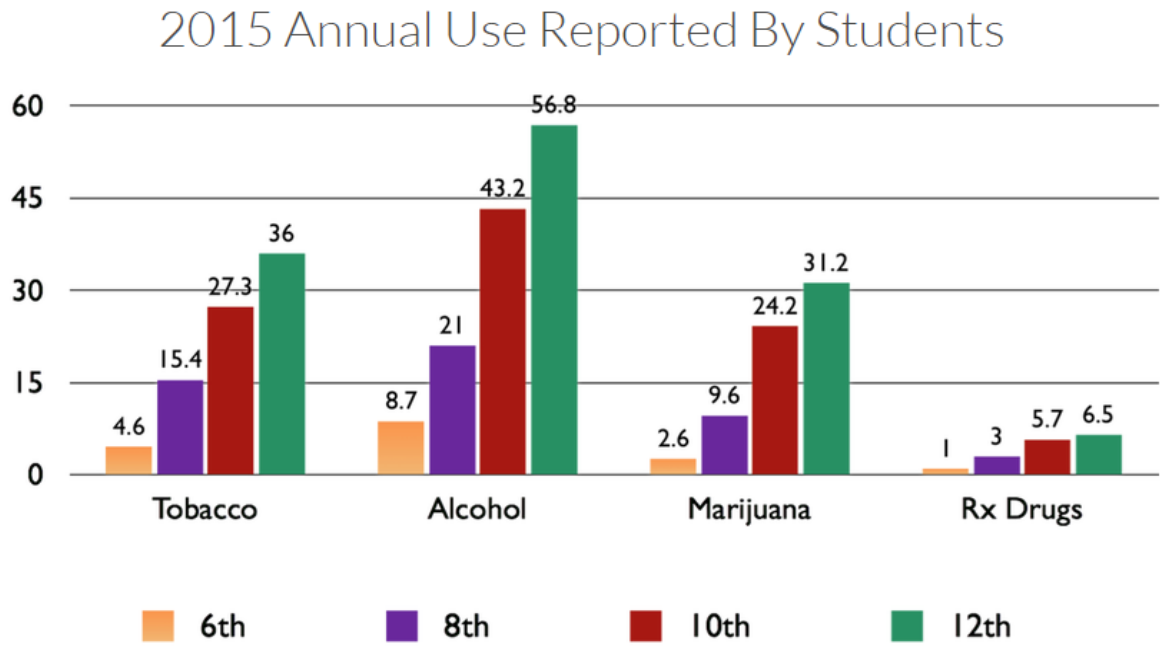
[1] Sources: Ohio Department of Health, Bureau of Vital Statistics; analysis conducted by ODH Violence and Injury Prevention Program; U.S. Census Bureau (Vintage 2016 population estimates).

[2] Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44).

Rate suppressed if < 10 total deaths for 2011-2016.

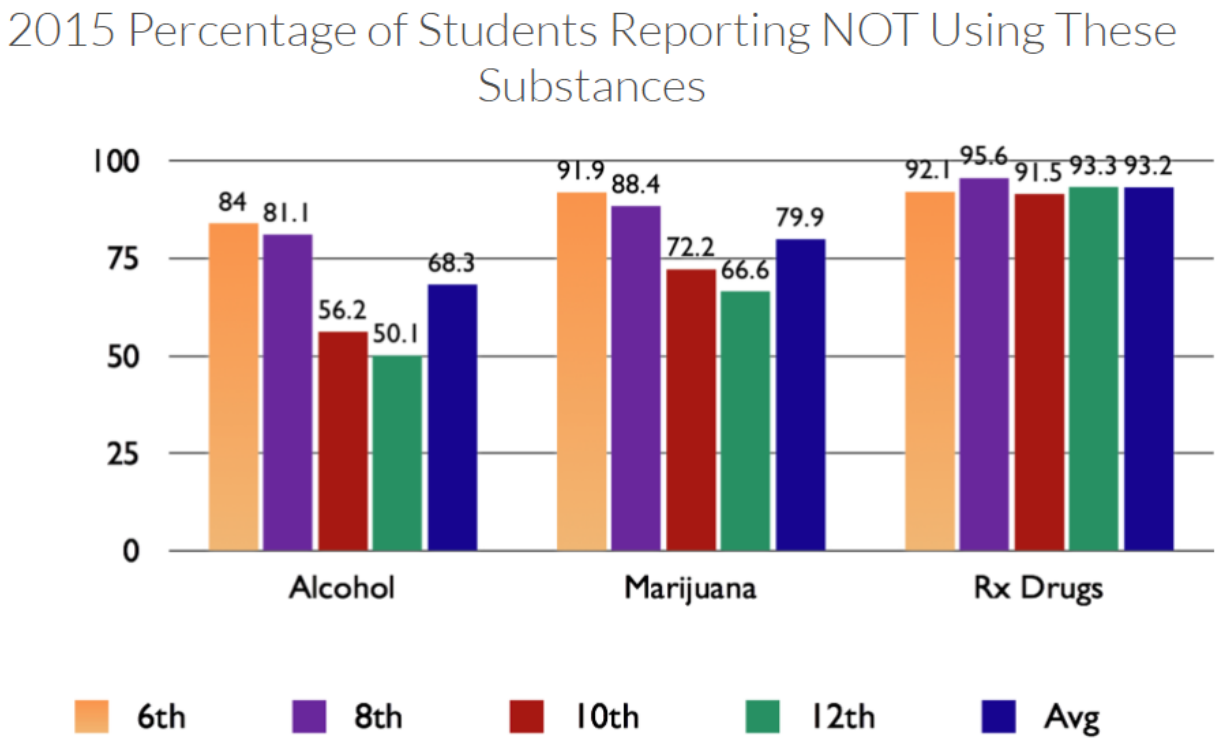
(Ohio Department of Health, 2016)

22 ***Figure 5:3 - 2015 Annual Use Reported by Students***



(Knox Substance Abuse Action Team, 2018)

23 ***Figure 5:4 - 2015 Percentage of Students Reporting NOT Using These Substances***



(Knox Substance Abuse Action Team, 2018)

Environmental Issues

Parks and Recreation

Open and natural spaces provide areas for exercise and outdoor reprieve, which is important to support mental and physical health of our residents. In Knox County, these spaces are especially important since many residents choose to live and work in the county for the easy access to rural and natural features in the area.

The Knox County Park District (link: www.knoxcountyparks.org) was created in 1995 and is tasked with acquiring, conserving, and managing Knox County's natural resources to preserve our rural character. Currently, the Park District manages more than 955 acres across eight (8) park locations, ten (10) river access points, 35 miles of bike trails, and 14 parking areas (Knox County Park District). Current park locations managed by the Park District are listed in Table 5:2.

16 ***Table 5:3 - Knox County Park District - Park Locations***

Park	Address
Hellbender Preserve	23316 Coshocton Road, Howard 43028
Honey Run Highlands	10865 Hazel Dell Road, Howard 43028 10816 Millersburg Road, Howard 43028
Honey Run Waterfall	10855 Hazel Dell Road, Howard 43028
Indianfield Bluffs Park	10855 Sapp Road, Howard 43028
Thayer Ridge Park	7077 Thayer Road, Mount Vernon 43050
Wolf Run Regional Park & Bark Park	17621 Yauger Road, Mount Vernon 43050
Bat Nest Park	30500 Walhonding Road, Danville 43014

(Knox County Park District)

In addition to the county-wide park system, city-maintained parks also provide recreational opportunities for residents. These range from smaller pocket parks along downtown streets, to larger, regional draws, such as the new Ariel-Foundation Park in Mount Vernon.

In 2017, Ohio residents were asked to share their experiences and opinions regarding their favorite outdoor recreation activities on public lands, such as local and state parks, nature preserves, wildlife and forestry areas and federal lands. They were also asked specifically about their level of participation and any new or expanded facilities they would like to see in Ohio.

Ohio University's (OU) Voinovich School of Leadership and Public Affairs final report for the 2018 Statewide Comprehensive Outdoor Recreation Plan (SCORP) public survey is now available at: www.parks.ohiodnr.gov/research. OU analyzed 5059 completed surveys from respondents from all of Ohio's 88 counties. The report provides some interesting insight into the desires of Ohio's

recreationalists, such as the facilities that respondents want more of and the top five outdoor recreation pursuits.

Survey results include:

- Eighty-two percent of survey respondents stated that recreational facilities are very important to the enjoyment of outdoor activities in Ohio.
- The main reason for engaging in outdoor recreation on public lands is for fun and entertainment; sharing time with family and friends and experiencing nature; quiet time and serenity.
- Ohioans participating in wildlife activities favored wildlife viewing; nature photography and bird watching; with 47 percent stating they did so to experience nature, quiet time and serenity.
- Camping responses indicated tent and pop-up campers were more popular than other types of camping vehicles with more than 46 percent responding they enjoyed camping to share time with family and friends.
- All forms of trail activities received high responses with 51 percent of respondents stating they participated for health wellness and fitness. The top trail-related activities are walking and hiking on various trail surfaces (natural, stone and paved).
- Canoeing and Kayaking are the most frequent boating activities.

Ohioans prioritized which outdoor recreation facilities they would like to have more of in Ohio. The top-ranked facilities focused on trails (natural surface, paved and water); wildlife viewing and birding areas; and undeveloped campgrounds.

County Trails

Knox County contains an abundance of trails with diverse uses including walking, bicycling, roller blading, and horse-back riding, among others. The county has nearly 35 miles of trails as part of the *Ohio to Erie Trail*, a 330-mile mostly off-road trail from the Ohio River to Lake Erie.

