UNIVERSITY PARKWAY CORRIDOR PLAN

DRAFT 2019

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Executive Summary

Purpose

The Evansville-Vanderburgh County Comprehensive Plan 2015-2035 identifies the University Parkway as a corridor in need of further study. The County now has a pressing need to study the corridor sooner than anticipated due to the County Commissioners decision to fund the extension of the sanitary sewers further north along the corridor and the Evansville Water and Sewer Utility (EWSU) construction of a new pump station located at Creamery Road. To address these changes, this study focuses on land use, transportation, infrastructure, and physical features within the corridor study area and includes a market analysis to provide direction on the quantity and feasibility of future development in the area.

The land use portion of the plan is meant to guide future development decisions along the corridor. However, **individual land owners remain in control of their properties, and will decide whether it should be developed.** The County will not be purchasing property for the purposes of private development. Where the Plan proposes a different land use than what currently exists, the use - and zoning classification - will remain as it is, so long as desired by the owner. **No rezoning will be required except as necessary for the owner to establish a different use.**

Study Corridor

University Parkway serves an important role in western Vanderburgh County. This route connects State Route 62, (Lloyd Expressway) and the University of Southern Indiana north to State Route 66, (Diamond Avenue). The area around the parkway being studied is bordered by State Road 66 to the north; State Road 62 to the south; Peerless Road and Church Road to the east; and the Vanderburgh/Posey County line to the west.

This plan addresses the location, type, quantity, and quality of land use and transportation along University Parkway. However, this study does not cover all the transportation issues within the area. The Lloyd Expressway (SR 62/66) Corridor Study, which occurred in tandem with the University Parkway Corridor Plan, addresses the Lloyd Expressway and University Parkway interchange.

Recommended Scenario

During the early stages of the process, three development scenarios were created to test potential future land use options that could occur under different policy decisions. Using public opinion, existing physical and market conditions, and the guidance of local officials the recommended scenario (Figure 0-1) was created. This future vision included the approved zoning on the parcels of Majestic Place, a mixed use development, and a dense residential development to the south. Other land use recomendations include the expansion of the recreation club east of the corridor, a technology park adjacent to the Parkway, a commercial node on the southeast side of Upper Mount Vernon Road, and a new residential development to support the new retail and employment centers and the growing desire to live on the west side of Vanderburgh County.

Throughout the process concerns about the amount, type, and quality of development were expressed which also influenced the plan. Residents expressed a strong desire for the preservation of existing agricultural and natural resources which influenced the recommended scenario including:

- Restricting growth from occurring north of Upper Mount Vernon Road;
- Increasing environmental restrictions through the creation of a conservation zone; and
- Restricting residential subdivisions to residential zoning districts.

The land use recommendations center around two key concepts including the development of a mixed use Majestic Place and the Research and Development Technology Park. Majestic Place is located west of the Parkway and just south of Hogue Road. Given the desires of residents who live in the corridor and the conditions under which the rezoning was approved, a conceptual plan was created to illustrate how a mixed use development could be laid out. The main street would act as the spine for retail, office, and multi-family development. The development's perimeter is comprised of large tree stands, ponds, and natural wetlands which would be preserved as natural features but also recreational amenities.

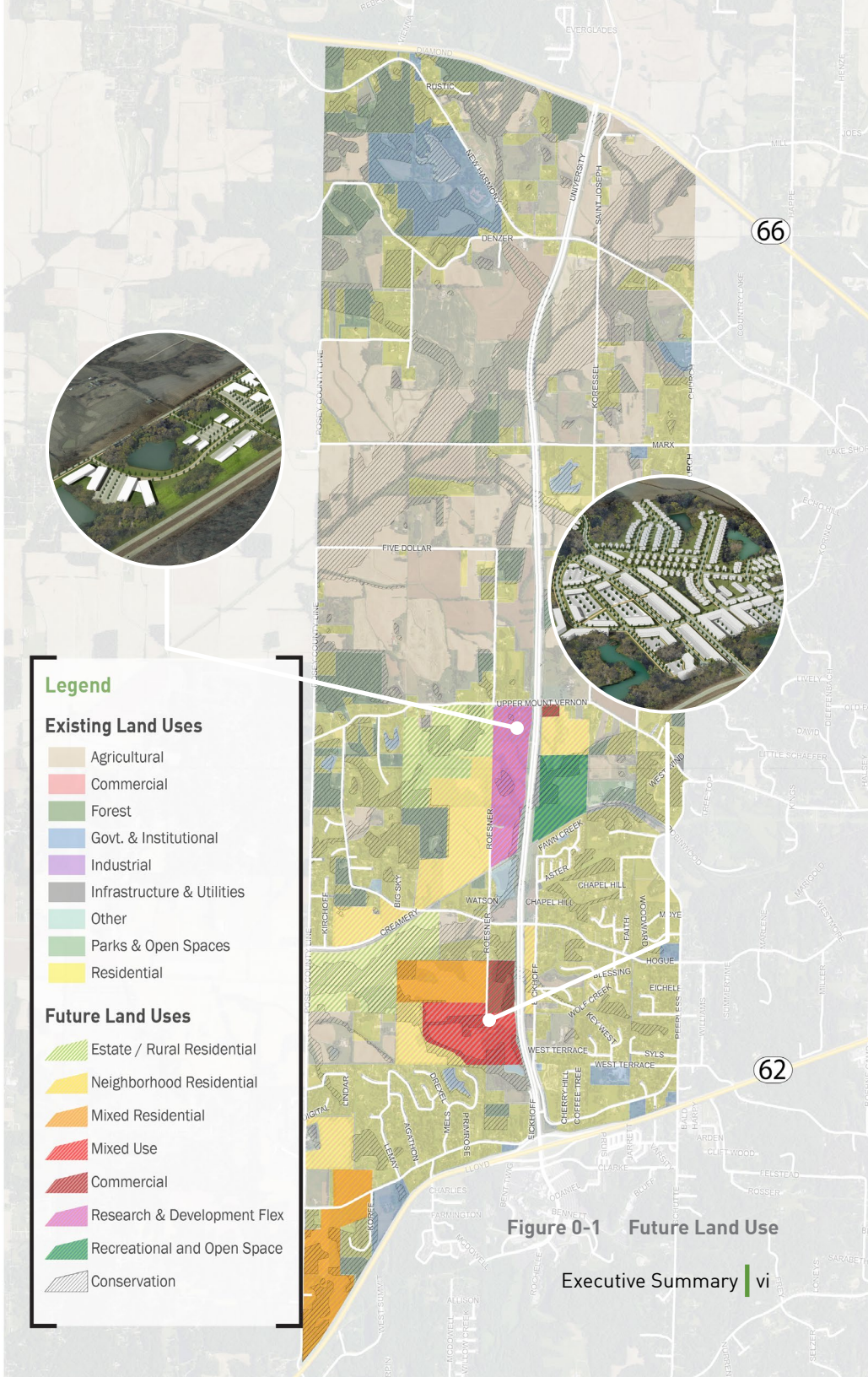
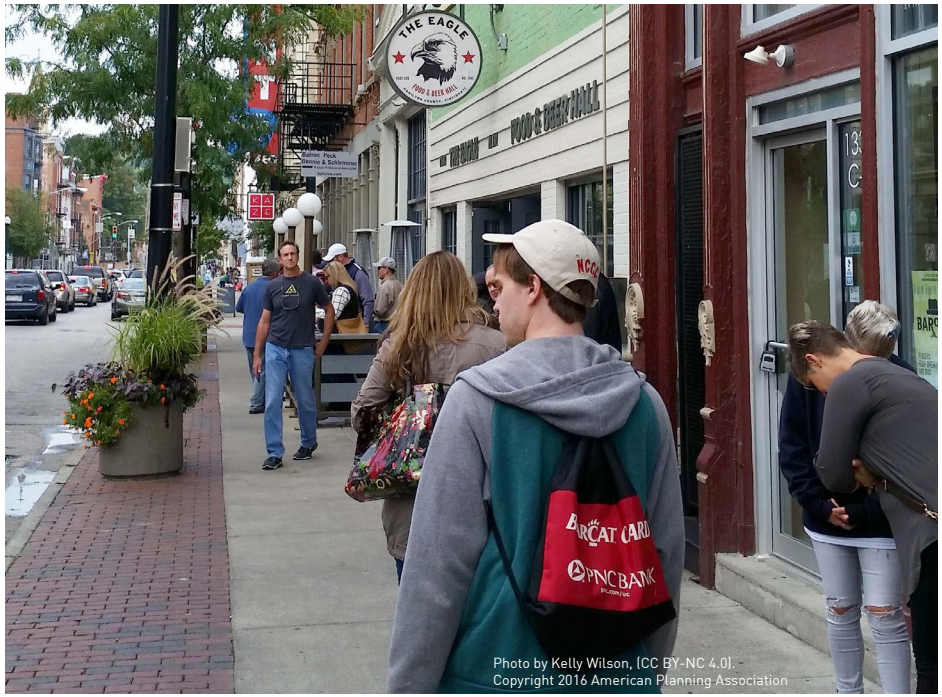


Figure 0-1 Future Land Use



The second area is the Research and Development Technology Park. It would be a unique employment center envisioned to occur though a partnership with University of Southern Indiana (USI), Growth Alliance, and University of Evansville. One of the objectives would be to keep existing students in the region and attract young professions to the research park by offering job training, business development, and educational opportunities. This development would be designed as a campus that would encourage attractive building design and materials, preserve and build upon the natural features, and enhance the rural character of the corridor.

Recommendations and Policies

Corridor Vision

The Vision for Vanderburgh County's University Parkway Corridor will continue to be a scenic, safe, and accessible thoroughfare for all. To achieve this, the corridor will encourage safe multi-modal transportation, balanced growth, and preservation of natural assets. Access to the Parkway will be limited and managed to allow for efficient traffic flow. All modes of transportation will have appropriate facilities providing safe and easy access along and around University Parkway. Growth along the corridor will be managed so that impacts to the rural character are minimal, while providing neighborhood commercial, services, and residential development. This new development will not be prioritized over existing natural and agricultural land to preserve the rural appeal of the University Parkway Corridor. To achieve this vision, there are several overall project goals that were developed to create the scenic, safe and accessible corridor. Each goal is broken down into an overall classification including development, transportation, utilities, environmental, institutions, and recreation.

Development

The development goals and objectives strive to balance the need to maximize the County's investment along the corridor and the desire to preserve the corridor's agricultural and environmental resources.

1. Preserve the existing character of the corridor.
2. Encourage new residential development along the southern portion of the corridor that is consistent with existing development.
3. Manage neighborhood commercial development.

Transportation

The transportation network plays an integral role supporting the economy and quality of life. The transportation recommendations support development while maintaining safety, connectivity, and mobility throughout the University Parkway and the adjacent areas.

4. Improve the safety and mobility for motorists, bicyclists, and pedestrians.
5. Redesign intersections to improve traffic flow and safety.
6. Preserve University Parkway as a scenic thoroughfare.
7. Encourage better connectivity with the existing and future street network.

Utilities

Utilities along the corridor should be limited to Upper Mt. Vernon Road. Utility services south of this roadway shall be provided however, the cost for installation should be bore by developers.

8. Increase utility access to adequately meet the demands of new development.
9. Avoid overextending utilities.
10. Manage stormwater as new development occurs.

Environmental

11. Preserve the corridor's existing agricultural and natural land.

Institutions

12. Strengthen the relationship between the University Parkway Corridor and the University of Southern Indiana (USI).
13. Assist Evansville-Vanderburgh School Corporation (EVSC) to better serve the corridor.

Recreation

14. Increase recreational opportunities along the corridor.

Implementation

The University Parkway Corridor Plan is both a development guide and policy document for future decision-making on development within the entire corridor. Challenges arise when translating a plan's vision, goals, and recommendations into the day-to-day operations and actions of government. The County Commissioners, APC, and EMPO will need to collaborate on the implementation of these recommendations and policies. For the corridor plan to be effective over time, it must be periodically reviewed and updated to stay responsive to trends or changes in economic, physical, social, or political conditions.

Adoption

Vanderburgh County will adopt the corridor plan by resolution as part of the policy of its comprehensive plan to ensure that it promotes the public health, safety, morals, convenience, order, general welfare, and economic efficiency. Even with a well-designed planning process, a community may lack consensus on certain issues or, in the worst case, may not have enough support to adopt a plan. In that case, the County may want to:

- Setup a committee to work through the remaining issues.
- Recommend further study of the issues with a clear timeline.
- If the community is extremely divided on an issue, it may be necessary to bring in a professional facilitator or a mediator.

How to Use the Plan

The corridor plan is a more detailed plan of a specific area that identifies land uses at a parcel level and identifies detailed projects and recommendations to be implemented. This plan is meant to be a living document and be updated as various goals are achieved and as conditions change. The corridor plan should be reviewed bi-annually to determine progress and relevancy. This corridor plan contains:

- Updates to existing land use inventories
- Strategies for key land use and transportation issues
- Recommended Transportation Policies
- Guidance for future land use, access management, and infrastructure decisions
- Recommended policies to direct future development and reinvestment

Decisions Regarding Rezoning

In general, the County Commissioners and APC should consider the following circumstances in any rezoning:

- The extent to which the requested rezoning is consistent with University Parkway Corridor Plan's policies and land use map;
- Whether the proposal is consistent with the policies of the Comprehensive Plan.
- If there was an error or oversight in the original zoning of the property;
- If changes have occurred near the property and whether those changes prevent the reasonable use of the property as currently zoned;
- Does the requested rezoning benefit the community at large;
- Whether the proposal fits with the surrounding land uses.
- Any negative impact to adjacent properties;
- Does the change in the zoning district negatively impact how the land can be developed;
- Rezonings should be reviewed from the perspective of the community's collective vision for the future being the "common good" and not from the standpoint of a single hardship expressed by a property owner or group of property owners.

Zoning decisions become difficult to enforce with policies alone. To support the APC in their recommendations and decisions, an overlay zone is needed to protect property values and ensure planned and orderly development. This would be accomplished through the:

- Promotion of coordinated, quality development through sound land use planning.
- Protection of important ecological and agricultural assets along the corridor.
- Establishment of basic standards for structures, landscaping, and other improvements for properties within the Overlay Zone to promote high quality, innovative site design, and efficient land usage.
- Preservation of roadway integrity and function, and promotion of the efficient flow of traffic through access management planning.

Introduction

Study Corridor

University Parkway serves an important role in western Vanderburgh County. This route connects State Route 62, (Lloyd Expressway) and the University of Southern Indiana north to State Route 66, (Diamond Avenue). The area around the parkway being studied is bordered by State Road 66 to the north; State Road 62 to the south; Peerless Road and Church Road to the east; and the Vanderburgh/Posey County line to the west. The area is bisected by two distinct townships: German township to the north and Perry Township to the South.

This plan addresses the location, type, quantity, and quality of land use and transportation along University Parkway. However, this study does not cover all the transportation issues within the area. There are a number of other studies which occurred in tandem with the University Parkway Corridor Plan to address those issues. The intersection of Lloyd Expressway and University Parkway will be addressed by the Lloyd Expressway (SR 62/66) Corridor Study.

Purpose of the Plan

The Evansville-Vanderburgh County Comprehensive Plan 2015-2035 identifies the University Parkway as a corridor in need of further study. The overall direction of the Comprehensive Plan was to promote infill development in the City of Evansville, especially in the older downtown neighborhoods. However, because of the County Commissioners decision to fund the extension of the sanitary sewers further north along the corridor and the Evansville Water and Sewer Utility (EWSU) construction of a new pump station located at Creamery Road, the County now has a pressing need to study the corridor sooner than anticipated. Therefore, Vanderburgh County is conducting this study to establish a plan which will guide development in the coming years.

The study addresses land use, transportation, infrastructure, and physical features within the corridor study area and includes a market analysis to provide direction on the amount of certain future uses that could feasibly be developed in the area.

The land use plan is a guide for local decisions regarding future development along the corridor. However, the individual land owners will still remain in control of their properties as they are today, and would have to pursue development for it to occur. The County will not purchase property for the purposes of private development. Properties recommended for a land use change will continue in its existing use. Only when the land owner pursues any type of development will the recommended land use plan be used. If the land owner chooses to leave the property in its current state, the corridor will remain as it.

A Tax Increment Financing District (TIF) was established that runs narrowly along the University Parkway and expands near the intersection with SR 66, as shown in Figure 1-1. The TIF is a funding source from the collection of an increment of tax dollars within the boundary which can be used for infrastructure improvements.

GUIDELINES FOR THE PLAN

- County will not purchase property for the purposes of private development.
- Properties recommended for a land use change will continue in its existing use.
- Only when the land owner pursues any type of development will the recommended land use plan be used.
- If the land owner chooses to leave the property in its current state, the corridor will remain as it.

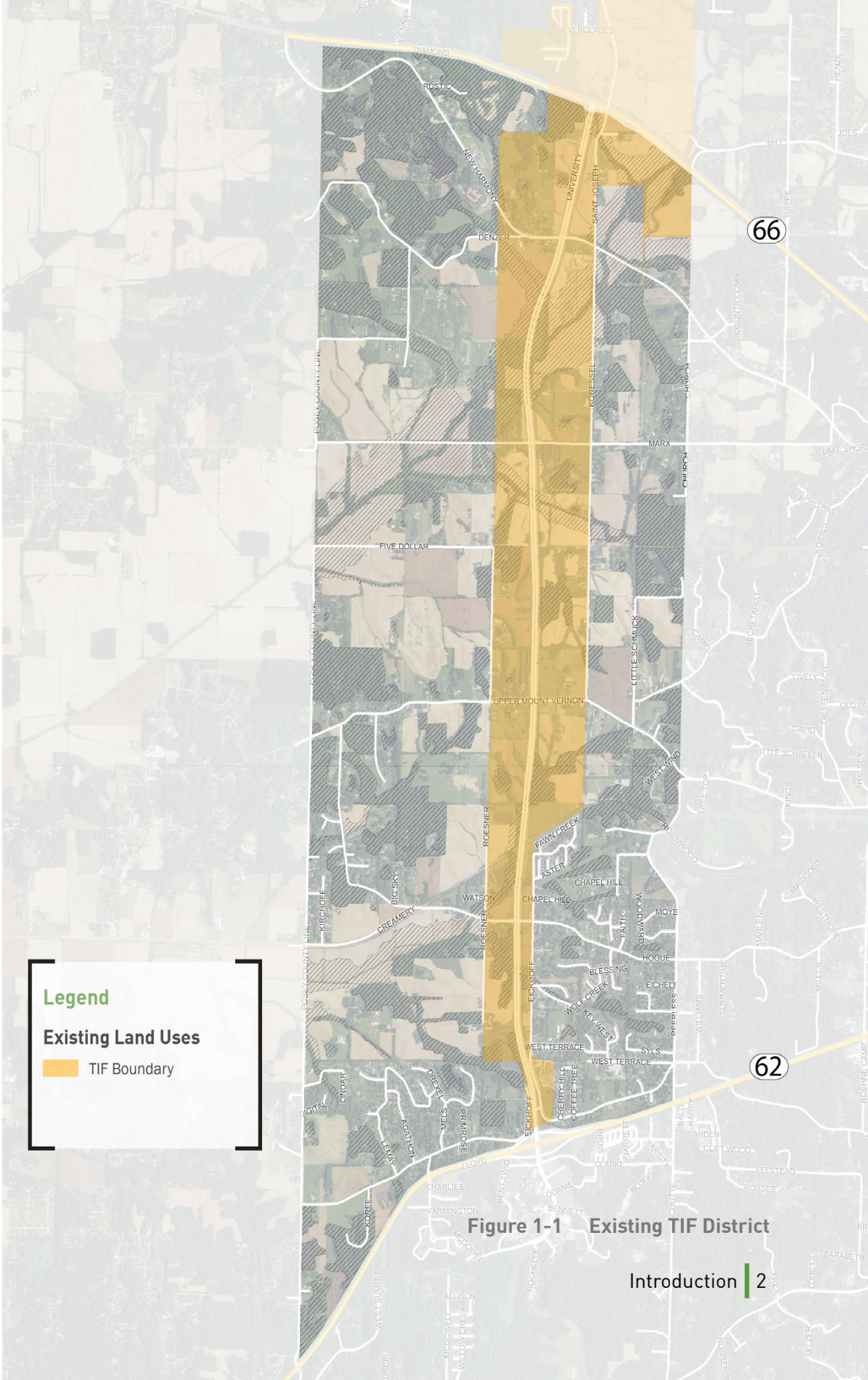


Figure 1-1 Existing TIF District

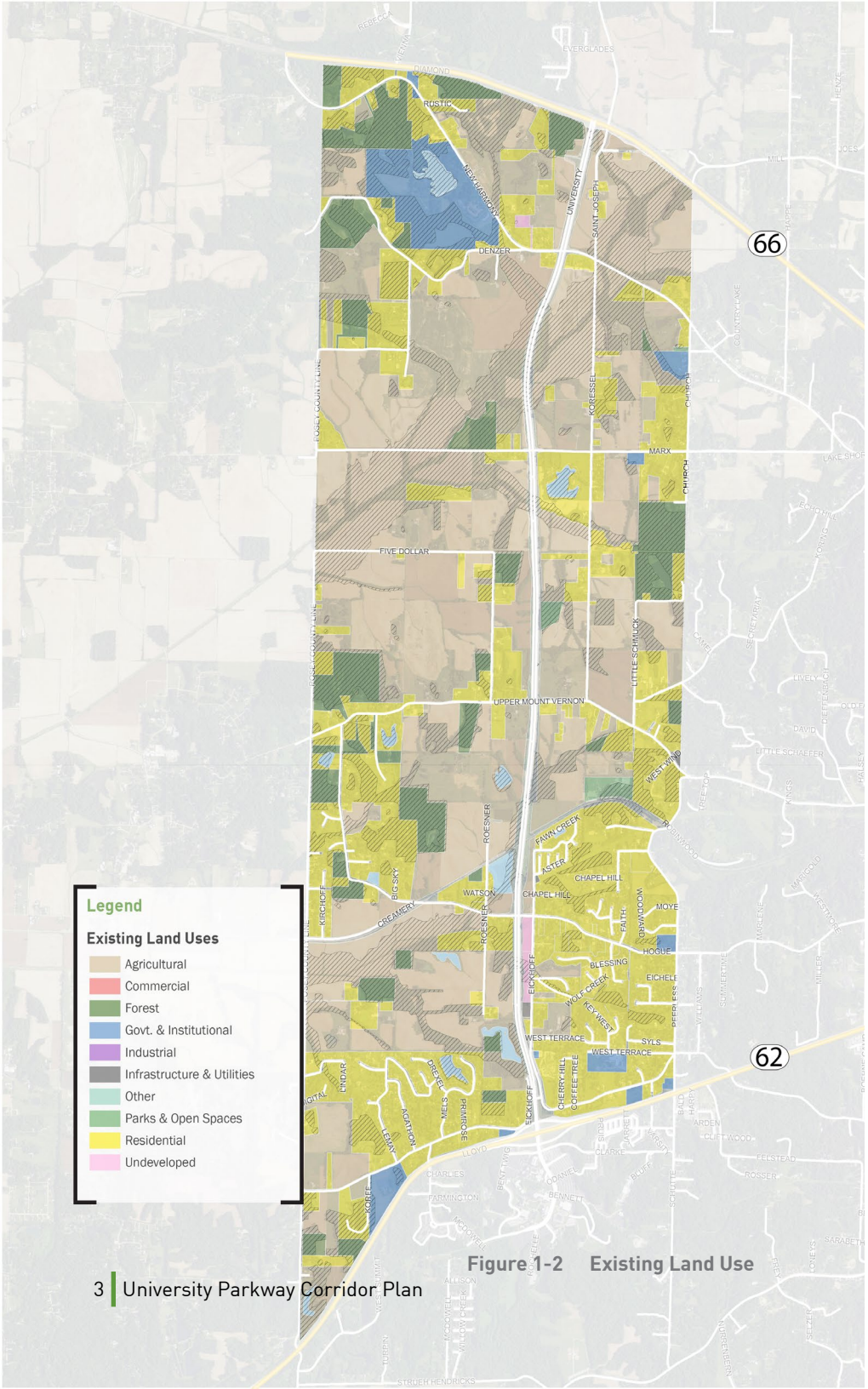


Figure 1-2 Existing Land Use

Existing Corridor Conditions

The process for the plan began with research to gain a better understanding of the University Parkway Corridor and the area around it which influences the corridor. This research covered a variety of topics including land use, transportation systems, public utilities, and the market. Each provided valuable insight and direction for the progression of the plan. This section provides a brief overview of the existing corridor conditions. A more detailed report can be found in **Appendix C.**

Land Use & Zoning

As shown in Figure 1-2: Existing Land Use, the University Parkway Corridor is rural in character with a majority of the uses being agricultural and some residential in clusters. Forested regions are scattered amongst the Parkway. Most of the residential resides south of Hogue Road. Currently most of the corridor is agricultural land use, within which county regulations permit residential subdivisions, and certain special uses allowing them to span the corridor.

Transportation Systems

The University Parkway Corridor, being a rural area of Vanderburgh County, still has several major roadways serving it. University Parkway is a minor arterial connecting two major roadways, Lloyd Expressway (SR 62) a principal arterial and Diamond Avenue (SR 66) a major collector. Along this corridor, traffic is relatively low except in select areas. The major peak times for traffic are 7:00 am to 8:00 am and 4:15 pm to 5:15 pm. Most of the corridor manages this traffic well except two intersections, Hogue Road and Upper Mount Vernon Road which have some difficulty during peak hours.

Utilities

A majority of the Corridor is not currently served by public utilities with the exception of the southern most part of the study area including the southwest corner. The goal of the public utilities was to continue to expand the access to utilities north along University Parkway. To achieve this goal a number of improvements are required to better serve the area. Some of these include sewer system rehabilitation, lift station improvements, water main extensions at Eickhoff Road and Middle Mt. Vernon, Creamery Road lift station, trunk line capacity upgrade, etc.

Market Analysis

The market is not something that is unique to the University Parkway Corridor. Evansville and Vanderburgh County influence the Parkway's economic climate, so the Market Analysis observed the conditions for the County to gather a broader understanding of the current market area and what development may be appropriate for the Parkway. Generally, the County has a strong employment sector acting as the center of employment for surrounding counties. Vanderburgh County produces more jobs than their population can support requiring the surrounding counties to export employees to Vanderburgh County.

The commercial market is strong, and the County has an abundance of retail. The University Parkway Corridor is well served with most retail needs within a 20-minute drive. This high quantity of retail does cause some concerns as a sizable percentage is currently vacant (17%) and is higher than the average for the Midwest.

Industrial in the County accounts for 12 percent of the economy by employment. This employment sector is quite diverse in the types of companies. However, a few such as plastics, rubber production, and food manufacturing have the most potential to grow. University Parkway does not have any industrial nearby as this use is mostly located along major highways that connect to I-69 or I-64.

Corridor Vision

The Vision for Vanderburgh County's University Parkway Corridor will continue to be a scenic, safe, and accessible thoroughfare for all. To achieve these characteristics, the corridor will encourage safe multi-modal transportation, balanced growth, and preservation of natural assets. All modes of transportation will have appropriate facilities providing safe and easy access along and around University Parkway. Growth along the corridor will be managed so that impacts to the rural character are minimal, while providing neighborhood commercial, services, and residential development. This new development will not be prioritized over existing natural and agricultural land to preserve the rural appeal of the University Parkway Corridor.

To achieve this vision, there are several overall project goals that were developed to create the scenic, safe and accessible thoroughfare. This corridor plan is designed to compliment existing studies by providing more in-depth details and recommendations to the corridor. The following goals will be further elaborated on in the detailed recommendations found in each chapter of the plan. Each goal is broken down into a overall classification including development, transportation, utilities, environmental, institutions, and recreation.

Development

1. Preserve the existing character of the corridor.
2. Encourage new residential development along the southern corridor that is compatible with existing development.
3. Manage neighborhood commercial development.

Transportation

4. Improve the safety and mobility for motorists, bicyclists, and pedestrians.
5. Redesign intersections to improve traffic flow and safety.
6. Preserve University Parkway as a scenic thoroughfare.
7. Encourage better connectivity with the existing and future street network.

Utilities

8. Increase utility access to adequately meet the demands of new development.
9. Avoid overextending utilities.
10. Manage stormwater as new development occurs.

Environmental

11. Preserve the corridor's existing agricultural and natural land.

Institutions

12. Strengthen the relationship between the University Parkway Corridor and the University of Southern Indiana (USI).
13. Assist Evansville-Vanderburgh School Corporation (EVSC) to better serve the corridor.

Recreation

14. Increase recreational opportunities along the corridor.

Plan Process & Elements

The Vanderburgh County Commissioners, Vanderburgh County Area Plan Commission (APC), and the Evansville Metropolitan Planning Organization (MPO) retained the planning team of Rundell Ernstberger Associates (REA), Lochmueller Group, and Powers Engineering to facilitate a planning process for the creation of a strategic land use and transportation corridor plan for University Parkway. The process began in May, 2017 with the development of a staff working group, to provide input and guidance to the consultant team.

This plan is a culmination of that process to guide development over the next twenty years. The plan contains many different chapters.

This **first chapter**, the Introduction, provides an overview of the plan's purpose, existing conditions, vision and goals, plan organization and the key outcomes of the plan.

The **second chapter** summarizes the public outreach efforts and the direction from each public meeting and the surveys. The input from the public guided the direction of the plan and the recommendations.

The **third chapter**, preferred scenario, is the meat of the document that will be referred to often by the County Commissioners and Area Plan Commission. It contains the future land use map, land use descriptions, and photo images of the land use classifications. It also contains the transportation recommendations, where improvements should be targeted and other supporting information.

The **fourth chapter** uses the goals as an organizational feature for the objectives and recommendations for the corridor. There were very specific issues that were identified during the public input process that needed to be addressed, and those recommendations are summarized here. The major goals include development, transportation, utilities, environmental, institutions, and recreation.

The **fifth chapter**, Implementation, is one of the most important chapters as it tells readers how to implement the plan. The chapter provides an overview of adoption, how to interpret various elements in the plan, how to use the plan, and what to consider as part of development review. There is also a section on monitoring and updating the plan discussing an annual review with the APC and the criteria for when an update to the corridor plan should occur.

Appendix A contains a draft of the overlay district standards for the University Parkway Corridor.

Appendix B contains the transportation cost analysis for the improvements recommended in **Chapter 3**.

Appendix C contains the discussion on the two other land use scenarios considered during the creation of the plan. The purpose of this appendix is to document the discussion of the other scenarios.

Appendix D contains the Existing Conditions. It details the baseline trends in the County over many years. It includes the existing land use map as of 2017, an overview of environmental factors, discussion of the existing transportation network and issues, demographic analysis, and housing characteristics. All this information helped to shape the policy of this plan.

KEY OUTCOMES OF THE CORRIDOR PLAN

- Strategic land use plan
- Appropriate development types
- Road and utility infrastructure recommendations
- Overlay district

Public Engagement

Overview

Throughout the planning process, the consultant team offered several public engagement opportunities for residents and interested citizens to provide directions regarding future aspirations for the University Parkway Corridor. These opportunities were critical to the development of the recommended policies, land uses, transportation, and utility improvements. There were four techniques used to seek input including:

- Active Website
- Public Surveys
- Focus Group Interviews
- Public Meetings/Open house

Website

The APC and consultant team collaborated to create a project website. The consultant team provided information to the APC as they maintained the site. This project website acted as a platform to offer project updates, schedules, surveys, documents for review, etc. Email updates often cued residents to check the site and to stay informed.

Survey Results

Surveys were one of the opportunities to provide input and feedback regarding the corridor and its future direction. During the process, there were three surveys presented to residents. Each of the surveys covered a different set of topics to guide and direct the vision for the Corridor.

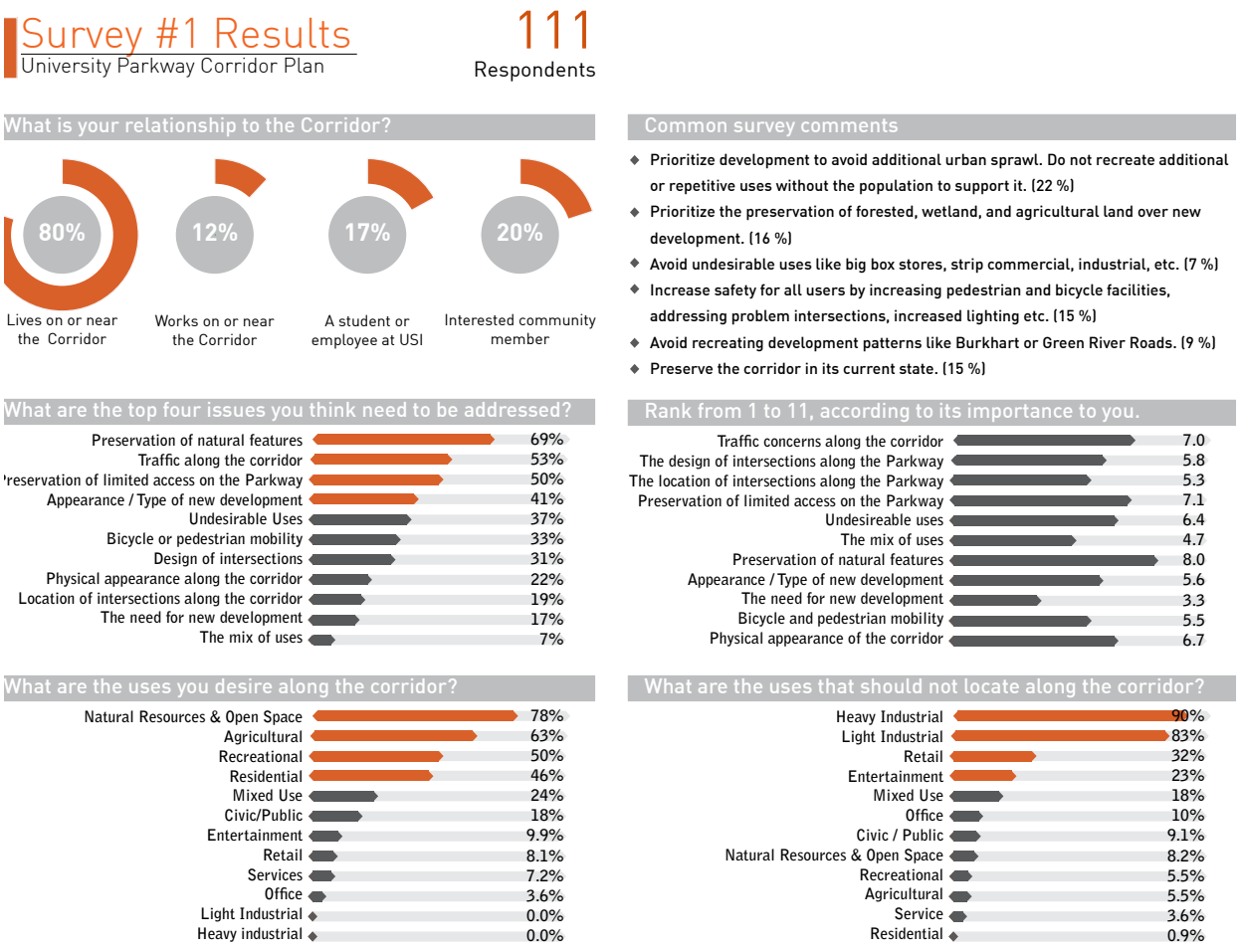


Figure 2-1 Survey 1 Results

Survey 1

Survey 1 was a general survey covering a broad range of topics to gauge how participants related to the Corridor, what major concerns were, and what they saw as the major land uses that should and should not be permitted along the Corridor. The survey indicated that many residents were focused on the preservation of natural areas and agricultural land along University Parkway. They were also concerned with the potential impacts development might have on traffic volumes, free flow of traffic on University Parkway, and the appearance of the area.

Survey 2

Survey 2 began to hone in on the development and regulatory desires of the community. Topics that were addressed include land use preferences, location of development, and zoning ordinance modifications. The survey results indicated that land use preferences were heavily weighted towards preserving the existing character of the corridor and allowing such use as residential, agricultural, and open space. Respondents did not wish to see industrial, research and development, and neighborhood mixed use. Many residents also expressed interest in large residential lot sizes, the preservation of natural and agricultural areas, and the addition of trails along the corridor.

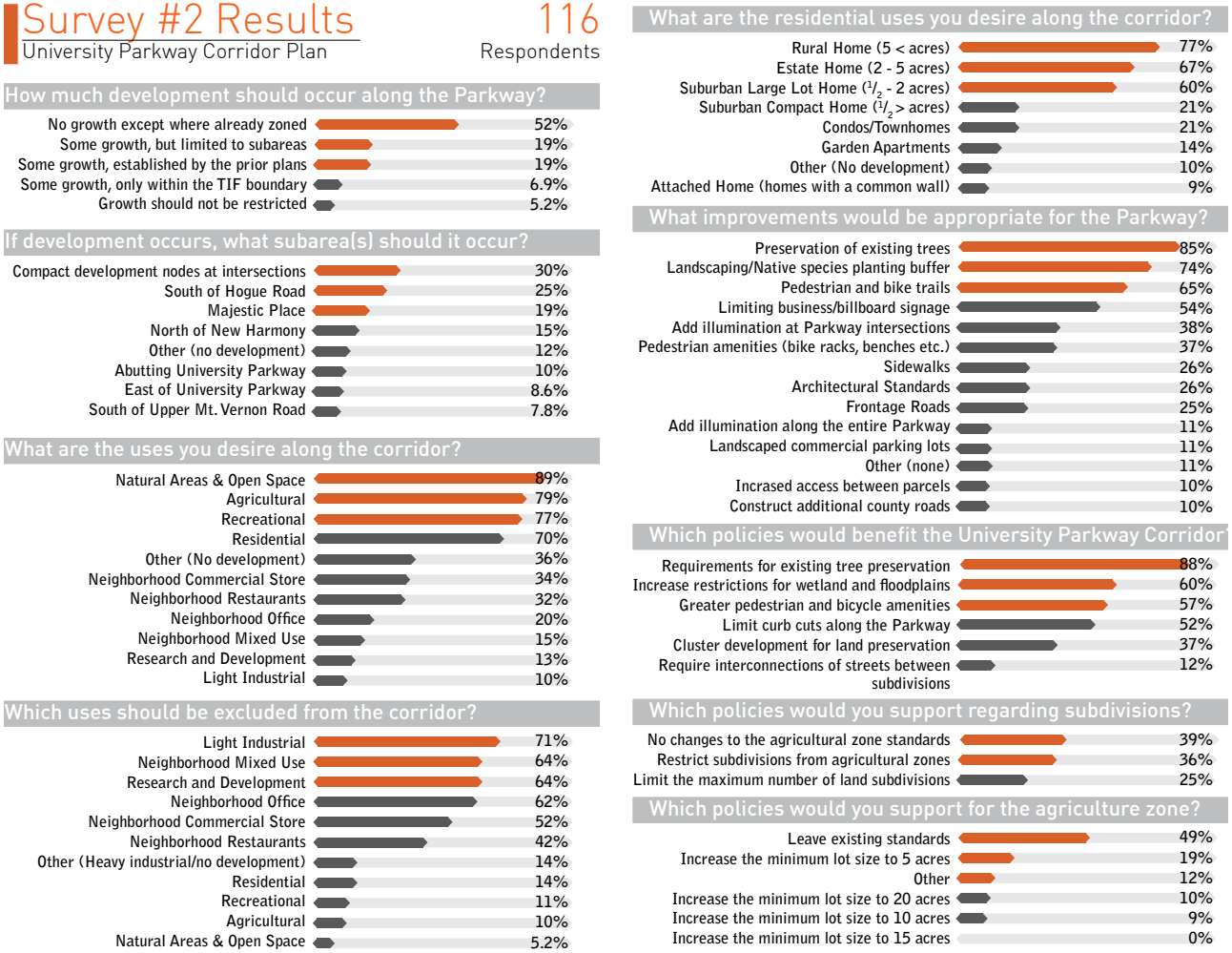


Figure 2-2 Survey 2 Results

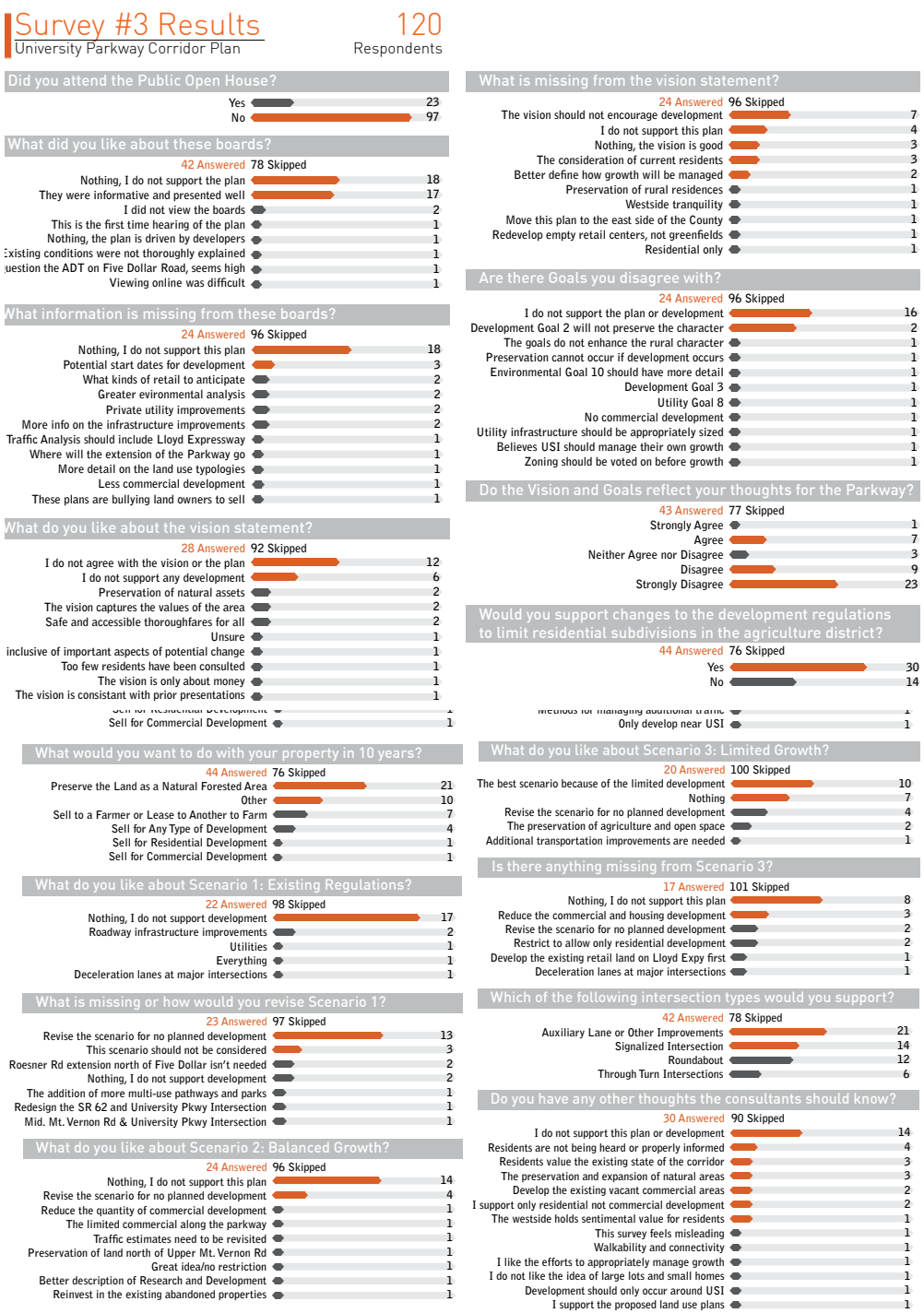


Figure 2-3 Survey 3 Results

Survey 3

Survey 3 was created to gather additional input on the draft vision; goals and objectives; and land use, transportation, and utility scenarios. These materials were originally presented at the Public Open House for public input and comment. Because the information presented at the open house contained recommendations and addressed the future direction for the corridor, the information was posted on the website to offer additional opportunities for input. In addition to the Open House materials, the survey posed hypothetical questions gauging how respondents would manage land in the near future.

Focus Group Interviews

The Focus Group Interviews were an opportunity to better understand the needs and desires of the corridor from multiple perspectives. Various local officials, organization and institutional representatives, private developers, and residents in the study area were brought together to gain insight on the University Parkway Corridor. Through discussions with these individuals, the team ascertained the strengths, assets, areas of conflict or concern, potential opportunities, and general vision for the Corridor.

To help facilitate these interviews, groups were constructed based upon the field of work or interests an individual represented. This was an attempt to avoid conflicts and encourage greater discussion between members of each focus group. The focus groups were organized into the categories listed below.

- City/County Staff
- County Commissioners
- Local Institutions
- Area Plan Commission
- Property Owners
- Developers

Each of these groups were comprised of various organizations, County departments, local institutions, businesses, or general residents. Individuals who were contacted to participate in the focus groups include:

- County Staff
- EWSU
- Utility Management Staff
- Emergency Response
- County Council
- County Commissioners
- Area Plan Commission members
- Land Owners/Residents
- USI
- EVSC
- Private Developers
- Local organizations and institutions
- GROUP
- Indiana Farm Bureau
- Growth Alliance for Greater Evansville
- West Side Sportsman's Club
- Southwest Indiana Builders Association

Public Meeting

The first public meeting held was an introduction to the project for the public to learn about the intent of the plan. The meeting began with an overview of the project's process, identifying the boundaries of the study area, what the plan hopes to accomplish and what has been accomplished thus far. To make the meeting a productive input session, the large group of attendees were broken up into smaller groups of 8 to 12 for group discussion and brainstorming. Each group was tasked with addressing three major topics and then reporting back with their ideas. During the half hour of discussion, the consultant team and County staff migrated between groups to facilitate discussion and answer questions. The three questions posed were:

- What are the key issues?
- What are the key assets along the corridor?
- In 25 years, what is your vision for the corridor?

After discussion, the groups gathered back together to report on their various ideas. Due to the large number of attendees, not all groups had the opportunity to relate their ideas; however, all the comments were collected by the consultant team. This list of ideas was aggregated together, which brought to light several topics which were repeated among most of the groups. Some of these topics include:

- Problematic intersections which have congestion or safety concerns (Diamond Avenue & Lloyd Expressway)
- Concerns that new development will substantially increase traffic volumes and congestion
- Preserving agricultural and environmentally sensitive land
- Preserving the corridor's existing rural character
- Increasing safety along the corridor for existing and future drivers. This could be done through increased lighting, better signage, signalization of intersections, etc.
- Stormwater management
- Avoiding undesirable uses such as big box stores, industrial, strip centers, etc.
- Increasing pedestrian and bicycle facilities along existing corridors and the creation of a new trail network
- The availability and extension of utilities such as water, sewer and internet/fiber for new and existing land owners.

Public Open House

The second public meeting held for the University Parkway Corridor Plan was held in an open house format to increase the flexibility for attendees schedules and allowing more open discussions with attendees as they cycled through the display boards provided. This open house covered a wide range of topics to help offer a broad understanding of the corridor and the potential changes that could occur. The display boards progressed through stations on the project purpose; schedule; existing conditions; vision and goals; and the land use, transportation, and utility scenarios.

As people progressed through the presentation boards, they were given a comment sheet to list their opinions on. These comments were collected and aggregated together to help focus the opinions of the various attendees. Some of the major comments that were most often expressed include:

- General desire to prevent urban sprawl
- The agricultural and natural countryside should be preserved
- The utilization of existing retail space should occur before new retail can be built
- The Parkway should have a focus on single-family development
- Increase the pedestrian and bicycle amenities along the Corridor
- A preference for the addition of roundabouts over other traffic improvements
- Prevent University Parkway from developing like existing suburban developments along Burkhardt Road, Green River Road, or Pearl Drive.

Recommended Scenario

Overview

Three future land use scenarios were developed based on information gathered during the existing conditions analysis and initial public engagement sessions. These scenarios represent the planning horizon year of 2040. Based on discussions and feedback, the three scenarios were refined to create a recommended option. These scenarios are described in greater detail in **Appendix C**.

The recommended scenario most closely followed Scenario 2. This scenario was chosen to blend the desires of the development community, residents, institutions, and local officials. A few of the major features which are prominent in this development scenario include:

- Restricting growth from occurring north of Upper Mount Vernon Road.
- Increasing environmental restrictions to preserve the natural conditions.
- Restricting large residential development in agricultural districts.

Land Use

Land Use Descriptions

Agriculture

Agriculture areas are those lands that are sparsely populated and used primarily for crop production, growing produce, raising of livestock, and single-family homes associated with agriculture use. Generally, development in these areas will utilize on-site services since public utilities are not available.

Scenarios 2 and 3: Preservation of continuous agriculture acreage is seen as important to sustain the character of the University Parkway Corridor north of Upper Mt. Vernon Road. Future land divisions in this area should not result in densities greater than one dwelling unit per 20 acres.

Conservation

Conservation areas are identified to protect sensitive land and environmental features from development. These Conservation areas include floodplains, wetlands, forests/tree stands, and cemeteries. Conservation of these areas has an inherent long-term value. Most importantly, preventing construction in flood hazard areas has a public-safety purpose and helps to minimize property damage during flood events. Crop production, tree stands, and low-impact recreation uses may take place in Conservation areas, but more intense agriculture operations and buildings should be limited to preserve the function and character of these zones. The Conservation areas generally follow environmental features, and as such, do not align with parcel boundaries. Estate/Rural residential development may still be possible on many of these parcels and should be designed to protect as much of the environmental feature as possible using such techniques as clustering development or conservation subdivision design. Any residential development should be reviewed on an individual basis to determine its appropriateness.

Agricultural

Agricultural Subdivisions

Farmland, within the state of Indiana is on the decline. The decline of this vital resource has become a growing concern among the agricultural community. Urban development caused the loss of 24 percent of the agricultural land between 1950 and 2007. This decline of farmland continues today. Between 1992 and 2012, close to 31 million acres of agricultural land was lost to development across the county. 11 million of these acres were prime farmland. Low-density residential is one of those major threats with 34.5 percent of this development choosing cropland and pastures to develop on. [1]

To combat this heavy development of agricultural, land new policies and regulations are needed to manage this growth. A common method is to increase the minimum lot size to 20-30 acres preventing typical subdivisions from occurring. This method is easily administered, encourages slower growth in agricultural districts, and generally is successful in retaining a rural landscape. Additionally, in other communities in Indiana, it is typical to rezone an agriculture district to a residential district in order to develop a residential subdivisions prior to the development of a subdivision.

[1]Farms Under Threat: The State of America's Farmland, American Farmland Trust, A. Ann Sorensen, Julia Freedgood, Jennifer Dempsey and David M. Theobal, 2018

Recreation and Open Space

Recreation areas are large open spaces providing opportunities for leisure, recreational, and sporting activities and events. This zone would require buffering from other adjacent uses reducing the level of noise, light, or other impacts. Estate/Rural residential development may be permitted in this zone but would require appropriate buffering from the primary use. Any proposed development should be reviewed on an individual basis to determine its appropriateness.

Estate / Rural Residential

The Estate / Rural Residential areas reflect much of the established character of the University Parkway corridor. These areas are comprised of single family homes on large lots that may include woodlands, open space, or associated agriculture activities. These areas are not commonly served by municipal water and sewer services, and therefore have a minimum lot size of 2.5 acres. Subdivisions in the Estate / Rural Residential areas should be designed around natural features to highlight forested areas, hillsides, streams and drainage courses, lakes, and tree-lined fence rows. In addition to single family residential uses, limited institutional and recreation activities may be appropriate.

Neighborhood Residential

Neighborhood Residential areas consist of single family residential subdivisions, which provide a range of dwelling and lot sizes. Typical densities are in the range of two to seven dwelling units per acre, which must be served by water and sewer utilities. The defined character may vary by neighborhood, but new developments should provide a transition from the existing densities in adjacent neighborhoods to higher densities, if applicable. New neighborhoods should have walkable, well-organized street and sidewalk systems that connect to surrounding neighborhoods and nearby destinations. They should be designed around natural features to highlight active and passive open space areas as accessible community amenities.

Mixed Residential

Mixed Residential areas provide for a range of housing types, including apartments, townhomes, condominiums, duplexes, and single-family homes on small lots. These areas allow for greater flexibility in form and scale to achieve active, cohesive, and vibrant neighborhoods. Mixed Residential developments should be designed around common open space and amenity areas. Given dwelling unit densities in the range of 10 to 20 units per acre, municipal sewer and water utilities are a requirement. Building height should range from two to three stories and should scale down to adjacent single-family neighborhoods or be appropriately buffered. Mixed Residential developments should include an emphasis on quality open space as a community amenity. Other common amenities associated with Mixed Residential projects include clubhouses, pools, fitness centers, playgrounds, landscaping, and multi-use paths.

Research & Development Flex

The Research and Development (R&D) Flex area is intended for institutional, office, research and development, and small-scale prototyping and light manufacturing uses; these primary uses may be supported by limited local commercial uses as a secondary element following or integrated into the Flex development. Building types may include low-scale, larger footprint structures or multi-story buildings in a business park setting. Nearly all operations should be conducted within enclosed buildings. When parcels are subdivided into a business park, they should be designed to incorporate shared open space and stormwater management facilities. Industrial uses that involve outdoor storage or processing of materials and that generate significant truck traffic are not encouraged. The Research and Development Flex area is located to capitalize on University Parkway access, visibility, landscaped plantings, and bicycle and pedestrian facilities to better connect to adjacent development.

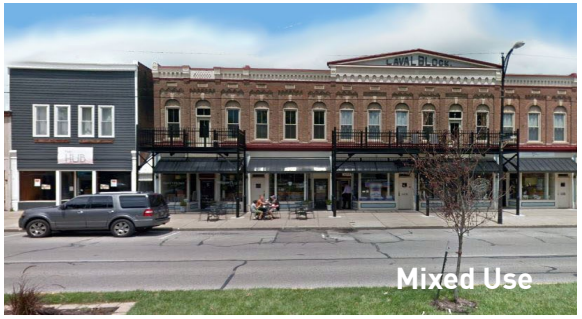

Conservation


Recreational


Estate / Rural Residential


Commercial


Neighborhood Residential


Mixed Use


Mixed Residential


Research & Development

Commercial

The Commercial land use area represents an activity center for a variety of uses including office, retail, restaurants, and professional service businesses. This area has the potential to be an employment and tax revenue generator for the community. Neighborhood scaled commercial uses generally serve the University Parkway residents but have the potential to serve a larger area with adequate transportation infrastructure. Higher intensity uses should be located closer to University Parkway or central to the development, with less intensive uses transitioning to residential areas. Buildings should be arranged so that they frame and define the street network; internal drives should resemble streets rather than parking lot drive aisles. Large expanses of surface parking, particularly between the building front and the street, should be avoided. Landscape plantings should be used to create more attractive developments and buffer adjacent single family residential areas, parking lots, and service areas. A coordinated pedestrian system should be provided throughout the commercial area, connecting uses on the site, on adjacent properties, and beyond.

Mixed Use

The mixed used category provides for diverse, high-activity uses within a connected and pedestrian scaled environment. A mixed use development area could be part of a larger development or a standalone building at the corner of key intersections. Appropriate uses include restaurants, small-scale retail and professional services, offices, multifamily apartments and condominiums, townhomes, and recreation amenities. Building heights should typically range from two to three stories, with active commercial uses on the first floor and office or residential uses on upper floors.

Mixed uses should have a coordinated type, scale, and density of development with high quality architecture, bicycle facilities, wide sidewalks, plazas, and other amenities to activate the street network. Building setbacks from the primary street should be minimal. All buildings should have an entry oriented toward the primary street; first floor non-residential uses should include large windows to allow views into and out of the space to better activate the adjacent streetscape. Bicycle and pedestrian facilities should be included to connect the mixed use to adjacent developments and facilities.

Land Use

The recommended land use scenario (figure 3-1) is the proposed detailed development plan for the University Parkway Corridor. This plan would supplement the land use plan in the Comprehensive Plan for the University Parkway area.

This plan guides new development but does not guarantee that development will occur. Property owners are the ones who determine whether their property stays in its current use or will be developed into a different use.

Prior to this plan, certain areas were already zoned for commercial and residential use including Majestic Place and an undeveloped R-3 area just north of Lloyd Expressway and east of the Posey County Line. These areas could be developed under the applicable zoning districts which are now by-right zoning districts. The recommended scenario shows additional planned development in the area south of Upper Mt. Vernon Road, which would require rezoning for this development pattern to be realized.

To help illustrate the character of future development that is expected based on the policy in this plan, several conceptual illustrations were prepared. The first illustration, shows Majestic Place developed as a mixed-use district fronting the Parkway. A central roadway should be considered that would be lined with neighborhood commercial. This commercial zone would contain a mix of neighborhood serving stores, restaurants, and housing. The development should be surrounded by conservation zones buffering the adjacent residential developments with landscape and open space. A mixed-use node, would be located between Roesner Road and University Parkway, and contain small scale shops, restaurants, offices, and other services needed to serve the residential in Majestic Place and the rest of the corridor. Residential units could be located above commercial spaces or as stand-alone buildings. The northwest section of Majestic Place is proposed to be a mixed residential district surrounded by existing tree stands.

The existing residentially zoned parcels in the southwest corner of the corridor will serve a variety of housing needs. The area could be developed as a mixed residential district integrated into the existing forested and wetland area. To the north, neighborhood residential would blend into the existing residential development.

The area north of Hogue Road and south of Upper Mt. Vernon Road is proposed to be primarily neighborhood residential development with some recreational development adjacent to the West Side Sportsman's Club.

Additionally, there is a proposed research and development (R&D) flex district between University Parkway and Roesner Road. The R&D flex area would be a proposed business park intended to include office, research and development, and light manufacturing uses. Uses which generate substantial truck traffic are discouraged.

Finally, a mixed-use node is proposed at the southeast corner of Upper Mount Vernon and University Parkway. This areas could include a combination of support commercial, office or residential.

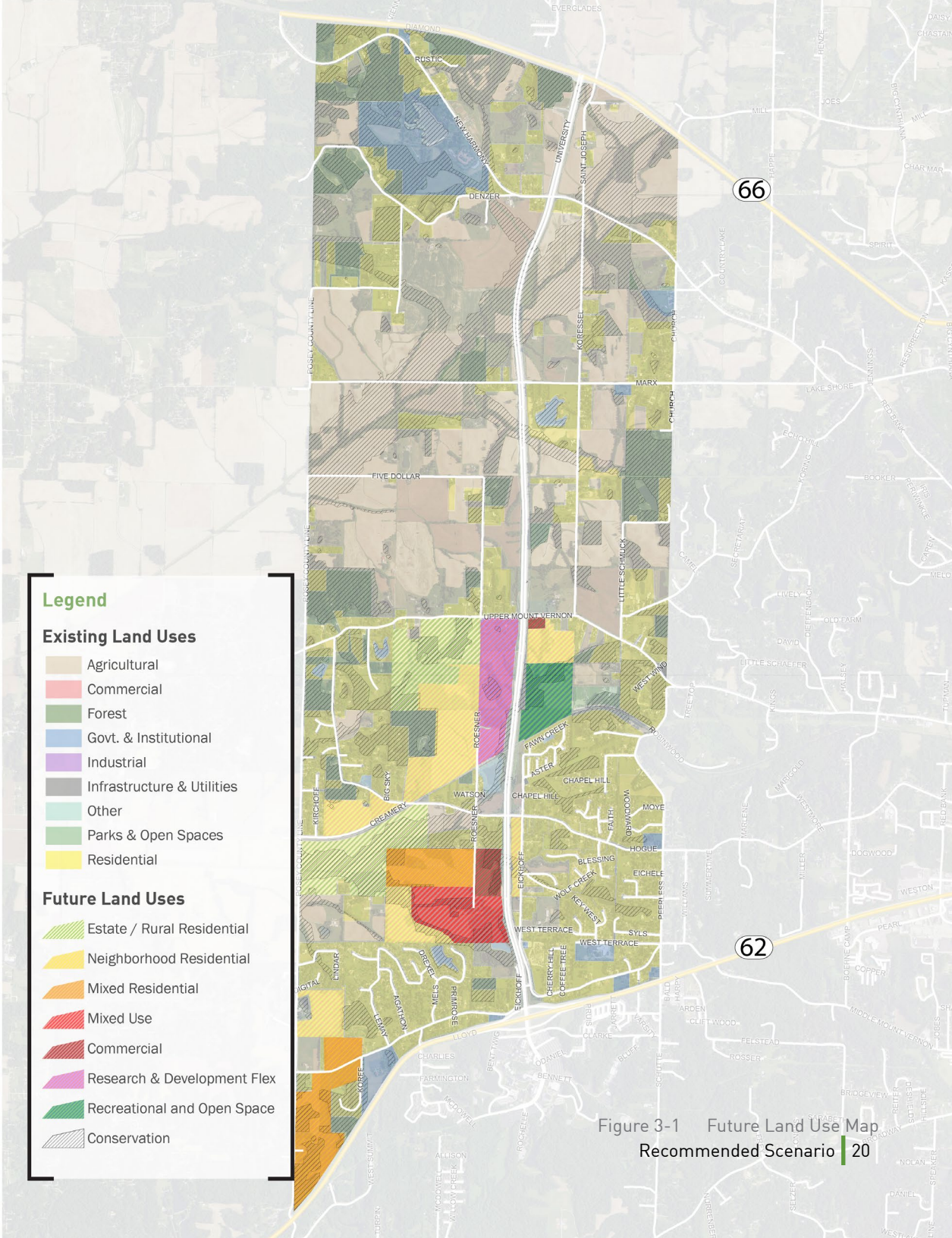


Figure 3-1 Future Land Use Map

Figure 3-2 Majestic Place Conceptual Rendering

Majestic Place

This discussion will refer to the property shown in figure 3-2 above as Majestic Place due to the public's familiarity with the name used during the rezoning process. Majestic Place is at the center of the corridor's development and will offer a rich diversity of shops, services, and housing. The Conceptual Plan (Figure 3-2) is an illustration of a potential type, scale, and density of development that could occur with the new regulations. This concept is based on the plan's recommendations and public comments.

Majestic Place is located west of University Parkway and south of Hogue Road. Currently, several large tree stands, and ponds surround the properties. It is desirable for these assets to be preserved and used for open space, recreational trails, and visual buffers from existing residential and agricultural properties. The central spine of Majestic Place, which accesses University Parkway, will be the "Main Street" with shops and housing lining the active streetscape. To the south of the main street will be a commercial zone spanning from the creek to a natural area to the southeast. This zone will be unique as it allows a variety of commercial uses and diverse housing options.

The area north of main street is proposed to be a mixed use and housing zone. The mixed use zone abuts University Parkway and Roesner Road. Buildings here should be a maximum of two to three stories with retail and services located at street level and with housing and offices uses on upper levels.

It is anticipated that residential development would occur in a variety of areas throughout Majestic Place. A single-family neighborhood would be suitable in the southwest corner across the creek. To the north of that area, a compatible mix of residential housing types would provide a variety of options for residents. These could include townhomes, apartments, single-family, etc. based on what the market would bear. These neighborhoods will be intertwined with the existing natural features of the corridor. Within or along these areas, trails and park space will interconnect Majestic Place, and other key areas all the way to USI, creating safe pedestrian and cyclist connections. Within all the housing developments, more diverse sets of home types and lot sizes will be permitted to offer new residents a variety of options.

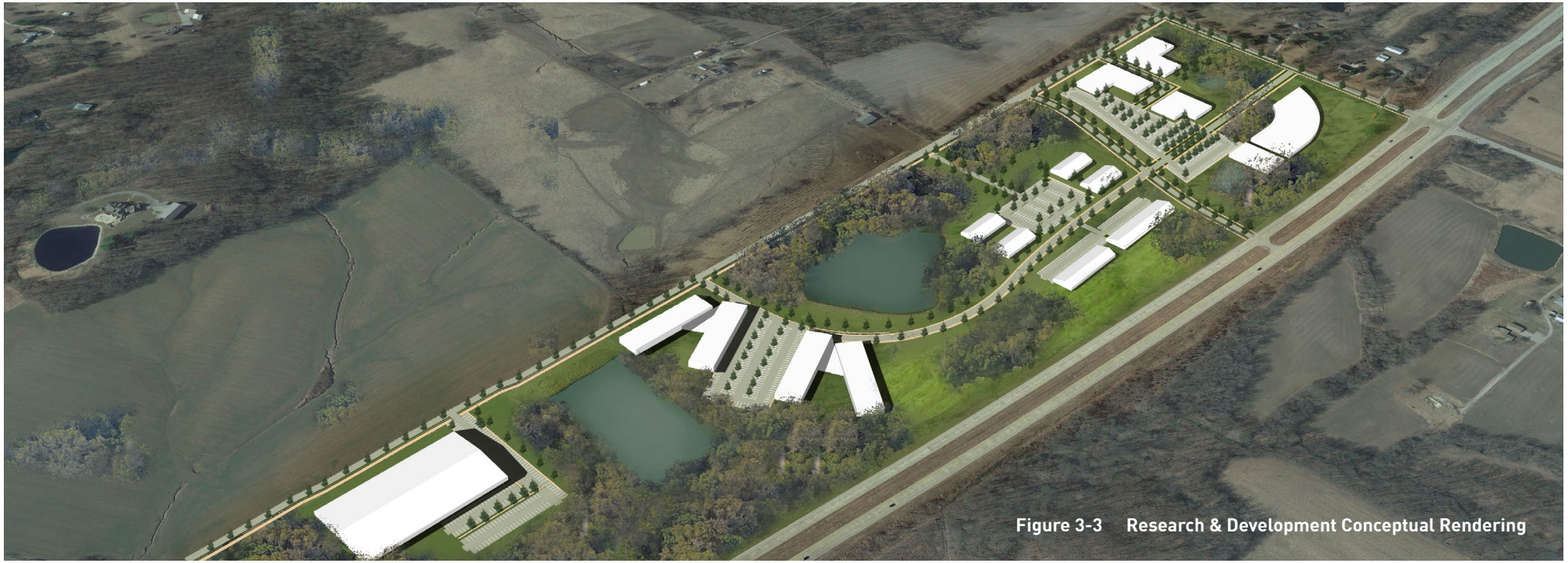


Figure 3-3 Research & Development Conceptual Rendering

Technology Park

The Research and Development Technology Park is a unique opportunity for the corridor to increase employment, educational, and business development. This technology park should be a partnership between the various economic development organizations, universities in Evansville and private companies.

The Conceptual Plan (Figure 3-3) is an illustration of a potential type, scale, and density of development that could occur with the new regulations. This concept is based on the plan's recommendations and public comments to be limited in size and scope.

This development would extend between University Parkway and Roesner Road, north of the railroad up to Upper Mount Vernon Road. The type, scale, and density of development could vary depending on the specific use(s) to be located there. The future design of the Research and Development Technology Park should be integrated into the natural character of the area and preserve the natural and environmentally sensitive areas.

Each development will have an appropriate buffer from existing or potential residential development to preserve an appealing corridor. These structures should use attractive design, building materials, and landscaping to be aesthetically pleasing from both the parkway and Roesner Road.

Transportation

The transportation plan for University Parkway Corridor Plan maintains the integrity of the corridor, enhances safety and mobility for all users, and supports the recommended changes to policy or development standards. The study area includes University Parkway from State Route (SR) 66 to Middle Mt. Vernon Road as well as the adjoining public road network. It should be noted that the interchange with SR 62 was not included since it is currently being studied by INDOT in the Lloyd Expressway (SR 62/66) Corridor Study.

As noted previously, the primary objectives of the transportation plan include:

1. Improve the safety and mobility for motorists, bicyclists, and pedestrians.
2. Redesign problem intersections to improve traffic flow and safety.
3. Preserve University Parkway as a scenic thoroughfare.
4. Encourage better connectivity with the existing and future street network.

In order to meet these needs, a thorough analysis of anticipated future traffic conditions was performed. This included traffic forecasting, alternatives analysis and the establishment of a conceptual master plan for the corridor's transportation infrastructure.

Traffic Forecasting

The regional travel demand model maintained by the Evansville Metropolitan Planning Organization (EMPO) was utilized to estimate future traffic volumes along University Parkway in 2045. The travel demand model accounts for demographic and infrastructure changes anticipated over time to project regional traffic flows.

The most substantial regional project that would impact traffic growth along University Parkway is the future extension of the roadway beyond SR 66 to Interstate 64 (I-64). This extension is part of the region's future roadway plan and is included in the travel demand model.