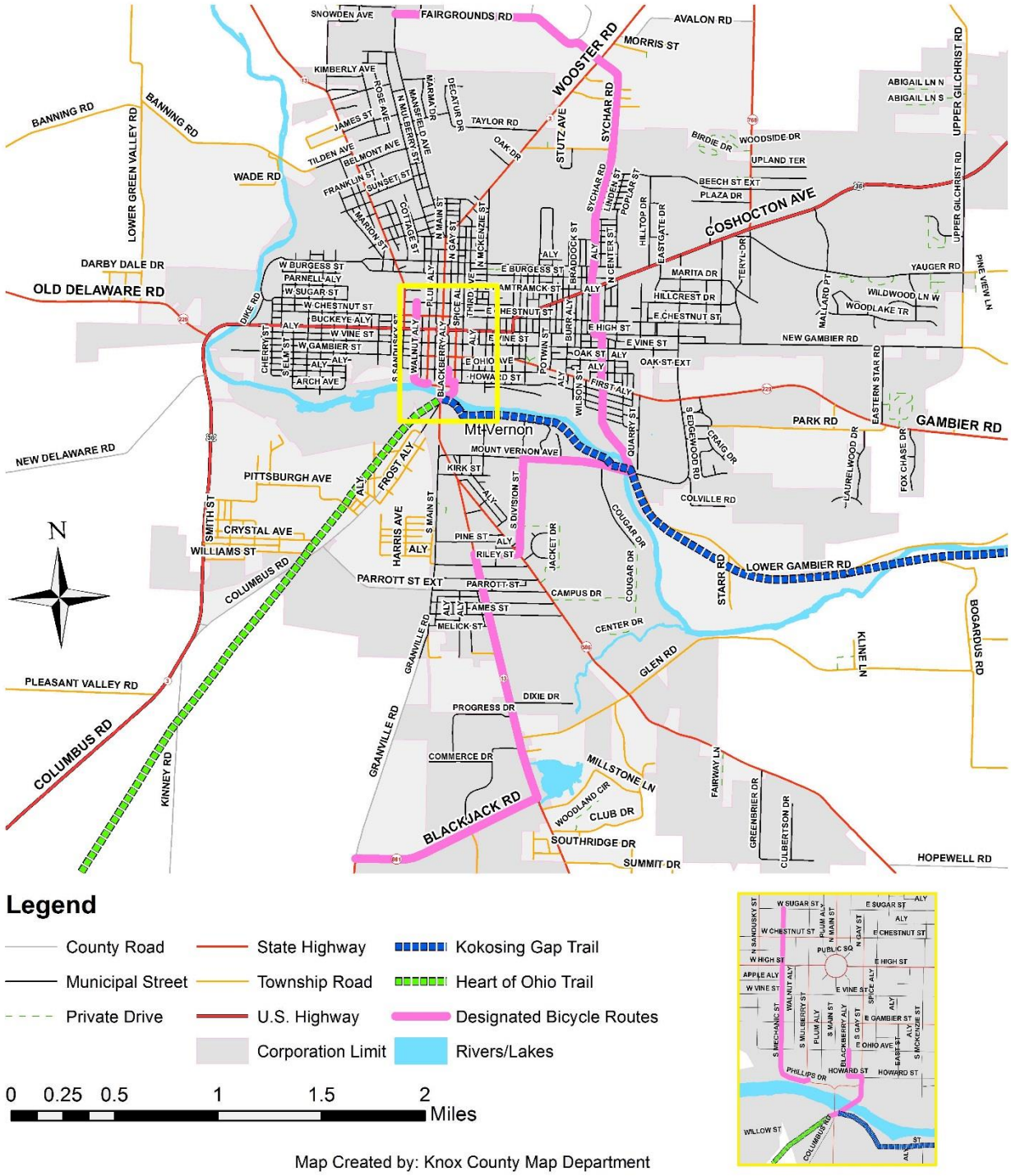
- **Koskosing Gap Trail**: a 14-mile, paved trail linking Mount Vernon, Gambier, and Danville. The trail is managed by a nonprofit organization, Kokosing Gap Trail, with a volunteer board appointed by the Knox County Commissioners in 1987 (Kokosing Gap Trail, 2018). (See link: http://www.kokosinggaptrail.org/KGTMap.pdf)
- **Heart of Ohio Trail**: a nearly 20-mile trail from Mount Vernon to Centerburg. This trail is managed by a nonprofit organization, the Heart of Ohio Trail group. During the next few years, the Knox County Park District plans to clear the last section of this trail from Huffman Road to the Knox-Licking County line (Totman, 2018). (See link: http://heartofohiotrail.org/2014a.pdf)
- **Mohican Valley Trail**: a 4.5-mile trail connecting Danville and Brinkhaven. To the west, this trail is connected to the Kokosing Gap Trail, and to the east, this trail will connect to the Holmes County Trail, the latter of which will be under construction in 2018. The Knox County Park District has a planned project to resurface the trail from the Bridge of Dreams to the Holmes County line to improve connection between the counties (Totman, 2018).

This network of trails is one of Knox County's most important recreational assets. Recall Chapter 3's discussion of the tourism impact from outdoor recreation and the OSU Report's emphasizing

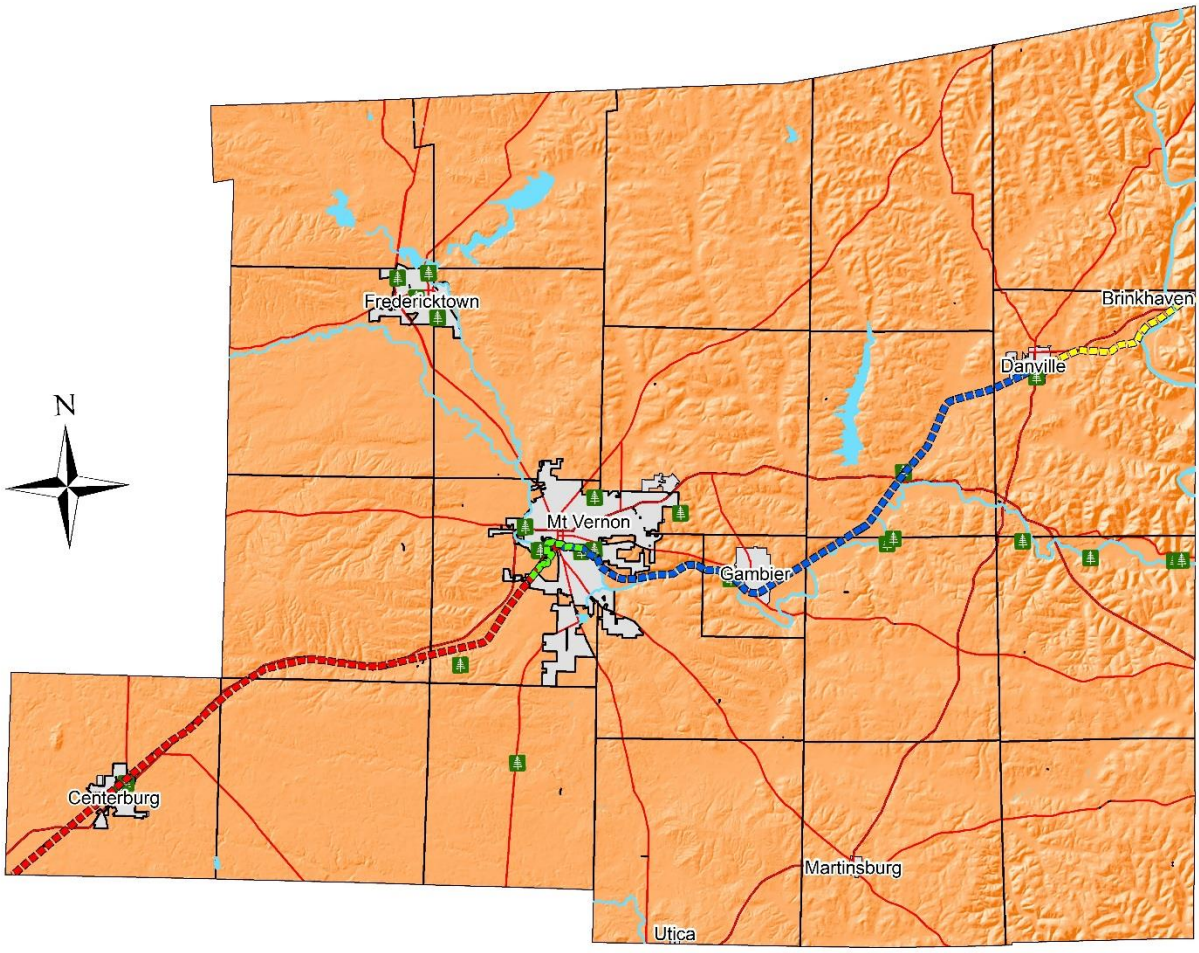
the county's trails as a way to retain younger residents. When planned appropriately, trails also offer significant economic benefits such as increased property values. Researchers at the University of Cincinnati calculated in 2011 that homeowners generally were willing to pay $9,000 more to purchase land located 1,000 feet closer to a stretch of the Little Miami Scenic Trail. (Fuller, 2011). Trails can help support businesses and increase tax revenues in communities across Knox County.

The following maps provide an illustration of dedicated and shared-road bike routes within Mount Vernon (Figure5:5), Knox County (Figure 5:6), and their connectivity to surrounding areas (Figure 5:7). As shown, Knox County has strong east-west connections with designated bike paths, and north-south connections to the Mansfield area via roadways. As planned trail connections are completed in the coming years, there will be opportunities to bolster this system in order to improve connections between communities.

24 ***Figure 5:5 - Mount Vernon Designated Bicycle Routes***



25 ***Figure 5:6 - Existing Knox County Bikeways***



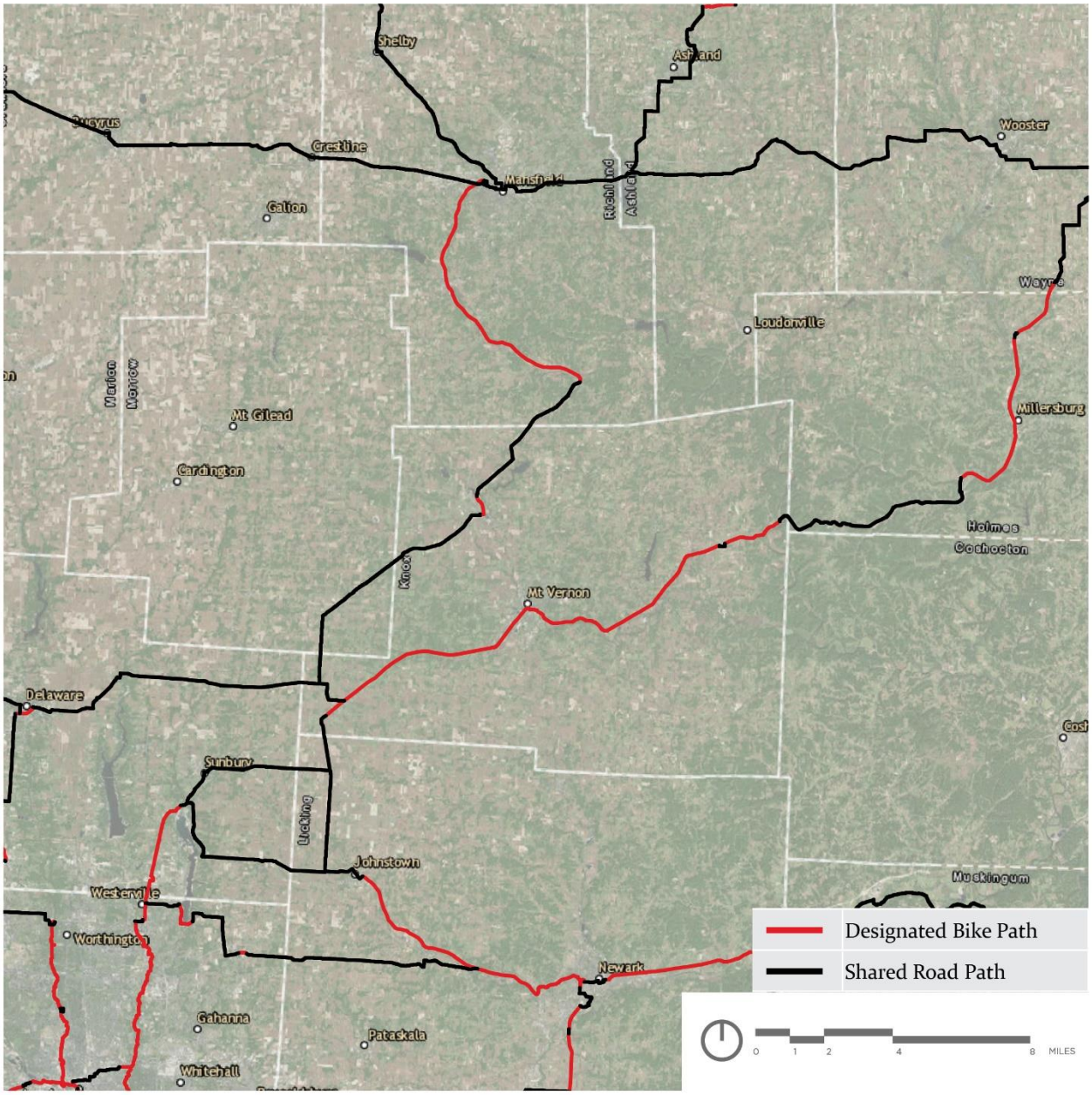
Legend

Kokosing Gap Trail
Heart of Ohio Trail
Mohican Valley Trail
HOOT/Gap Trail Connector
Rivers/Lakes
Township Boundary
U.S. Highways
State Highways
Parks

0 2 4 8 12 16 Miles

Map Created by: Knox County Map Department

26 ***Figure 5:7 - Knox County's Connections to Regional Bikeways***



(Ohio Department of Transportation)

5.3 GOALS AND STRATEGIES

As noted, this Chapter 5 seeks to address two quality of life categories related to *environmental* and *community* issues.