The model's assumptions for growth adjacent to the corridor were modified to match the land use and density characteristics described in the recommended land use plan. Given the majority of development is planned to the south of Upper Mt. Vernon Road, increases in side-street and turning movement traffic are generally expected at the southern intersections, while side-street traffic to the north is limited to general background growth.

Based on the modeling, the projected Average Daily Traffic (ADT) along University Parkway is expected to grow to approximately 19,000-22,000 by 2045. This compares to an existing ADT of 6,500-8,000.

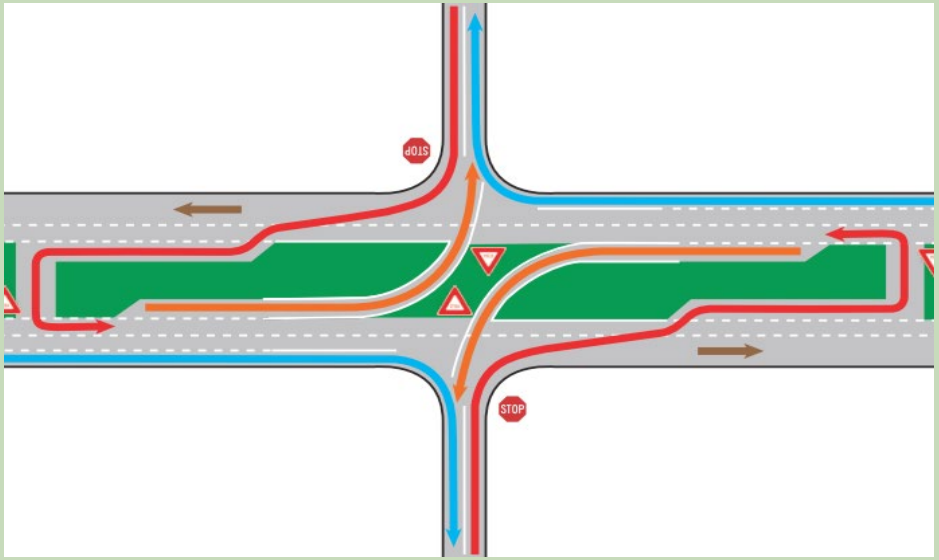
The daily traffic estimates were analyzed to produce anticipated 2045 weekday a.m. and p.m. peak hour traffic forecasts. These peak hour forecasts form the basis for the operational traffic analysis and are summarized in Figure 3-4.

Alternatives Analysis

Based on projected traffic demands, the intersections along the corridor could be controlled in several ways that would be effective from a traffic operations and safety perspective. These include installing traffic signals, constructing roundabouts or through the implementation of a "J-turn" configuration where side-street left-turn and through movements are completed indirectly.

Based on public input, the residents in the area expressed a desire to avoid a fully signalized corridor based on aesthetic and environmental concerns (stop and go traffic) and a desire to preserve uninhibited traffic flow on the Parkway. The installation of multiple traffic signals was also perceived as ineffective at supporting appropriate development in accordance with the proposed land use plan.

If the corridor utilized roundabouts at all major intersections, it would require two-lane roundabouts that would result in significant right-of-way acquisition and widening. In addition, with a possible future connection to I-64, it is likely that the corridor would attract additional freight traffic, which would make the use of roundabouts less attractive due to increased end-to-end travel time and potential geometric constraints.



What are J-Turns?

The J-turn is an alternative to traditional roadway intersections on a four-lane highway. Instead of motorists crossing fast-moving lanes of traffic to get to the opposing lanes, drivers at a J-turn intersection turn right in the same direction of traffic, merge into the left lane, and then make a u-turn in the direction they intend to travel. Although some drivers will have to travel slightly further to get where they want to go, using J-turns can take the same or less time than trying to wait for a safe and appropriate gap to cross traffic, or waiting at a traffic signal.

The point of a J-Turns is to greatly reduce - or even eliminate - a significant number of severe crashes common when drivers must cross-over busy highways to reach another road.

How do J-turns enhance safety?

J-turns have proven to be a safer alternative to a traditional roadway intersection on a four-lane highway because they eliminate or substantially reduce right-angle crashes, the crash the most responsible for fatalities and serious injuries at intersections. In fact, the installation of J-turns at similar intersections throughout Indiana and the nation have shown a substantial decrease in fatal and serious injury crashes.

J-turns eliminate the need for motorists to cross the high-speed lanes of traffic to get to the opposing lanes. Studies done by the National Cooperative Highway Research Program show J-turns provide a significant reduction in right-angle, "far" side crashes.

Additional Resources:
https://www.in.gov/indot/3660.htm
http://www.modot.org/general/J-

YouTube

In a traditional intersection there are 42 different conflict points where an accident can occur. 24 of those 42 conflict points can cause serious accidents such as t-bone or right angle crashes. A J-Turn intersection can have no more than 29 possible conflict points and some J-Turn intersections can be designed so that there are zero crossing conflict points.

Recent statistics about J-turns in Missouri:

The Missouri Department of Transportation has implemented many J-turn projects in recent years and has before-and-after statistics about their safety performance. A recent study conducted by the University of Missouri shows that implementing the J-turn design at intersections of high-speed rural expressways and minor roads results in fewer accidents than those that are controlled by two-way stops.

Researchers assessed five different J-turn intersections in Missouri:

- The J-turn design resulted in a 34.8 percent reduction in crash frequency for all crashes
- A 53.7 percent reduction in crash frequency for all injury and fatal crashes.
- Disabling injury crashes decreased by 86 percent and minor injury crashes decreased by 50 percent.
- Since the J-turns have been in place, none of the five study sites had a single fatality accident.
- One of the most severe crash types, the left turn, right angle crash, was completely eliminated by the J-turn.

Missouri currently has 19 J-Turns and anticipates building more in the future.

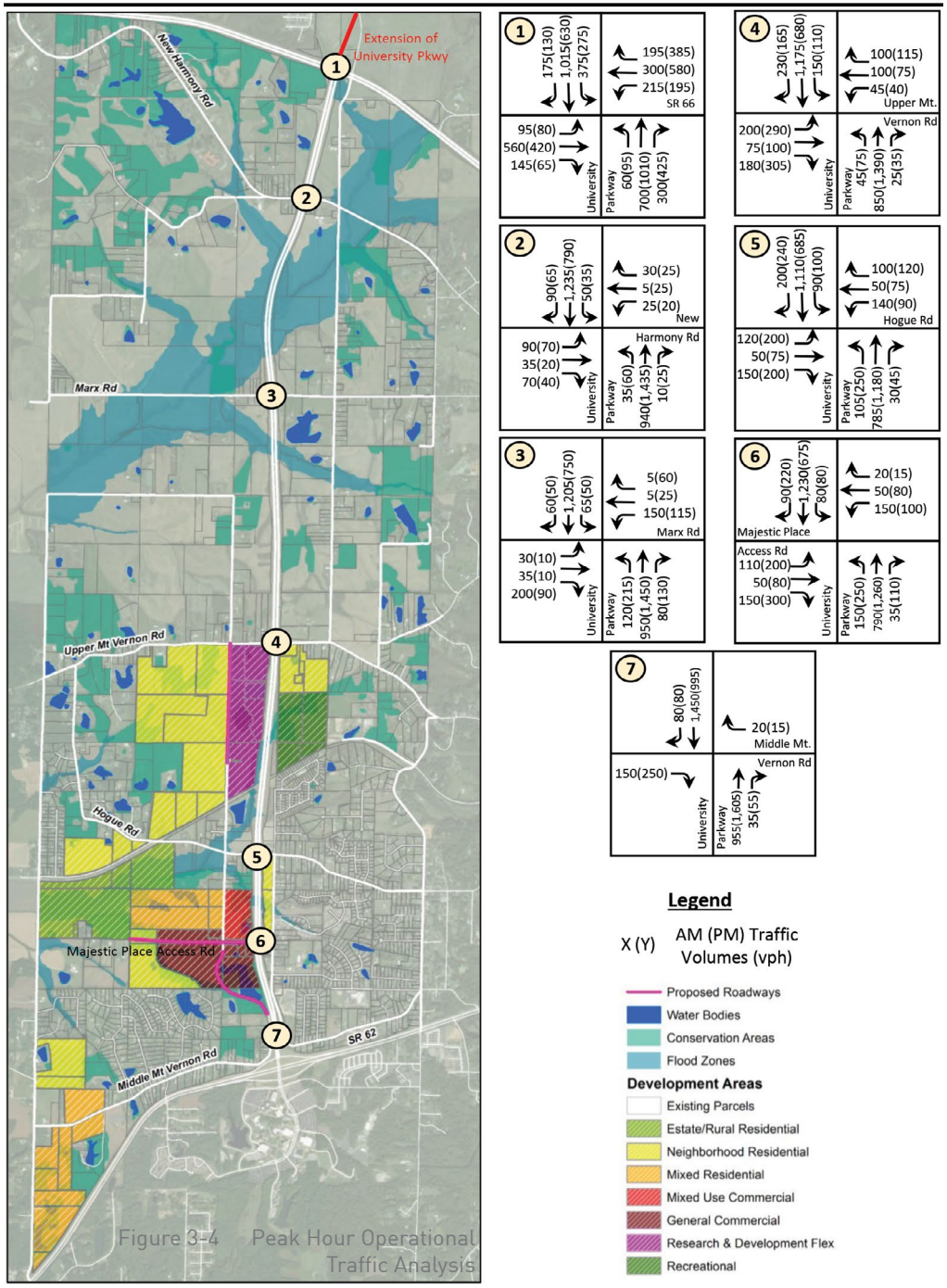


Figure 3-4 Peak Hour Operational Traffic Analysis

Under a J-turn configuration, a partial median would be constructed at each intersection to restrict side-street left-turn and through movements. Those movements are instead accommodated as right turns and a subsequent U-turn downstream. The existing wide median along University Parkway is conducive to this design.

In addition to testing each option for operational effectiveness, a preliminary opinion of probable costs was developed for each alternative. Based on a conceptual layout of each option, the relative costs are expected to be as follows (detailed breakdowns are provided in **Appendix B**):

- Signalization Option: $4.0 Million
- Roundabout Option: $9.1 Million
- J-turn Option: $6.4 Million

As shown, the J-turn option is less expensive than roundabouts, which would require additional widening. The signalized option would be the least expensive initially, although it would have greater long-term maintenance and electricity costs.

Based on these factors as well as the other project goals, including maintaining the parkway and managing development growth, the J-turn configuration was chosen as the recommended scenario. It should be noted that the installation of traffic signals would remain a viable alternative for traffic operations, though that option would not be as effective at satisfying other project goals.

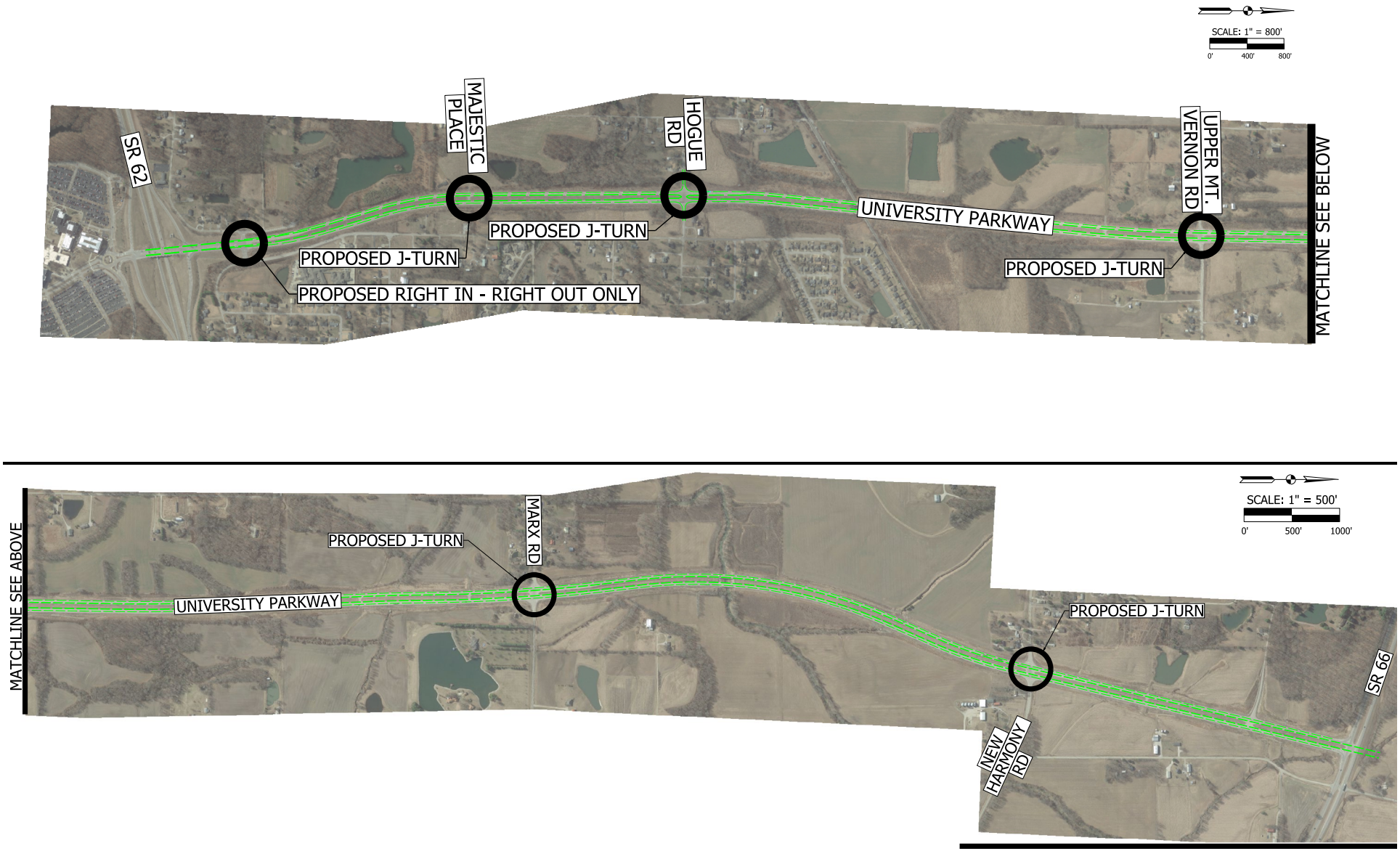


Figure 3-5 Proposed Intersection Improvements

Conceptual Transportation Master Plan

The implementation of a J-turn configuration primarily involves constructing a partial median in the intersection along with U-turns on each side. Figure 3-5 depicts a typical J-turn layout for the intersections along University Parkway, while Figure 3-6 shows a tractor trailer turning movement path utilizing the intersection for mainline left-turn and U-turn movements.

The U-turns would typically be located approximately 700-1,000 feet from the main intersection to accommodate the existing left-turn bays as well as required acceleration and deceleration distances, though more detailed geometrics would be established when the improvements are designed.

It is recommended that Vanderburgh County coordinate with INDOT to implement J-turns at every intersection within the study area for consistency, with the exception of SR 66. Given the forecasted east-west traffic flows on that arterial roadway, a traffic signal is recommended at the intersection of SR 66 and University Parkway. This is consistent with other intersection treatments along SR 66.

It should be noted that an Environmental Assessment would be required to study any potential extension of University Parkway to the north of SR 66 to ultimately connect with I-64. That study would establish specific recommendations for the intersection of University Parkway and SR 66. While it appears that the intersection would operate satisfactorily under signal control, an Environmental Assessment would include a detailed analysis of traffic, safety and environmental considerations to determine the long-term needs of this intersection.

It should be noted that the existing intersection of St. Joseph Road with SR 66 is located very close to University Parkway. In conjunction with the future signalization of SR 66 and University Parkway, it is recommended that INDOT be consulted about closing this intersection to avoid motorist confusion and overlapping traffic operations. At a minimum, a median should be constructed on SR 66 to restrict St. Joseph Road to right-in/right-out movements only.

In addition, at the southern end of the corridor, the existing intersection of University Parkway and Middle Mt. Vernon is too close to the interchange with SR 62 to safely maintain full access. Therefore, it is recommended that a full median be constructed at that location to restrict it to right-in/right-out movements. A new J-turn intersection with access to both sides of University Parkway would be added at the previously approved access location for Majestic Place, and displaced left turns from Middle Mt. Vernon would instead utilize the new intersection, which would be located approximately 2,500 feet to the north.

The benefits of a J-turn corridor include:

- Improves safety by removing the most problematic traffic movements (side-street left-turn and through movements) as traffic grows. Nationwide, statistics show a more than 50 percent decline in crashes where J-turns are installed. Fatal crashes decline by as much as 85 percent as compared to traditional intersection configurations.
- Maintains the median which is integral to the aesthetic and operational integrity of the Parkway
- Minimizes delays for through traffic including the potential for increased freight in the future (no stops are required for mainline traffic)
- Eliminates the need for traffic signal installation, maintenance, and electricity costs
- Provides a strong mechanism for maintaining access management

The trade-off with this approach is that it involves some additional travel time for some local residents and businesses seeking to make a left-turn or through movement from the side street. As noted, those movements will be accommodated as right turns and subsequent U-turns so additional travel time may be required. J-turns are the only reasonable alternative to traffic signals.

Based on the traffic analysis and a preliminary assessment of other design considerations, a conceptual master plan was developed for the corridor that establishes the locations for J-turn intersections as well as the aforementioned traffic signal and right-in/right-out intersection. This corridor plan is shown in Figure 3-7.

The forecasted traffic volumes were used to evaluate the detailed traffic operations of the recommended J-turn plan. The entire corridor was analyzed using a VISSIM microsimulation model. This tool provides thorough measures of operational performance for each traffic movement as well as a visual representation of conditions that is useful for engaging the public.

Based on the VISSIM analysis of 2045 AM and PM peak hour conditions, a summary of anticipated delays, Levels of Service, and queue lengths was developed as shown in Tables 3-1 and 2 for the a.m. and p.m. peak periods, respectively.

As shown, the proposed J-turn configuration could satisfactorily accommodate the long-term traffic growth anticipated through the study area, while maintaining favorable Levels of Service. It should be noted that J-turns provide flexibility to address any operational issues that may arise at a specific location as traffic volumes grow. Although local residents are not yet familiar with J-turns, once installed in the Evansville area, local drivers would become acclimated to them just as drivers in other communities have adjusted to them.

Specifically, partial signals can be installed to better facilitate mainline left-turn or U-turn movements, wherein only one direction of travel is stopped briefly to create platoons and gaps in the traffic flow. For the purposes of this preliminary analysis, partial signals were assumed at the three southern U-turn intersections. The actual location of any partial signals would be determined during design and implemented as traffic demands require the introduction of additional gaps in opposing traffic flows.

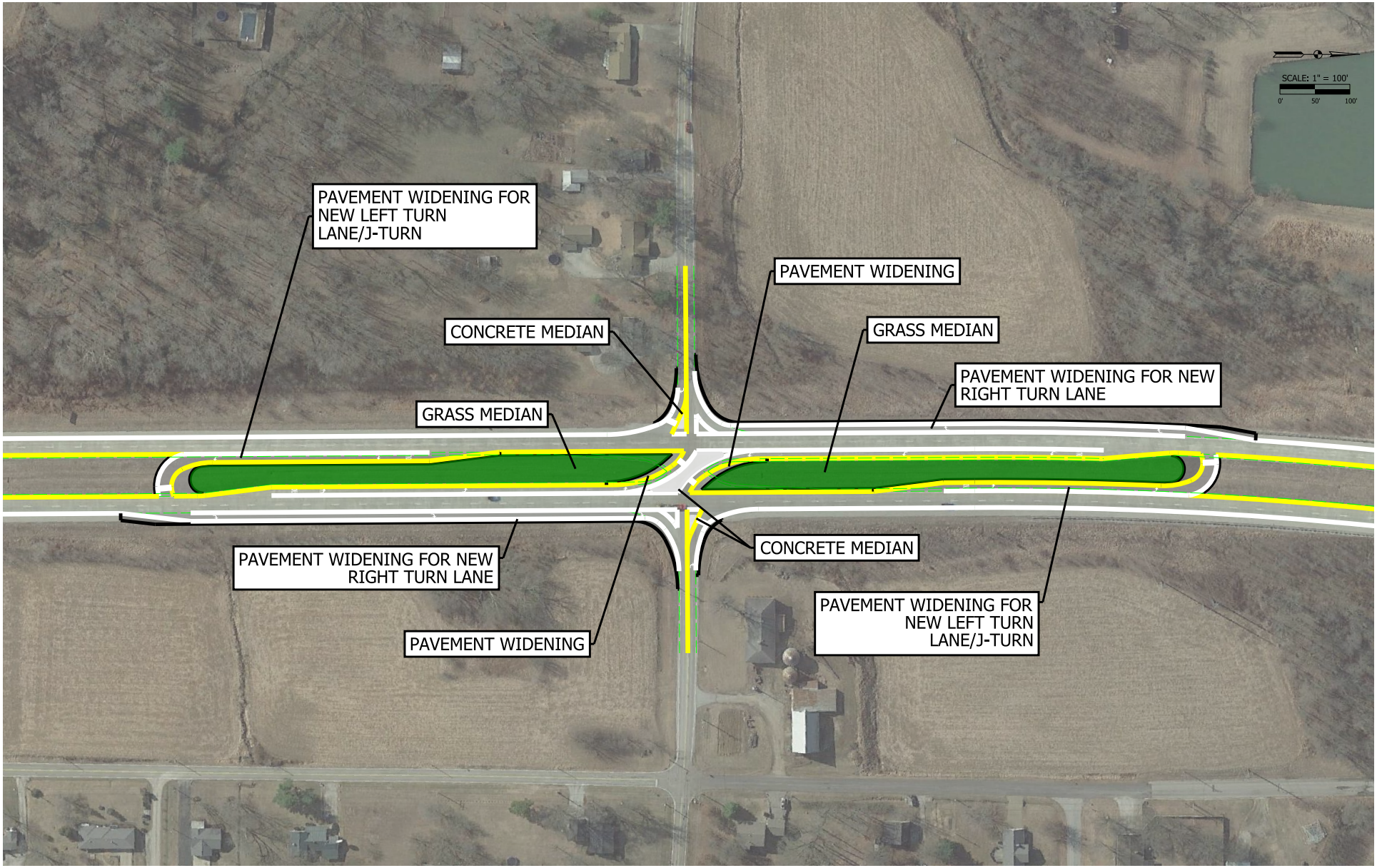


Figure 3-6 Typical J-Turn Alignment

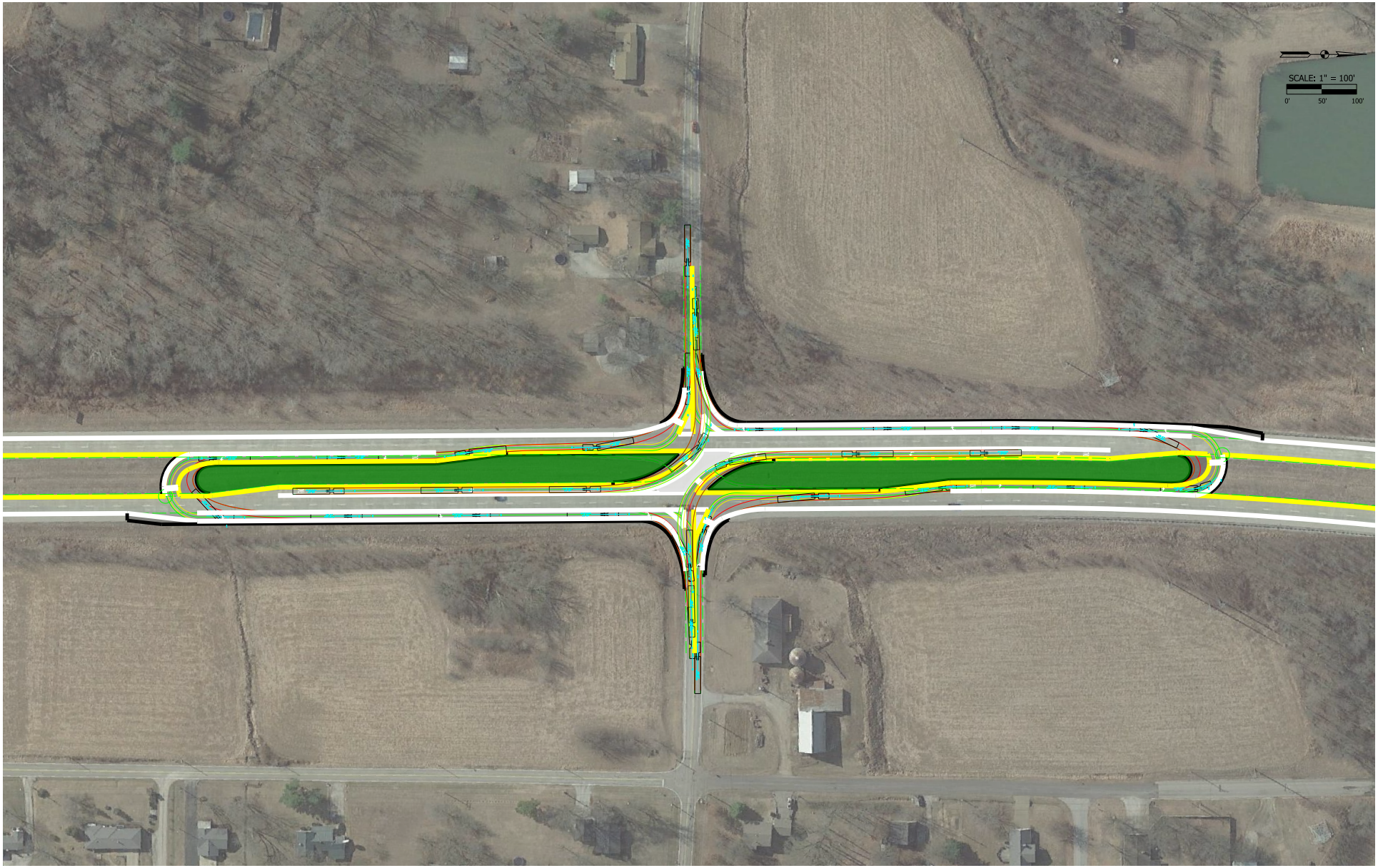


Figure 3-7 J-Turn n Truck Movements

Table 3-1: 2045 Forecasted AM Traffic Operating Conditions

Int. #	Intersection & Movements	Forecasted AM Capacity Analysis Results		
		LOS (Delay)	Avg Queue (ft)	Max Queue (ft)
1	University Pkwy @ SR 66 (Signalized)			
	Overall Intersection	C (27.7)	--	--
	Eastbound Left-turn	C (31.8)	59	239
	Eastbound Through	D (37.7)	60	239
	Eastbound Right-turn	A (9.1)	93	290
	Westbound Left-turn	D (43.6)	54	262
	Westbound Through	C (27.5)	54	262
	Westbound Right-turn	A (6.9)	43	269
	Northbound Left-turn	C (30.2)	61	282
	Northbound Through	A (7.6)	20	323
	Northbound Right-turn	C (32.0)	61	281
	Southbound Left-turn	D (43.5)	102	522
	Southbound Through	C (25.3)	100	522
	Southbound Right-turn	A (9.5)	99	507
2	University Pkwy @ New Harmony Rd			
	Overall Intersection	A (1.8)	--	--
	North U-Turn	B (14.9)	2	54
	Eastbound Right-turn	A (6.2)	3	104
	Westbound Right-turn	A (3.1)	0	38
	Northbound Left-turn	C (17.1)	2	61
	Northbound Right-turn	A (0.2)	0	0
	Southbound Left-turn	C (17.5)	3	74
	Southbound Right-turn	A (1.7)	0	33
	South U-Turn	C (18.4)	11	128

3	University Pkwy @ Marx Rd			
	Overall Intersection	A (1.2)	--	--
	North U-Turn	C (20.1)	6	87
	Eastbound Right-turn	A (3.8)	2	94
	Westbound Right-turn	A (2.4)	0	56
	Northbound Left-turn	B (14.5)	3	66
	Northbound Right-turn	A (0.5)	0	0
	Southbound Left-turn	B (13.3)	3	74
	Southbound Right-turn	A (1.3)	0	33
	South U-Turn	C (15.7)	4	78
4	University Pkwy @ Upper Mt. Vernon Rd			
	Overall Intersection	A (5.2)	--	--
	North U-Turn	C (21.0)	18	134
	Eastbound Right-turn	A (8.9)	12	282
	Westbound Right-turn	A (4.3)	2	105
	Northbound Left-turn	D (30.6)	44	231
	Northbound Right-turn	A (1.5)	0	44
	Southbound Left-turn	B (11.7)	5	87
	Southbound Right-turn	A (3.8)	2	103
	South U-Turn	B (13.5)	19	155
	U-Turn Northbound	B (11.4)	18	181
5	University Pkwy @ Hogue Rd			
	Overall Intersection	A (2.7)	--	--
	North U-Turn	D (31.0)	40	232
	Eastbound Right-turn	A (7.3)	5	141
	Westbound Right-turn	A (3.8)	2	111
	Northbound Left-turn	C (18.4)	9	107
	Northbound Right-turn	A (0.9)	0	0
	Southbound Left-turn	B (10.1)	4	79
	Southbound Right-turn	A (2.0)	1	67
	South U-Turn	B (11.4)	9	110
	U-Turn Northbound	A (4.3)	57	230

6	University Pkwy @ Majestic Place Access Rd			
	Overall Intersection	A (2.8)	--	--
	North U-Turn	E (47.6)	82	308
	Eastbound Right-turn	A (6.4)	5	142
	Westbound Right-turn	A (4.2)	2	84
	Northbound Left-turn	C (24.4)	21	160
	Northbound Right-turn	A (0.6)	0	0
	Southbound Left-turn	B (10.1)	3	86
	Southbound Right-turn	A (1.7)	0	58
	U-Turn Northbound	A (7.7)	11	124
	South U-Turn	B (11.0)	9	99
7	University Pkwy @ Middle Mt. Vernon Rd			
	Overall Intersection	A (0.6)	--	--
	Eastbound Right-turn	A (3.7)	2	75
	Westbound Right-turn	A (2.0)	0	41
	Northbound Right-turn	A (0.9)	0	0
	Southbound Right-turn	A (1.1)	0	0

Table 3-2: 2045 Forecasted PM Traffic Operating Conditions

Int. #	Intersection & Movements	Forecasted AM Capacity Analysis Results		
		LOS (Delay)	Avg Queue (ft)	Max Queue (ft)
1	University Pkwy @ SR 66 (Signalized)			
	Overall Intersection	C (25.4)	--	--
	Eastbound Left-turn	D (36.6)	40	175
	Eastbound Through	C (32.2)	41	175
	Eastbound Right-turn	A (6.7)	71	225
	Westbound Left-turn	D (38.5)	61	268
	Westbound Through	C (27.6)	61	268
	Westbound Right-turn	B (11.3)	57	274
	Northbound Left-turn	C (24.3)	64	319
	Northbound Through	A (9.3)	17	358
	Northbound Right-turn	C (26.9)	64	319
	Southbound Left-turn	E (60.8)	100	401
	Southbound Through	C (20.5)	98	400
	Southbound Right-turn	A (7.8)	92	415
2	University Pkwy @ New Harmony Rd			
	Overall Intersection	A (1.4)	--	--
	North U-Turn	B (13.6)	3	71
	Eastbound Right-turn	A (4.4)	2	81
	Westbound Right-turn	A (4.5)	1	60
	Northbound Left-turn	B (14.0)	2	53
	Northbound Right-turn	A (0.5)	0	0
	Southbound Left-turn	C (18.5)	2	59
	Southbound Right-turn	A (1.5)	0	29
	South U-Turn	C (20.8)	9	98

3	University Pkwy @ Marx Rd			
	Overall Intersection	A (1.1)	--	--
	North U-Turn	C (16.4)	5	89
	Eastbound Right-turn	A (2.4)	0	49
	Westbound Right-turn	A (3.8)	2	84
	Northbound Left-turn	B (12.0)	3	69
	Northbound Right-turn	A (0.4)	0	0
	Southbound Left-turn	C (16.1)	3	79
	Southbound Right-turn	A (1.2)	0	25
	South U-Turn	C (18.9)	2	63
4	University Pkwy @ Upper Mt. Vernon Rd			
	Overall Intersection	A (3.7)	--	--
	North U-Turn	B (13.4)	8	108
	Eastbound Right-turn	A (7.7)	6	293
	Westbound Right-turn	A (5.9)	5	131
	Northbound Left-turn	B (13.5)	9	123
	Northbound Right-turn	A (1.8)	0	46
	Southbound Left-turn	C (17.3)	10	122
	Southbound Right-turn	A (2.8)	1	71
	South U-Turn	C (21.9)	39	262
	U-Turn Northbound	B (11.2)	27	280

5	University Pkwy @ Hogue Rd			
	Overall Intersection	A (4.2)	--	--
	North U-Turn	C (16.9)	18	148
	Eastbound Right-turn	A (7.7)	4	144
	Westbound Right-turn	A (5.3)	5	119
	Northbound Left-turn	C (20.5)	23	195
	Northbound Right-turn	A (0.9)	0	8
	Southbound Left-turn	B (14.5)	7	92
	Southbound Right-turn	A (3.3)	2	105
	South U-Turn	C (20.4)	30	210
	U-Turn Northbound	A (4.7)	46	225
6	University Pkwy @ Majestic Place Access Rd			
	Overall Intersection	A (4.4)	--	--
	North U-Turn	D (30.5)	67	283
	Eastbound Right-turn	A (8.5)	7	214
	Westbound Right-turn	A (6.7)	5	114
	Northbound Left-turn	D (25.8)	42	271
	Northbound Right-turn	A (0.6)	0	0
	Southbound Left-turn	C (16.3)	7	96
	Southbound Right-turn	A (3.2)	2	85
	U-Turn Northbound	A (8.7)	27	276
	South U-Turn	C (21.0)	33	210
7	University Pkwy @ Middle Mt. Vernon Rd			
	Overall Intersection	A (0.7)	--	--
	Eastbound Right-turn	A (3.6)	2	84
	Westbound Right-turn	A (2.7)	0	33
	Northbound Right-turn	A (1.0)	0	0
	Southbound Right-turn	A (1.1)	0	0

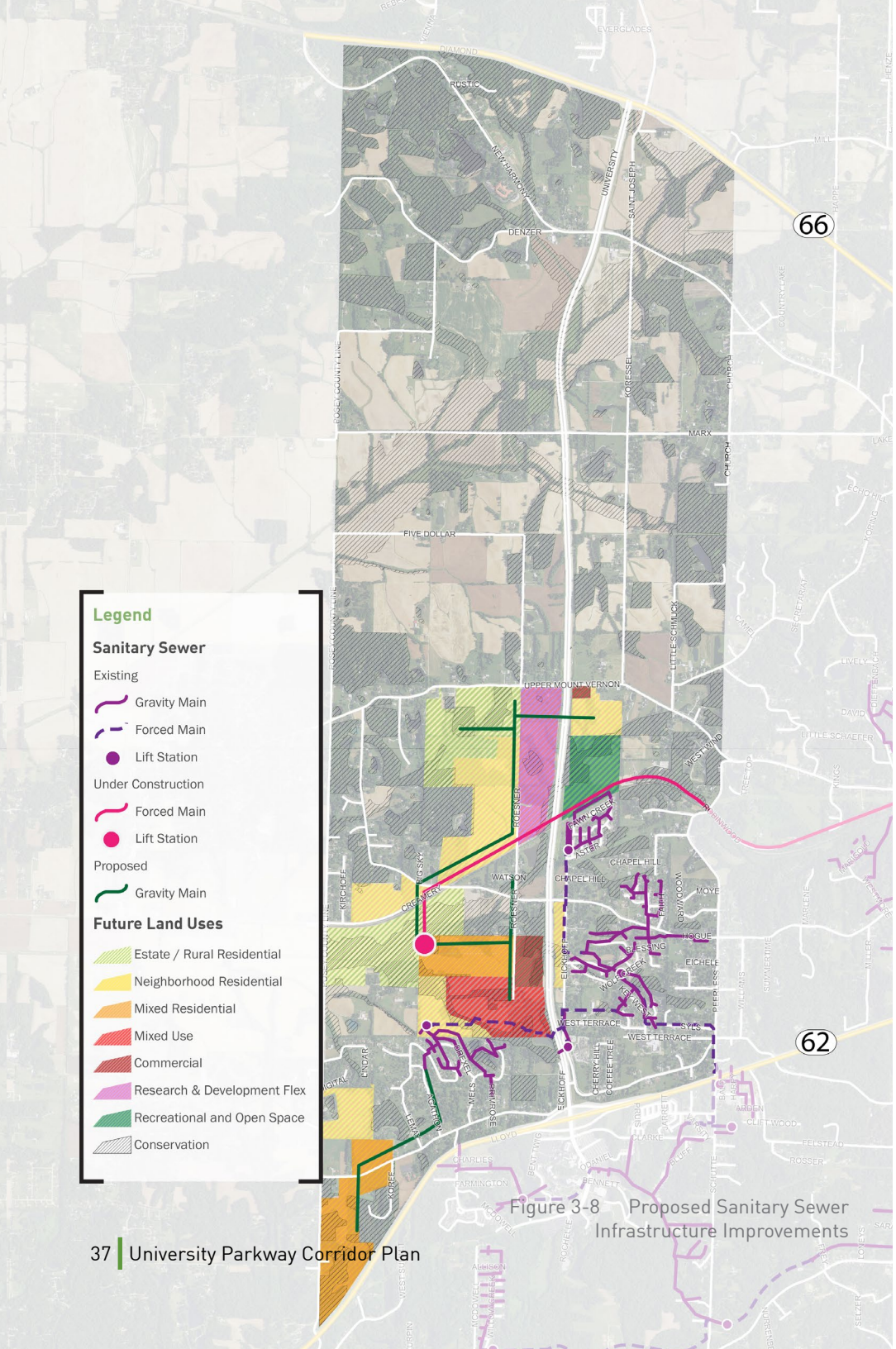


Figure 3-8 Proposed Sanitary Sewer Infrastructure Improvements

Utilities

To provide water and sanitary sewer service to the residential, commercial and flex zones, additional water and sewer mains will be required as well as upgrades to the Creamery Road Lift Station and downstream sewer. Please refer to Figure 3-8 for the proposed sewers and Figure 3-9 for the proposed water mains. Three sanitary sewer lines are proposed:

- A 12-inch extension running south on Agathon Drive, west on Middle Mount Vernon Road, and then south into the residential zone at the southwest corner of the study area.
- A 15-inch extension running west from Creamery Road Lift Station and then along South Roesner Road.
- An extension ranging from 15 to 18 inches running north from Creamery Road Lift Station, crossing under the railroad tracks, then heading northeast toward the flex zone, before turning north again and branching west into the residential zone. A second branch goes to the residential zones east of University Parkway.

Additionally, upgrading the 500 gpm Creamery Road Lift Station and completing the Northwest trunk sewer upgrade, scheduled for 2026 by EWSU, may be required.

A total of 20,800 LF of sewer mains are proposed. This includes one bore under University Parkway and one under the railroad tracks adjacent to Creamery Road Lift Station. The total estimated sewer cost is $8.0 million. This includes an upgrade to the Creamery Road Lift Station but does not include upgrades to the Northwest trunk sewer.

Three 8-inch water main branches are proposed:

- An extension running west on Middle Mount Vernon Road and then south into the southwest residential zone.
- An extension running north along the west side of University Parkway before turning west into the commercial zones, then branching north along South Roesner Road and continuing north into the Rural Estate zones. These branches then connect into a loop to supply additional water pressure.
- An extension running west along Upper Mount Vernon Road before turning south after the flex zones with branches south, west, and southwest into the residential zones. The west and southwest branches then connect into a loop to supply additional water pressure.

A total of 29,200 LF of water mains are proposed. This includes one bore under University Parkway. The total estimated water cost is $5.1 million.

All cost estimates include only main trunk lines. Sewer and water main laterals and minor branches used to reach developed areas would incur additional cost. This additional cost would be born by the developer.

For all alternatives, including the recommended scenario, the preliminary sewer and water main sizing are for planning purposes only and are based on the minimum design standards of the Evansville Water and Sewer Utility at the time of this report writing. External developments and utility projects were considered when projecting the Parkway's improvements, including the Wadesville expansion. Final sizing and costs will be dependent upon actual site considerations, size and type of development, demand conditions, conditions of the sewer and water system, as well as design and permitting standards at the time of final design.

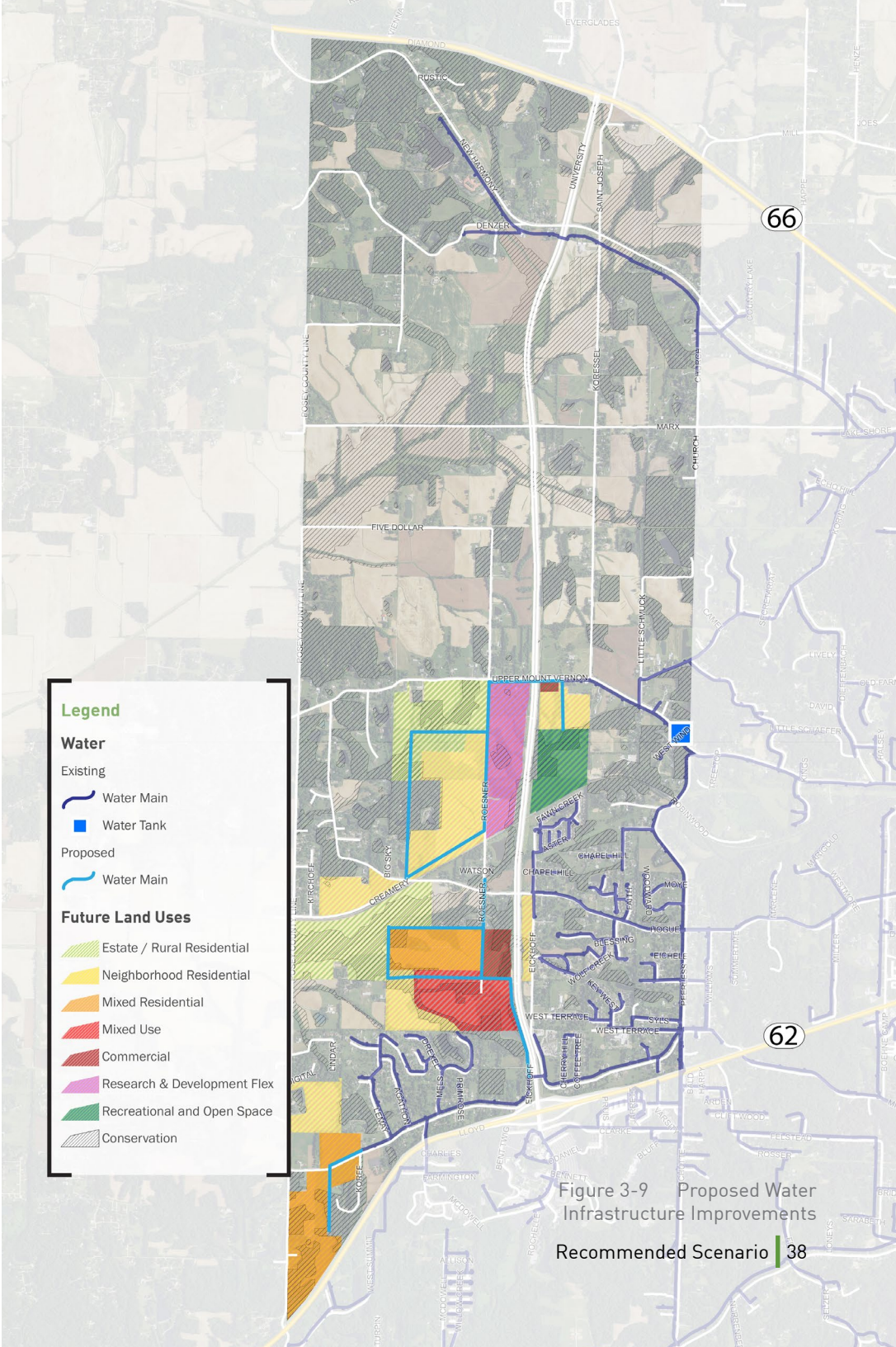


Figure 3-9 Proposed Water Infrastructure Improvements

Phasing

2025

Land Use

The beginnings of the University Parkway development will be slow moving due to the infrastructure improvements necessary to support it. The first portion of development to occur will be along the main street of Majestic Place. This includes a mixed use development at the northeast corner of Roesner Road and the main street, commercial on the southern side of the main street, and higher density residential on the north side of the main street. Minor residential developments may occur during this time. One of which could be the single-family development along Eickhoff Road.

Transportation

To support this new development, new road networks will be required. The addition of Majestic Place's main street and the upgrade of Roesner Road from Hogue Road to the edge of the Majestic Place site are vital to serve the new development. The construction of a new intersection where Majestic Place's main street intersects with University Parkway will be an important feature for access.

Utilities

For new development to occur, the necessary water and sewer infrastructure must be in place. The proposed lift station and force main which is to extend along the railroad corridor and Creamery Road will be the first step. Once completed, the gravity main extension into Majestic Place can be installed to serve the area. The water main extension will come from the south along University Parkway and feed Majestic Place along the main street.

2035

Land Use

As the area continues to gain interest, additional commercial and residential development will occur. The residential neighborhood and mixed residential will begin to flourish within Majestic Place. The commercial will also continue south of the main street and mixed use development will expand north along Roesner Road to the edge of Majestic Place shrinking in scale as it approaches the edge. In addition to Majestic Place residential, the other residential areas along the corridor will begin to develop as utilities are made available. These will likely not reach full build out by 2035.

Transportation

Transportation improvements will be needed outside of Majestic Place as other areas continue to develop. The major project is the upgrading of Roesner Road north of Majestic Place to Upper Mount Vernon Road. This includes improving the crossing at the railroad. To support the additional residents and commercial center, a new trail system will be constructed from USI north along University Parkway until it intersects with Majestic Place. The trail will intertwine with the development and continue north along Roesner Road. The details of this trail connection will depend on the future interchange improvements and on coordination with USI for the optimal on-campus location of this connection.

Utilities

Utility improvements will be needed outside of Majestic Place as other areas continue to develop. In order to support this proposed development, in the future new gravity sewer mains will be needed. One of these mains will extend west from the existing main on Middle Mt. Vernon Road and turn south to the proposed mixed residential neighborhood. A second main will travel north from the proposed lift station, then follow the railroad tracks from Creamery Road to Roesner Road where it travels north and branches out to service the surrounding development. To accompany the sewer mains, new water mains will also be needed to accommodate new growth. One main will be an extension to the west along Upper Mt. Vernon Road until it reaches Roesner Road and then turns south and loops to reach the proposed residential district. A second water main is planned to extend along Middle Mt. Vernon Road and then turn south into the proposed mixed residential neighborhood.

2040

Land Use

The final phase of the development will be populating residential areas and the development of the Research and Development Technology Park. The mixed residential in the southwestern corner of the corridor between Lloyd Expressway and Middle Mt. Vernon Road and the neighborhood residential north of Creamery Road will fill in the remaining housing units. In addition, the final addition to the corridor is the Research and Development Technology Park. This employment center will need the corridor to become more prominent and have additional amenities to draw new employers there. So until there is sufficient commercial and residential growth to support it, the Technology Park would not be viable.

Estimated Value

The infrastructure improvements shall generally be developer driven. The funding policy assumption is that any infrastructure improvements needed to serve the potential new developments would not be created predominantly at the expense of the community. Improvements that are on site would be the sole responsibility of each developer. External infrastructure improvements or extensions could partially be funded by Vanderburgh County through TIF District or other funds in partnership with developer funding if the development aligns with this Plan, the Comprehensive Plan, and the County has available funds.

The infrastructure improvements listed within this section have a cost estimation of roughly $19.5 million. This can be an intimidating expense; however, the added tax benefits created by these developments would outweigh the cost.

The land which has been, for the purposes of this study, designated for future development but currently is agricultural and residential land that produces approximately $35 thousand each year in tax revenue for the County. This limited revenue could not fund the future infrastructure and improvements nor the costs required to maintain them.

If the corridor develops according to the recommendations in this plan, the University Parkway Corridor could become a vibrant community asset. This area, at buildout, would dramatically increase the tax base to approximately $4.4 million a year. Given the projected level of tax revenue at buildout, it would only take 4.5 years to cover the total cost of the recommended infrastructure. This increased revenue would bring multiple benefits to the community and assist in other infrastructure improvements along the corridor.

Recommendations

Introduction

The University Parkway Corridor Plan strives to balance the multiple sources and layers of information expressed through interviews, public meetings, panel discussions, existing conditions, and scenario studies to create a 20-year vision for development along the corridor. These ideas and concepts have been refined into a land use plan that directs development along the corridor while preserving existing natural areas and environmentally sensitive features.

Recommendations and Policies

The future land use plan provides development direction for the next 20 years. What will drive this development is primarily the market, the Parkway, and utility improvements. This plan is a blueprint for the location and type of land use within the University Parkway Corridor, outlining appropriate concentrations of development in specific areas along the corridor. To implement this land use plan and ensure a balance of uses, an overlay zoning district is recommended. This overlay district will create the development standards that will ultimately achieve this vision.

The recommendations contained in this chapter are use specific regulations and policies that should be implemented in the University Parkway Corridor to meet the goals and objectives set forth within this Plan.

While these recommendations are specific to guide the County's decision making, flexibility and discretion should be considered as conditions change. The overall development strategy should be one that remains flexible to a variety of development potential if the intent of the plan is met. **Development along the corridor will only occur based on property owners' desires, the market, and changes in zoning. Until then, the existing conditions present along the corridor today will continue to exist.**

The State of Indiana is a very strong property rights state. Each property owner has a bundle of rights for their property. These include the right to occupy it, lease it, sell it, develop it, construct buildings, farm, restrict access, and harvest timber. Land owners are the ones who decide what they will do with their property. Most communities understand this and put in place zoning controls and other tools that would protect those property rights as well as protect the value of the land.

The following recommendations and policies are organized by the goal categories including development, transportation, utilities, environmental, institutions, and recreation. Each goal category has a series of objectives and recommendations which support the goals for the final plan. The recommendations and policies should serve as guidance to Area Plan Commission staff when reviewing development plans for the area. In general, development plans should adhere to the recommendations and policies contained in this document. Additionally, these recommendations and policies should be used in updating the County's zoning and subdivision control ordinances.

Development

There is mixed sentiment from area residents regarding future development. There are two distinct opinions including no development and managed development that is sensitive to the existing conditions of the corridor. However, with the construction of a new sanitary sewer lift station, some additional development will be necessary to maximize the investment of tax dollars into this project. The goals under the development category try to balance both of these opinions and activities to chart the best course forward. Objectives and recommendations for development include:

Preserve the existing character of the corridor.

Regulate development to avoid undesirable uses and patterns. The preferred land use pattern is one that keeps future development to the south of Upper Mount Vernon Road. The land use pattern south of Upper Mount Vernon Road contains a mix of uses including residential development like existing residential communities nearby, a research and development technology park, and a mixed use and commercial node. Recommendations and policies include:

- Adopt an overlay district to ensure the most desirable land uses. This could exclude specific uses that have negative impacts on the corridor. Some of these could include: big box retailers, sororities and fraternities, any repair related businesses, lawn care services, cleaning and pest control services, betting facilities, recycling facilities, and heavy manufacturing industry.
- Amend the agricultural district standards in the overlay district to prohibit major subdivisions without rezoning the land.
- Include in the update of the Unified Development Code standards and incentives that promote cluster development to preserve open space and natural areas.
- Update parking standards to avoid over-parking and locate parking away from University Parkway and store fronts to develop a more walkable commercial and office land use pattern.
- Establish a build to line along both sides of University Parkway to better define the corridor.

- Update the number of business and wayfinding signage permitted along the corridor. During the creation of the Unified Development Ordinance, the signage standards for all corridors, including University Parkway, should be adjusted to current technologies. Excess signage along arterials is a major problem in many communities. While signage is the primary means for a business to promote itself or for wayfinding for the motorist, often the number, size and style of signage can distract motorists traveling down a corridor and negatively impact the identity of an area. To positively impact the character along University Parkway, a desired style and character should be established. By establishing a unique identity, standards can be implemented that regulate height, size, style and arrangement of signage. This would enhance the visual aesthetics of the corridor, provide clear direction for motorists, and provide a unifying element for varying land uses.

Manage development along the corridor. The current regulations in place do not limit or manage development and therefore are inconsistent with the future corridor land use plan. In addition to the overlay zone, other techniques can be used to limit development to south of Upper Mount Vernon Road. These policies and recommendations include the following:

- Use Upper Mount Vernon Road as a municipal services boundary to limit growth to the north. Future additional utility improvements should not occur above this boundary until buildout of development has occurred per the future land use plan. Without sewer and water, it would be difficult to develop the northern portion of the corridor.
- Use the zoning process to withhold approval of new development that requires a rezoning of the base district and does not align with the plan's vision or goals. When rezonings are approved, plans for new structures should be submitted for consideration by the APC through the development plan process. The APC could then consider these proposals in public meetings and approve, disapproved or approve with development commitments or conditions.
- The APC staff should review rezonings, development plans, and site plans and provide a recommendation to the APC and County Commissioners to provide relevant facts that the local officials should use to make informed decisions. This would be a constant reminder that development should follow the policies outlined herein (e.g. new development should be adjacent to existing development).
- Encourage smaller and denser building patterns that maximize development potential for property owners, decrease costs of development, and preserve existing development character and natural, environmentally sensitive, and agricultural land.
- Encourage low impact development to avoid the production of excessive stormwater runoff, noise, light, and pollutants; to ensure consistent character; and to protect residential, agricultural and natural areas.

Encourage new residential development south of Upper Mount Vernon Road that is compatible with existing development character.

Existing residential development that has occurred within the study area has been a combination of single family estate type, large lot residential parcels, as well as more traditional subdivisions. While new residential development is encouraged south of Upper Mount Vernon Road, this development must be compatible and consistent with existing residential uses to protect and preserve the established character and support the plan's future vision.

Permit a variety of housing types. Single family residential dwellings are the predominate type of residential development within the corridor. However, to meet the needs of the community, a mix of residential types are needed. Diversity in housing products will support the policies and population growth projected in the comprehensive plan. Therefore, a variety of housing types should be permitted in the future. These types of housing should be managed to ensure consistency and compatibility with existing residential uses. To achieve this, the following policies are recommended:

- Adhere to the housing typologies identified in the land use descriptions (**Appendix C**) to assess future residential types, scale, and densities in the study area. For the final land use plan, a series of assumptions were developed based on each housing type (**Appendix C**). These criteria should be used in the review of future development.

- Future residential development should be reviewed for compatibility with the typology, scale, and setbacks to adjacent residential development and should not be reviewed solely on the density of dwelling units. The intent of this plan is to compel and encourage quality development over the quantity of development and ensure that as new housing typologies are introduced, there is a scaling of a development that will not impact adjacent neighbors.

Encourage residential development that mimics the type, scale, and density of adjacent or nearby residential development. Much of the development that has occurred along the Parkway has been residential subdivisions that lack nearby employment or commercial centers. Most of these subdivisions have larger lot sizes that have forced the conversion of agricultural land to residential land. These smaller developments have often required new road, sewer and water connections. Residential development is proposed in a variety of areas south of Upper Mount Vernon Road. Within each subdivision, a diverse set of housing types and lot sizes should offer new residents a variety of options. These neighborhoods should be integrated with natural features existing throughout the corridor. Within neighborhoods, it is desired that trails and park space will inter-connect with neighborhoods, commercial areas, USI, Majestic Place, and other future development to create a safe pedestrian and cyclist environment.

- Use context-based regulations to manage differences in setbacks and building massing to create enticing neighborhoods. New development should be compatible and connect to existing and future proposed amenities, while addressing the development standards described in the following sections. Some of these could include:
    - Preserve any natural features such as significant tree stands on the parcel.
    - Encourage visually appealing and appropriate design that are of a similar scale and character to the surrounding residential stock.
    - Encourage bicycle and pedestrian amenities that are connected to the planned system.
    - Ensure landscape buffering between uses as well as at the edge of the development.

- Curb cuts for newer subdivisions should align with those of older, adjacent developments where feasible. Neighborhood streets should be extended to intersect with other local streets to improve neighborhood connections and access, and those streets should align with one another. Stub streets should be required in new subdivisions, when adjacent to agricultural parcels that are recommended for future residential use.
- New subdivisions shall be encouraged to develop compatible types, scale, and densities as adjacent or nearby subdivisions. In review of new subdivisions, a developer and the Area Plan Commission staff should review adjacent development up front to determine character, connectivity of bike/pedestrian access, transportation access and scale of development. The policy intent is to ensure that new subdivisions are compatible with existing development and foster connectivity to and within the corridor.
- Improve connections/access between subdivisions. A lack of connectivity between subdivisions can lead to traffic issues in a community. A well-connected road network has many short links, numerous intersections, and minimal dead-ends. As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations, creating a more accessible and resilient system.

Manage the location and type of non-residential development.

Create a mix of commercial uses in a small-scale pedestrian focused pattern. University Parkway should not become the next commercial corridor. This means that big box development should be prohibited, and any commercial uses should be integrated into a coordinated, small neighborhood center that is well-designed, incorporates pedestrian amenities, has good access into and through the development, and is compatible with adjacent uses. These nodes should not greatly increase the amount of traffic beyond what was planned for in this study.

- Commercial development should be focused at the front (east side) of Majestic Place along the main corridor into the development. Majestic Place is located west of University Parkway and south of Hogue Road and was rezoned to be a mixed use development. It is envisioned that Majestic Place will offer a diversity of shops, offices, services, and housing. No development plan was provided during the rezoning, but Use and Development Commitments were adopted. When Majestic Place comes before the Plan Commission for development plan/site plan review, the staff should ensure that Majestic Place is a well-designed and well-integrated development. To achieve this, the following policies should be kept in mind:
    - The preservation of natural features, including trees stands, on the parcel.
    - Scale development from its core outward to ensure compatibility with adjacent existing developments.
    - Limit individual commercial footprints.
    - Encourage visually appealing character and appropriate design.
    - Mixed use is a key component to this district to set it apart from nearby commercial zones. The C-4 commercial district should permit housing and mixed use, with limitation to building height.
    - Incorporate landscaping throughout the development as well as at the edges.
    - No parking or loading docks should face or be adjacent to University Parkway or adjacent residential neighborhoods.
    - Use green infrastructure as well as detention or retention ponds to limit stormwater runoff and enhance the natural environment.
- To create a smaller, walkable, pedestrian-scale commercial district, on local streets, promote smaller front yard setbacks from arterial and collector roads. For those commercial areas that front University Parkway, the establishment of a standard build-to line to frame University Parkway and preserve the existing views is recommended.
- For new commercial development, parking should be located to the side of or behind buildings. In some cases, it will be appropriate to create "two fronts" of a building, one along University Parkway or a major arterial, and one towards the parking lot.
- All new non-residential development should have pedestrian friendly amenities like bike racks, wide sidewalks, and bike lanes that connect to the larger pedestrian system.

Ensure new development visually fits the community vision. University Parkway has different character areas along of the length of the corridor. In the very southern portion is institutional due to USI, in the next segment it is suburban residential with the subdivisions that have developed, and the northern section has a rural character containing primarily homesteads, large single-family lots, natural and stream corridors, and agricultural activities. Housing development is continuing north and USI is continuing to grow. The County has made an investment and expects some development, and it has undertaken this process to ensure that development is planned differently than any other area within Vanderburgh County. The County has experienced significant growth along Burkhardt Road that has led to numerous curb cuts, increased congestion, and development that could be found anywhere in the Midwest. To combat this for University Parkway, this detailed plan has been created and will need to be followed to ensure a poorly planned, suburban corridor isn't recreated.

- This plan should be adopted as an amendment to the comprehensive plan. While the comprehensive plan provides a high-level view of land use and development, this plan will serve as a detailed subarea plan that will augment and be used in combination with the Comprehensive Plan during the review of future development and rezonings. Additionally, the land use map for the corridor will replace the land uses designated in the Comprehensive Plan.
- Residential development will continue to occur throughout the corridor. New development should be integrated and connected to existing and future amenities while addressing the development standards described throughout this section. Certain design characteristics should be considered when reviewing development. This includes compatibility of uses, consistency in density, preservation of natural features on the site, how visually appealing the design is coupled with the character of the development, incorporation of bicycle and pedestrian amenities, links to other trail and greenway systems, and housing typologies as described in this Section.

Other design features that should be considered to ensure new development visually compliments existing character include using natural storm water options such as green infrastructure, using native plant species in landscaped areas and buffer yards, limiting building heights to preserve the rural scale of development, and establishing flexible design standards.

What is Green Infrastructure?

Green Infrastructure is an environmentally and cost-effective measure for stormwater management. Green infrastructure is often seen as expensive and cumbersome to maintain. However, there are several low maintenance/ cost methodologies which can be utilized.

The first practice that should occur is preserving or mimicking the existing natural resources and systems to allow the natural systems to continue managing stormwater. Some practices include:

- Preserve and permanently conserve undisturbed forests, native vegetation, wetlands, etc.
- Conserve natural vegetated buffers along waterways and wetlands.
- Design new development to avoid impacting the topography to limit the need for clearing and grading.
- Avoid developing in floodplains, steep slopes, wetlands, existing forested areas, etc.
- Cluster new development to allow for greater open space allocations.
- Reduce impervious surfaces in new developments.
- Riparian buffers are vegetated areas along bodies of water slowing runoff before it enters the stream to reduce erosion and reduce sediments in the body of water.

Many of these techniques for preservation and conservation are very affective at managing stormwater however, when these methods are not sufficient a development may construct stormwater infrastructure to mitigate a development's runoff impacts. Some practices include:

- Vegetated open swales or filter strips with grass to slowly channel water offering it greater time for infiltration.
- Tree planting and tree boxes can provide a number of benefits like landscaping, water retention, and erosion control.
- Dry ponds that are designed to hold water during major storm events and allow water to discharge slowly.
- Wet ponds which are permanent water bodies which collect water and act as a biofilter.

A green infrastructure guide for small cities, towns and rural communities. (2017).

Define and locate the Research & Technology Park. In both the 2015-2035 Comprehensive Plan and the 2040 Millennium Plan, a research and technology center was identified to be located along the corridor. The research and technology park is envisioned to be a joint effort by the County, Growth Alliance for Greater Evansville (GAGE), Economic Development Coalition of Southwest Indiana, the University of Evansville, Ivy Tech, and the University of Southern Indiana (USI) to create a regional, technology-based business incubation and acceleration center that capitalizes on the strengths of the Southwestern Indiana and Northwestern Kentucky economies, with their strong work ethics and manufacturing backgrounds.

The Research and Technology Park will be a unique opportunity for new employment creation within the area and to offer local students graduating from the universities a place to work instead of leaving Evansville and Vanderburgh County. This center is not envisioned to be a standard business park like others throughout the region.

- Locate the research and technology center on the west side of University Parkway bounded by the railroad to the south and Upper Mt. Vernon Road to the north. It should be understood however, that in the current climate, this research and technology center will not be the first area to develop. It likely would develop after the extension of University Parkway to Interstate 64 and Majestic Place has been developed. The proposed illustration provides some context for how that research and technology park could be organized (as seen above).
- The development of this campus will require a public-private-not-profit partnership to facilitate its creation and sustainment. Partnerships between local universities, the County, and private businesses should be forged to create lasting employment and educational opportunities. These partners should work with GAGE and the Economic Development Coalition of Southwest Indiana to plan for the appropriate timing and prepare the site to shovel ready status. Specific tactics could include: purchase the property and designate through zoning as the research and technology center; extend utilities to the site; prepare the site to be shovel ready and certified as shovel ready by the state; pursue a certified technology park if the partnership with the local universities materializes; utilize industrial bonds or the industrial development grant fund to provide assistance to future businesses; create a business incubator program and ensure there is additional room within the center for their relocation; and partner with universities and the local high schools to offer vocational training associated with the businesses in the center.
- The development of this center should require development plan review and would likely benefit using the Planned Unit Development process (PUD). As part of that process, the development entity could write the regulations that will govern the development ensuring consistency if other parcels are sold off to different developers. There are a number of design principles that should be incorporated into the PUD to create an engaging environment for employees and businesses. These include:
    - Include connectivity and walkability through the entire research and technology center that would include a system of walking paths, sidewalks and connections to the trail system along University Parkway.
    - Allow a mix of uses within the development plan that would support the daily needs of employees including cafés, restaurants, print/office shop, and other business support services.
    - Preserve natural features by using green infrastructure, shared or regional retention ponds, landscaping, and visual buffers.
    - Incorporate a flexibility of architectural design that will create active places, enhanced building structure, and develop a higher level of expectation and experience as compared to other regional centers or business parks.
    - At the time of development, there shall be one access onto University Parkway. However, there should be an internal roadway network that would provide additional connections to Upper Mount Vernon Road and the extended Roesner Road.
    - For those buildings fronting University Parkway, they should be designed to have two fronts, one that is outward facing to University Parkway and one that faces the internal roadway network.
    - There should not be any loading docks or parking areas that face or are adjacent to University Parkway. All parking and loading areas should be internal to the development, screened and landscaped.

Encourage a mix of uses which are not duplicative of existing development on the west side of Evansville. As more residential use is developed in the study area, commercial and office uses will follow. The key is to manage the mix, intensity and location of both commercial and office development to minimize congestion and safety issues and limit land use conflicts. During the planning process, many residents expressed concerns that University Parkway could become another Burkhardt Road with large box, strip, suburban development like the east side Walmart commercial area. This is not desired or needed in the area and should be avoided for University Parkway. The overlay district, plus design guidelines contained within this plan, if implemented, will manage this.

- Using the overlay zone, prohibit large format, big-box retailers unless they serve as an anchor that will contain small restaurants, shops, and services. Because of the Use and Development Commitments for Majestic Place adopted on May 3, 2013, some big-box could potentially be developed on the C-2 and C-4 parcels. The Use and Development Commitments of Majestic Place did not limit big box uses so department stores, supermarkets, smaller scale retail, and restaurants are permitted. The development conditions for the C-2 parcel detail an open-air, retail structure designed to facilitate local vendors in a farmers-market type atmosphere.
- Using the overlay district, change residential standards to permit housing to be located on the second floor, adjacent to, or attached to commercial uses. This would be appropriate along Roesner Road in Majestic Place. Apartments could be located over retail, which would support a more walkable environment.

  The area west of Roesner Road and north of the main thoroughfare within Majestic Place would be appropriate for residential use. The current development commitments allow for apartments, if they are not student apartments, senior living community (55 and over), and single-family dwelling.

  In the southwest corner of the area that is zoned R-3, a mix of residential use is permitted. It could include apartments, townhomes, condominiums, and single-family homes. These mixed residential zones provide new housing typologies for existing and new residents while preserving the existing natural areas and agricultural land along the corridor. It also potentially allows someone who has lived in the area to age in place and not leave the social community they have developed.

  Appropriate types of housing in these areas could include:

  - Row House
  - Low-Rise Apartment
  - Small Mixed use
  - Stacked Flat
  - Walk-up Apartment
  - Zero-lot-line Patio Homes

Expand the Tax Increment Financing District. The current TIF district is narrow and misses key opportunities in the southern half of the corridor, some of which are designated by the Comprehensive Plan for commercial, mixed use and industrial growth. It is recommended that the TIF district be expanded to include the commercial and mixed-use areas of Majestic Place as show on the Figure 4-1 The purpose of the expanded TIF district is to capture tax increments that would increase as development occurs. These captured taxes would assist in financing transportation, utility, and recreational improvements along the corridor.

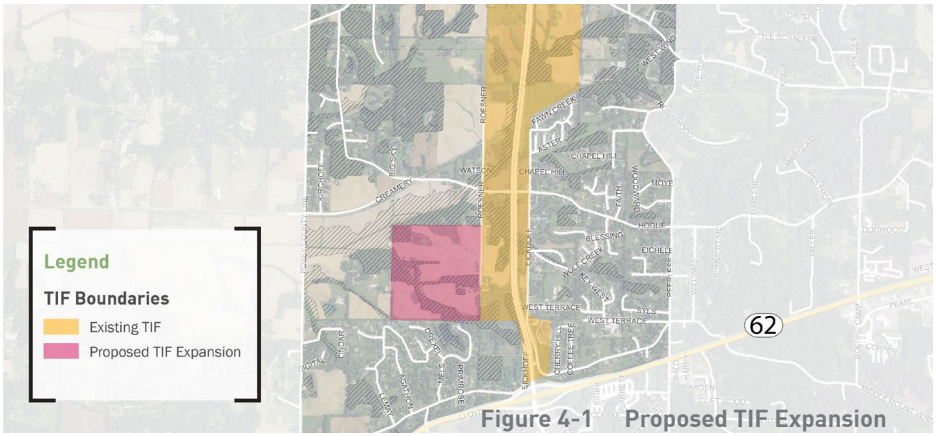


Figure 4-1 Proposed TIF Expansion

Transportation

An area's transportation network plays a central role in supporting and maintaining economic success, and a good quality of life for all while ensuring safety, the efficient movement of traffic, and multiple modes of transportation. If goods, services or people cannot move effectively and efficiently through University Parkway, the economic and social well-being of the area will be impacted making it less desirable to locate new businesses and subdivisions in the corridor. As part of the planning process, the transportation network has been viewed as a key component to the success of the corridor plan and overall goals of the project.