5.3.1 GOAL: Diversify the County's Housing Stock

Affordability, changes in household size, an aging population, and a growing preference for walkability, will all continue to reshape Knox County's residential development patterns moving forward. An attractive, high-quality, and safe housing stock is important for retaining and attracting residents. During Knox County's next Comprehensive Plan Update, a thorough housing analysis should be performed to help policymakers ensure the housing needs of Knox County residents are being met.

5.3.1 STRATEGY: Study the possible implementation of Residential Building Codes for Knox County

Safety is a mission-critical element in all types of commercial, industrial and residential development. Modern building codes are one mechanism to help ensure that baseline safety standards are satisfied across building types. In Knox County, the subject of county-wide residential building codes elicits a wide-range of (very strong) opinions from various stakeholders, including elected officials, residents, and contractors. A thorough examination of best practices in building code enforcement could help the community make informed decisions as to whether or not to implement county-wide residential building codes as development pressures increase over time.

TARGET OUTCOME

A professionally prepared, publicly informed **report to the RPC** and county leaders should be completed within three (3) years examining the pros and cons of building codes and how such codes would be implemented in Knox County. This report should include an overview of best practice models for improving safety, how other rural communities adopt, fund and enforce such codes, and a suggested implementation strategy.

5.3.2 GOAL: Improve Health Outcomes Related to Opioid Use and Abuse

With opioid addiction a major concern throughout Ohio, there are several organizations working locally to reduce opioid addiction and overdoses. As with efforts already underway in the area of waste management, the county should build upon existing substance abuse efforts, so as to reduce redundancies and improve efficiencies.

5.3.2 STRATEGY: Support Ongoing KSAAT Efforts

The Knox Substance Abuse Action Team is already active in efforts to reduce opioid abuse and addiction in Knox County; the community should continue to support these efforts. Much of what the organization does is disseminate information about drug abuse and available resources, as well as grow community awareness through educational events and social media. Additionally, KSAAT has developed focused initiatives and already has a successful educational and social media outreach campaign.

Related to, and in furtherance of, KSAAT's efforts, county stakeholders should make note that certain social and economic factors are important indicators of risk related to opioid addiction: unemployment, poverty, and low educational attainment. These very same issues were addressed in the county's economic development plan, set forth in Chapters 3 and 4. Professionals devoted towards economic and community development should become more involved in the KSAAT initiative to better understand the relationship of their work to opioid abuse prevention and addiction solutions.

TARGET OUTCOMES

Building off KSAAT's current initiatives, the following are additional desired outcomes related to substance abuse in Knox County:

- **Assess substance abuse issues and related needs** based on current data and updated as new data becomes available. Assessment data will be used to continue to inform implementation strategies for effective prevention programs, policies, and practices.
- **Build coalition capacity to impact local issues** with widespread engagement and participation from the public.
- **Implement effective prevention programs, policies, and practices** focusing on both adult and youth populations, with continual evaluation for effectiveness.
- **Understand social and economic factors that impact risk of addiction,** such as educational attainment, poverty, and unemployment. By understanding the factors of opioid abuse, the county can be more proactive in economic and community development initiatives to better eliminate or reduce the drivers for addiction.

5.3.3 GOAL: County Parks and Trails to Meet the Needs of Knox County Residents and Visitors

Parks and trails are critical assets to Knox County. They provide recreational opportunities for local residents, connect Knox County to the regional trail network, and have the potential to provide an economic boost to many communities.

Across Knox County, stakeholders and communities have different ideas and priorities for capital improvements, specifically as they relate to parks, trails, and other public spaces having potential to elevate the county's overall quality of life. A dialogue among communities and county leaders to develop a list of parks and trails priorities for capital investment will allow stakeholders to identify projects that benefit the county as a whole. For example, a trail addition to connect with the larger Ohio-to-Erie Trail network in southwest Knox County may result in additional trail users and visitors to places like Mount Vernon, Gambier and Danville. There may be certain "catalyst" projects that would benefit all communities across the county, such as shoring up trail linkages or improving connections between trails and downtowns.

5.3.3 STRATEGY: Prioritize Capital Improvement Projects for Parks and Trails

Parks and trails-based capital improvements projects have the potential to benefit residents across Knox County. Creating a collaborative effort will help identify projects that can have the most significant and cost-effective impact for the county. Leveraging the community's deep penchant for collaboration will help to ensure facilities are of a high quality and equitably distributed across the county.

TARGET OUTCOME

To increase collaboration and ensure parks and trails-based capital improvements have the best possible outcomes for the county, the following targeted outcomes should be pursued persistently:

- Through a **robust stakeholder engagement process**, identify parks and trails-based projects and capital improvement priorities across the County.
- **Develop and hone plans**, to include full funding strategies and implementation timelines, to begin to pick-off identified projects for completion.

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Chapter 6: Preserve Environmental Character

6.1 Vision Statement

We envision a community that maintains the rural character and feel that Knox County presently enjoys, conserves our natural resource base and focuses development in an environmentally and economically sustainable manner, and does so while realizing the importance of key principles of private property rights and local grass-roots governance, such as the township form of government.

6.2 Existing Conditions

Preserving Environmental Character is a rather broad terminology that may be interpreted to encompass a variety of *natural environment* characteristics in a specific area, as well as conditions that serve as an area's perceived *living environment*. For example, the general surroundings in a community can impact residents' feel for a specific geographic area, as well as create a positive or negative image for the community in which they live. Issues such as the proportion of wooded and agricultural areas, the availability of public open space, and attractive and safe neighborhood designs are key matters involving living environments.

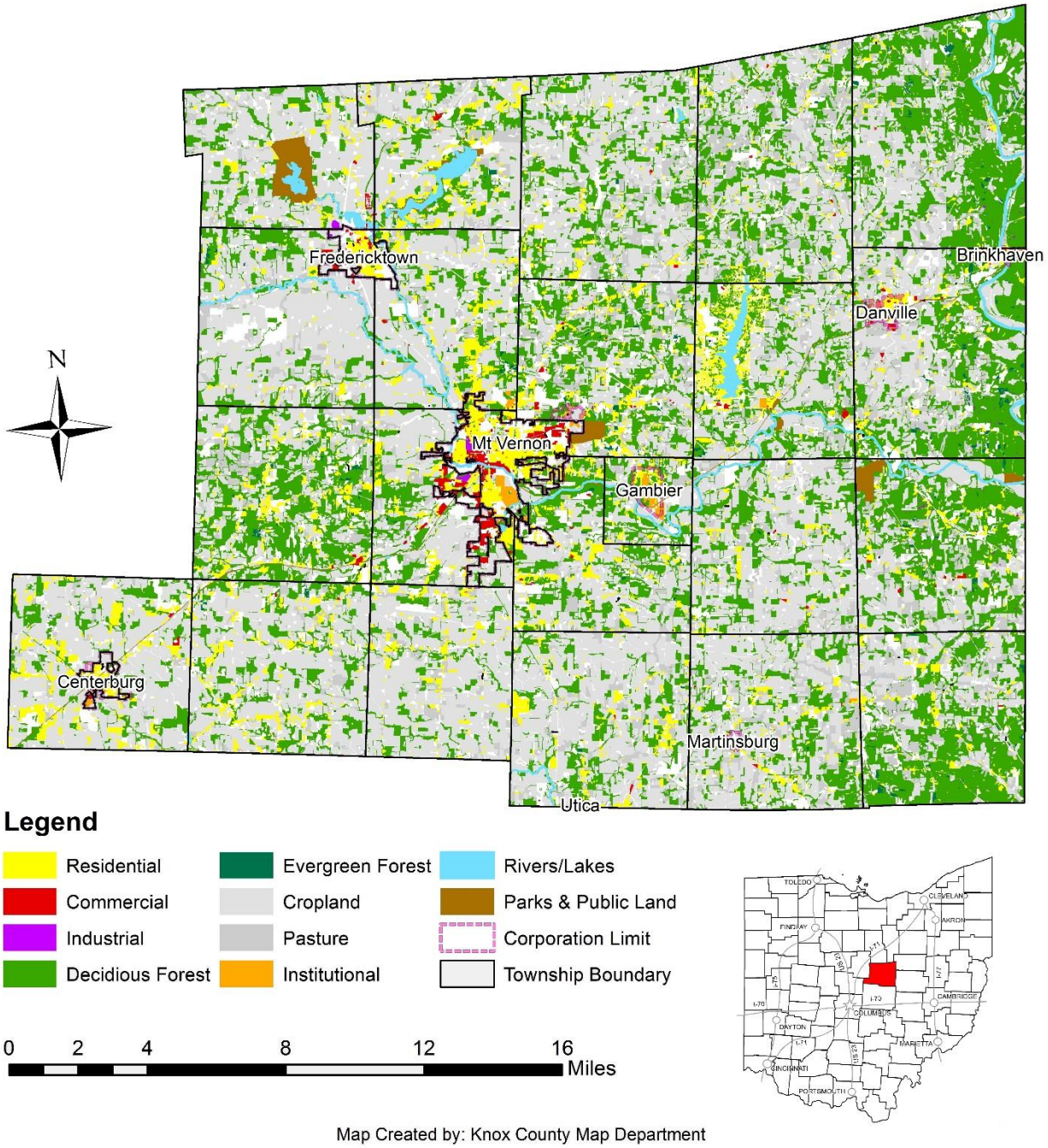
Since there are numerous local, state, and federal agencies and regulations dealing with *natural environment* issues (e.g. protecting resources like air and water quality), the context of this Chapter 6 concentrates on issues and initiatives impacting Knox County's perceived *living environment*. In the following discussion, we acknowledge that living environment-focused initiatives may also impact the quality and conservation of the natural environment.

Ultimately, planning to mitigate the impacts of inevitable development in Knox County is a balancing act between the rights of private property owners to market and develop their land as they so choose, and the impact (real or imagined) on the community as a whole, both financially and in terms of preserving the local environmental character.

Community Setting & Natural Features

A community's natural features and settings play a major role in creating residents' personal impressions of the area. Wide open spaces, scenic vistas, quaint farmsteads, and publicly accessible spaces all lend to a more rural feel in a community and positively impact residents' perceptions (Knox County Regional Planning Commission, 2012).

27 ***Figure 6:1 - Existing Land Use***



(Knox County Tax Map & GIS Department, 2018)[11]

[11] Compare this Existing Land Use map with the version produced by the Mid-Ohio Regional Planning Commission that appears in Figure 3:1; both are equally suitable for reference within this Plan Update.

Natural Environment

Knox County is blessed with a beautiful rural landscape including gently rolling hills, river valleys, lakes, cultivated areas, pastures and woodlots. Most of the county is farmland, however the variation in topography is largely the product of glaciation. The major river valleys include those of the Kokosing River, Mohican River, and North Fork of the Licking River. Most of the county's land use is agricultural farmland.

General Topography

The highest elevation in Knox County is on the western side in Liberty Township and the lowest is on the eastern side, where the Kokosing River leaves the county in northeastern Butler Township. The difference in elevation is approximately 600 feet. The steepest slopes in Knox County are found toward the northeastern parts of the county near the Mohican River. Slopes greater than 15 percent generally limit future land development opportunities.

Geology

Knox County is on the outer edge of an area once covered by continental glaciers. The most recent of the glaciations, the Wisconsin, covered the western part of the County about 15,000 to 16,000 years ago, leaving thick deposits. Most of the relief in this part of Knox County was caused by uneven glacial deposition and subsequent erosion of the glacial mantle.

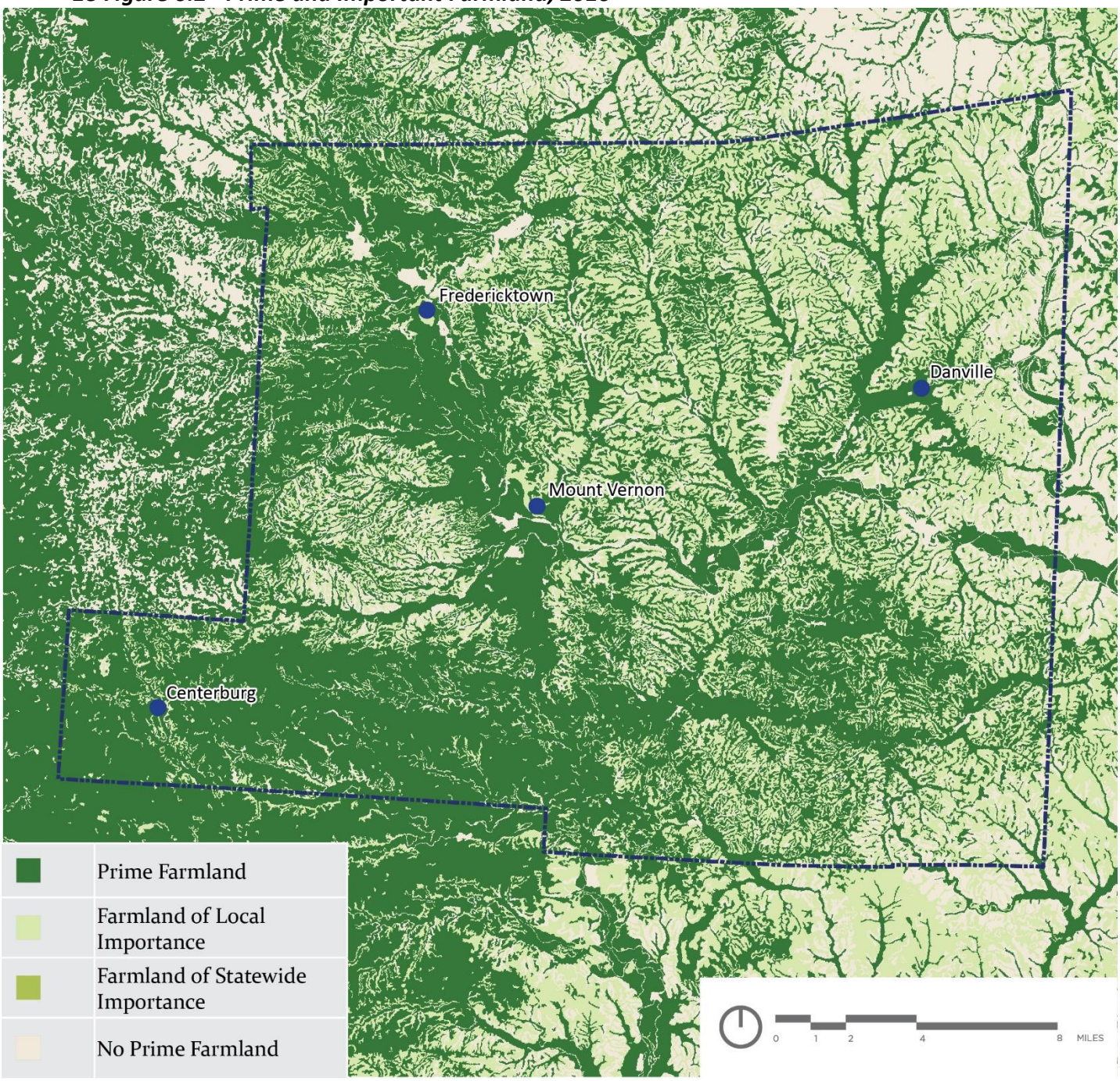
Much of the eastern part of the county was covered by the Illinoisan glaciation more than 100,000 years ago. Although it was not strong enough to level the existing bedrock, the ice flowed between the hills leaving thick glacial deposits in some areas and almost none in others. The northeastern and southeastern corners of the county were not glaciated.

Several valleys in Knox County carried large volumes of glacial melt water, which laid extensive deposits of gravel and sand along ancient riverbeds.

Soil Conditions and Prime Farmland

A detailed survey describing soils throughout Knox County was completed in 1986 by the U.S. Department of Agriculture ("**USDA**"). Given agriculture is the predominant land use, the county's soils are of particular importance for farming. The USDA defines prime farmland as the land that is best suited to grow food, feed, forage, fiber, and oilseed crops. Such land may be cultivated, pasture, or woodland, and can produce the highest yields with minimal inputs of energy and economic resources and with the least damage to the environment. According to the most recent soil survey, more than half (57 percent) of the total acreage of the county is classified as **prime farmland**. While prime farmland is found throughout the county, the largest concentrations are found to the south where slopes are gentler, which can be seen in Figure 6:2.

28 ***Figure 6:2 - Prime and Important Farmland, 2016***



(National Resources Conservation Service, 2016)

Importantly, note the location of the county's identified prime farmland is in the same area dubbed a development "hot spot" in Chapter 3 – in the southwest, near Centerburg – and is most likely to face more immediate development pressures from the southwest (developments north from Westerville and Sunbury and east from Delaware).

Surface Waters

According to the soil survey of Knox County, most of the county is drained by the Kokosing River, North Fork of the Licking River, Mohican River, and Wakatomika Creek. These waterways collectively are part of the Muskingum River Watershed. A small part of western Knox County drains to Big Walnut Creek, which is part of the Scioto River Watershed. Surface water features can be seen in Figure 6:1.

Kokosing River

The dominant surface water feature in Knox County is the Kokosing River. In September 1997, the Kokosing was designated a Scenic River under the Ohio Wild, Scenic and Recreational Rivers Law, following extensive local effort and the completion of the Kokosing River Study. The Study included a detailed biophysical description of the river, which appears below in part:

> *The Kokosing River continues to exist as one of the highest quality rivers in Ohio. According to Ohio EPA, "Populations of blue breast darters dramatically increased in the middle and lower portions of the Kokosing River and have populated further up the middle portion of the river, indicating a significant improvement in water quality."*
>
> *Excellent habitat and water quality, combined with the presence of pollution-sensitive invertebrates and fish species, suggest that the Kokosing River is a high-quality, healthy system, one of Ohio's best water resources. To maintain its high-quality status, Ohio EPA recommends that storm water be managed, failing home septic systems be fixed, and livestock exclusionary fencing be installed.*
>
> *In terms of aquatic habitat, the Kokosing River has some of the highest quality aquatic assemblages in Ohio. Segments of the River have been designated either "exceptional warm water habitat" or "warm water habitat." "Exceptional warm water habitats" are waters that can support and maintain an unusual community of warm water organisms, comparable to the 75th percentile of sites statewide. "Warm water habitats" are waters that support and maintain a balanced, integrated and adaptive community of warm water organisms with a specific species composition, diversity and organization.*
>
> (Ohio Environmental Protection Agency, 2010)

In April 2004, the Ohio Department of Natural Resources' Division of Natural Areas and Preserves ("**DNAP**") released the *Kokosing Scenic River Watershed Plan.* The purpose of the plan was to "identify and reduce nonpoint sources of pollution and to identify and protect high-quality habitat areas." The plan was comprised of an analysis of environmental, recreational, socio-economical and historical factors related to the watershed. The plan set forth strategies for restoration, enhancement, and protection of the watershed's resources. The plan continues to help DNAP, nonprofits, and local governmental entities with making decisions about the river and its tributaries.

The complete study, *Kokosing State Scenic River 2004 Watershed Plan*, was published in 2005. Beyond regulatory considerations that exist by virtue of the Scenic River designation, the presence of high-quality water in the Kokosing River System influences effluent limitation from wastewater treatment plants. Anti-degradation regulations adopted by the Ohio EPA have an impact on the operation of local wastewater treatment plants (Ohio Department of Natural Resources, Division of Natural Areas and Preserves, 2004).

Mohican River

The Mohican River has also been designated a State Scenic River. According to the Ohio EPA, "Based on the biological data collected in 2007, the Exceptional Warm Water Habitat ("**EWH**") use designation was found to be appropriate for the Mohican River main stem" (Ohio Environmental Protection Agency, 2009). The main stem of the Mohican had previously been designated warm water habitat in 1978. This change in designation signifies that the Mohican River contains higher quality habitat components than previously thought. Excellent habitat and water quality, combined with the presence of pollution-sensitive invertebrates and fish species, indicate that the Mohican River is a very high-quality, healthy system, another one of Ohio's best water resources (Ohio Environmental Protection Agency, 2009). Following is a link to water quality studies for the Mohican and Kokosing Rivers: http://watercraft.ohiodnr.gov/sqm.

Lakes

There are three (3) major lakes in Knox County, all of which are manmade bodies within the Kokosing River watershed. Apple Valley Lake is a 511-acre private body of water located east of Mount Vernon. Knox Lake, constructed in 1954 northeast of Fredericktown, covers about 500 acres and includes boat launching facilities at three locations. Kokosing Reservoir, approximately 160 acres in size, is located northwest of Fredericktown and was constructed by the U.S. Army Corps of Engineers for flood control and recreation in 1971. It is part of approximately 1,300 acres, managed for fish and wildlife, but also contains camping and picnic grounds, latrines, wells, and a public launching ramp for boats.

Floodplains

Floodplains are low, flat areas that border watercourses and serve as areas for storage and flow of excess water beyond the normal capacity of a river or stream. The 100-year floodplain refers to the area next to waterways that is expected to flood at least once in a given 100-year period (i.e., the annual risk of flooding is one percent). Detailed floodplain maps are available for all Knox County through the National Flood Insurance Program. The largest floodplains are associated with the Kokosing and Mohican Rivers, but every watercourse has a floodplain, whether mapped or not.

Regulations addressing limitations on development in floodplains are adopted and enforced by Knox County (for all unincorporated areas) and by each municipality (in their respective jurisdictions). Adoption of floodplain regulations is a requirement for local governments to remain eligible for disaster relief from the federal government.