The transportation network and land use framework presented in this plan are highly interconnected. The proposed land use plan was developed around available land and utilities as well as the protection of natural features and scenic views along the corridor. The recommendations discussed in this section represent an integrated vision that will support future development while maintaining safety, connectivity, and mobility throughout the University Parkway and the adjacent areas. The future recommendations described allow the County the opportunity to plan for proposed development in land use, transportation, and multimodal infrastructure.

Improve the safety and mobility for motorists, bicyclists, and pedestrians along the University Parkway Transportation Network.

Provide context appropriate facilities for pedestrians and bicyclists along roadways surrounding University Parkway. The preferred land use plan depicts additional development to occur along the corridor over the next twenty years and beyond. The land use plan highlights a variety of new types of development including single family residences, apartments, row houses, small mixed use commercial-residential buildings, small scale commercial, office, institutional, and advanced manufacturing. All of these uses will not only increase motor traffic, but also require multiple modes for bicyclists, pedestrians, as well as transit users.

- Proactively consider the potential bicycle/pedestrian link when planning for transportation needs. Bicycle and pedestrian initiatives have typically been pushed by interest groups, rather than evolving as part of a rational, planning process that sees biking and walking as an integral part of the overall transportation system. This plan is trying to change that perception. These linkages apply not only to connections between residential areas and commercial centers, but where these modes are in relation to local transit systems and in the design of activity centers themselves, so that they can support access and circulation by modes other than just private vehicles.
- Update zoning and subdivision standards to require the developer of new subdivisions to provide right-of-way or an easement to be used for multi-use paths connecting to other area trails. By requiring developers to set aside some land adjacent to roads for identified future improvements, a more coordinated and diverse transportation system will be provided for existing and future residents and business in the area.
- Update zoning and subdivision standards to include the typical cross sections identified in this plan.
- As Majestic Place and the Research and Development Technology Park are developed, a multi-use path on University Parkway should be constructed that would connect with USI and future developments.
- As the County improves Roesner Road, a multi-use path should be incorporated into the design to connect to the USI trail system on the south side of SR 62 to maximize recreational opportunities.
- Any new or improved streets outside of University Parkway should include sidewalks to better serve pedestrians.
- Developers should incorporate bus stops with shelters and other pedestrian amenities including bicycle racks into their development where warranted.

- The County supports additional transit options for the area. Developers should work with USI and METS to expand their transit network adding additional stops along University Parkway at Majestic Place and the Research and Technology Center as development warrants. The developer could sign and provide to the APC staff a letter of agreement with USI and METS designating the future improvements, where they would occur, and the timing of such improvements. This letter should be included in the Development Plan Process as one of the requirements.
- The County should require developers to install sidewalks/multi-use paths along local roadways to encourage pedestrian and bicycle movement within neighborhoods and subdivisions. These could be used as a secondary layer of pedestrian pathway management providing the ability to travel from a neighborhood to a commercial center, school, or office without the safety issues associated with the use of heavily traveled roadways. All new subdivisions as well as major commercial, office and industrial centers should be required to install sidewalks or paths that will interconnect into the proposed pathway, trail and greenway network. This should be accomplished through the zoning and subdivision ordinances.
- Encourage cross easements between parking lots by grouping entrances to provide access from one business to another without the use of the main roadway. In general, for the various commercial areas along Burkhardt Road, there are several businesses and strip centers that do not have access between businesses. These developments are served by an excessive number of curb cuts for each existing business, which has added to congestion in the area. Typically, in suburban developments, parking lots have been created for each business and individual curb cuts have been provided. This policy needs to be changed. Zoning and subdivision standards should be updated to require the creation of frontage roads (where feasible) and the internal connection of parking lots to have access between properties while enhancing the flow of traffic. As developments occur adjacent to existing businesses, the location of any curb cut serving the multiple businesses should be reevaluated.
- Create trails, multi-use paths, bike lanes and sidewalks that are integrated as part of a planned system, that are located where users want, are direct connections to attractions, and provide acceptable safety levels.

Why Transit?

Public transportation services create benefits for residents and businesses it serves while promoting an environmentally conscious lifestyle. The most common form of public transit is buses which are used by METS in Vanderburgh County. Transit supports an increasing population with transit ridership increasing by 30% since 1995 with 35 million trips each weekday across the country. Transit creates several benefits for its users:

- Reduce the risk of traffic related accidents with only a quarter the per capita traffic fatality rate.
- A reduction in carbon emissions improving air quality.
- Increase physical fitness through their walk to transit services reaching the recommended 22 minutes of daily moderate physical activity. This increased level of activity improves transit users health and lowers health care costs.
- A growing portion of households would prefer to drive less and rely more on walking, cycling and public transit, provided these alternatives are convenient, comfortable, safe and affordable.

In addition to the personal benefits, the economy is often bolstered by transit as well.

- Every $1 invested in public transportation generates $4 in economic returns.
- Every $1 billion invested in public transportation supports and creates more than 50,000 jobs.
- Every $10 million in capital investment in public transportation yields $30 million in increased business sales.
- Every $10 million in operating investment yields $32 million in increased business sales.
- 71% of public funding for public transportation flows to the private sector, creating and supporting hundreds of thousands of jobs.
- Home values performed 42% better when located near public transit.

Public Transportation Benefits, American Public Transportation, Retrieved from: https://www.apta.com/mediacenter/ptbenefits/Pages/default.aspx
Tom Litman (2010). Evaluating Public Transportation Health Benefits, Victoria Transportation Policy Institute. Retrieved from: https://www.apta.com/resources/reportsandpublications/Documents/APTA_Health_Benefits_Litman.pdf

Crosswalks

Crosswalks are used to assist pedestrians in crossing streets and help to alert motorists to their possible presence. Crosswalks legally exist at intersections whether they are marked or not, unless the pedestrian crossing is specifically prohibited. At non-intersections, crosswalk markings are used to legally establish the crosswalk. Parallel striping is the most basic type of crosswalk marking. Continental or ladder crosswalk markings provide greater visibility of the crossing location. Current MUTCD standards state the longitudinal lines should be 12 to 24 inches wide and separated by gaps of 12 to 60 inches. Typically, 24-inch striping and 24 inch gaps are considered appropriate. The design of the lines and gaps should avoid the wheel paths if possible, and the gap between the lines should not exceed 2.5 times the width of longitudinal lines. More recently, decorative, embedded crosswalk markings have become popular because of their high visibility and ability to incorporate branding and system identity in the design. In these cases, the thermoplastic markings are embedded flush or slightly recessed in the asphalt surface rather than applied to the top. It is possible that dirt and dust may settle more easily in these crosswalks. While this is not a serious problem, it should be considered for future maintenance programming.

In developing a complete and connected pedestrian and bicycle system, crosswalks should not be isolated to intersections. Appropriate locations for marked crosswalks are:

- All signalized intersections
- Crossings near transit facilities
- Trail/path/greenway crossings
- Land uses that generate high pedestrian volumes
- Along school walking routes
- Where there is a preferred crossing location due to sight distance

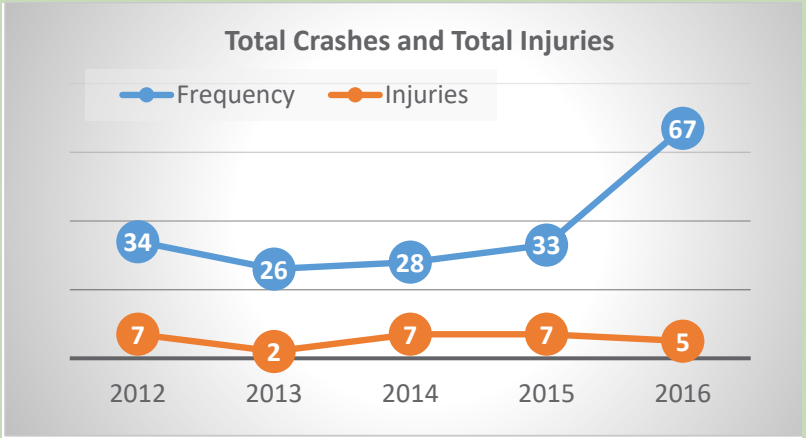
Avoid isolated developments and preserve the Parkway's rural character and improving mobility for new development. Land use and transportation are inherently linked. University Parkway was constructed twelve years ago to a four 12-foot lane with median configuration. During this time, while there has been some residential development, the corridor remains largely undeveloped, especially north of the railroad and Robinwood Lane. The land use plan reflects a balanced approach where residential and non-residential growth is targeted south of Upper Mount Vernon Road, while north of Upper Mount Vernon is to remain agricultural and large lot residential in character. However, with new development that is proposed, improvements to the transportation network will be needed, albeit developer-driven improvements.

- Work with developers to build new streets identified in the plan as new development occurs.
- Update zoning and subdivision standards to address the following transportation design elements to:
  - Limit the use of cul-de-sacs and create stub streets for future connections into new developments.
  - Require at least two accesses if more than 50 lots are created in a subdivision or development.
  - Update landscape standards to require a planted buffer yard and setbacks from the roadway.
    - ◇ The corridor should portray a natural appearance in plant types and densities by using native landscape planting treatments in right-of-way.
    - ◇ Tree and shrub plantings shall be planted in natural patterns or clusters to convey a naturalistic appearance.
    - ◇ Natural woodlands should be protected to the greatest extent possible.
    - ◇ Use landscaped berms and screens to minimize conflicts between uses.
    - ◇ Landscape any medians
    - ◇ Use ornamental lighting and signage with landscape plantings to create a unified theme throughout the corridor.

- Limit access points on University Parkway.
- Require frontage roads where needed to help facilitate access and increase flow of development internally.

Improve safety at intersections. The improvements being recommended to the transportation network will require other changes to support those transportation improvements. To reduce the number of crashes and improve safety, consistent lighting and signage is needed throughout the corridor.

- Improve lighting along the Parkway, specifically at each J-turn intersection and U-turn location, as it is improved to enhance safety along the corridor at night. Funding to install lighting could be from federal transportation dollars. Work with the EMPO to set aside funding when J-turns are constructed.
- Where streets intersect with University Parkway, the sight triangle shall be preserved by limiting the location of landscape, signage and signals to keep clear sight distances at the intersections.



Intersections with Highest Crash Rate (2012-2016):

The following intersections had the highest crash rate along the University Parkway Corridor:

- University Parkway/Diamond Ave (SR 66) 37 crashes
- University Parkway/Marx Road 11 crashes
- University Parkway/Upper Mt. Vernon 9 crashes
- University Parkway/Hogue Road 9 crashes

Why Provide Two Accesses?

When building a residential development, there are a number of requirements which are placed upon the design of the structures, roadways, etc. Many of these requirements are for the safety of residents. Municipalities are now requiring increased access to new large residential developments to improve circulation and access for emergency services when needed. The best practice of these communities is increasing the number of access points for new developments which exceed 30-50 dwelling units unless each home provides automatic sprinkler systems.

What is access management?

Access management is the systematic control of location, spacing, design and operation of driveways, median openings, interchanges and street connections to a roadway. By implementing access management tools, a safer, calmer transportation system can be created. Access management seeks to limit and consolidate access along major roadways, while promoting a supporting street system and unified access and circulation system for development. The result is a roadway that functions safely and efficiently for its useful life, and a more attractive network of corridors. While the existing alignment and location of the road corridors and intersections can be modified to accommodate the projected development expansion, several new roads, intersections and driveways will be needed as parcels are developed. These new transportation amenities should include access management solutions to create a safe, efficient transportation system. A variety of access management solutions can be utilized within new development and are discussed in the following sections.

What is impervious surface?

Impervious surfaces are man-made structures (roads, sidewalks, parking lots, buildings, etc.) that are covered by impenetrable materials that do not allow water to seep through the ground into the water table. Impervious surfaces typically increase stormwater runoff, pollutants into the water system, as well as create heat islands.

What is Traffic Calming?

Traffic Calming is a concept concerned with the reduction of vehicle speed and volume of vehicles on a thoroughfare to improve pedestrians and cyclists safety. There are a number of methods to accomplish this which include:

- Speed humps
- Medians
- Textured Pavement
- Ruble Strips
- Raised Crosswalks
- Speed Limit Reductions
- Narrowing Driving Lanes

Encourage better connectivity with the existing and future street network by redesigning intersections, extending roadways, and adding new roads to improve traffic flow and safety.

Provide context appropriate transportation improvements along University Parkway to accommodate projected growth. An overarching goal for any transportation network is to facilitate traffic flow and ensure the safety of all users. The current transportation network supports existing development, facilitates safe and efficient traffic movement. What will become critical for University Parkway is that as development increases, the transportation network is adjusted to ensure connectivity and safety while improving traffic flow. As more traffic is added to the Parkway, this will cause these intersections and others to decrease in service. Therefore, intersection upgrades and access management techniques are necessary to manage congestion, traffic flow, and access.

- Conduct feasibility and alignment studies for the following improvements
  - Roesner Road (road extension between Majestic Place Access Road to Middle Mount Vernon Road)
  - Majestic Place Access Road (new road from Posey County Line Road to Eickhoff Road)
  - University Parkway north of Diamond Avenue (SR 66) to I-64

- Utilize J-Turns as the preferred intersection type along the corridor. The implementation of the J-turn treatments will likely occur on an incremental basis as funding allows and as development activity requires enhanced traffic control at specific locations. The need to complete the full corridor plan would likely be linked to the extension of University Parkway to I-64 since that will trigger the most substantial traffic growth.
    - University Parkway at New Harmony Road
    - University Parkway at Marx Road
    - University Parkway at Upper Mount Vernon Road
    - University Parkway at Hogue Road
    - University Parkway at Majestic Place Access Road
- Utilize Right Turn only intersections to limit points of conflict for slower or lower classified thoroughfares which intersects with University Parkway.
    - University Parkway at Middle Mount Vernon Road
- Continue to monitor and coordinate with INDOT for possible future improvements:
    - University Parkway at Diamond Ave (SR 66)

Preserve the Parkway's limited access. The primary method to ensure traffic flow and preserve University Parkway as a scenic thoroughfare is to manage access along the entire corridor. No new access to University Parkway shall be permitted except for the previously approved access for Majestic Place.

- Provide access to both sides of University Parkway at Majestic Place to better serve the east side of the road given the recommended restriction of Middle Mt. Vernon Road to right-in/right-out movements only.
- Cross-access connections between properties shall be encouraged and required in conjunction with any new development. Given the limited access to University Parkway, the local road network must support providing access from individual properties to the nearest east-west public roadways.
- Institute traffic calming measures in neighborhoods as warranted to cut down through traffic. In lieu of restricting access, measures could include speed humps, roundabouts, medians, textured pavements, rumble strips, raised crosswalks, and other special features. Traffic calming measures could help retain the residential nature of neighborhood streets by discouraging high operating speeds and non-local traffic.
- The County has taken measures to preserve the limited access by purchasing the limited access right-of-way along the corridor. This allows Vanderburgh County to restrict all access to the preexisting right-of-way access points.
- Roesner Road and Eickhoff Road should serve as service roads between Middle Mt. Vernon and Upper Mt. Vernon Roads. Given the limited access that will be retained directly to University Parkway, the provision of parallel access roads is an important part of the transportation system within the developed portions of the corridor. As traffic in the corridor increases in the future, these existing roads will need to be upgraded to standard width to operate efficiently.

Utilities

Increase utility access to adequately meet the demands of new development.

Create partnerships with developers for water and sewer extensions that provide benefits to the community. Utility extensions are costly for the County to fund and maintain, and any utility investment should be offset with community benefits and economic growth. To assure new extensions will be beneficial and to minimize risk to the County, developers should be required to entirely or substantially fund any new utility extensions.

Collaborate with developers and utilities to ensure future extensions are developer-driven and that developers are committed to completing the projects. Future utility extensions should not occur without new development or existing development having a need for it. The County should not create new extensions without a verified developer expressing the need for it and committing to completing the development.

Avoid over-extending utilities

Limit the expansion of utilities based on the service needs, feasibility of development, and the required investment. New utility extensions are costly for governmental agencies to fund and maintain. To assure that these extensions are feasible, a new developer needs to prove that their development will benefit the County.

- Require feasibility analyses for developments which require an extension of municipal services in the development plan review process.
- Limit development to Upper Mt. Vernon Road due to the limits of the Creamery Road lift station. Beyond this limit, significant investment would be required to provide utilities.

Developments which require utilities but are not adjacent to or within a reasonable distance from existing municipal services, should not be given access to these services at the sole cost of the County. Utilities require substantial resources and if a significant extension does not return benefits to the County, it should not occur. Development should be responsible for the utilities which service their properties. If public funds are to be used, a set of criteria should be established to determine the appropriateness and need for public money to be spent on water and sewer infrastructure. Criteria could include:

- Substantially benefits the surrounding community;
- The level of commitment to the project by the developer;
- The project must be consistent with the Corridor Plan and other County plans; and
- The project must be contiguous to existing development or within a reasonable specified distance.
- The project must improve the overall health of the community.
- The cost of the public improvements should be offset by user fees over a specific length of time.

Consider developing an adequate facilities ordinance. An adequate facilities ordinance can be used to regulate and promote the extension of public facilities in return for community benefits and economic growth.

Manage stormwater as new development occurs.

In order to further restrict runoff from new developments, it is recommended that the corridor be designated as an impacted drainage area. As new development occurs and progresses north along University Parkway, a storm sewer system will need to be constructed parallel to the sanitary sewer system to collect stormwater runoff from roads and developed areas.

For development with 10,000 square feet or more of impervious surface, storm water detention is required (Vanderburgh County Drainage Ordinance). This is to prevent the storm sewers from being overwhelmed during storm events. This could consist of green infrastructure to allow infiltration into the ground or a detention tank or pond to be discharged into the storm sewer system at a predetermined and allowable rate.

Developers shall coordinate with the County so planned and approved development works with any potential regional stormwater drainage improvements. Nonresidential dry weather sanitary sewer discharge may be required to be maintained at or under a specific rate due to sewer capacity. This discharge may also require pretreatment before entering the sewer system.

Utilize natural processes to manage stormwater runoff. As the area develops, it is recommended that green infrastructure is implemented to decrease storm water runoff into the storm sewer system. Installing planter boxes and bioswales in parking lot medians and along streets allows rainfall runoff to be collected and infiltrate the ground instead of traveling directly to the storm sewers. Parking lots and sidewalks could be paved with permeable pavement which allows rainfall to permeate into the soil, but must be accompanied with provisions for maintenance.

Preserve and strengthen the natural stormwater management system for the corridor. Within the corridor, there are numerous streams and creeks. With new development, the amount of impervious surface increases. There are many ways to manage stormwater runoff.

- Development should create drainage methods that avoid producing additional runoff.

What is a land trust?

A land trust is a nonprofit organization that actively works to conserve land by undertaking or assisting in land acquisitions. As a nonprofit, land trusts depend on individuals, businesses and other community organizations to donate funds to purchase lands that need protection. Land trusts will also accept land donations, bequests and conservation easements - legal agreements between a landowner and a land trust that permanently limits uses of the land in order to protect its conservation values.

Source: The Nature Conservancy Website, 2018.

What is a conservation easement?

A conservation easement is a easement intended to protect, preserve, and conserve a natural feature. The land designated typically prohibits the construction of any structure or building and removal of vegetation, unless it threatens the health or safety of the public. This private legal contract transfers the rights to the property to a trustee or nonprofit. Owners still retain some property rights including selling the property, transferring it to an heir, or renting it. Certain uses can also occur on the property that contains an easement. Those uses are worked out through the negotiation process.

Source: Liberation Through Assets Network website, 2018.

Fee in Lieu of

When a new development is proposed, the governmental body, which approves these proposals and issues permits has a number of requirements associated with their approval. Some of these requirements could be public amenities, mandatory dedication of land, etc. Some governments allow developers to forgo meeting these requirements but require a payment in the absence of providing the amenities or land dedication. This is referred to as fee in lieu of.

Environment

Preserve the corridor's existing agricultural and natural land.

Value existing agricultural and natural resources over new development along the corridor. The northern area of the corridor, north of Upper Mount Vernon Road, is predominately agriculture with some natural tree stands, creeks and streams. During surveys and in meetings, the public was overwhelmingly supportive of maintaining this agricultural and scenic beauty. Therefore, the land north of Upper Mount Vernon Road is designated as agriculture or recreation and open space.

- Work with a non-profit organization to establish a conservation easement. This will allow private property owners to donate or sell their land to the not-for-profit. Areas such as major tree stands, wetlands, and floodplains should be considered for conservation easements. Conservation easements can accomplish specific objectives such as protection of water quality, protection of significant tree groves, protection of farmland, protection of wetlands, or protection of wildlife.
    - A property owner can donate or sell their land to a conservation easement in private ownership. In most cases, the property owner can continue to live on the land and farm, raise animals, harvest timber, etc.
    - Each land easement is different based on the entity that it is sold or donated to. Each easement should be tailored to the property owners' desires and needs.
    - Properties may not be open to public access unless specified in the easement.
    - Most easements "run with the land" meaning that even if the property is sold or inherited by other family members, that easement still exists and remains in effect.
    - There could be several tax benefits to a property owner who donates an easement to a private land trust.

    - There are several organizations in Indiana that can purchase land including the Sycamore Land Trust in Bloomington who focuses on preserving natural and agricultural lands in Southern Indiana. These organizations formed the Indiana Land Protection Alliance (http://www.ltanet.org/findlandtrust/alpha.tcl?state_id=indiana18). There is a state land conservation trust formed by the General Assembly, the President Benjamin Harrison Conservation Trust Fund. It purchases land and accepts donations for local parks, archaeological and historic sites, state and local nature preserves, and local conservation areas. There are several national organizations which operate and collect land in Indiana. A list of them can be found at https://www.findalandtrust.org/states/indiana18.
- Current standards do not provide any protection for agricultural land. The current zoning allows property owners to develop residential subdivisions in areas zoned Agriculture without zoning review. Through the overlay district, subdivisions could not be developed in agricultural zoned lands without a rezoning. This will ensure the public has an opportunity to comment at public meetings about whether the proposed use fits with surrounding uses, and whether it is consistent with the Comprehensive Plan and the corridor plan. Without this provision in the overlay zone, residential development in a major subdivision can proceed through the process with no public hearing or review on land use issues.

Require dedication of open space in new development to enhance the natural landscapes. Another method to preserving natural features is requiring the dedication of open space as a parcel is being developed. Using the overlay district, standards should require a certain percentage of land be kept as open space, natural area or parks. This is very common throughout Indiana. There are different ways this can work:

- For individual lots, many communities use a percentage of lot coverage to limit how much can be built or paved on an individual site.
- For residential and non-residential subdivisions, many communities require up to 30 percent open space that can be either active or passive recreation, trails, retention/detention ponds and natural areas that are outside of individual lots and cannot be built on.

Protect environmentally sensitive features identified along the corridor. Besides the overlay district, there are several other methods used throughout Indiana (St. Joseph County, Porter County, etc.) and the country (Pennsylvania) to preserve farmland and natural areas. The Plan Commission and County Commissioners should consider or reconsider pursuit of the following items, some of which are addressed within the Comprehensive plan:

- Quarter Zoning: quarter zoning protects agriculture and natural lands by regulating the density in a zone. Quarter zoning refers to the public land survey system where sections and quarters were used. Using that method, development could be limited to a quarter section of land, whereas a limited number of non-farm homes could be allowed for every 40 acres of land. This technique has been successfully used in St. Joseph and Porter Counties to protect its agricultural land.
- Cluster Zoning: cluster zoning encourages the preservation of large tracts of land by allowing the development of new homes on very small lot sizes clustered together on a specific area of a parcel. This allows the preservation of farmland and makes farming the rest of the plot easier. It can also be used to protect natural features such as streams, ponds, and significant tree groves. Typically, the protection of the remaining land is noted on the recorded plat so that the remaining parcel cannot be split off. La Porte County uses this in their zoning ordinance.
- Incentive Zoning: incentive zoning is where a development can increase the number of lots by so much (e.g. 25%) in exchange for using clustering techniques, preserving open space or natural features.
- Natural Resource Protection Ordinance: this type of ordinance establishes standards to protect, conserve, and enhance natural resources. This ordinance allows the County to preserve larger, interconnected sensitive areas and sets expectations of developers and landowners on what the County wants to achieve. To use this tool, the County would complete an inventory of significant features using a variety of techniques including floodplain maps, visual inspection, other state and national databases. This would allow the County to identify where and what natural resources should be protected. Next, the Comprehensive Plan would need to be updated to include a policy statement regarding the protection of natural resources and a map outlining these areas. Then the County can develop the standards and adopt the ordinance. This technique has been successfully used in Chester County, Pennsylvania.
- Transfer of Development Rights: transfer of development rights is a zoning tool that permanently protects agricultural and other environmentally sensitive lands. To implement this, the County would designate a target area in the County or Evansville or other small towns for development. Another zone (a sending area) would be designated where growth should not occur. Then developers would purchase the development rights in the protection area to increase the amount of development proposed in the development target zone. Typically, TDR's require developers to purchase the development rights from the property owners and an easement is recorded on the parcel where the development rights were purchased that limited future growth. This method has been effective in protecting agriculture lands while limiting sprawl. This method is used in Lancaster County, Pennsylvania.

USI Campus, USI photography and Multimedia

Institutions

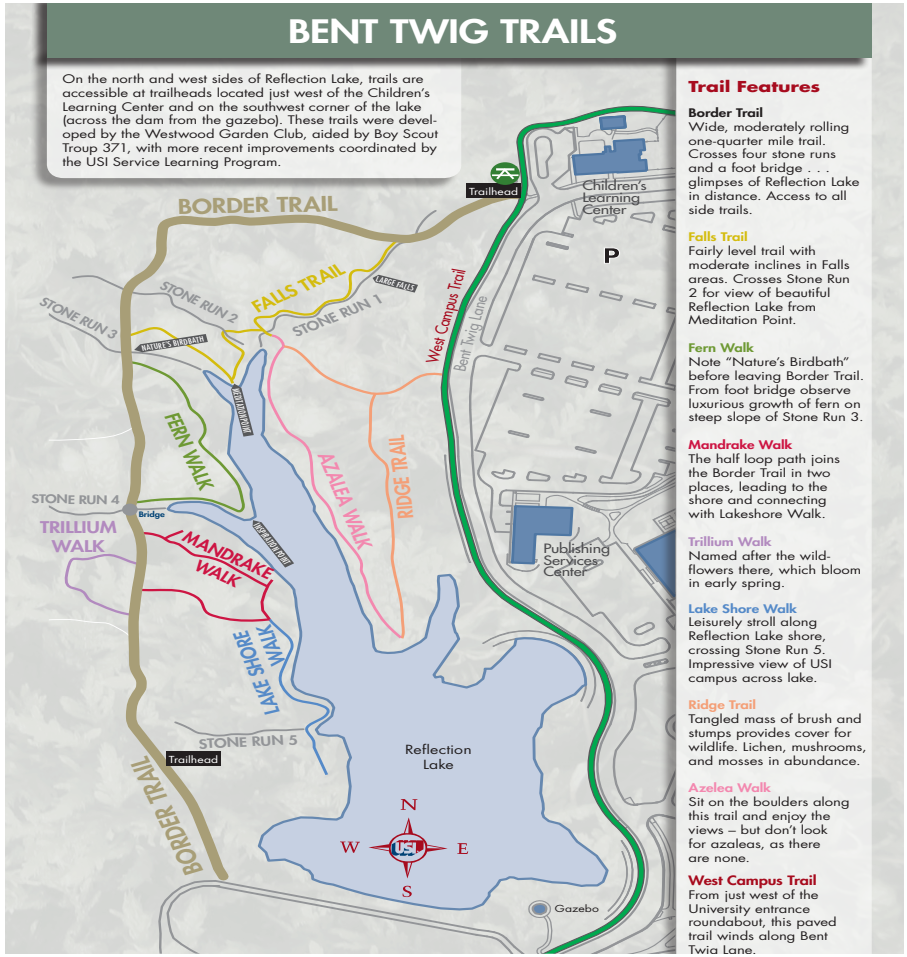
Strengthen the relationship between the University Parkway Corridor and the University of Southern Indiana (USI).

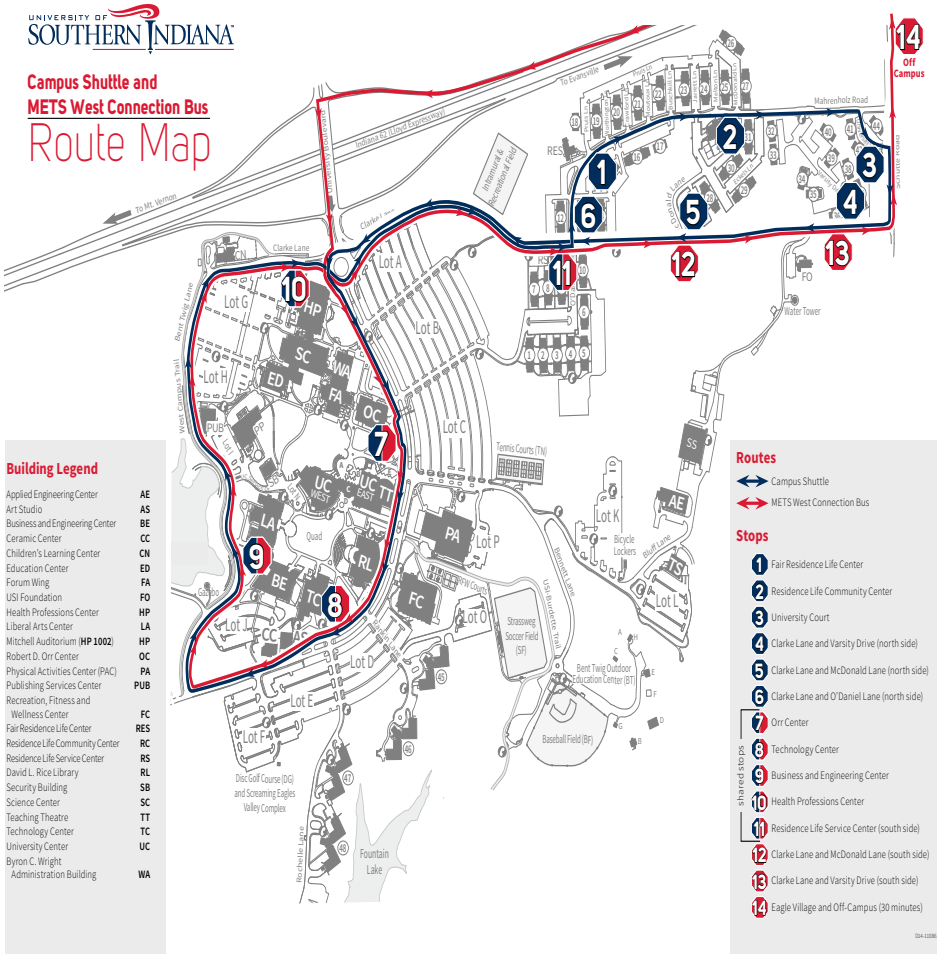
Better connect USI to the rest of University Parkway Corridor. USI serves as an anchor for the University Parkway. Located at the southern end of the Parkway where it joins the Lloyd Expressway, USI serves as an identifying feature and land mark. USI has more than 11,000 students enrolled in 2018-2019[1] and over 20,000 people participate annually in continuing education courses and special programs. The University owns over 1,400 acres of land and is consistently increasing its programs, number of buildings, and recreation offerings. The University offers many technical programs (e.g. nursing, business, engineering, manufacturing engineering, mechanical engineering, etc.) that could create a nice synergy with the Research and Technology Park and Majestic Palace. There are many ways USI can be connected to the parkway.

The campus has numerous trails and sidewalks that are interconnected on campus as well as the campus shuttle and METS West Connection Bus. While student housing is discouraged off campus, there could be some non-traditional students and employees who will want to live nearby. Additionally, with the potential partnership on the Research and Technology Center, students will need to easily access that campus. Therefore, extension of the multi-modal system along University Parkway will be needed. This can include:

- Create a multi-use path along University Parkway to Campus.
- Ensure that all new development has sidewalks and are interconnected.
- Connect the trail network along University Parkway to USI's existing trails and open space network to allow for easy walking and biking.
- Coordinate with INDOT and USI on where and how the trail will connect to the USI campus. Negotiations should occur during the redesign of the State Route 62 and University Parkway interchange.
- Work with USI and METS to add additional stops along University Parkway at Majestic Place and the Research and Technology Center.

[1]University of Southern Indiana, Retrieved August 2018 from https://www.usi.edu/





Establish a business partnership with USI through the new technology park and business accelerator. One of the physical recommendations of the plan is to create a Research and Technology Center along the Parkway. That recommendation would involve public/private-non-profit partnerships. In conversations with USI, an opportunity exists for this partnership. The goal of both the County and the University is to keep more students in Vanderburgh County rather than continuing the brain drain. The University is interested in expanding some training and internship programs for students, and assisting the community with economic development efforts, which could be provided through the Research and Technology center.

- Create a training and internship program for the University of Southern Indiana, University of Evansville, and Ivy Tech students.
- Use existing County programs and businesses like Innovation Pointe to partner with USI's Applied Engineering Center.
- Recruit a major private business partner to anchor the center.

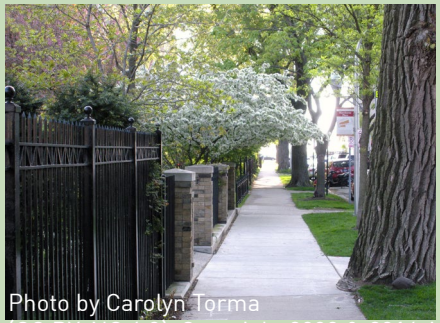


Photo by Carolyn Torma

Photo by Kelly Wilson

The Value of Walkability

Walking is the primary form of transportation for humans. On average, 10 to 20 percent of trips are not taken by car, and in addition most trips taken in a vehicle require walking to reach the vehicle or desired destination. Creating a pleasurable experience for these necessary moments as a pedestrian can create an economic benefit that is often overlooked in many neighborhoods and communities.