Subsurface Water

Knox County has extensive groundwater resources. A large aquifer along most of the Kokosing River provides an excellent source of water for Mount Vernon and Apple Valley. Other areas of the county have less groundwater; however, groundwater availability is generally sufficient for most needs within the community. Subsurface water resources are protected by the map, *Ground Water Pollution Potential of Knox County*, published in 1991 by the Ohio Department of Natural Resources' Division of Water.

Wetlands

Wetlands can be readily found throughout Knox County. Wetlands provide important ecosystem services including water regulation, flood control, and a habitat for plants and animals — many of which are rare or endangered. In Ohio, 90 percent of wetland resources have been destroyed or degraded since the late 1800s (Ohio Environmental Protection Agency, 2016). This, coupled with the benefits they provide, underscores the importance of protecting wetlands into the future. Information on wetland sites can be obtained through the Ohio EPA and the National Wetlands Inventory Maps. Wetlands are protected under federal law and their presence in an area can greatly restrict its potential for development. A prime example of this is the wetland near the industrial park on Blackjack Road south of Mount Vernon.

Green Infrastructure

Elements and functions of the natural environment also can be viewed in the context of the public benefits they provide. As an example, floodplains are sites for storing periodic floods. Developing these areas, or altering existing topography, may increase the severity of flooding. Similarly, undeveloped land near underground sources of drinking water protects groundwater from potential contamination caused by urban or commercial land uses.

Viewsheds

An amalgamation of the natural setting features is captured by the relatively new term **viewshed**, coined in relation to geographic information systems ("**GIS**"), and is defined as *the geographical area visible from a given location*. A viewshed includes all surrounding points in line-of-sight with that location and excludes points that are beyond the horizon or obstructed by terrain and other features (e.g., buildings, trees). It can also refer to the surrounding area from which an object can be seen. In terms of GIS modeling and land analysis, a viewshed is simply an analytical equation with distinct geographic boundaries. However, in real terms individuals will often correlate their impression of a community based on the visually observed viewshed and the primary land-uses one notes within that area.

Knox County is fortunate in that, from most points of reference, the viewshed of our community gives the impression it is decidedly rural. Once outside of the primary developed areas of the county, the combination of our topography and a relative abundance of natural forested areas effectively masks much of the rural development having occurred in the area over the years. This often gives the casual passerby the impression they are in the wide-open countryside, when in fact there may be many rural residences nearby.

6.3 Goals and Strategies

6.3.1 GOAL: Seek to Understand the Fiscal Impacts of Land Uses

Land use decisions have lasting impacts beyond the built environment. Land use is also tied to the fiscal health of a community. Although a diversity of land uses is needed to create a vibrant community, different land uses have different impacts on local budgets. Recall from other chapters of this Plan Update that residential land uses generally do not pay for themselves, but commercial, industrial and agricultural development does. New residential developments cost local governments more – in road maintenances expenses, and fire and EMS runs, among others – than the offsetting revenues received from residential development in the form of taxes. But commercial, industrial and agricultural development tends to bring in more tax revenue than they cost to provide services. Decision-makers should be made aware of how land uses impact the fiscal health of a community.

6.3.1 STRATEGY: Update the *Cost of Community Services* Study

Cost of Community Services Studies ("**COCS**") are case study analyses of the average fiscal impacts of existing land use on local budgets. They provide a snapshot in time of net revenues versus costs, based on the public service demands of current land uses. COCS are descriptive – not predictive – and are based on current audited financial statements for a specific community in a particular time period. Unlike other types of fiscal analyses, this methodology takes into account farm and other open lands on an equal basis with more intensely developed land uses. Findings provide the benefit of hindsight into the fiscal effects of existing patterns of land use and development (American Farmland Trust Knox Co. COCS 2003).

The 2003 COCS provided important insight into the fiscal realities of development in the county at that time. The findings in some instances challenged traditional views towards the perceived economic benefits of residential development, much of which was poorly conceived sprawling development in rural areas of Knox County. In particular, the 2003 study showed that for every $1.00 that residential land generated in tax revenue, it required $1.05 in public services. Conversely, commercial and industrial land required only 38 cents, and agricultural land just 29 cents for every $1.00 generated. The data clearly demonstrated that, in terms of local property tax revenue, commercial and agricultural land uses were paying the way for residential development.

The Knox County COCS results were in keeping with other American Farmland Trust studies conducted at the time. Our community even had a slight advantage over many other communities' rural developments costs, which were often in the $1.15 range. The information helped steer certain development initiatives regarding rural development in Knox County. But we are now 15 years beyond the fiscal period analyzed by the initial COCS study group. There have been numerous changes in local property, sales and incomes taxes in the interim period. And there are new policy makers in office. The original statistics, while useful in context, are now too dated to carry much relevance for current decision makers.

Given the COCS' solid process and methodology, we recommend the RPC work with trusted consultants to update the study with the most current fiscal year statistics.
(RPC responsible for implementing this strategy)

TARGET OUTCOME

Decision-makers require current and accurate statistical information to guide them in the process of establishing and revising local land use policies. Updating our local COCS study should provide relevant data for RPC members, township trustees, and County Commissioners to utilize in the policy development process. Once completed, the information should be shared directly (via in-person presentations) with policy makers at all levels of local government, as well as the general

public, to help stakeholders best appreciate the impact of land-use development choices on the operations of local governments.

6.3.2 GOAL: Educate Knox County Residents About Land Use and Development Issues

For many residents, part of the appeal of living in Knox County is the rural aesthetic and country lifestyle. However, many of us do not understand the realities of living close to agricultural operations. It is important to educate the general public, both current and future residents, of these realities so they can make informed decisions when buying a home or business in certain areas.

6.3.2 STRATEGY: Mitigate Conflicts and Educate Stakeholders as to Realities of Living in an Agricultural Community

The Ohio Revised Code defines **agriculture** to include,

> "*farming; ranching; aquaculture; algaculture meaning the farming of algae; apiculture… production of honey, beeswax, honeycomb, and other related products; horticulture; viticulture, winemaking, and related activities; animal husbandry, including… the care and raising of livestock, equine, and fur-bearing animals; poultry… dairy production; the production of field crops, tobacco, fruits, vegetables, nursery stock, ornamental shrubs, ornamental trees, flowers, sod, or mushrooms; timber… [and] the processing, drying, storage, and marketing of agricultural products*."
>
> (ORC Section 1.61)

Here, farming, ranching, and aquaculture would not seem to most people to be land uses that conflict with rural residential development. After all, it is the rural agricultural *feel* that many residents seem to desire, thereby making Knox County attractive for development outside metropolitan areas. Individuals moving to rural areas often assume that the "care and raising of livestock" is just part of the rural scene and something that they will look forward to seeing outside their living room window. Indeed, many people relish the romantic *idea* of the typical rural farmstead: cattle peacefully grazing on pasture, quaint farmsteads with little white houses and big red barns, maybe even a chicken coop and a small hog lot with a few pigs lounging lazily in a wallow. They envision such agriculture – just as it existed in 1950!

Unfortunately, most new rural residents are neither prepared for, nor excited about, the prospect of living next to modern agricultural facilities and the scale at which they operate. The reality in early 2018 is that the hog lot has been replaced by large 2,400-head swine confinement buildings. Likewise, the chicken coop has given way to multi-unit poultry confinement facilities with groupings of three (3) to six (6) barns, each barn holding nearly 40,000 birds. Continuous traffic, noise, dust, and odor from housing facilities and manure storage or disposal systems are the tangible effects of the evolution of modern agriculture. Further complicating the issue is the fact that what today may be a pasture field with cows grazing may "tomorrow" be three (3) separate 39,000 square foot poultry confinement buildings housing 117,000 chickens. Note that in such instances – quaint or intensive – all are deemed agriculture under Ohio law.

Many new rural residents confronted with these realities mistakenly believe that local township zoning regulations should provide some benefit or protection from the encroachment of agricultural side-effects onto their rural living. However, agricultural activities as defined in the Ohio Revised Code, located outside of municipalities and platted subdivisions, are clearly **exempted from oversight by township zoning**:

> "*sections 519.02 to 519.25 of the Revised Code confer no power on any township zoning commission, board of township trustees, or board of zoning appeals to prohibit the use of any land for agricultural purposes or the construction or use of buildings or structures incident to the use for agricultural purposes… and no zoning certificate shall be required for any such building or structure*."
>
> (ORC Section 519.21 (A))

The RPC, in cooperation with local agencies, townships, farm advocacy, and agricultural industry representatives should develop an educational program that emphasizes the conditions that can reasonably be expected from living in rural areas where modern agricultural activities exist. One component of such an educational program should incorporate free multimedia viewing with downloading capabilities to ensure widespread online distribution.
(RPC, Township officials and Local Farm Bureau to collaborate to implement this strategy)

TARGET OUTCOME

Although it is true not all neighboring land use conflicts can be avoided, providing advanced educational programming and expectation-setting as to the realities of living near modern agricultural operations may help reduce the potential for discord among rural residents and their agricultural neighbors. We also believe that such education and awareness can positively guide where and how rural residential development patterns occur.

6.3.3 GOAL: Conduct a Comprehensive Review and Update of County Land Use Regulations

In helping preserve the rural character of Knox County, there is an array of tools available to localities. A thorough review of these practices, with input from local businesses and residents, should empower leaders to put necessary regulations in place to protect the rural character of Knox County going forward.

6.3.3A STRATEGY: Incorporate Viewshed Analyses into Local Subdivision Rules

To a certain degree, the conversion of rural land into residential development is inevitable. Development is coming, whether we want it or not. Recognizing this fact is the first step in developing initiatives to positively guide where, when and how development occurs. We believe most citizens of Knox County value the rural feel and atmosphere prevalent throughout most parts of the county.

When developments are proposed in the future, this Plan Update stands for the notion that residential subdivisions should be sited so as to create the least visible intrusion in local viewsheds. Development standards for subdivision regulations should be developed requiring land developers to conduct GIS viewshed analyses of the proposed projects. Economic development financial incentives should be employed to induce the design and placement of subdivisions to have the least impact on the county's landscape, especially as viewed from county roadways and state and federal highway routes. Such tools may include the use of New Community Authorities, authorized under Ohio Revised Code Chapter 349 and discussed in Chapter 3 of this Plan Update, to share in the infrastructure and development costs of appropriately sited developments.
(RPC, Knox County GIS and Township officials to implement this strategy)

TARGET OUTCOME

Adopting advanced planning strategies such as viewshed analysis, coupled with economic development incentive tools, should enable desirable residential development to occur, while at the same time minimizing such developments' impact on the county's rural character.

6.3.3B STRATEGY: Update Subdivision Design Standards and Employ Incentives Promoting Conservation of Open Space and Agricultural Land

A majority of rural residential development in Knox County is simple frontage development along existing roadways. The process of constructing dedicated subdivisions with streets, sidewalks, and other amenities is often abandoned in favor of the simpler process of carving out statutorily defined minimum sized lots along existing county thoroughfares.

Cluster development is a land development design strategy providing a means of preserving open space *and* directing development away from important natural and agricultural resources. Implemented via local zoning ordinances, subdivision, and land development regulations, cluster development regulations provide applicants with appropriate design standards. The idea is that individual lot size requirements are reduced in exchange for dedicated open space areas remaining agricultural, forest, or conservation land uses. The goal of these mechanisms is to generally allow for comparable residential density as from traditional frontage or common subdivision designs, but with concurrent preservation of agricultural and other important open spaces. Since the remaining dedicated open space is part of the actual platted subdivision, the local zoning authority can limit the possible types of agricultural activities to occur in the area and mitigate some of the neighbor conflicts discussed in the preceding section.