Neighborhood walkability has a profound effect on a home's property values. A study conducted by Texas A&M University (Assessing Benefits of Neighborhood Walkability to Single-Family Property Values) indicated that neighborhoods which have a strong sidewalk system and capacity for walkability saw a significant increase in property values when compared to neighborhoods which had fewer pedestrian amenities and were more auto-oriented.[1] One local state example can be found in Indianapolis where properties within a half mile of the Monon Trail (11.4%) or a conservation corridor (25.9%) saw higher sale prices in comparison to other properties in the area.[2]

Walkability can also be seen making an impact on the economy generally. When major trails or sidewalk facilities are created, these can spur greater recreational and business activities located along the trail or sidewalks. A recent study completed for the Indianapolis trail system indicated that a mixed use corridor, like the University Parkway, could see annual sales increase from the trail alone. This increase in retail sales can range from $250,000 all the way to $1,000,000 in more active regions employing 1 to 5 additional employees.[2]

[1]dLi, Wei. John, Kenneth. (2015). Journal of Planning Education and Research. Planetizen. Retrieved from: https://www.planetizen.com/node/81269/economic-benefit-increasing-neighborhood-walkability-it-myth

[2]City of Indianapolis (2014), Indy Greenways: Full Circle 2014-2024 Master Plan, Indianapolis, IN

Assist Evansville-Vanderburgh School Corporation (EVSC) to better serve the corridor.

EVSC has one school in the area, West Terrace Elementary, that serves K-5. The school is currently at capacity. As more residential use is developed along University Parkway, EVSC will have to give consideration to expanding the school or constructing another school to serve the area.

Assist EVSC in anticipating future student enrollment and prepare for facility needs. Currently no new school location has been identified on the future land use map for University Parkway. As new developments occur, it will be imperative for the APC planning staff to track the number of units developed and occupied so EVSC can project the future student enrollment. EVSC should be included in technical review meetings for new subdivisions and multi-family development along the parkway to judge how quickly development is occurring and the impact on the elementary school. The APC planning staff will continue to monitor development so that EVSC can determine when a new school is needed. The EVSC should work with the APC to determine a future location of a school within the Parkway. If a site for a new school is determined by EVSC, this plan should be amended to show it. Thought should be given to easy access, safety, and adjacent land uses.

Require new subdivisions to create pedestrian and bicycle facilities that connect the existing and future development to schools. With the younger generations' ideology to not drive a vehicle, more and safer connections for active modes of travel will be required. As new subdivisions and non-residential development occur, sidewalks and trails must provide direct and safe routes to schools. This will require an extra layer of review by the APC staff to ensure these connections occur and working with developers to make sure they provide them. The overlay district will address this bicycle/pedestrian connectivity.

Recreation

Increase recreational opportunities along the corridor.

The natural and scenic beauty of the corridor has a positive benefit for property owners along the Parkway. Adding in recreational opportunities along the corridor will help to support the goal of maintaining a more rural character north of Upper Mount Vernon Road while also meeting the needs of new residents and businesses and providing alternative forms of transportation. During the process, we heard from many residents about the desire for more safe biking routes. There are two recommendations to increase recreational opportunities:

Create a trail network along the corridor. Currently there is no trail network that extends north of USI and onto University Parkway. The plan recommends that a multi-use path be developed adjacent to the new roadway that would start at USI connecting their network and Burdette Park, travel north through the interchange, connect through Majestic Place and then continue along Roesner Road to Upper Mount Vernon, seen in Figure 4-1. It will be important for the County to name the trail and include trailheads at key places. Ultimately the location and design of the multi-use path will need to be developed through a scoping and alignment study. This could also be incorporated into the construction and upgrade of Roesner.

If development ever occurs north of Upper Mount Vernon, the trail could continue. The overlay district should have a requirement that as land is developed along Roesner Road, the property owner must provide a trail easement for the multi-use path. Additionally, if conservation easements are used to preserve natural lands, they can be used as well to create a greenway.

Depending on whether a trail, multi-use path, or greenway is installed, there are design recommendations that should be taken into consideration.

Figure 4-1 Proposed Trail Route

Multi-use Path

Multi-use paths are paved pathways that are designed to accommodate people walking, biking and other non-motorized activities, such as skateboarding or roller blading. They are paved, 10 to 14-foot wide facilities designed to accommodate both bicycles and pedestrians. Like sidewalks, multi-use paths are typically located within the public right-of-way and should be buffered from the adjacent travel lanes with a landscape strip and/or vertical separation (i.e. curb).

Where multi-use pathways are adjacent to the roadway, appropriate buffer space should be provided following applicable federal, state, and local guidelines. Where multi-use paths cross a roadway, they should include appropriate intersection or mid-block crossing treatments to allow for safe and convenient roadway crossing for people using the paths.

Special consideration must be given to multi-use path design because they can result in situations where a portion of the bicycle traffic rides against the flow of traffic. Despite possible conflicts created by contra-flow bicycle traffic, multi-use paths are recommended to provide facilities for cyclists that may not be comfortable using on-road facilities. It should also be noted that the presence of a multi-use path does not prevent any user from riding in the travel lanes. Multi-use paths are recommended in situations where one or more of the following may exist:

- The adjacent roadway has high traffic volumes or high vehicular speeds.
- Bicycle and pedestrian use is expected to be high.
- Is used to connect recreational facilities.
- Can be designed with few roadway and driveway crossings.
- Can be terminated with safe transition to another path or on-street facility.

Ensure all new roads have sidewalks both internal to the development and externally connected. Sidewalks are the backbone of the pedestrian network. They are the most common pedestrian facility in both urban and suburban settings. They are typically constructed out of concrete and range from four to eight feet in width. Sidewalks are most commonly located within the public right-of-way between the roadway edge and the property line and are grade separated from the adjacent roadway with a curb. Current best practices recommend sidewalks be a minimum of 6 feet wide. Sidewalks should include curb ramps, appropriate intersection and mid-block crossing treatments and safety enhancements such as raised crosswalks, pedestrian refuge islands and curb extensions to allow for safe and convenient roadway crossing for people walking. Design Recommendations:

- Sidewalks shall be accessible to all users and designed according to ADA standards.
- Two people should be able to walk side-by-side or pass each other comfortably.
- Sidewalks should be obstruction free. Common obstructions include sign posts, utility and signal poles, mailboxes, fire hydrants, and street furniture.
- Sidewalks should be graded to minimize standing water.
- Sidewalk users should feel secure and not at risk of adjacent vehicular traffic.
- Where parking is present next to a sidewalk, additional width may be necessary to mitigate the effects of vehicle encroachment.
- The sidewalk surface should be smooth and continuous.
- Decorative concrete and pavers can be used to improve aesthetics and increase visibility at conflict points.
- Landscape planting strips and street trees should be included where possible to provide a buffer between the sidewalk and adjacent travel lanes. These buffer strips should become the responsibility of adjacent developments to ensure proper upkeep.

Increase the private park space/open space along the corridor.

- Through the development review process, work with the developer to provide land for recreational purposes.
- Use conservation zones for parkland and open space designation.
- If a land owner or developer offers land for recreational use, amend the land use map in this plan to designate the area for future park space.

Multi-Use Path:

- 12 feet is the minimum recommended width in most situations.
- A minimum 5-foot buffer should be used to separate the path from the adjacent roadway. In areas where a 5-foot buffer cannot be accommodated, a minimum 42-inch high physical barrier should be installed.
- A total clear width of 5 feet is recommended on both sides of the path with a minimum clear width of 3 feet.
- If the clear width is less than 5 feet and one of the following conditions is present, a physical barrier should be provided:
  - The slope is 3:1 or steeper and the dropoff is at least six feet
  - The slope is 2:1 or steeper and the dropoff is at least four feet
  - The slope is 1:1 or steeper and the dropoff is at least two feet
- Vertical clearance of 10 feet is recommended with 8 feet being the minimum.
- Where possible, provide separate bicycle and pedestrian ways to reduce conflicts.
- Where possible, provide an adjacent soft surface path for runners.
- The path should be constructed to a standard that allows maintenance vehicles without causing damage to the facility.
- The path should start/stop with convenient and controlled access to and from the street system.
- The side path shall comply with ADA guidelines.

Greenway:

- 12 feet is the minimum recommended width in most situations.
- Path alignment should be carefully considered to protect existing natural features.
- Because greenways do not follow established roadways, crossings may frequently occur mid-block or away from intersections. Additional consideration must be given to greenway crossings. Active crossing treatments may include median refuge islands, flashing beacons, and in-pavement flashers.
- A total clear width of 5 feet is recommended on both sides of the path with a minimum clear width of 3 feet.
- If the clear width is less than 5 feet and one of the following conditions is present, a physical barrier should be provided:
  - The slope is 3:1 or steeper and the drop-off is at least six feet
  - The slope is 2:1 or steeper and the drop-off is at least four feet
  - The slope is 1:1 or steeper and the drop-off is at least two feet
- Vertical clearance of 10 feet is recommended with 8 feet being the minimum.
- Where possible, provide separate bicycle and pedestrian ways to reduce conflicts.
- Where possible, provide an adjacent soft surface path for runners.
- The path should be constructed to a standard that allows maintenance vehicles without causing damage to the facility.
- The greenway path shall comply with ADA guidelines.

Implementation

Introduction

The University Parkway Corridor Plan is both a development guide and policy document for future decision-making for development within the entire corridor. The real challenge often comes in translating a plan's vision, goals, and recommendations into the day-to-day operations and actions of County government.

The previous sections of this plan spell out the vision, goals, and recommendations. This section focuses on implementation and how those recommendations can be realized. Just as the County Commissioners, APC, and EMPO have collaborated on this study, they will need to be able to implement this plan both jointly and independently via other regulations such as Indiana State Law.

As the plan's recommendations are implemented, it is important to continuously consider the integrity of the planning process, the community's values, the County's resources and why the project is important to implementing the land use and transportation vision. This plan is the corridor's future. It is the collective will and roadmap for the future. It is a community's duty to find ways to give it life that keep it true to the vision and maintain its integrity.

In addition, for the corridor plan to function over time, it must be periodically reviewed and updated to stay responsive to trends or changes in economic, physical, social, or political conditions. The following pages identify the necessary steps and provide a roadmap for successful plan implementation, organized around these areas:

- Adoption
- How to Use the Plan
- Interpretation
- Decisions Regarding Rezoning
- Capital Improvement Program and Plans
- Plan Monitoring and Update
- Fiscal Considerations

Adoption

A local government must prepare a resolution to adopt its corridor plan as part of the policy of its comprehensive plan to ensure that it promotes the public health, safety, morals, convenience, order and the general welfare and for the sake of economic efficiency.

The process starts with the Area Plan Commission. They will hold a public hearing to review the comprehensive plan and forward a recommendation to the County Commissioners. For the plan to be effective, it must be approved by the County Commissioners. Typically, the County Commissioners have a process for adopting resolutions that generally involves a public hearing allowing public comment. If residents are actively involved throughout the planning process, the public hearing should go smoothly. Using a resolution, the County Commissioners will formally adopt the plan – by a simple majority vote. The procedures for adopting a plan are described in Indiana Code, 36-7-4-500 Series. When the plan has been adopted, a copy of the plan with the approval resolution shall be recorded with the County Recorder.

Even with a well-designed planning process, a community may lack consensus on certain issues or, in the worst case, may not have enough support to adopt a plan. In that case, the County may want to:

- Setup a committee to work through the remaining issues. The committee should have balanced representation from all sides of the issues in dispute and a definite timeline for reporting back its recommendations.
- Recommend further study of the issues with a clear timeline. Through additional study, participants may discover new information that will help them develop a consensus.
- If the community is extremely divided on an issue, it may be necessary to bring in a professional facilitator or a mediator to help it find a solution. Sometimes a community must make tough choices and move on.

How to Use the Plan

A comprehensive plan is a document with a long-range view that serves as a guide for making land use decisions, preparing capital improvement programs, and determining the rate, timing, and location of future development.

The corridor plan is a more detailed plan of a specific area that identifies land uses at a parcel level and identifies detailed projects and recommendations to be implemented. The corridor plan is based on establishing a vision and goals that direct investment and development along the corridor.

While the corridor plan has a 20-year planning horizon, plan updates can occur before the expiration date if the recommendations are implemented, goals are achieved, corridor conditions change, values and/or priorities shift, or if circumstances dictate that the plan is no longer germane. As such, the corridor plan should be reviewed bi-annually to determine progress and relevancy. This corridor plan contains:

- Updates to existing land use inventories
- Addresses key land use and transportation issues
- Outlines Transportation Policies
- Provides guidance for future land use, access management, and infrastructure decisions
- Outlines policies to direct future development and reinvestment

The more detailed corridor plan should be used by the Vanderburgh County Commissioner's, the Area Plan Commission, and the Evansville Metropolitan Planning Organization. This plan serves as the basis for development and infrastructure policy related to construction and management of land uses. This plan should provide the policy basis to support any changes in the Zoning and Subdivision Control Ordinances as well as provide guidance on the creation of a Capital Improvements Plan (CIP) and updating the MPO Transportation Improvement Plan (TIP).

Interpretation

The University Parkway Corridor Plan should serve as the guide for land use and development decisions. The long-range vision, goals, and recommendations, along with the supporting maps, are intended to guide development decisions towards the Parkway's identified vision of the future. The County Commissioners, Plan Commission, EMPO, and members of the County staff should interpret the goals and objectives as a long-term and deliberately broad vision. The County Commissioners, APC, and EMPO officials cannot expect to control all circumstances.

The County Commissioners, APC, EMPO, and members of the County staff should interpret the policy and recommendations by this statement, "given our long-term goals and changing community conditions, these are the projects and recommendations that we want to complete in the short-term and long-term, and this is how we plan to accomplish them." Interpreting the plan in this way will enable the members of the County Commission and APC to justify their approval, or denial, or approval with conditions, of any proposed development along the University Parkway Corridor.

When a rezoning, planned unit development (PUD), subdivision, or site/development plan review request is filed with the Area Plan Commission, the County planning staff as well as other County departments should review and evaluate the application against the corridor plan and the zoning and subdivision ordinances, and provide a staff report with a formal recommendation to the Plan Commission regarding its findings. The staff report should include an evaluation of the development and the degree to which the proposed project conforms to the plan's vision, goals and recommendations, as well as the future land use and transportation maps.

The corridor plan does not contain the actual decisions that should be made; however, it should be interpreted as the guidance for those decisions so that they will help to attain the community's vision for the future of the corridor and to implement this plan.

Decisions Regarding Rezonings

Zoning protects the rights of individual property owners while promoting the general welfare of the County. The purpose of zoning is to locate specific land uses where they are most appropriate, protect property values and ensure the health, safety and general welfare of the County. In determining the most appropriate zoning designation, the County must consider such things as the adjacent land use, the existing or established development types, scale, and densities of the area in which development is proposed, public utility availability, and road access.

In general, the County Commissioners and APC should consider the following circumstances in any rezoning:

- The extent to which the requested rezoning is consistent with University Parkway Corridor Plan's policies and land use map;
- If there was an error or oversight in the original zoning of the property;
- If changes have occurred near the property and whether those changes prevent the reasonable use of the property as currently zoned;
- Does the requested rezoning benefit the community at large;
- Any negative impact to adjacent properties;
- Does the change in the zoning district negatively impact how the land can be developed;
- Rezonings should be reviewed from the perspective of the community's collective vision for the future being the "common good" and not from the standpoint of a single hardship expressed by a property owner or group of property owners.

If the Area Plan Commission recommends approval of numerous rezonings to the County Commissioners that are substantially different from the Parkway Plan's future land use map, then the plan should be updated. This is an indication that the area's conditions, issues, and/or priorities have changed.

University Parkway Corridor Overlay Zone (UPCOZ)

Given the number of recommendations in the plan as well as the number of zoning districts along the corridor, an overlay zone should be created. The UPCOZ would cover a designated area similar to the study boundaries of this plan.

The purpose of the district would be to protect property values and ensure planned and orderly development. This would be accomplished through the:

- Promotion of coordinated, quality development through sound land use planning.
- Protection of important ecological and agricultural assets along the corridor.
- Establishment of basic standards for structures, landscaping, and other improvements for properties within the Overlay Zone to promote high quality, innovative site design, an efficient land usage.
- Preserve the integrity of the roadway function and promote the steady flow of traffic through access management planning.

A draft version of the UPCOZ has been provided in Appendix A. This Zone should be adopted by the APC and the Board of Commissioners of Vanderburgh County in order to implement the University Parkway Corridor Plan and to ensure the health, safety, comfort, convenience and general welfare by providing the consistent treatment of properties along the corridor.

Capital Improvement Program and Plan

The University Parkway Corridor Plan covers a broad variety of issues and subject matters and includes both policy decisions, recommendations, and improvement projects. To implement the plan and projects, the County should amend or include this plan in the next update of their Capital Improvements Plan (CIP).

The County's Capital Improvement Program is a planning document that identifies projects for the next twenty years that are needed to ensure a strong transportation and bridge network throughout the County. The CIP is a plan that prioritizes the highest scoring projects for the next five years and allocates financial resources to various community needs and requests. The Capital Improvement Program and Plan will implement the projects identified in the corridor plan by providing the necessary funding for capital improvement projects. The County's website states that the "list of projects resulting from this assessment is not financially constrained so that a comprehensive list of all needed improvements can be developed regardless of whether funding has been obligated to a project."

To update the County's CIP, the County Engineer should update the Capital Improvement Program with the projects listed in the corridor plan. The Capital Improvement Program represents the County's tentative commitment to comply with the plan unless circumstances or priorities change in the future. The commitment is more certain in the first year of the CIP and becomes increasingly more tenuous in subsequent years. Nevertheless, the CIP should be used as the County's present plan and priority over the next five years.

Once the County's Capital Improvement Program and Plan is updated with the information contained in the approved corridor plan, then on an annual basis, the County Engineer should prioritize the projects and develop a rolling strategy for moving these items forward. It will be important that this is completed prior to the County's budgeting time to ensure that adequate funding is in place if funds are anticipated from the County budget. Even though the CIP is a planning document, it should not be seen as an automatic authorization of the construction of projects, because of the procurement process and the allocation of resources.

As development starts to occur in the TIF District, funds will begin to build and can eventually be used for improvements in the District. The availability of these funds should assist in funding improvements designated in the Plan and elevate them in the project schedule.

Monitoring & Update

A planning process does not have a defined beginning and end. It is an on-going process that responds to new information and circumstances and incorporates changing conditions into decisions. Circumstances that may change include physical conditions of infrastructure, economic climate, the natural environment, and social and community goals.

Once the corridor plan is adopted it will need to be revised from time to time to ensure that it stays consistent and relevant to current conditions. It is best that the County continue in the same partnership manner it undertook for the creation of this plan.

Periodically and prior to preparing the annual County operating budget, the Area Plan Commission, County Engineer and MPO should undertake an assessment that documents the impacts of the project implementation activities. This could be accomplished with preparing the update to that year's CIP.

A major plan update for a corridor like University Parkway should occur at intervals of approximately every ten years, or sooner depending on the conditions within the corridor. The purpose of the plan update is to re-evaluate the goals, recommendations, and projects contained within this Plan (noting those to change and those to remove), and to develop new goals, recommendations, and policies if necessary to make sure that this Plan is being effective. Additionally, it might be necessary to update the travel demand model, especially when significant development changes occur.

Fiscal Considerations

The implementation of the corridor plan will require a partnership between the County Commissioners, APC, EMPO, EWSU, land owners, and private developers to carry out the recommendations and projects and achieve the vision and goals set forth herein. Many of the transportation projects will be developer driven at the time of proposed development. There are two projects in this Plan that the County should undertake to support development and ensure safe and efficient traffic movement. These include the Roesner Road upgrade and the portion of the trail from USI, through the University Parkway/Lloyd Expressway Interchange, and along University Parkway to the Majestic Place Site. Therefore, this project should be identified in both the County's Capital Improvement Program and Plan, and preparations made to start to plan for the improvements in advance of development along Roesner Road.

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UNIVERSITY PARKWAY

Appendix A:

Model Overlay

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Table of Contents

Chapter 17.17 University Parkway Corridor Overlay Zone.

§ 17.17.020 Purpose, Authority, and Nature of Overlay Zone.

A. Purpose. The purpose of the University Parkway Corridor Overlay Zone (herein referred to as the UPCOZ) is to promote and protect the public health, safety, comfort, convenience, and general welfare by providing for the consistent and coordinated treatment of properties along University Parkway, which is the primary connector between State Route 62 (Lloyd Expressway), and the University of Southern Indiana (USI) north to State Route 66 (Diamond Avenue). The Board of Commissioners of Vanderburgh County has invested substantial tax dollars in this corridor by upgrading the roadway and sewer systems, and developing the University Parkway Corridor Plan to facilitate and promote well-planned and orderly development of future land use and transportation infrastructure, and more specifically to:

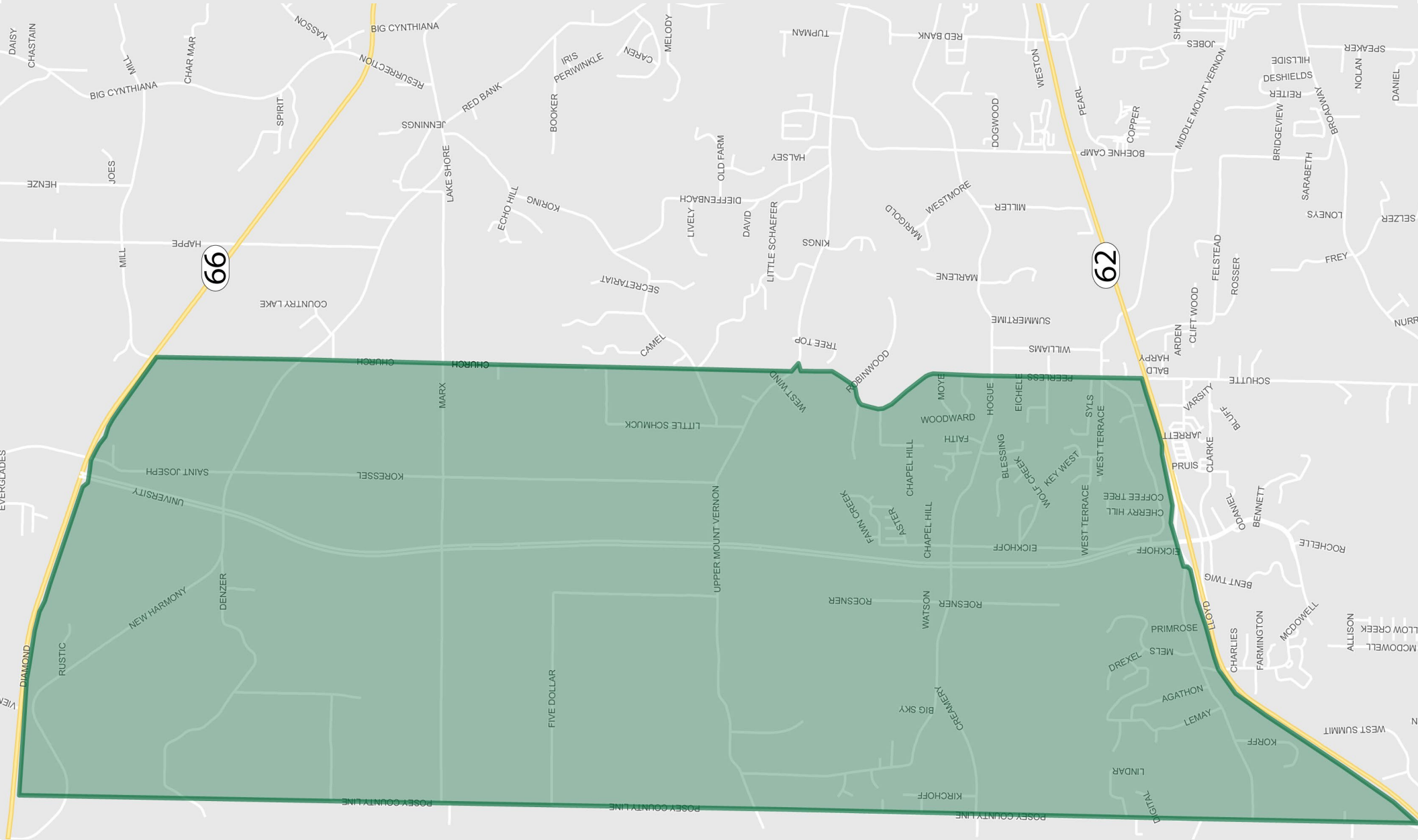
1. Implement the current Evansville-Vanderburgh County Comprehensive Plan and the University Parkway Corridor Plan, both of which have been adopted by the Evansville-Vanderburgh County Area Plan Commission and the Vanderburgh County Board of Commissioners;
2. Protect property values;
3. Promote coordinated, quality development through sound land use planning;
4. Protect important ecological and agricultural assets along the corridor;
5. Establish basic standards for structures, landscaping, and other improvements for properties within the UPCOZ to promote high quality, innovative site design, and compatible land usage; and
6. Preserve the integrity of the roadway function and promote the efficient flow of traffic through access management planning.

B. Limitations. It is not the purpose of this Chapter, nor of the University Parkway Corridor Plan, to take property from current owners, nor to require any specific development or rezoning of property unless a change in use is desired by the property owner.

C. Authority. The UPCOZ is established pursuant to Indiana Code §§ 36-7-4-600 et seq. (creation of zoning ordinances) and 36-7-4-1400 et seq. (Development Plans).

D. Nature of Overlay. The UPCOZ is established as a zoning overlay district to be superimposed on top of existing base zoning districts. Development standards provided herein are intended to supplement those in the underlying zoning district. In some cases, the UPCOZ standards set forth in this Chapter may be more restrictive than those of the underlying zoning district, while in other cases, the UPCOZ standards may relax or be less restrictive. In cases where standards are prescribed both within this Chapter and within the underlying zoning district, the standards of this Chapter will prevail. Where development standards or requirements are prescribed in the underlying zoning district but are not prescribed for the same topic(s) in this Chapter, the standards or requirements of the underlying zoning district apply.

Figure 1 UPCOZ Boundaries



E. Development Plan Required.

1. Pursuant to Indiana Code § 36-7-4-1401.5(a), the UPCOZ is hereby deemed and established as a zoning district in which a Development Plan is required and must be approved by the APC prior to issuance of an Improvement Location Permit for all proposed development projects meeting the applicability criteria set forth in Section 17.17.130.
2. The detailed Development Plan review process requires the APC to consider and evaluate the Development Plans for such projects in public meetings in order to promote orderly growth compatible with the surrounding land use and consistent with the Comprehensive Plan and University Parkway Corridor Plan.

§ 17.17.030 Zone Boundaries.

The boundaries of the UPCOZ are hereby established as shown on the attached map. The Zoning Map which is part of the Vanderburgh County Zoning Ordinance, is officially amended by the adoption of this Chapter to include the UPCOZ per the boundaries set forth. As shown in Figure 1: UPCOZ Boundary Map, the boundaries of this zone are the Vanderburgh-Posey County line to the west; State Route 66 (Diamond Avenue) to the north; State Route 62 (W. Lloyd Expressway) to the South; and a line connecting/extending Peerless Road and Church Road to the east. If a portion of a parcel falls within this identified boundary, the whole parcel is subject to the Development Plan review process and the UPCOZ standards as set forth in this Chapter.

§ 17.17.040 Area Plan Commission Approval.

A. General. Except as otherwise provided in this Chapter, the APC must approve, approve with conditions, or disapprove the proposed Development Plans for any tracts of land in the UPCOZ.

B. Exemptions. Developments consisting of one single-family residence or one two-family residence are exempt from both site plan and Development Plan requirements.

C. Review. Site plans will be reviewed pursuant to the underlying zoning district as detailed in Section 17.36.020.B, and approval by the Site Review Committee is required prior to the issuance of an Improvement Location Permit for developments that do not require a Development Plan and are not otherwise exempt from site plan approval requirements.

D. Development Plan Required. A Development Plan must be submitted to, reviewed by, and approved by the APC prior to the issuance of an Improvement Location Permit for development in the UPCOZ meeting any of the following criteria:

1. Parcels that front directly on University Parkway;
2. Residential developments with more than ten (10) dwelling units, regardless of whether composed of single-family, two-family, or multi-family units;
3. All commercial and industrial developments encompassing over one (1) acre;
4. Development in the floodplain;

5. Change in use, but only where such change results in increased off-street parking requirements that cannot currently be met on the site; or
6. Developments having site plans that do not otherwise meet any of the above criteria but which the Site Review Committee determines must nonetheless be reviewed by the APC in a public meeting as a Development Plan per the requirements of this Chapter, based on the impacts of the project.

E. Development Plan Authority. Pursuant to Indiana Code Section 36-7-4-1401.5, the APC has exclusive authority to approve or disapprove a Development Plan for real property located within the APC's jurisdiction. The APC will follow the procedures for review of Development Plans in accordance with this Chapter.

F. Waivers.

1. The APC may grant a waiver of specific UPCOZ development requirements as set forth in this Chapter.
2. In granting a waiver, the APC may impose such conditions that will, in its judgment, secure the purposes of this Chapter.
3. The APC may only approve a waiver if all of the following criteria are met:
   a. The proposed development will nonetheless be in harmony with the purposes and the land-use standards contained in this Chapter.
   b. The proposed waiver will enhance the overall Development Plan, the adjoining streetscapes and neighborhoods, and the overall University Parkway Corridor.
   c. The proposed waiver will not:
      i. be detrimental to traffic flow;
      ii. produce a street/circulation system that is counter to the policies in the University Parkway Corridor Plan regarding network connectivity and access management standards;
      iii. adversely affect emergency vehicle access; or
      iv. deprive adjoining properties of adequate light, air, or enjoyment by their owners.
   d. The proposal exhibits extraordinary site design characteristics, including, but not limited to: increased landscape treatment, tree preservation, provisions for bicycles, transit, shared parking, or pervious surface parking coupled with provisions for shared parking facilities.
4. Waivers must be heard by the APC at a public hearing following satisfaction of all notice requirements applicable to a Development Plan under this Chapter and must be approved, approved with conditions, or rejected after such hearing, with written findings regarding the above criteria. Waivers should generally be submitted to the APC in conjunction with the Development Plan; requests for waivers submitted after disposition of the application for approval of the Development Plan must be submitted as part of a new request for approval of a Development Plan in conformance with the procedural and documentation requirements for Development Plans set forth in this Chapter.

5. The provisions for waiver under this Section do not affect the right of an applicant under Indiana law to petition the Board of Zoning Appeals for a variance from development standards of the underlying zoning district, as provided in IC 36-7-4-918.5 and Chapter 17.36 of this Zoning Code.

§ 17.17.050 Development Plan Procedure and Review.

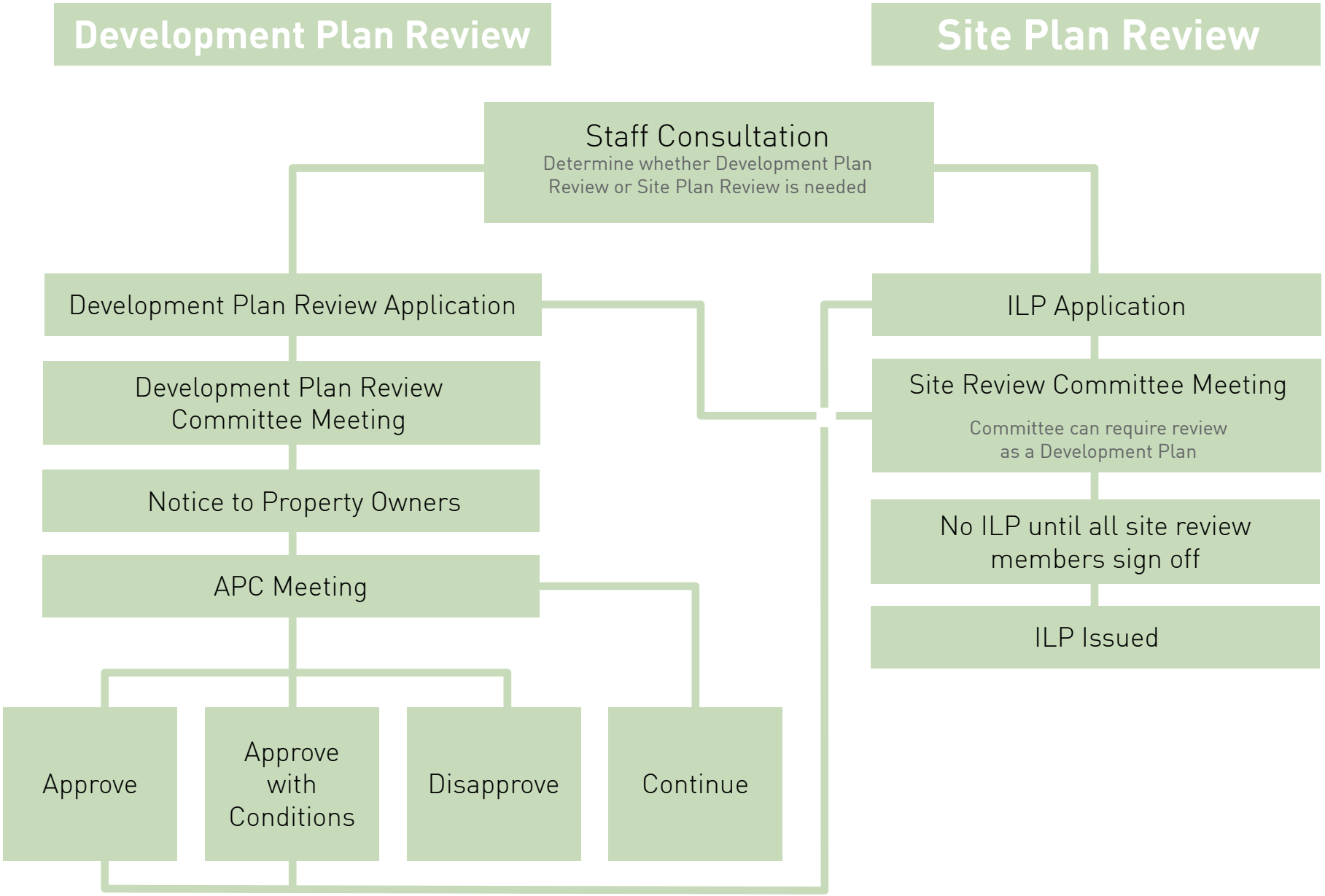
A. Application for Review and Approval of Development Plan.

1. An application for Development Plan approval must be made by the property owner, or by an owner's representative under written authorization from the property owner, intending to request an Improvement Location Permit under the requirements of this Chapter.
2. All documents and information submitted as part of an application for Development Plan approval constitute a statement by the applicant agreeing to be bound to develop in accordance with such information upon approval.
3. The application must be filed with the APC.
4. The application must be accompanied by an application for any variances, requests for waivers under this Chapter and a nonrefundable payment for the Development Plan filing fee established by the APC. Each application must include three copies of all required documents, three copies of drawings on twenty-four by thirty-six inch paper, and three copies of drawings on eleven by seventeen paper. Upon notification that the application is complete and to be reviewed by the APC, the applicant must provide fifteen copies of drawings on 11 by 17 paper.
5. All graphic and plan drawings must be to a scale of not less than one inch equals one hundred feet (1"=100').
6. All application materials must be submitted electronically as well as in hard copy.
7. Sufficiency Review. Upon receipt of a Development Plan application, the APC staff will:
    a. Review the completeness of the application as to the content requirements;
    b. Inform the applicant of the sufficiency status determination within three working days of the application filing date;
    c. Assign meeting dates for consideration of the proposal by a Development Plan Review Committee, and by the APC for a final decision on the plan in a public hearing, once an application is determined to be complete.

B. Interrelationship of Development Plan and Site Plan Review

1. A Development Plan Review Committee is hereby established to consist of the same members as the Site Review Committee specified in Paragraph 17.36.020 B.3., to review all Development Plan applications for technical recommendations.

UPCOZ Review Processes Diagram



2. Subsequent to review by the Development Plan Review Committee, the Plan will proceed to the Area Plan Commission meeting. If the Development Plan is approved by the APC, the applicant could then file an Improvement Location Permit Application and site plans for the project to be considered by the Site Review Committee in accordance with the requirements of Section 17.36.020. The steps in these plan reviews are depicted on the UPCOZ Review Process Diagram.

C. Contents of Application Package. The following information must be provided with the application and collectively constitute the Development Plan. The Director may determine that any of the information below is not required for a particular Development Plan.

1. Owners. Name, address and telephone number of person or entity owning an interest in the subject property and the extent of such ownership interest; the term "ownership interest" includes any legal or equitable interest held at the time of application in the real property which is the subject of the application. The application must include the signatures of the owner(s).
2. Preparation. The names and addresses of persons and/or firms responsible for preparing the Development Plan.
3. Uses. A statement of the existing uses of the project site and those of each abutting property, and a statement of all proposed uses, stating the type and size of residential and non-residential buildings, and the type of business, commercial or industry, so as to reveal the effect of the project on traffic, fire hazards, or congestion of population, and including at a minimum the following information:
    a. Estimated number of employees, commercial square feet, residential units, etc.
    b. Hours of operation;
    c. Any changes anticipated in terms of dust, odor, smoke, fumes, noise, light, hazardous or noxious fumes, wellhead protection, etc.;
    d. Disturbance of vegetative cover, earth work, etc.; and
    e. Any ancillary improvements that the applicant proposed to remedy or prevent problems created by the development.
4. Timeline. Statement of proposed starting and completion dates for the project, including any proposed phasing and sequencing.
5. Utility Plan. A utility plan must be submitted showing all existing and proposed facilities servicing the development including public water and sewer lines, and private laterals.
6. Road Plan. A road plan must be submitted for any proposed on- or off-site road improvements needed to facilitate traffic at project build-out. This drawing must show.
    a. All existing roads;

b. Proposed road improvements:

   i. New rights-of-way;

   ii. Pavement types including streets, curbs, and sidewalks;

   iii. Lane markings and other traffic control; and

   iv. Any facilities conveying storm water in the right-of-way.

7. Traffic Study. A traffic impact analysis must be submitted if required by the APC Director, the Director's designee, Evansville Metropolitan Planning Organization (EMPO), or County Engineer. This review must include at a minimum:
   a. Current traffic counts;
   b. Projected future traffic counts at build-out;
   c. Current Level of Service;
   d. Projected future Level of Service at build-out; and
   e. Recommendations for any future road improvements needed to address project traffic.
8. Grading Plan. A grading plan must be submitted for any disturbance to the earth or to the vegetative cover anticipated in the project construction. This drawing must show:
   a. Contours for the existing elevations, for any 100-year flood zone on the property, and the final grade contours of all areas on-site where earthwork (excavation, fill, & grading) would change the existing elevations; and
   b. Notes describing proposed site grading and erosion control methods to be used.
9. Drainage Plan. A drainage plan, with calculations based on the grading plan, must be submitted showing:
   a. Established benchmark elevations and their locations on the site;
   b. Contours for any 100-year flood zone within the property, and for the existing and proposed post-development site elevations;
   c. Direction of flow arrows;
   d. Proposed site improvements for impervious surface areas, and for facilities required to accommodate storm water on- and off-site; and
   e. Additional minimum drainage requirements detailed in the Vanderburgh County Drainage Ordinance, Sections 13.04.135 and 13.04.160A. through E.
10. Drawings for the Development Plan in accordance with this Section.

11. Landscape Plan. Landscape plan drawing(s) delineating all existing and proposed structures, parking areas, walks, ramps, driveways, signs, above and below ground utilities, lighting, and the location, size, quantities and description of all landscape materials to be used, and the size in square feet of the areas where landscaping will be planted.
12. Lighting Plan. A lighting plan must be submitted as part of the Development Plan review process, and must include the following information to demonstrate conformance with the lighting standards contained in this Chapter:
    a. Location of existing and proposed buildings, landscaping, and parking areas with locations of proposed exterior light fixtures;
    b. A photometric plan;
    c. Manufacturer's catalog cuts; and
    d. Proposed mounting height of all exterior fixtures.
13. Other reasonable information required by the Director to adequately assess the proposal, which may include, without limitation, reports on one or more of the following issues examining both the positive and negative estimated impacts of the proposed development on:
    a. A letter from the Evansville-Vanderburgh School Corporation outlining estimates of the impacts of the proposed development;
    b. Capabilities of emergency services, including but not limited to, fire, sheriff, and emergency medical services, and their respective response time;
    c. Any public recreational facilities proposed in the development, as well as any proposed mitigation measures; or
    d. The fiscal impact on the County.
14. Supplemental Data.
    a. In addition to the minimum data and information required by this Section, applicants may submit such other additional data, information, or documentation they deem necessary or appropriate to achieve a full and proper consideration of that application.
    b. Whenever supplemental data has been requested by staff or provided by the applicant, it must be submitted at least ten days prior to the date on which it is to be considered or acted upon in connection with such application. The filing of such data after the ten-day deadline will constitute cause to delay a requested or scheduled hearing or decision date.

D. Drawing Contents. Drawing of the proposed development must include the following:

1. Date, north point and scale.
2. Accurate location of all survey monuments erected, corners, and other points established in the field in their proper places.
3. Radii, internal angles, points of curvature, tangent bearings and lengths of all arcs, chords and chord bearings.
4. The proposed name by which the project is to be legally or commonly known.
5. Legal description of the development site, including all parcels or lots therein.
6. Tax parcel Identification number(s).
7. The following items are internal or adjacent to the site:
    a. Existing structures and improvements, with indication of those improvements that are to remain and those which will be removed.
    b. All building restriction lines, and reservations.
    c. Calculations of the following, as applicable:
        i. Number of dwelling units or square footage of non-residential uses,
        ii. Number of parking spaces, and
        iii. Number of loading spaces.
    d. Building Elevations. Preliminary exterior building elevations of all proposed structures and exterior elevations of existing buildings when existing buildings are proposed to be structurally altered. Elevations must indicate the materials to be used in the design of the structure and the proposed color scheme.
    e. Signs. Elevations of proposed signs as well as the materials and colors intended for the sign; "Typical" elevations must be provided for wall mounted signs including renderings of all sign faces; views of supporting members, poles, bases and pedestals; side views which indicate both signage depth and projections; method of illumination (if any), materials indications, and dimensions of all sign elements.
    f. Underground storage tanks, if any.
    g. Existing and proposed topography based on U.S. Geological Survey NAVD 88 datum with contour intervals of not more than five feet where the slope is greater than ten percent and not more than two feet where the slope is less than ten percent.
    h. The water elevation at the date of the survey of lakes, streams, or swamps within the project, as well as the approximate high and low water elevation of such lakes, streams, or swamps. The plan must also show the regulatory flood contour line (100-year flood) and flood protection grade elevation (FPG) for any lot or parcel in the floodplain. All elevations must be based on NAVD 88 datum.

i. Existing and proposed easements and rights-of-way for any purpose, including:

i. Public utilities generally;

ii. Specific utilities;

iii. Streets, alleys, rail, and other public ways;

iv. Drainage; and

v. Private uses.

j. Streets and other ways. Alignment, location, lengths, widths, types of construction and names (if applicable) of all existing and proposed streets, alleys, or other public ways, including bridges, street lighting and underground conduits for street lighting.

8. The following external items to the site must be shown to illustrate the relationship of the subject property to the existing conditions within 200' of the site:

a. The dimensions of all lot and property lines, owners of record, the relationship of the subject property to abutting properties and buildings within two hundred feet;

b. Existing zoning of the land and all adjacent lands;

c. Existing and proposed driveways, entrances, exits, parking areas, sidewalks, and any other pedestrian paths on-site and within 200';

d. Existing and proposed fire hydrants;

e. Utilities. For either the utility plan or the drawing, existing and proposed public utility facilities, including water mains, storm sewers, sanitary sewers, culverts, bridges, and other utility structures or facilities, and including pipe sizes, grades, and exact locations, to the extent obtainable from inspection of site or from public or private records as to property surrounding site; and

f. All parks, wooded areas, cemeteries, water courses, drainage ditches, wetlands, and floodplains.

E. Notice. The applicant must comply with all notice provisions for hearings as follows:

1. Give notice of the hearing by publication in accordance with Indiana Code Section 5-3-1; and

2. Provide for due notice to interested parties at least ten (10) days before the date set for the hearing.

F. Action on Development Plans. Upon submittal of a Development Plan application, or upon resubmittal of a site plan as a Development Plan at the recommendation of the Site Review Committee, the APC will consider the application in a public meeting and take one of the following actions:

1. Approve. If the Development Plan meets all the requirements of this Ordinance and other applicable County Ordinances, the application may be approved, with or without conditions imposed by the APC, and may permit or require the owner of real property to make a written commitment under Ind. Code § 36-7-4-1015.

2. Disapprove. If the Development Plan does not meet all the requirements of this Chapter, other applicable County Ordinances, and any conditions of approval recommended during the review of the application, the application may be denied.
3. Approval Conditioned on Correction. If minor corrections to the Development Plan are necessary for it to meet the standards set for approval, and such minor corrections can be clearly expressed to the applicant as conditions, then approval of the application may be given. Revised drawings must be submitted to the Director prior to issuance of an Improvement Location Permit.
4. Table. When a Development Plan is forwarded to the APC and the Commission needs more information to determine whether the Development Plan is compliant with the requirements of this Chapter or other applicable County Ordinances, the APC may table action on the Development Plan until compliance is shown, or the required additional information is provided.

G. Criteria and Findings. In reviewing and determining whether to approve or disapprove a Development Plan, the APC must consider the following criteria, and must enter written findings regarding conformity or nonconformity with the criteria pursuant to Indiana Code Section 36-7-4-1406(a) concerning each decision to approve, approve with conditions, or disapprove a Development Plan.

1. All applicable application and notice requirements must be satisfied.
2. The proposed development must be consistent with the intent and purpose of the Evansville-Vanderburgh County Comprehensive Plan, the University Parkway Corridor Plan, and the UPCOZ Overlay Zone.
3. The Development Plan must comply with all applicable provisions of this Chapter.
4. The Development Plan must comply with all applicable requirements in the underlying zoning district in which the development site is located.
5. The Development Plan must comply with all applicable provisions of the Subdivision Control Ordinance.
6. The proposed development must be appropriate to the site and its surroundings.
7. The proposed development must be capable of being sufficiently serviced by water, sanitary sewers, storm water drainage, and other utilities.
8. The proposed development must be accompanied by the concurrent construction of any on or off-site improvements needed to accommodate:
    a. The impact of project traffic on the road network near the site; and
    b. The impact of the project on any other community infrastructure.

H. Time Limitations. A Development Plan approved by the APC is valid for a period of one (1) year for purposes of obtaining an Improvement Location Permit. An Improvement Location Permit expires if neither site work nor building construction has commenced within 1 year of the date of issuance.

I. Performance Assurances.

1. Each approval of a Development Plan may be conditioned on the furnishing to the APC of a letter of credit that:
   a. Guarantees the timely completion of proposed public improvements in the development; and
   b. Is satisfactory to the APC.
2. No Certificate of Occupancy will be issued until any required improvements are completed, inspected, approved, and accepted.
3. As-Built Plans and Required Certification. The applicant, developer, or owners must prepare and submit as-built drawings to the respective reviewing agency(ies) for all streets, drainage ditches and facilities, utility pipes and structures, and finished grade elevations for the project. The as-built plans must be filed with a request for inspection of these improvements to the respective reviewing agency(ies) prior to the release of any performance assurances. The as-built plans must be accompanied by a certification of completion and compliance properly executed by the licensed engineer or surveyor preparing the Development Plan and/or as-built plans in the form prescribed by each respective reviewing agency.

§ 17.17.060 LAND USE.

A. Permitted Uses. All uses which are permitted in a given site's underlying primary zoning district(s), except those uses expressly excluded in this Chapter, are permitted in the UPCOZ.

B. Mixed Uses. Mixed Use is permitted in the R-3, R-4, R-5, CO-1, CO-2, C-1, C-2, and C-4 districts, with the following requirements:

1. Residential use is not permitted on the first floor of a parcel in a commercial underlying zoning district.
2. Outdoor sales and seating may be permitted for restaurants and similar uses in the R-3, R-4, R-5, CO-1, CO-2, C-1, and C-2 districts.
3. Commercial use must not constitute more than 25% of the gross floor area of any building in a residential underlying zoning district.
4. If the residential square footage of a building exceeds the commercial, then the R-5 development standards apply. In addition to the uses permitted under R-5, uses in Use Group 7 are permitted in the commercial area of the building.

§ 17.17.070 SPECIAL USES.

Special uses permitted upon approval by the Board of Zoning Appeals in the underlying primary zoning district, except the uses expressly excluded in this Chapter, are permitted as special uses in the UPCOZ.

§ 17.17.080 EXCLUDED USES.

A. Major subdivisions with lots that will be connected to public sewers are excluded from the "A" Agricultural zoning district within the UPCOZ.

B. The following uses are excluded within the UPCOZ regardless of the permitted uses listed in the underlying primary zoning districts within the UPCOZ:

1. All uses in Use Group 8, except for uses in Section 17.20.110.A, B, and F;
2. All uses in Use Groups 9 through 14, inclusive;
3. All uses in Use Group 15, except for the following permitted uses: brewery, distillery, grain blending, livery stable, or riding academy;
4. Use Group 16;
5. Use Groups 19 through 21, inclusive;
6. Special Use 6 (cemeteries, mausoleums, columbaria, or crematoria);
7. Special Use 8 (mobile home parks);
8. Special Use 9 (storage of junk or salvage, or principal use for sale of junk or salvage);
9. Special Use 11 (bus or railroad passenger stations, garages or lots);
10. Special Use 12 (airports or heliports);
11. Special Use 16 with the exception of an "auditorium" consistent in mass and design with surrounding development and consisting of a facility for live stage performances;
12. Special Use 17 (Sale of gasoline);
13. Special Uses 19 (mineral extraction, storage, and processing);
14. Special Use 20 (landfills);
15. Special Use 21 (livestock sales or auctions, stockpens);
16. Special Use 22 (animal breeding and raising for fur production or experimental use);
17. Special Use 26 (mobile offices); and
18. Special Use 29 (massage parlors).

§ 17.17.090 ACCESSORY BUILDINGS AND USES.

A. All accessory structures and uses which are permitted in the underlying district(s) are permitted under the provisions of Section 17.12.070, but are subject to the requirements of this Section.

B. Accessory structures must not be located closer to the front property line than the principal building.

C. Accessory structures must have, on all sides, the same architectural materials or must be architecturally compatible with the principal building. Architectural compatibility includes, but is not limited to, the type, color, and texture of building materials, and the type, design, and character of windows, doors, light fixtures, signs, and supplementary elements. This requirement is subject to the following:

1. If alternate building materials are to be used or the accessory building is not architecturally compatible with the principal building, it must be screened on all sides using opaque fencing, masonry wall(s), plantings, landscaping or hardscaping materials, or a combination thereof, subject to approval by the APC.
2. Accessory structures located in the "A" Agricultural zoning district, on a lot or parcel of 2.50 acres or more, are exempt from this provision.

§ 17.17.100 DEVELOPMENT STANDARDS.

A. Applicability. The standards in this section apply to all Development Plans and to all projects for which an Improvement Location Permit is to be issued within the boundaries of a previously approved Development Plan, with the exception of lot area, which applies throughout the UPCOZ.

B. Building Height. The maximum building height is determined by the underlying zoning district(s).

C. Lot Area. The minimum lot area is determined by the underlying zoning district(s), with the exception that the minimum lot area in the Agricultural "A" District is 2.5 acres.

D. Setbacks.

1. Build-To Line.
    a. All principal buildings facing University Parkway must be located on a Build-to Line as set forth in this Section.
    b. All principal buildings facing Majestic Place Access Road (not yet named, but refers to the main spine through Majestic Place) must be located on a Build-to Line as set forth in this Section.
    c. Dimensional requirements for build-to-lines must be measured from the edge of pavement of the adjacent roadway(s) as follows:

i. University Parkway: 150 feet (see Figure 2)

ii. Majestic Place Access Road: Twenty (20) feet (see Figure 3)

2. All parcels adjacent to University Parkway must contain a 30-foot greenbelt as specified in this Chapter. The greenbelt must be measured from the property line (see Figure 2).
3. Corner lots are deemed to have two front yards and two side yards, however, the greenbelt is only required along University Parkway.
4. For any non-residential uses adjacent to a residential use or a lot zoned for residential use; the side and rear yard setbacks must be 20 feet.

E. Building Orientation. Non-residential buildings adjacent to University Parkway must be oriented to front on both University Parkway and the internal site road.

F. General Standards. The following standards are of general applicability, and are superseded where applicable by more specific standards contained in this Chapter.

1. The development must be planned so as to be served by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, refuse disposal, water and sewers/septic and schools.
2. All developments must have or provide access to emergency vehicles such as fire, police, and ambulances, which must be unobstructed at all times.
3. Proposed development must be compatible with the character depicted in the University Parkway Corridor Plan.

Figure 2 Maximum Setback

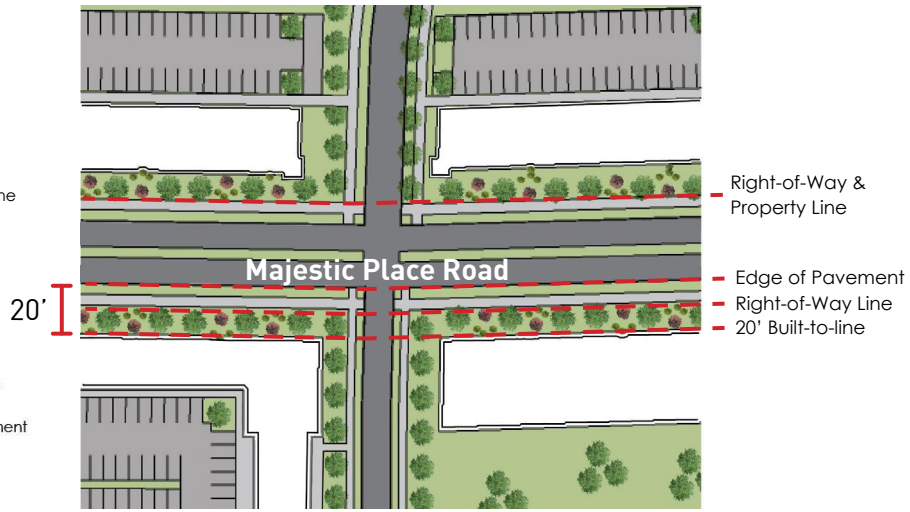


Figure 3 Majestic Place Setback

4. Proposed developments must be designed with consideration of the massing, height, and scale of buildings and the way the site is designed to minimize impact on surrounding property, including:
    a. Relationships of buildings to sites;
    b. Achieving a desirable transition to the street;
    c. Providing for adequate planting, safe pedestrian movement and off-street parking areas;
    d. Innovative methods of effectively screening parking areas to enhance views from public ways;
    e. Compatibility of the height and scale of each building with the University Parkway Corridor Plan, its site and any existing (or anticipated) adjoining buildings, subject to the permissible limits of the applicable zoning district.
5. Building Design.
    a. Structures must be in the scale and character of other surrounding buildings.
    b. Exterior materials must provide consistency with the character of surrounding buildings and be suitable to the types of buildings and the designs in which they are used.
    c. Materials must be of durable quality. All exterior wall building materials must be high quality, and must be any combination of the following:
        i. Brick or face tile;
        ii. Wood;
        iii. Native stone;
        iv. Glass (reflective glass must be limited to a maximum of 50% of the area of any facade wall on which glass is used);
        v. Tinted and/or textured concrete masonry units (such as split-face block and burnished block);
        vi. Architectural precast concrete or tilt-up concrete panels;
        vii. Architectural metal, limited to a maximum of 50% of the area of any facade wall on which architectural metal is used;
        viii. Exterior Insulation and Finish Systems (EIFS);
        ix. Fiber cement board.
    d. Exterior lighting must be part of the architectural concept, with fixtures, standards and exposed accessories consistent with the building design.
    e. The look of large boxed buildings within the UPCOZ should be avoided. Walls must change planes every 300 feet and should use a variety of materials or color to limit monotony.

f. Building entrances should be well-defined and articulated by lighting and architectural elements such as lintels, pediments, pilasters, columns, and other design elements appropriate to the architectural style and details of the building.

g. Roof mounted equipment must be screened using a parapet wall or other design detail, as approved by the APC.

h. Any Accessory Buildings must be:

   i. Designed to include a roof structure; and

   ii. Architecturally compatible with the principal building.

6. Open space provided must be configured to be usable, functional, and appropriate to the development proposed.
7. Streets and sidewalks must, insofar as reasonably practicable, provide access and good traffic circulation to and from adjacent lands, existing streets and sidewalks.
8. Provision must be made to ensure that adequate access roads and entrance/exit drives will be provided and will be designed to prevent traffic hazards, safety issues, and minimize traffic congestion.
9. Adequate provision must be made to ensure that the vehicular circulation elements of a proposed development will not create hazards to the safety of vehicular or pedestrian traffic on or off the site, disjointed vehicular or pedestrian circulation paths on or off the site, or undue interference and inconvenience to vehicular and pedestrian travel.
10. Adequate provision must be made to avoid glare of vehicular and stationary lights that would affect the established character of the neighborhood, and to the extent such lights will be visible across any property line, the performance standards for illumination must be met.
11. Adequate provision must be made to ensure that the location, lighting and type of signs and the relationship of signs to traffic-control is appropriate for the site and will not have an adverse effect on any adjacent properties.
12. Adequate water mains and fire hydrants must be provided in accessible places in accordance with good firefighting and fire prevention practice.
13. Adequate provision must be made for the collection and disposition of all on- and off-site storm water, including but not limited to on-site drainage detention and retention facilities.
14. Adequate provision must be made for the collection and disposition of sanitary sewage.
15. Adequate provision must be made to avoid an increase in hazard to adjacent property from flood, increased run-off or water damage.
16. For development proposals on any site known to be contaminated, the applicant must provide documentation that the site has been cleaned and contamination alleviated to protect public health, safety, and welfare.

§ 17.17.110 PARKING AND LOADING REGULATIONS

A. Applicability. The standards in this section apply to all projects for which an Improvement Location Permit is to be issued within the UPCOZ.

B. Curb Cuts.

1. Curb cuts on roads perpendicular to University Parkway must be located no closer than 360 feet from University Parkway as measured from the end of the radius nearest the proposed cut. All other curb cuts within the UPCOZ are dependent on roadway type and speed limit and must follow the Access Management Manual and Development Guide.
2. Curb cuts must be located directly opposite one another or separated by the minimum width stated in the Access Management Manual and Development Guide, dependent on roadway type and speed limit.

C. Parking Lots.

1. Entrances and Driveways.
    a. Entrances and exits to the site must be so located such that parking spaces and traffic aisles do not conflict with entering and exiting traffic.
    b. Dimensions of access drives must meet the requirements of Section 17.24.030.C.
    c. Driveways should be shared where possible.
2. Interior Design of Parking Lots.
    a. Vehicular and pedestrian cross-access between adjacent commercial properties is required (see figure 4).
    b. The number of required spaces must conform to the parking spaces required in Section 17.24.080. For uses that share parking, the parking requirement may be reduced by 50 percent. For the uses allowed in nonresidential zoning districts, if the minimum number of off-street parking spaces required to meet Section 17.24.080, is five or greater, that minimum is reduced by 25 percent.
    c. Parking spaces must be delineated by white pavement striping unless otherwise required by ADA. Reflective striping is encouraged.
    d. Parking lots must be designed to provide coordinated cross-access between parking areas on adjoining tracts or parcels within the UPCOZ.
    e. All parking lots and drives must comply with Chapter 17.24 except as otherwise provided in this Chapter.
    f. Parking and loading areas are encouraged to have permanent concrete curb design to permit low impact stormwater treatment as approved by the County Engineer and County Surveyor.
    g. All landscaped areas adjacent to parking spaces but not protected by permanent concrete curb must be protected by a cement wheel stop appropriately anchored to the pavement and set a minimum of 30 inches back from the edge of pavement to restrict damage to landscape materials by vehicles.

h. Landscaped islands must be installed for each 150 lineal feet of parking area and must cap ends of all parking rows. Islands must otherwise be landscaped in accordance with Section 17.24.120.

i. No parking is permitted in the front yard between the building and University Parkway. Parking must be on the side or rear of building. Parking lots on any side of a building that is not opposite University Parkway and that can be seen from University Parkway, must be landscaped in accordance with Section 17.24.120.

j. Loading bays and overhead doors must not be oriented toward University Parkway or any other public right-of-way and must be screened using opaque fencing, masonry wall(s), plant material, landscaping or hardscaping materials, or a combination thereof, subject to approval by the APC.

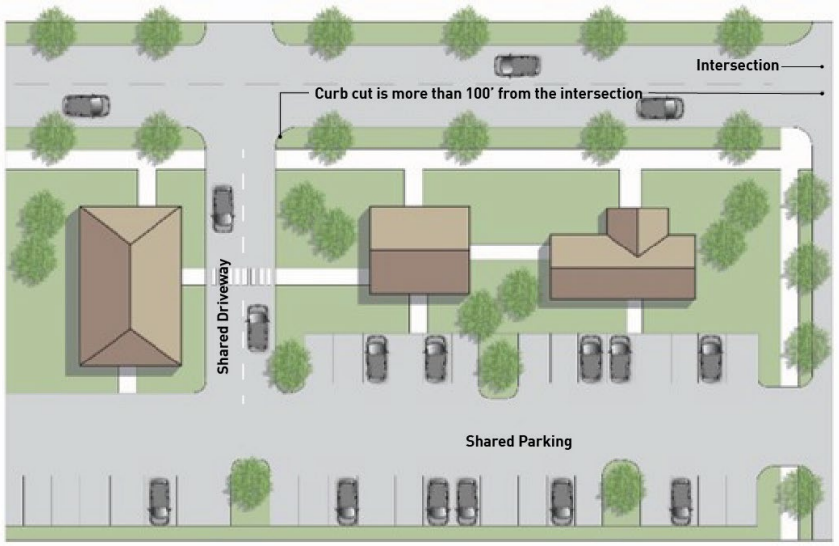


Figure 4 Curb Cuts, Shared Driveways, and Shared Parking

D. Internal Site Circulation.

1. Internal pedestrian circulation must be provided to create interconnected walkways safely conveying pedestrians from adjacent streets and parking areas to the building on the site as shown in Figure 5.
2. Material for the walkways may include brick, pavers, tile, stone, or stamped or brush finished concrete. The use of asphalt, cinderblock, and gravel is prohibited.
3. Crosswalks must be designated by white pavement striping or materials of a different color and texture from the surrounding surface but conforming to the overall color scheme of the development.

E. Circulation External To Site.

1. Sidewalks must be provided adjacent to all public streets along the entire frontage of a development site and align with existing sidewalks on adjacent properties including both frontages on corner lots, except for University Parkway. Dedicated pedestrian paths must be constructed to connect parking areas to building entrances. Additionally, buildings fronting on University Parkway must include pedestrian facilities connecting building entrances to the multi-use path along the Parkway or the sidewalk along other local roadways (see Figure 4).

2. Minimum sidewalk width is five feet.
3. Where sidewalks are not yet present on adjacent sites, sidewalks must be constructed at least five feet behind the curb to allow for landscaping and street trees. If sidewalks are present on adjacent properties, the new sidewalk must connect to the existing sidewalk.
4. Sidewalks must be ADA compliant in all respects, regardless of whether they cross driveways or other improvements having slopes in excess of ADA maximum standards.
5. Sidewalks must be concrete. Asphalt sidewalks are prohibited.
6. Installation of a multi-use path adjacent to a roadway will eliminate any requirement for sidewalks on that development parcel's road frontage
7. Crosswalks must be provided to connect external pedestrian circulation systems to and from a site and safely convey pedestrians to the site destination.
8. Crosswalks must be striped in conformance with the latest edition of the Manual on Uniform Traffic Control Devices.

F. Access Management.

1. It is the intent of the University Parkway Corridor Plan and this Chapter to maximize safety and minimize disruption of traffic flow along University Parkway by directing access from abutting properties to other existing or planned public streets and to curb cuts that intersect with these roadways.
2. New access points to University Parkway will be prohibited unless there are no feasible alternatives as approved by the County Commissioners.
3. In cases where a parcel can be accessed via connection to a collector, local street, adjoining parking lot drive, drive aisle, or shared entrance by way of an access easement, a curb cut will not be approved and must not be installed on University Parkway. (Figure 4).
4. Common entrances shared by several properties and developments are required.
5. Access roads to contiguous tracts must be coordinated to form one main access road serving adjacent developments. Access roads must be designed to align with one another.

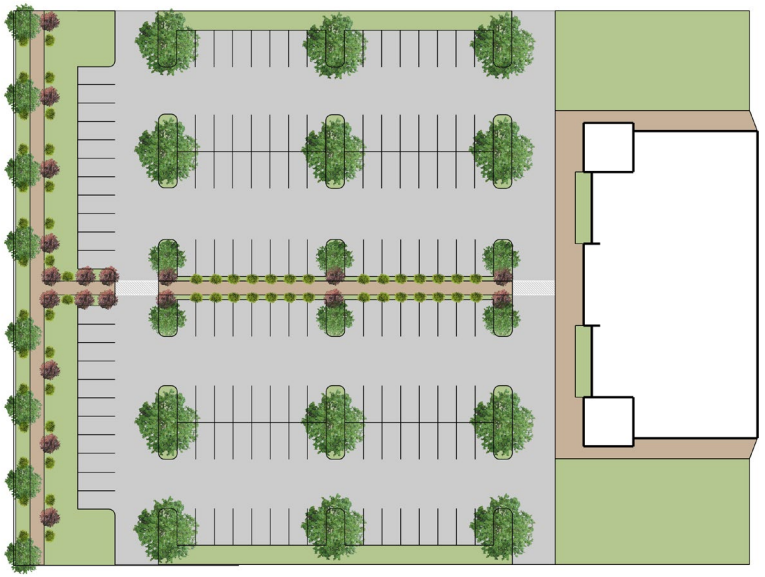


Figure 5 Internal Pedestrian Access

6. If a new roadway or improvement is required adjacent to a development, the property owner must dedicate right-of-way for public roads, or must provide an easement for private roads, that is sufficient and appropriate for the roadway or improvement to be constructed.
7. A traffic impact study may be required at the discretion of the APC, County Engineer, or EMPO based on expected trip generation of the proposed development, concerns with existing congestion in the area of the proposed development, or because of the access and circulation patterns of the proposed development. Applicants should reference the most recent version of the Indiana Department of Transportation Applicant's Guide to Traffic Impact Studies for the methodology and information to be included in such study.

G. Added Value Developments. Developments must include and maintain pedestrian and bicycle access, circulation, and amenities in the development.

1. Bicycle and Pedestrian Access. Bicycle and pedestrian access must include linking pedestrian and bicycle facilities to adjacent development, USI's overall system of bicycle and pedestrian trails and routes, and otherwise extending facilities within the University Parkway Corridor.
2. Community Amenities. New developments have the potential to establish or enhance community identity and create opportunities for public gathering. Community amenities include:
    a. Patio/seating area;
    b. Pedestrian plaza with seating;
    c. Bicycle parking;
    d. Public playground or mini park (minimum 3,000 sq.ft., mini park);
    e. Water feature (swimming pool, splash pad, fountain, waterfall, etc.);
    f. Public art;
    g. Green infrastructure (rain gardens along streets, rain barrels for each lot in property, etc.); and
    h. Other such amenities as approved by the APC.
3. Relaxation of Development Requirements as Incentive.
    a. Developments that incorporate two or more community amenities may reduce the minimum percent landscape from the required 25% down to a minimum of 15% of the lot area or reduce required side and rear setbacks by up to 25%, as approved by the APC.
    b. If bicycle parking is provided, a maximum of 20% of the required automobile parking spaces may be reduced at a ratio of one automobile parking space for every four bicycle spaces provided. If there are less than 20 required automobile parking spaces, up to four parking spaces may be replaced with bicycle parking.

H. Outside Storage of Refuse. Unenclosed storage of refuse (whether or not in containers) is not permitted on any project. All refuse must be contained completely indoors.