Benefits to employing cluster development strategies include:

- Reduce infrastructure costs;
- Protect income opportunities for existing landowners who are contemplating sales;
- Reduce environmental impacts from storm water discharges due to the overall smaller footprint of the development area;
- Reduce rural “waste areas” often created when minimum-size lot frontage development occurs;
- Incorporate subdivision design walkability concepts like sidewalks and trails;
- Create public spaces, such as play and picnic areas, to encourage interaction among residents, enhance the sense of community, and create sustainable neighborhoods;
- Reduce rural crime due to the increased density and proximity to neighboring residences; and
- Disguise rural residential development areas by using the residual conserved open space to hide intensely developed areas.

Another initiative worth pursuing, in the same vein as updating subdivision design standards, is that of an **expedited major subdivision** process for parcels on which unique situations exist and the major subdivision platting process may be excessively punitive.

There should be an effort to develop and incorporate into Knox County's Subdivision Regulations certain **mitigation strategies** for important local resources and environmental assets (i.e., wetlands and prime farmland). This would address impacts to important resources by conserving or creating *offset credits* from development into other parts of the county. This would combine voluntary, regulatory, and fee-based approaches to accomplish desired conservation efforts.

(RPC Land Use Committee and Knox County Commissioners to implement this strategy)

TARGET OUTCOME

Acknowledging that development is coming, cluster development guidelines and incentives, when combined with strategies like those described to protect viewsheds, are critical to shaping future development outcomes in Knox County. Proceeding according to a unified development approach, with aligned strategies and financial incentive tools, will do much to protect the income opportunities of landholders and preserve and protect important agricultural lands and open spaces. By increasing opportunities to make use of available landscape features and economic development incentives to best locate otherwise intensely developed areas, we can mitigate conflict between rural residential and agricultural neighbors and conserve our scenic viewsheds.

6.3.3C STRATEGY: Review Township Zoning Codes and Encourage Rural Development and Design Options

Guiding development in rural communities is largely ad hoc, with township-by-township zoning codes requiring close coordination among the RPC, township trustees and zoning commissions (that is if the township is zoned). Short of adopting county-wide zoning, the only effective means to implement comprehensive development and land-use strategies is to **review, or audit, local zoning codes**.

The RPC should develop a comprehensive strategy to audit township zoning codes on a regular basis. Such an effort should include a mechanism whereby the RPC and the townships cross-reference respective township zoning codes with specific provisions of the Knox County Comprehensive Plan and Knox County's Subdivision Regulations. In the instances in which local township zoning codes lack options allowing for innovative development design strategies, the townships would be encouraged to update their codes accordingly.

Additionally, the RPC should conduct a five (5) year audit of lot splits, by locational quadrant, to determine areas of the county that may be out of balance. Such a review would ascertain if applicable subdivision regulations and zoning resolutions are being honored across Knox County. The effort would result in creating lot split and land use maps to indicate where lot splits are

occurring and if they are in the most fertile farmland or natural resource areas, or if the lot splits are occurring in areas where growth is preferred (as may be shown in a *Plan for Future Land Use* map, described below).
(RPC Land Use Committee to initiate this strategy)

TARGET OUTCOME

As discussed in Chapter 1, township zoning in Ohio is *in accordance with comprehensive planning*. But even the best composed comprehensive plan fails if residents and local governments fail to abide by its provisions. This Plan Update must be relevant to township leaders as a useful guidance document for overall development in unincorporated areas of the county. The systematic review by the RPC of local zoning regulations at the township level, as recommended here, will highlight areas in which township zoning codes are not in unison with the County Comprehensive Plan. In such instances, the RPC should work with the respective township to determine if an update to the latter's zoning regulations may be in order.

6.3.3D STRATEGY: Develop Templates and Encourage Township-level Regulatory Farmland Preservation Efforts

This Plan Update restates and reiterates the notion – first set forth in the Focus 2100 effort that produced the 1998 Plan – that certain regulatory measures at the township level can help reduce sprawl and preserve farmland from premature and piecemeal development.

(RPC Land Use Committee and township officials to initiate this strategy)

TARGET OUTCOME

Steps that should be taken by townships include the following:

Limiting subdivision activity in agriculturally zoned areas at the township and county levels would result in rezoning being necessary to develop property beyond a few new lots. Limitations on lot splits could mirror the county's requirements (e.g., a maximum of four new splits less than five acres from an original tract) or even go beyond the county's threshold and limit subdivision activity to a maximum of four new splits less than 20 acres from an original tract, depending on local needs. Minimum lot sizes should not be reduced to below an acre in agriculturally zoned areas.

Develop a new Rural Residential Zoning District as an alternative classification balancing private property rights with the need to prevent sprawl and maintain farmland. This option would allow those who wish to develop rural property to do so, but with more stringent standards than previously required. The model township zoning code (and individual township codes written in accordance with the model version) would include the new Rural Residential Zoning District. Minimum lot sizes would be reduced in Rural Residential Zoning Districts to allow for clustering of residential density. With these new zoning districts in place, the owner of rural land zoned agricultural (and subject to the limitations on rural lot splits and larger lot size requirements) could pursue rezoning of the property according to this alternate approach.

Rezoning to conventional residential districts should not be allowed in areas shown as agricultural and outside any defined urban growth boundary that may be included in a *Planned Future Land Use* map.

6.3.3E STRATEGY: Update the Existing *Plan of Future Land Use* Map and Encourage Residential Development Accordingly

This Plan Update restates and reiterates the notion – first set forth in the Focus 2100 effort that produced the 1998 Plan – that an updated, GIS-based *Plan of Future Land Use* map be developed. Residential growth should be encouraged within logical areas depicted in such a mapping exercise, with residential development purposefully directed toward areas that currently have existing infrastructure. This notion is directly in-line with the recommendations set forth in Chapter 3 – namely that development occur in areas **already on the grid**. The areas would include the following:

Areas outward from Mount Vernon, as they already are largely zoned for higher-density residential development. Given the proximity of existing infrastructure, including water and waste water, such areas are best suited for growth. Note, however, that the eastern side of Mount Vernon south of U.S. Route 36, should it ever develop, requires careful site planning to realize the considerable potential to connect, with linked open space corridors, all the adjacent environmental features, such as Knox Woods State Nature Preserve, Wolf Run Regional Park, the Kenyon Center for Environmental Studies, the Kokosing Gap Trail, and the Kokosing River Corridor.

Apple Valley represents a key residential growth area for Knox County as it is already platted and served by infrastructure, with hundreds of vacant residential lots available for development.

Knox County's villages and hamlets represent future residential growth areas as, in many cases, they have sufficient infrastructure. Incorporated villages can adopt and enforce zoning and subdivision regulations just as municipalities, thereby guiding growth in an orderly manner. Further community development initiatives can be employed to enhance hamlets and small villages' relative readiness for development. Residential, neighborhood-scale commercial, retail and recreational development should be explored for these areas.

Commercial and industrial zones are equally important and should also be clearly defined in any *Plan of Future Land Use* mapping exercise. Ideally, commercial and industrial development zones would follow the recommendations of Chapter 3 and be located in areas served by sufficient infrastructure (i.e., are already on the grid) and adjacent to existing commercial and industrial development.
(RPC, ADF and GIS department to initiate this strategy)

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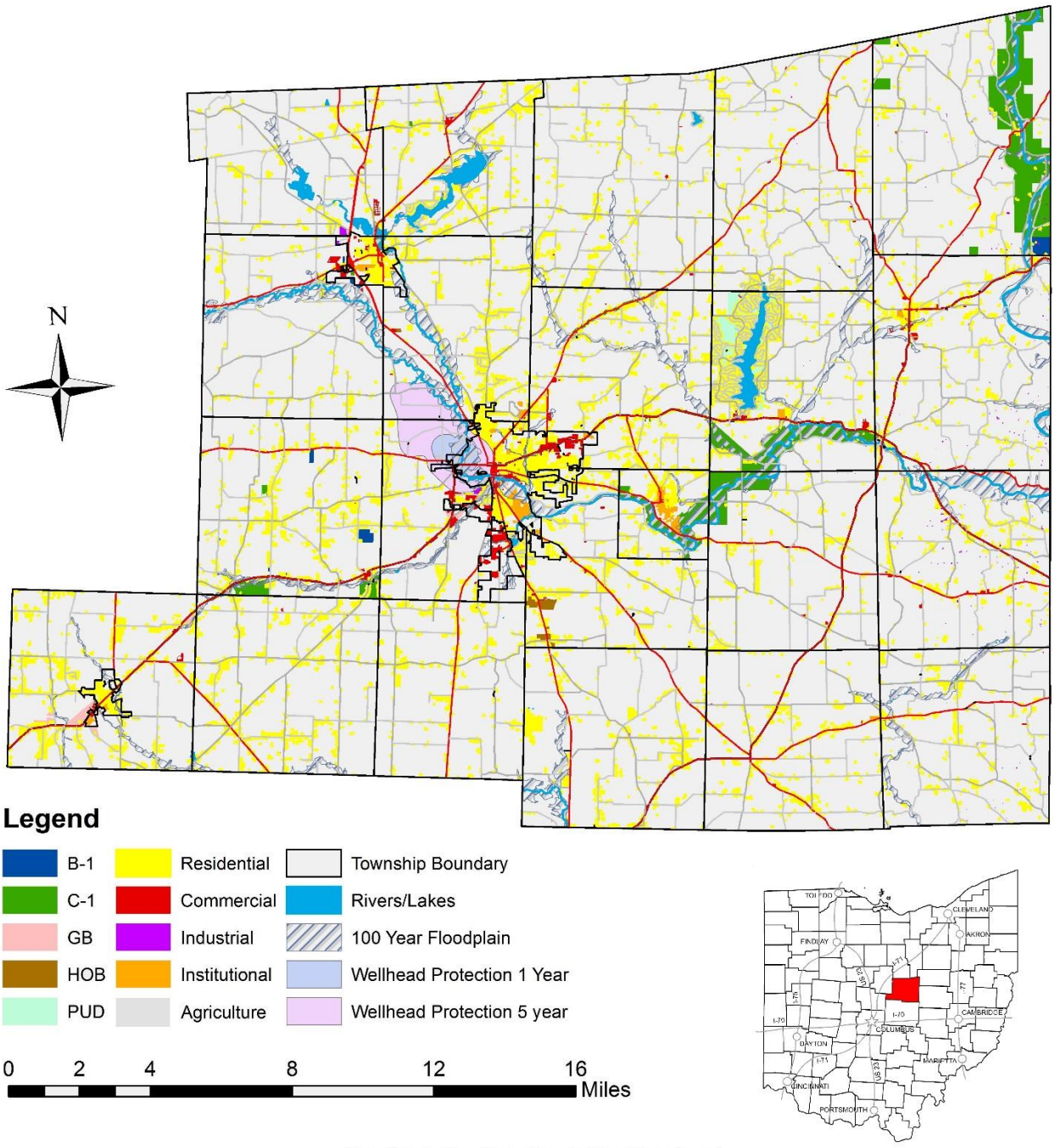
TARGET OUTCOME

Land use planning initiatives often lack meaning to local residents because they are not easily visualized. Updating the Existing *Plan of Future Land Use* map to illustrate where and how planning and development efforts may impact different parts of the county will provide citizens, policy makers and developers with better insight into the function and purpose of the Knox County Comprehensive Plan.

29 ***Figure 6:3 - Existing Plan of Future Land Use***



Map Created by: Knox County Map Department

6.3.3F STRATEGY: Develop a County Farmland Preservation Plan

Purchasing development rights in perpetuity, or even just for a finite period of time, is an effective but expensive tool in the kit to preserve farmland. The greater expense incurred by such means is more justifiable when more than one land use objective is concurrently met by purchasing development rights. By way of example, purchasing development rights in defined well-head protection areas, or along the Kokosing and Mohican River Greenway, would preserve farmland but also provide water quality benefits to the Knox County community.

There are two (2) approaches most commonly used to purchase, or hold, development rights in Knox County: **agricultural easements** and **conservation easements**. As of the time of writing this Plan Update, the majority of these easements are being purchased by private land trusts such as the Owl Creek Conservancy and the Philander Chase Conservancy. These groups have effectively utilized the Ohio Local Agricultural Easement Purchase Program (LAEPP) to establish agricultural protection areas around Knox County. Due to the local matching requirements for the LAEPP program, as well as the costs to establish such easements, the land trusts rely heavily on donations for their preservation efforts. This fact effectively limits the land trusts' abilities to fully deploy the program across the county.

At one time, the Knox County Commissioners provided some local matching funds to acquire agricultural easements. The Commissioners' match facilitated broad use of the program in the community and demonstrated the importance of farmland preservation to county leaders. Unfortunately, budget challenges forced the Commissioners to discontinue this cooperative effort for farmland preservation. As economic conditions improve, and Knox County's budget becomes more stable, this Plan Update recommends that the Commissioners again financially partner with local groups to advance on farmland preservation efforts.

At the same time, our city and villages should consider adopting long-term approaches to **limit exurban sprawl** from denser commercial and residential corridors into the rural landscape. Planning concepts, including so-called urban growth boundaries, seek to coordinate and prioritize updated zoning regulations, comprehensive land-use guidelines and strategic infrastructure development to areas already served **on the grid**. Variations of this notion have been raised repeatedly in the context of this Plan Update.

The RPC should work with the Area Development Foundation, Inc. to consider appropriate financial incentives to induce commercial and residential development to areas already served by infrastructure and appropriate zoning. Such mechanisms could include the use of New Community Authorities under ORC Chapter 349.
(RPC, ADF, Knox County Commissioners and Knox County Farm Bureau to collaborate on this strategy)

TARGET OUTCOME

Knox County lacks a unified and understandable approach to the problem of effectively protecting farmland resources. Development of a **Farmland Preservation Plan** would distill the collective efforts of public and private entities into a common plan that clearly demonstrates the value placed on the county's agricultural land resources. Such a plan could develop an appropriate conservation approach in relation to inevitable residential and commercial growth and development.

The County Farmland Preservation Plan should include the following:

- Provide Knox County's townships with educational materials as to agricultural protection zoning;
- Encourage public participation in so-called agricultural security area and agricultural district programming;
- Study the development of farmland and open space conversion impact fees to offset county-wide reductions in agricultural and prime farmland resources by providing a mitigation alternative by allowing purchases of offsetting development rights.

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Appendix A

Works Cited

Chapter 1

Apple Group, Ltd. v. Granger Twp. Bd. of Zoning Appeals [Case] : 144 Ohio St.3d 188 / auth. Ohio Supreme Court. - [s.l.] : Ohio Supreme Court, 2015.

B.J. Alan Co. v. Congress Twp. Bd. of Zoning Appeals [Case] : 124 Ohio St.3d 1 / auth. Ohio Supreme Court. - [s.l.] : Ohio Supreme Court, 2009.

Impact of Land Use Law on Commercial Development [Journal] / auth. Riehl Esq., Charles T. // Advanced Topics in Commercial Real Estate Law. - 2017. - pp. 7.8 - 7.12.

Land in Conflict: Managing and Resolving Land Use Disputes [Book] / auth. Ferguson Ona, Field Pat and Nolon Sean. - Cambridge, Mass. : Lincoln Institute of Land Policy, 2013.

Ohio Planning and Zoning Law [Book] / auth. Meck Stuart and Pearlman Kenneth. - Columbus : Thomson Reuters, 2017.

Chapter 2

Apple Group, Ltd. v. Granger Twp. Bd. of Zoning Appeals [Case] : 144 Ohio St.3d 188. - [s.l.] : Ohio Supreme Court, 2015.

Columbus economy tops Cleveland [Article] / auth. Williams Mark // The Columbus Dispatch. - Columbus : [s.n.], September 22, 2017.

Columbus overtakes Indianapolis to become county's 14th largest city [Article] / auth. Newpoff Laura // Columbus Business First. - Columbus : [s.n.], May 25, 2017.

County Profiles [Online] / auth. Columbus2020 // The Columbus Region. - January 2018. - http://columbusregion.com/market-research/county-profiles/.

Director of Planning & Environment [Interview] / interv. Carr PhD, Kerstin. - December 15, 2016.

insight2050: Scenario Results Report [Report] / auth. MORPC; Columbus2020; ULI-Columbus; Calthorpe Associates. - Columbus : Mid-Ohio Regional Planning Commission, 2015.

Knox County Comprehensive Plan [Report] / auth. Focus 2100 / Mount Vernon / Knox County Chamber of Commerce. - Mount Vernon : [s.n.], 1998. - pp. 3-4.

Land in Conflict: Managing and Resolving Land Use Disputes [Book] / auth. Ferguson Ona, Field Pat and Nolon Sean. - Cambridge, Mass. : Lincoln Institute of Land Policy, 2013.

Ohio Planning and Zoning Law [Book] / auth. Meck Stuart and Pearlman Kenneth. - Columbus : Thomson Reuters, 2017.

The Columbus Region [Online] / auth. Columbus2020. - January 2018. - http://columbusregion.com/.

Chapter 3

[Interview] / interv. Tannous Marilyn. - 2017.

A Reportcard on Rural and Urban Ohio [Report] / auth. Cho Clare, Feng Bo and Partridge Mark. - Columbus : The Ohio State University, Dept. of Ag, Environ., and Dev. Economics, 2015.

Ariel-Foundation Park [Art] / art. Conservancy Ariel-Foundation Park. - Mount Vernon : Ariel-Foundation Park Conservancy.

As Companies Seek Tax Deals, Governments Pay High Price [Article] / auth. Story Louise // New York Times. - December 1, 2012. - p. A1.

CarolinaFarmStewards.or/lomax-farm [Online] / auth. Carolina Farm Stewardship Assocation // CarolinaFarmStewards.org. - October 10, 2017. - https://www.carolinafarmstewards.org/lomax-farm/.

Case Western Reserve Univeristy, think[box] Fab Lab [Art] / art. Harris Jeffry. - Mount Vernon : Area Development Foundation, Inc..

CNN Politics [Online] / auth. Brownstein Ronald // This is the new 'gian sucking sound" you hear. It's changing the economy and disrupting politics. - November 1, 2017. - http://www.cnn.com/2017/10/24/politics/brownstein-cities-education-giant-sucking-sound/index.html.

Columbus Region: Comprehensive Economic Development Strategy Update [Report] / auth. Columbus2020. - Columbus : Columbus2020, 2014.

Columbus2050 [Report] / auth. Urban Land Institute Columbus. - Columbus : Urban Land Institute, 2012.

Comprehensive Annual Financial Report [Report] / auth. Knox County Auditor's Office. - Mount Vernon : [s.n.], 2014.

Coordinator, Knox County Dept. of Job & Family Services [Interview] / interv. Williams Diana. - Mount Vernon : [s.n.], July 27, 2017.

County planning discussion [Interview] / interv. McLarnan Doug. - August 17, 2017.

County Profiles - 2017 Annual Edition [Online] / auth. Ohio Development Services Agency // County Trends & Profiles. - July 28, 2017. - https://www.development.ohio.gov/reports/reports_countytrends_map.htm.

Director of Planning & Environment [Interview] / interv. Carr PhD, Kerstin. - December 15, 2016.

Driverless Cars Made Me Nervous. Then I Tried One. [Article] / auth. Leonhardt David // New York Times. - October 22, 2017. - p. A21.

Economic Development: The Wily Devils Lurking in the Details of Real Property Tax Exemptions [Article] / auth. Harris Jeffry D. // Cities & Villages. - Columbus : Ohio Municipal League, July/August 2016. - July/August. - 4 : Vol. 64. - pp. 11-16.

Evaluation of Real Property Tax Abatements in Franklin County, Ohio [Report] / auth. Kenyon Daphne [et al.]. - Cambridge, Mass. : Lincoln Institute of Land Policy, 2017.

Falling Manufacturing Pay Creating Many Low-wage Jobs, NELP Report Says [Article] / auth. Perkins Olivera // Cleveland Plain Dealer. - December 16, 2014.

Focus 2100 / auth. Heine Thomas E. // Letter of Invitation. - Mount Vernon : Knox County Chamber of Commerce, February 25, 1998.

Foundations for the Future of Knox County [Report] / auth. The Ohio State University City and Regional Planning Economic Development Studio. - Columbus : The Ohio State University, 2016.

Government Publishing Office [Online] / auth. US Department of Health and Human Services // Federal Register. - October 9, 2017. - https://www.gpo.gov/fdsys/pkg/FR-2015-01-22/html/2015-01120.htm.

History of Knox County politics [Interview] / interv. Mavis Richard.

How Big Incentives Can Lure a Giant [Article] / auth. Coombs Casey // Columbus Business First. - October 13, 2017. - pp. 6 - 9.

insight2050: Scenario Results Report [Report] / auth. MORPC; Columbus2020; ULI-Columbus; Calthorpe Associates. - Columbus : Mid-Ohio Regional Planning Commission, 2015.

It's Unclearly Defined, but Telecommuting Is Fast on the Rise [Article] / auth. Tugend Alina // New York TImes. - March 7, 2014. - p. B6.

John McFarlane Interview [Interview] / interv. Fredericktown Village of. - Fredericktown : [s.n.], January 19, 2018.

Knox County Community Planning discussion [Interview] / interv. Howard Sacks PhD. - August 8, 2017.

Knox County Comprehensive Plan [Report] / auth. Focus 2100 / Mount Vernon / Knox County Chamber of Commerce. - Mount Vernon : Mount Vernon / Knox County Chamber of Commerce, 1998.

Knox County: Rural Transportation Plan [Article] / auth. Mid-Ohio Regional Planning Commission // Central Ohio Regional Planning Organization. - 2017.

Letters to Alex: A History of Ariel Corporation [Book] / auth. Buchwald James P.. - Cleveland : Monitor Publishing Limited, 2016.

Manufacturing Low Pay: Decling Wages in the Jobs That Built America's Middle Class [Report] / auth. Ruckelshaus Catherine and Leberstein Sarah. - New York : National Employment Law Project, 2014.

Many Uses, Linked by One Vibrant Alley [Journal] / auth. Macht William P. // Urban Land. - 2017. - pp. 68-73.

My City Was Gone [Sound Recording] / comps. Christine Hynde Dave Brock, N. Turner / perf. Pretenders The. - 1982.

Ohio History Central [Online] / auth. Ohio History Connection // Rhodes' Raider. - October 11, 2017. - http://www.ohiohistorycentral.org/w/Rhodes'_Raiders?rec=1677.

Ohio Rapid Response Workforce Survey Summary: Siemens Energy Inc [Report] / auth. Ohio Means Jobs. - Mount Vernon : Ohio Means Jobs, 2016.

Ohio Unemployment Rates [Report] / auth. Ohio Department of Job and Family Services. - Columbus : Ohio Department of Job and Family Services, 2017.

Ohio's RTPO Program [Conference] / auth. Phinney Scott // NOACA. - Cleveland : Ohio Department of Development, 2017.

Our Town: As America's rural communities stagnate, what can we learn from one that hasn't? [Article] / auth. MacFarqhuar Larissa // The New Yorker. - November 13, 2017. - pp. 56-65.

Poverty: 2014 and 2015 [Report] / auth. Bishaw Alemayehu and Glassman Brian. - Washington, D.C. : US Department of Commerce, Census Bureau, 2016.

Prepared Communities Win: Knox County [Report] / auth. Columbus2020. - Columbus : Columbus2020, 2017.

Report to the Community 2016 - 2017 [Report] / auth. CAPA. - Columbus : Columbus Association for the Performing Arts, 2017.

Restarting the US Small-business Growth Engine [Report] / auth. Horn John and Pleasance Darren. - [s.l.] : McKinsey & Company, 2012.

The 2014 Economic Analysis of Ohio University Innovation Center [Report] / auth. Jolley PhD, Jason G.. - Athens, OH : Ohio University Voinovich School of Leadership and Public Affairs, 2015.

The Geography of Nowhere: The Rise and Decline of America's Man-Made Landscape [Book] / auth. Kunstler James Howard. - New York : Touchstone, 1993.

The Midwest Growth Leader [Report] / auth. Columbus2020. - Columbus : Columbus2020, 2016.

The Problem with Courting Amazon [Article] / auth. Alexander Brian // The Atlantic. - New York : The Atlantic, 2018.

think[box], Case Western Reserve University [Art] / art. Harris Jeffry. - Mount Vernon : Area Development Foundation, Inc..

Top 25 Employers in Knox County, OH [Report] / auth. Area Development Foundation, Inc.. - Mount Vernon : Area Development Foundation, Inc., 2016.

Turnover Basics and Wage Survey Trend Review [Conference] / auth. Bethany Celmar PHR // Employee Retention Seminar. - Mount Vernon : HR Connect, 2017.

Where Internet Orders Mean Real Jobs, and New Life for Communities [Article] / auth. Kitroeff Natalie // New York Times. - New York : [s.n.], October 22, 2017. - p. A1.

Why Aren't There Any Turkeys at the Danville Turkey Festival? [Article] / auth. Sacks Howard L. // Journal of Agriculture, Food Systems, and Community Development. - August 6, 2010.

Why Corporate Tax Cuts Won't Create Jobs [Article] / auth. Ryu Marcus // New York Times. - October 9, 2017. - p. A23.

Workforce Financing Strategies [Conference] / auth. Orrell Brent // Ohio Financing Roundtable. - Columbus : Council of Development FInance Agencies, 2017.

Chapter 4

2017 - 2018 Fact Sheet [Online] / auth. Mount Vernon Nazarene University // Mount Vernon Nazarene University. - January 2, 2018. - http://www.mvnu.edu/uploads/factsheet.pdf.

Driverless Cars Made Me Nervous. Then I Tried One. [Article] / auth. Leonhardt David // New York Times. - October 22, 2017. - p. A21.

Foundations for the Future of Knox County [Report] / auth. The Ohio State University City and Regional Planning Economic Development Studio. - Columbus : The Ohio State University, 2016.

Good to Great [Book] / auth. Collins Jim. - New York : HarperCollins, 2001. - p. 42.

Government Publishing Office [Online] / auth. US Department of Health and Human Services // Federal Register. - October 9, 2017. - https://www.gpo.gov/fdsys/pkg/FR-2015-01-22/html/2015-01120.htm.

insight2050: Scenario Results Report [Report] / auth. MORPC; Columbus2020; ULI-Columbus; Calthorpe Associates. - Columbus : Mid-Ohio Regional Planning Commission, 2015.

Kasich's Executive Workforce Board Announces Plan of Action [Press Release] / auth. Wehrkamp Connie // Governor's Communication Department. - Columbus : [s.n.], November 26, 2012.

Kenyon College website / auth. Kenyon College.

Knox County Community Planning discussion [Interview] / interv. Howard Sacks PhD. - August 8, 2017.

Knox County: Rural Transportation Plan [Article] / auth. Mid-Ohio Regional Planning Commission // Central Ohio Regional Planning Organization. - 2017.

Manufacturing Low Pay: Decling Wages in the Jobs That Built America's Middle Class [Report] / auth. Ruckelshaus Catherine and Leberstein Sarah. - New York : National Employment Law Project, 2014.

Office of Workforce Development Programs [Online] / auth. Ohio Departmebnt of Job and Family Services // Ohio Department of Job and Family Services. - 2017. - January 2018. - http://jfs.ohio.gov/owd/Program/index.stm.

Ohio Job Training and Workforce Development - Administrative Consolidation [Online] / auth. Ohio Legislative Service Commission // Ohio Legislative Service Commission. - August 1996. - January 2018. - https://www.lsc.ohio.gov/documents/reference/archives/specialreports/srr144.pdf.

Ohio School Report Cards / auth. Ohio Department of Education. - [s.l.] : Ohio Department of Education, 2017.

Ohio Unemployment Rates [Report] / auth. Ohio Department of Job and Family Services. - Columbus : Ohio Department of Job and Family Services, 2017.

Request for Enrollment Information = Request for Enrollment Information / auth. Blubaugh Shelly. - January 9, 2018.

School Enrollment, School Type, Housing Characteristics / auth. American Community Survey // 2012-2016 American Community Survey 5-year estimate. - [s.l.] : U.S. Department of Commerce, 2016.

The "Snob" Debate: Making High School Matter for Non-College Bound Students [Online] / auth. Stone James R. // Albert Shanker Institute. - March 7, 2012. - January 4, 2018. - http://www.shankerinstitute.org/blog/‘snob’-debate-making-high-school-matter-non-college-bound-students.

Top 25 Employers in Knox County, OH [Report] / auth. Area Development Foundation, Inc.. - Mount Vernon : Area Development Foundation, Inc., 2016.

What does Tesla's automated truck mean for truckers? [Article] / auth. Marshall Aarian // Wired. - November 17, 2017.

What the future of work will mean for jobs, skills and wages [Report] / auth. Manyika James [et al.] / McKinsey Global Institute. - New York : McKinsey & Company, 2017. - p. 6.

Why America's men aren't working [Article] / auth. Muyi Yian Q. // The Washington Post. - Washington, D.C. : [s.n.], June 20, 2016.

Workforce development plan for Knox County [Email] / auth. Marlow Jane. - Mount Vernon : [s.n.], January 5, 2018.

Workforce Financing Strategies [Conference] / auth. Orrell Brent // Ohio Financing Roundtable. - Columbus : Council of Development FInance Agencies, 2017.

Worrying declines in teen and young adult employment [Report] / auth. Ross Matha and Prchal Svajlenka Nicole / Brookings Institution. - Washington, D.C. : Brookings Institution, 2015.

Chapter 5

[Online] / auth. County Health Rankings. - 2016. - http://www.countyhealthrankings.org/rankings/data/oh.

2016 Ohio Drug Overdose Data: General Findings [Report] / auth. Ohio Department of Health. - [s.l.] : Ohio Department of Health, 2016.

A Reportcard on Rural and Urban Ohio [Report] / auth. Cho Clare, Feng Bo and Partridge Mark. - Columbus : The Ohio State University, Dept. of Ag, Environ., and Dev. Economics, 2015.

Data Download / auth. Ohio Department of Transportation.

Data download from department / auth. Knox County Tax Map & GIS Department. - 2018.

Fact Sheet: Health Insurance and Access to Care [Report] / auth. Center for Disease Control. - 2017.

Government Publishing Office [Online] / auth. US Department of Health and Human Services // Federal Register. - October 9, 2017. - https://www.gpo.gov/fdsys/pkg/FR-2015-01-22/html/2015-01120.htm.

H+T Index / auth. Center for Neighborhood Technology. - 2017.

Knox County Park District - website / auth. Knox County Park District. - Mount Vernon : [s.n.].

Knox Substance Abuse Action Team - A community action partnership [Online] / auth. Knox Substance Abuse Action Team // Knox Substance Abuse Action Team. - 2018. - Knox Substance Abuse Action Team.

Kokosing Scenic River Watershed Plan [Report] / auth. Ohio Department of Natural Resources, Division of Natural Areas and Preserves. - 2004.

Metropolitan Area Trends, Preferences, and Opportunities [Report] / auth. National Resources Defense Council. - [s.l.] : NRDC, 2014.

Ohio Wetlands [Report] / auth. Ohio Environmental Protection Agency. - [s.l.] : Ohio EPA Division of Surface Water, 2016.

Park District Information / auth. Totman Lori. - January 24, 2018.

Solid Waste Management Plan [Online] / auth. DKMM // DKMM Solid Waste District. - 2012. - https://www.dkmm.org/dkmm-plan.

Sports & Fitness Industry Association Topline Participation Report [Report] / auth. Sports and Fitness Industry Association. - [s.l.] : Sports and Fitness Industry Association, 2016.

Taking Measure of Ohio's Opioid Crisis [Report] / auth. Rembert et al.. - Columbus, Ohio : The Ohio State University, C. William Swank Program in Rural-Urban Policy, 2017.

The Trail [Online] / auth. Kokosing Gap Trail // Kokosing Gap Trail. - 2018. - http://www.kokosinggaptrail.org/TRAIL/aatrail.htm.

USA Soil Farmland Class / auth. National Resources Conservation Service. - 2016.

Visitor Info - Education / auth. Knox County Convention & Visitors Bureau.

Waste management plan - personal correspondence / auth. Hicks Jenna. - January 19, 2018.

Chapter 6

Biological and Water Quality Study of the Kokosing River Watershed 2007 [Report] / auth. Ohio Environmental Protection Agency. - 2010.

Biological and Water Quality Study of the Mohican River and Selected Tributaries, 2007 [Report] / auth. Ohio Environmental Protection Agency. - 2009.

Cost of Community Services Study: Knox County, Ohio [Report] / auth. American Farmland Trust. - Columbus : American Farmland Trust, 2003.

Focus 2100 [Report] / auth. Knox County Chamber of Commerce. - Mount Vernon : Area Development Foundation, Inc., 1998.

Knox County Comprehensive Plan [Report] / auth. Focus 2100 / Mount Vernon / Knox County Chamber of Commerce. - Mount Vernon : [s.n.], 1998. - pp. 3-4.

Knox County Comprehensive Plan [Report] / auth. Focus 2100 / Mount Vernon / Knox County Chamber of Commerce. - Mount Vernon : Mount Vernon / Knox County Chamber of Commerce, 1998.

Knox County Comprehensive Plan Update [Report] / auth. Knox County Regional Planning Commission. - Mount Vernon : Knox County Regional Planning Commission, 2012.

Kokosing Scenic River Watershed Plan [Report] / auth. Ohio Department of Natural Resources, Division of Natural Areas and Preserves. - 2004.

USA Soil Farmland Class / auth. National Resources Conservation Service. - 2016.