I. Placement of Utilities.

1. The installation of new utility systems, including water, sewer, gas, telephone, cable television and electric, along with component parts, structures, appendages and materials, must be installed underground in a manner approved by the applicable utility provider in accordance with all existing standards. Above ground utility systems will not be permitted, except where certain appurtenances and accessory equipment must be installed above ground for servicing. Examples of such accessory equipment include fire hydrants, gas and electrical meters, electric service cabinets, irrigation controllers, and similar features.
2. Parcels adjacent to existing easements or public rights-of-way where overhead utility supply lines and service connections have previously been installed may be supplied with service from those overhead lines, but the service connections from the overhead lines must be installed underground. Should a road widening or an extension of service, or other such condition occur because of the proposed development and necessitate the replacement or relocation of such utilities, such replacements or relocation must be underground.
3. Electric power transmission lines are exempt from this requirement.
4. Where the placement of utilities underground within a site is not feasible due to utility or infrastructure conflicts, topographic conditions, or other physical limitations, alternative placement must be approved by the APC, and screening may be required as a condition of approval.

§ 17.17.120 LANDSCAPE STANDARDS

A. Applicability. The standards in this section apply to all Development Plans and to all projects for which an Improvement Location Permit is to be issued within the boundaries of a previously approved Development Plan.

B. Buffer Yards. Buffer yards are used to improve the appearance of on-site service areas and to lessen the potential conflicts between dissimilar uses located in adjacent parcels.

1. On non-residential and mixed-use parcels, a perimeter landscape buffer must be provided along all yards that are adjacent to a residential use or zoning district.
2. The required buffer yard must be located entirely on the subject property.
3. The perimeter landscape buffer must be selected by the applicant, from one of the following (see Figure 6):
    a. Five (5) feet in width, containing an eight (8) foot tall opaque fence or wall.
    b. Fifteen (15) feet in width, three (3) shade trees per 100 linear feet of buffer and a continuous shrub row.
    c. Twenty (20) feet in width, ten (10) evergreen trees per 100 linear feet of buffer.
4. Required buffer yard trees may be placed either at regular intervals or in irregular patterns representing a natural landscape, provided the desired screening effect is still provided.

C. Greenbelt.

1. A thirty (30) foot greenbelt is required for all parcels fronting University Parkway. (Figure 7).
2. The greenbelt is to be planted with a combination of shade trees, ornamental trees, evergreen trees, shrubs, ground cover, and grass attractively arranged within the greenbelt.
3. A minimum of three (3) shade trees, two (2) ornamental or evergreen trees, and six (6) shrubs must be provided per one hundred (100) linear feet of greenbelt.
4. Trees may be placed either at regular intervals or in irregular patterns representing a natural landscape.
5. Bicycle and pedestrian paths may be located in the greenbelt to connect to existing facilities along University Parkway.
6. Signage, site furnishings, and lighting may also be included in the greenbelt area.

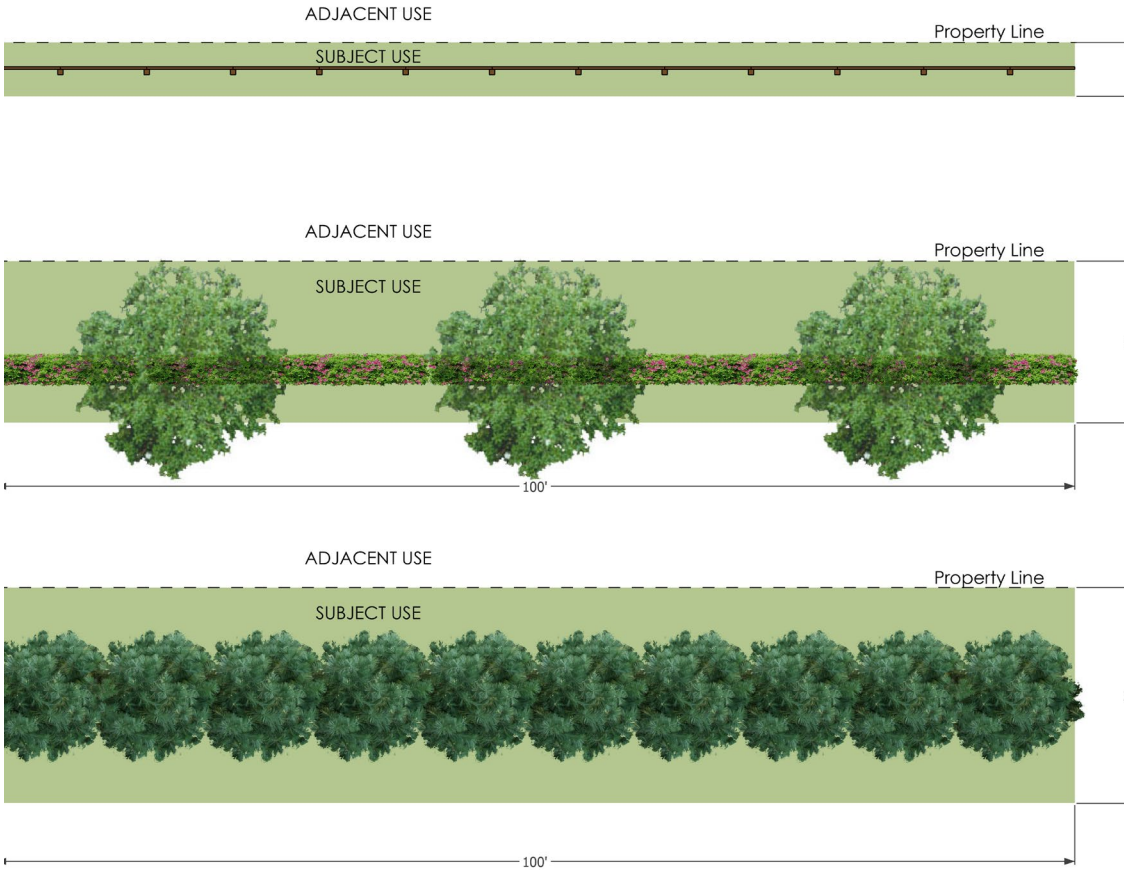


Figure 6 Perimeter Landscape Buffer

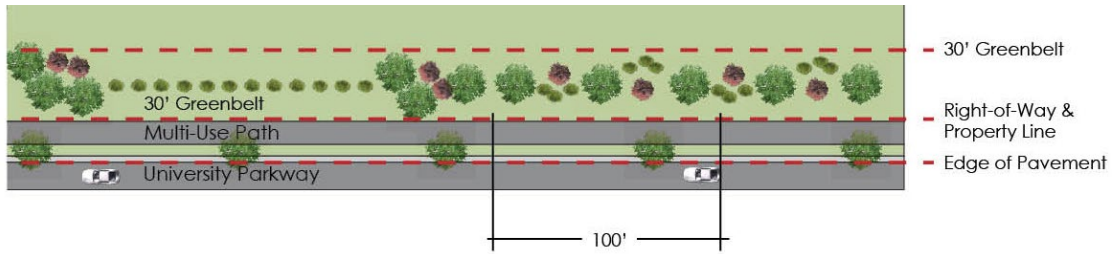


Figure 7 Greenbelt

D. Site Landscape.

1. A minimum of 25 percent of the lot area must be landscaped. Required greenbelt areas, parking lot landscaping, and buffer yards will count towards this minimum.
2. Landscape treatment of buffer yards, greenbelt, pervious spaces, plazas, driveways, paths, building perimeter, service, and parking areas must be designed in an integral and coordinated fashion with the entire parcel(s). Whenever possible, existing trees must be conserved and incorporated in the landscaping plan.
3. Utility equipment and trash collection areas must be provided per the needs of the business establishments. These areas must be screened from views from the public right-of-way and adjacent residential properties using opaque fencing, masonry wall(s), plantings, landscaping or hardscaping materials, or a combination thereof, subject to approval by the APC (see Figure 8)

E. Landscape Materials.

1. All plant material proposed to be used in accordance with any landscape plan must meet the following specifications:
   a. Shade trees: A minimum of two and one-half (2 ½) inch caliper.
   b. Ornamental trees: A minimum of one and one-half (1 ½) inch caliper.
   c. Evergreen trees: A minimum height of eight (8) feet.
   d. Shrubs: A minimum height of eighteen (18) inches.

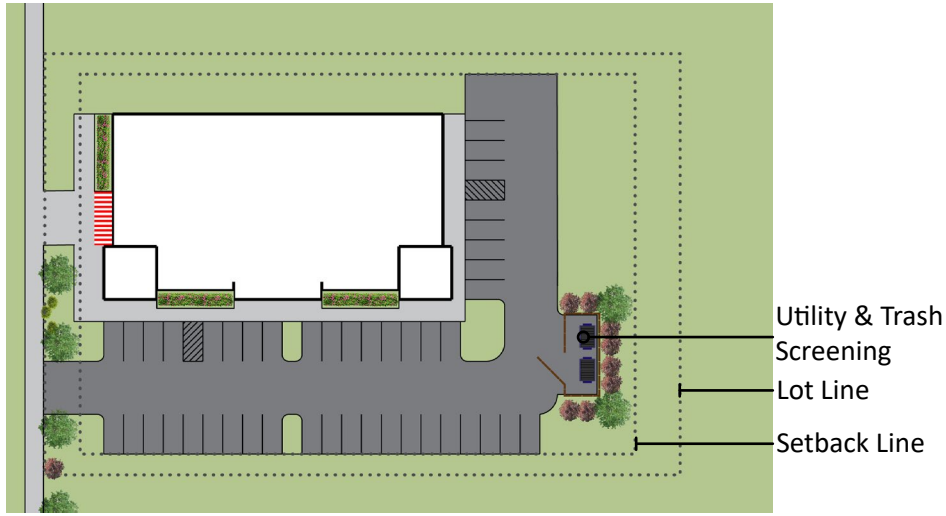


Figure 8 Utility Screening

2. The use of native plant species and cultivators of native plant species that are adapted to the local climate are required within the UPCOZ. If approved by the APC, limited use of non-invasive exotic species is allowed.
3. Trees in landscaped islands must be planted from the lists of native trees by size recommended for planting in the City of Evansville Arboricultural Specifications Manual.
4. The tree and shrub species listed on Table 17.17.110.E are prohibited from use within the UPCOZ due to concerns listed in the table, including weak branching, messy fruit, susceptibility to disease, and invasive nature; however, trees listed on the table for reasons limited to issues of messy or large fruit may be planted in grass areas if falling fruit will not pose a problem.

5. To the greatest extent possible, existing trees must be saved upon development of a property unless the site design restrictions necessitate their removal; such necessity requires demonstration of one or more of the following:
    a. The impracticability of arranging site plan components around existing features. In general, plans for groups of structures should be designed to preserve large tree masses, individual tree specimens, and small stands of trees. Natural woodland areas must be protected wherever feasible.
    b. The anticipated, post-development condition of the vegetation with respect to continued vitality.
    c. The practical and economic considerations of designing the location and grades of proposed structures and paving to preserve existing vegetation.
    d. The undesirability of a particular tree or species by reason of its appearance, characteristics, and the function the vegetation would fulfill as a beneficial site component.
    e. The potential for interference with utility services or with passage or visibility along roads, paths, or walkways.
6. Barriers must be used to protect trees during the development of the site. Substantial barriers must be specified on the landscape plan and must be placed at or beyond the drip line of trees to be protected. These barriers must remain in place during heavy construction on the site, and no vehicles, machinery, tools, chemicals, construction materials, or temporary soil deposits may be permitted within the barriers.
7. To encourage tree preservation, each tree preserved greater than six (6) inch caliper will be credited toward required landscaping as the equivalent of either:
    a. Two (2) required buffer yard shade trees, or
    b. Four (4) ornamental trees
8. Landscape materials provided in accordance with this Chapter will be inspected prior to issuance of the Certificate of Occupancy, or within one year thereafter, to determine if replacement of plantings are necessary. Property owners are responsible for maintenance of all plantings.
9. Requirements of the parking lot landscaping may be altered if professionally designed stormwater planters are to be used as approved by the County Surveyor.

Table 17.17.110.E PROHIBITED TREE & SHRUB SPECIES

Botanic Name	Common Name	Primary Issue/Concern
Large Shade Trees		
Acer negundo	Box Elder	Susceptible to Asian Longhorn Beetle
Acer platanoides	Norway Maple	Susceptible to Asian Longhorn Beetle, general decline
Acer saccharinum	Silver Maple	Susceptible to Asian Longhorn Beetle, weak branches
Aesculus hippocastanum 1	Common Horsechestnut	Susceptible to Asian Longhorn Beetle
Ailanthus altissima	Tree of Heaven	DNR invasive list
Betula papyrifera	Paper Birch	Susceptible to Asian Longhorn Beetle
Betula populifolia	Grey Birch	Susceptible to Asian Longhorn Beetle
Chionanthus retusus	White Fringetree	Susceptible to Emerald Ash Borer
Chionanthus virginicus	Chinese Fringetree	Susceptible to Emerald Ash Borer
Diospyros virginiana	Persimmon	Messy fruit
Elaegnus angustifolia	Russian Olive	Invasive
Elaegnus umbellata	Autumn Olive	DNR invasive list
Fraxinus spp.	White, Green, Black Ash	Susceptible to Emerald Ash Borer
Ginkgo biloba 2	Ginkgo	Messy fruit
Maclura pomifera	Osage orange/Hedge apple	Large fruit
Malus spp. 3	Apples	Messy fruit
Morus spp.	Mulberry	Messy fruit, invasive
Populus deltoides	Cottonwood	Large leaf litter, pollen allergy
Pyrus spp.	Pears (including ornamentals)	Messy fruit, weak branches
Rhamnus cathartica	Common Buckthorn	Invasive
Rhamnus frangula	European Buckthorn	Invasive
Robinia spp.	Black locust	Invasive
Salix alba	White Willow	Susceptible to Asian Longhorn Beetle
Salix alba x matsudana	Hybrid Austree	Fast growing, weak limbs
Salix babylonica	Weeping Willow	Susceptible to Asian Longhorn Beetle
Salix nigra	Black Willow	Susceptible to Asian Longhorn Beetle
Ulmus spp. 4	Elms (except for disease resistent varieties)	Susceptible to Dutch Elm Disease; Asian Longhorn Beetle
Shrubs		
Euonymus alatus	Burning Bush	Invasive
Berberis vulgaris	European Barberry	Invasive, thorny
Berberis thunbergii	Japanese Barberry	Invasive, thorny

1. Excluding Aesculus x carnea 'Briotii'
2. Including all female varieties; excluding male varieties such as G. biloba 'Colonnade', 'Halka', 'The President', 'Autumn Gold', and 'Princeton Sentry'
3. Excluding crabapples or ornamental types that don't produce large fruit
4. Excluding hybrids and cultivars with excellent resistance to Dutch Elm Disease and phloem necrosis

F. Lighting.

1. Street, internal streets, driveways, walkways, parking lots, and service areas in commercial developments must be adequately illuminated as evenly as possible diminishing to zero at a property line.
2. Lighting must not cause illumination beyond any property line.
3. All freestanding lights and lights mounted on walls or facades must use cutoff, or full cutoff luminaires (see Figure 9).
4. The use of search lights or lights that pulse, flash, rotate, simulate motion, or vary in intensity is prohibited.
5. Exterior lighting fixtures must not be placed or directed so as to interfere with the operation of vehicles.
6. The maximum mounting height for street and parking lot light fixtures is 24 feet.
7. All lighting standards, including freestanding lights, poles, and those mounted on walls or facades, must be of uniform design and materials, and match the character of existing lighting or other design, as approved by the APC.
8. Poles in non-residential and multiple-family developments, whether mounted upon a building or independently upon a light standard, must not exceed 24 feet in height.

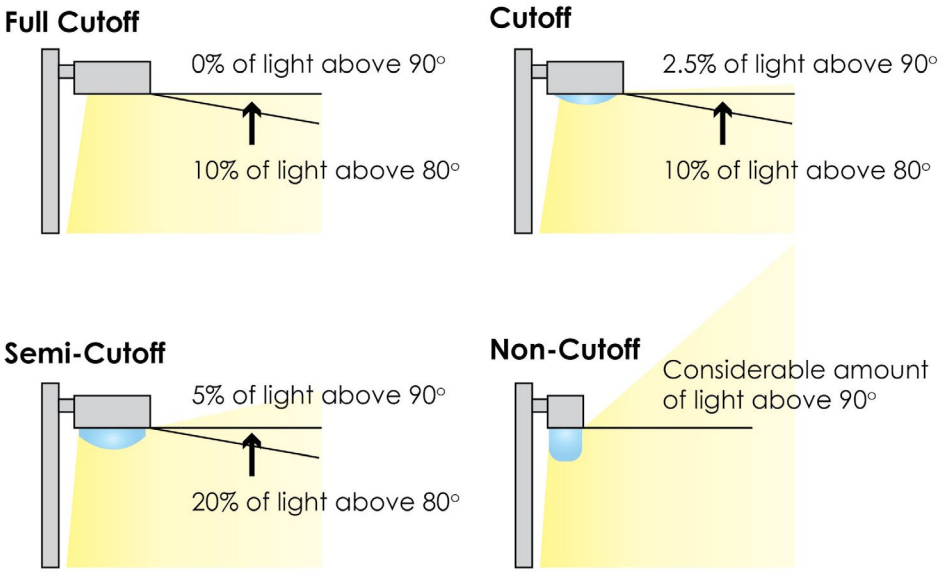


Figure 9 Lighting Cutoff

§ 17.17.130 SIGNAGE

A. Applicability. The standards in this section apply to all projects for which an Improvement Location Permit is to be issued within the UPCOZ.

B. General.

1. In the UPCOZ, signage must be designed as an integral part of the architectural and landscaping plans of the site and its buildings. The colors, materials, and style of signage must be architecturally compatible and accentuate the buildings and landscaping on the site.
2. Only one (1) sign per lot or one (1) sign per development is permitted facing University Parkway.
3. Directory signs listing multiple businesses within a development must be no more than twelve feet (12') in height; all other signs must be no more than eight feet (8') in height (see figure 10).
4. On-premise pole signs and off-premise signs are prohibited in the UPCOZ.
5. Signage is permitted in the thirty (30) foot greenbelt area or setback areas.
6. Signage must not be placed in the right-of-way or within the required sight-triangle.
7. Any signs that are illuminated must be internally illuminated.
8. Signs must also meet the underlying zoning district requirements.

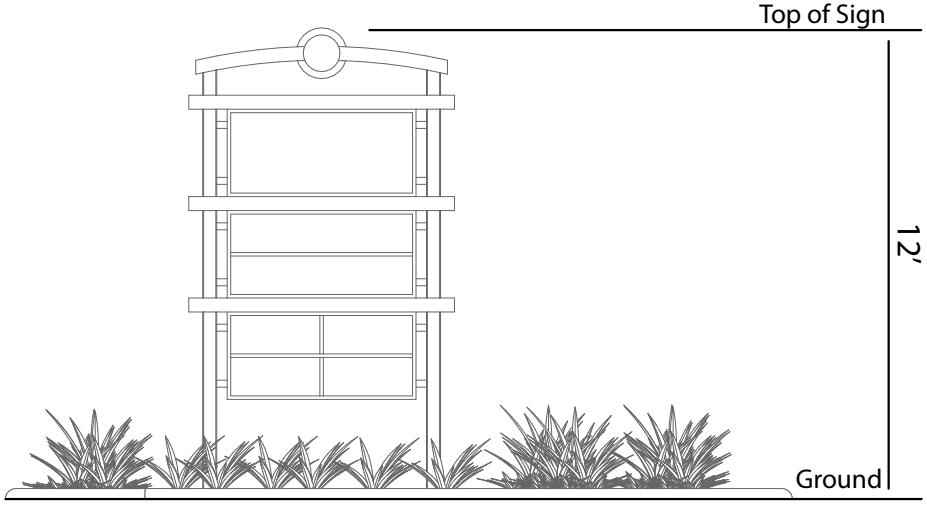


Figure 10 Sign Measurement

Definitions

The following definitions shall be added to Section 17.08.030:

"Altered" means changed in area, use, or external appearance.

"APC" means the Area Plan Commission itself, as constituted according to Ind. Code §§ 36-7-4-200 et seq. and does not include the staff.

"Architecturally Compatible" means of similar architectural character and general composition of the exterior of a structure, including but not limited to the kind, color, and texture of the building material and the type, design, and character of windows, doors, light fixtures, signs, and incidental elements.

"Development Plan" means a specific plan and supporting documentation and drawings for the proposed development of property that requires Area Plan Commission approval under the 1400 series of IC 36-7-4 and this Title, upon satisfaction of all applicable requirements.

"Expansion" means, as applied to a nonconforming use or structure, the physical expansion of a use or structure that results in increased capacity or activity associated with the use, an extension of the hours of operation or number of days of activity and any similar change in activity or location.

"Director" means the Executive Director of the Area Plan Commission as appointed according to Ind. Code § 36-7-4-311.

"Green infrastructure" means, at the development project site scale, a collection of stormwater management practices that seek to reduce stormwater volume, treat stormwater runoff, increase groundwater recharge, and delay peak discharge rates; green infrastructure systems may include one or more of the following: bioretention areas, stormwater planters, vegetated swales, permeable pavements, greenroofs, and rainwater harvesting.

"Greenbelt" means a strip of land of defined width and location which is reserved for the planting of trees, shrubs, and other vegetation to establish a unifying character along a corridor.

"Invasive Plant" means a type of plant that is not native to the ecosystem and whose introduction causes or is likely to cause economic or environmental harm, or harm to human health, resulting from its aggressive and exceptional ability to establish and to take over existing vegetation.

"Legal Nonconforming" means an existing lot, structure, building, sign, development, or use of an existing lot or structure that was established prior to the effective date of the zoning ordinance and its subsequent amendments, but that is no longer a permitted use or no longer meets development regulations in the zoning district where it is located, but continues to exist without any change or expansion, and thus is considered to have "legal nonconforming" status.

"Mixed-Use" means the development of land or buildings with two or more different uses, such as but not limited to residential, office, retail, public, or institutional, often designed in a more compact urban form and resulting in reduced traffic impacts to those standalone uses.

"Native Plant" means a plant that naturally occurs in an area, is adapted to the local climate, and was not introduced by man to the area.

"Nonconformance" or "nonconforming" means the status of a lot, structure, building, sign, development, or use that does not conform to the existing regulations or standards.

"Planning Department" means the Director and staff of the office established pursuant to Ind. Code § 36-7-4-202(b).

"Screened" means obscured from public view.

"Shrub" means a plant, evergreen or deciduous, that usually remains low and produces shoots or trunks from the base; it is not usually tree-like or single stemmed.

"Tree, Evergreen" means a type of tree that persists and remains green year-round.

"Tree, Ornamental" means a deciduous tree possessing qualities such as flowers, attractive foliage, bark or shape, with a mature height generally under thirty (30) feet.

"Tree, Shade" means a deciduous tree that normally grows with one main trunk, and generally to a height of over 30 feet planted primarily for its high crown of foliage or overhead canopy.

"Water feature" means an attraction, including devices using sprayed, jetted, pumped, or other water sources, which may or may not involve direct contact with those enjoying the feature. It may include a standing basin such as in a fountain, or it may not incorporate standing water, such as in a spray plaza.

UNIVERSITY PARKWAY CORRIDOR PLAN

Appendix B:

Opinion of Probable Costs

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ENGINEER'S ESTIMATE - OPINION OF PROBABLE COST
University Parkway Improvements
Evansville, Indiana

Route: University Parkway
County: Evansville Vanderburgh
Agency: InDot
Project No.: 116-0067-0TE

Date: 8/7/2018
Prepared By: CJW
Checked By:

DESCRIPTION	UNIT	UNIT PRICE	MIDDLE MT. VERNON (RIGHT IN - RIGHT OUT)		MAJESTIC PLACE (J-TURN)		HOGUE ROAD (J-TURN)		UPPER MOUNT VERNON ROAD (J-TURN)		MARX ROAD (J-TURN)		NEW HARMONY ROAD (J-TURN)		FIELD ENTRANCE (RIGHT OUT WITH J-TURN)		SR 66/DIAMOND AVE (SIGNAL)	
			QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE
ROADWAY																		
CLEARING AND GRUBBING	LS	$10,000.00			1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00		
PAVED SHOULDER REMOVAL	SY	$15.00			3380	$50,700.00	3380	$50,700.00	3380	$50,700.00	3380	$50,700.00	3380	$50,700.00	760	$11,400.00	540	$8,100.00
CLASS A EXCAVATION	CY	$15.00			850	$12,750.00	850	$12,750.00	850	$12,750.00	850	$12,750.00	850	$12,750.00	250	$3,750.00	400	$6,000.00
AGGREGATE BASE (4")	SY	$5.50			5,489	$30,189.50	5,489	$30,189.50	5,489	$30,189.50	5,489	$30,189.50	5,489	$30,189.50	1550	$8,525.00	2540	$13,970.00
CONCRETE MEDIAN	SY	$85.00	91	$7,735.00	190	$16,150.00	190	$16,150.00	190	$16,150.00	190	$16,150.00	190	$16,150.00	50	$4,250.00	60	$5,100.00
ASPHALTIC CONCRETE PAVEMENT (12")	TON	$80.00			3688	$295,040.00	3688	$295,040.00	3688	$295,040.00	3688	$295,040.00	3688	$295,040.00	1040	$83,200.00	1710	$136,800.00
LIGHT POLE AND LUMINAIRE	EA	$3,000.00			12	$36,000.00	12	$36,000.00	12	$36,000.00	12	$36,000.00	12	$36,000.00	6	$18,000.00		
PULL BOX	EA	$1,500.00			12	$18,000.00	12	$18,000.00	12	$18,000.00	12	$18,000.00	12	$18,000.00	6	$9,000.00		
POWER SUPPLY ASSEMBLY/LIGHTING CONTROLLER	EA	$5,000.00			1	$5,000.00	1	$5,000.00	1	$5,000.00	1	$5,000.00	1	$5,000.00	1	$5,000.00		
CONDUIT AND WIRING	LS	$7,500.00			1	$7,500.00	1	$7,500.00	1	$7,500.00	1	$7,500.00	1	$7,500.00	0.5	$3,750.00		
PAVEMENT MARKINGS	LS	$10,000.00			1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	0.5	$5,000.00		
SIGNAGE	LS	$10,000.00	0.5	$5,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	0.5	$5,000.00		
DRAINAGE																		
12" PIPE GROUP A	LF	$80.00			300	$24,000.00	300	$24,000.00	300	$24,000.00	300	$24,000.00	300	$24,000.00	100	$8,000.00		
INLET	EA	$2,000.00			6	$12,000.00	6	$12,000.00	6	$12,000.00	6	$12,000.00	6	$12,000.00	2	$4,000.00		
FLARED END SECTION, 12"	EA	$1,500.00			6	$9,000.00	6	$9,000.00	6	$9,000.00	6	$9,000.00	6	$9,000.00	2	$3,000.00		
SODDING & EROSION CONTROL																		
EROSION CONTROL	LS	$10,000.00			1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	0.5	$5,000.00		
SIGNALS																		
TRAFFIC SIGNAL	EA	$100,000.00															1	$100,000.00
UTILITIES	LS	(5%)		$640.00		$27,820.00		$27,820.00		$27,820.00		$27,820.00		$27,820.00		$9,340.00		$8,500.00
TRAFFIC CONTROL	L.S.	(10%)		$1,270.00		$55,630.00		$55,630.00		$55,630.00		$55,630.00		$55,630.00		$18,690.00		$17,000.00
MOBILIZATION	L.S.	(5%)		$640.00		$27,820.00		$27,820.00		$27,820.00		$27,820.00		$27,820.00		$9,340.00		$8,500.00
CONSTRUCTION SURVEYING & STAKING	L.S.	(5%)		$640.00		$27,320.00		$27,320.00		$27,320.00		$27,320.00		$27,320.00		$9,090.00		$8,500.00
SUBTOTAL OF ALL CONSTRUCTION IMPROVEMENTS:				**$15,930.00**		**$694,920.00**		**$694,920.00**		**$694,920.00**		**$694,920.00**		**$694,920.00**		**$233,340.00**		**$312,470.00**
CONTINGENCY (15%)				**$2,390.00**		**$104,240.00**		**$104,240.00**		**$104,240.00**		**$104,240.00**		**$104,240.00**		**$35,000.00**		**$46,870.00**
INFLATION (3%/YEAR)				**$1,650.00**		**$71,920.00**		**$71,920.00**		**$71,920.00**		**$71,920.00**		**$71,920.00**		**$24,150.00**		**$32,340.00**
TOTAL OF ALL CONSTRUCTION IMPROVEMENTS:				**$19,970.00**		**$871,080.00**		**$871,080.00**		**$871,080.00**		**$871,080.00**		**$871,080.00**		**$292,490.00**		**$391,680.00**
PROFESSIONAL SERVICES:																		
ENGINEERING/DESIGN (12%)	LS		1	$2,400.00	1	$104,530.00	1	$104,530.00	1	$104,530.00	1	$104,530.00	1	$104,530.00	1	$35,100.00	1	$47,010.00
CONSTRUCTION ENGINEERING/INSPECTION (15%)	LS		1	$3,000.00	1	$130,670.00	1	$130,670.00	1	$130,670.00	1	$130,670.00	1	$130,670.00	1	$43,880.00	1	$58,760.00
TOTAL ENGINEER'S ESTIMATE AMOUNT:				**$25,370.00**		**$1,106,280.00**		**$1,106,280.00**		**$1,106,280.00**		**$1,106,280.00**		**$1,106,280.00**		**$371,470.00**		**$497,450.00**

1. Does not include cost of any utility relocations (if necessary)
2. Does not include cost of right-of-way or easement acquisition (if necessary)
3. Right-of-way plans anticipated for Phase 2

GRAND TOTAL **$6,425,690.00**

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ENGINEER'S ESTIMATE - OPINION OF PROBABLE COST
University Parkway Improvements (Roundabouts)
Evansville, Indiana

Route: University Parkway
County: Evansville Vanderburgh
Agency: InDot
Project No.: 116-0067-0TE

Date: 8/7/2018
Prepared By: CJW
Checked By:

DESCRIPTION	UNIT	UNIT PRICE	MIDDLE MT. VERNON (ROUNDABOUT)		MAJESTIC PLACE (ROUNDABOUT)		HOGUE ROAD (ROUNDABOUT)		UPPER MOUNT VERNON ROAD (ROUNDABOUT)		MARX ROAD (ROUNDABOUT)		NEW HARMONY ROAD (ROUNDABOUT)		FIELD ENTRANCE (ROUNDABOUT)		SR 66/DIAMOND AVE (SIGNAL)	
			QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE
ROADWAY																		
CLEARING AND GRUBBING	LS	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00		
PAVED SHOULDER REMOVAL	SY	$15.00	1200	$18,000.00	1200	$18,000.00	1200	$18,000.00	1200	$18,000.00	1200	$18,000.00	1200	$18,000.00	1200	$18,000.00	540	$8,100.00
PAVEMENT REMOVAL	SY	$15.00	2670	$40,050.00	2670	$40,050.00	2670	$40,050.00	2670	$40,050.00	2670	$40,050.00	2670	$40,050.00	2670	$40,050.00		
CLASS A EXCAVATION	CY	$15.00	150	$2,250.00	150	$2,250.00	150	$2,250.00	150	$2,250.00	150	$2,250.00	150	$2,250.00	150	$2,250.00	400	$6,000.00
AGGREGATE BASE (4")	SY	$5.50	1,006	$5,533.00	1,006	$5,533.00	1,006	$5,533.00	1,006	$5,533.00	1,006	$5,533.00	1,006	$5,533.00	1,006	$5,533.00	2540	$13,970.00
CONCRETE MEDIAN	SY	$85.00	972	$82,620.00	972	$82,620.00	972	$82,620.00	972	$82,620.00	972	$82,620.00	972	$82,620.00	972	$82,620.00	60	$5,100.00
TRUCK APRON	SY	$60.00	458	$27,480.00	458	$27,480.00	458	$27,480.00	458	$27,480.00	458	$27,480.00	458	$27,480.00	458	$27,480.00		
CURB & GUTTER	LF	$45.00	3,430	$154,350.00	3,430	$154,350.00	3,430	$154,350.00	3,430	$154,350.00	3,430	$154,350.00	3,430	$154,350.00	3,430	$154,350.00		
COLDMILLING BITUMINOUS PAVEMENT (3")	SY	$5.00	5560	$27,800.00	5560	$27,800.00	5560	$27,800.00	5560	$27,800.00	5560	$27,800.00	5560	$27,800.00	5560	$27,800.00		
ASPHALTIC CONCRETE PAVEMENT (3" SURFACE MIX)	TON	$80.00	957	$76,594.56	957	$76,594.56	957	$76,594.56	957	$76,594.56	957	$76,594.56	957	$76,594.56	957	$76,594.56		
ASPHALTIC CONCRETE PAVEMENT (12")	TON	$80.00	112	$8,960.00	112	$8,960.00	112	$8,960.00	112	$8,960.00	112	$8,960.00	112	$8,960.00	112	$8,960.00	1710	$136,800.00
LIGHT POLE AND LUMINAIRE	EA	$3,000.00	12	$36,000.00	12	$36,000.00	12	$36,000.00	12	$36,000.00	12	$36,000.00	12	$36,000.00	12	$36,000.00		
PULL BOX	EA	$1,500.00	12	$18,000.00	12	$18,000.00	12	$18,000.00	12	$18,000.00	12	$18,000.00	12	$18,000.00	12	$18,000.00		
POWER SUPPLY ASSEMBLY/LIGHTING CONTROLLER	EA	$5,000.00	1	$5,000.00	1	$5,000.00	1	$5,000.00	1	$5,000.00	1	$5,000.00	1	$5,000.00	1	$5,000.00		
CONDUIT AND WIRING	LS	$7,500.00	1	$7,500.00	1	$7,500.00	1	$7,500.00	1	$7,500.00	1	$7,500.00	1	$7,500.00	1	$7,500.00		
PAVEMENT MARKINGS	LS	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00		
SIGNAGE	L.F.	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00		
DRAINAGE																		
12" PIPE GROUP A	LF	$80.00	150	$12,000.00	150	$12,000.00	150	$12,000.00	150	$12,000.00	150	$12,000.00	150	$12,000.00	150	$12,000.00		
INLETS	EA	$2,000.00	8	$16,000.00	8	$16,000.00	8	$16,000.00	8	$16,000.00	8	$16,000.00	8	$16,000.00	8	$16,000.00		
FLARED END SECTION, 12"	EA	$1,500.00	8	$12,000.00	8	$12,000.00	8	$12,000.00	8	$12,000.00	8	$12,000.00	8	$12,000.00	8	$12,000.00		
SODDING & EROSION CONTROL																		
SODDING	SY	$15.00	980	$14,700.00	980	$14,700.00	980	$14,700.00	980	$14,700.00	980	$14,700.00	980	$14,700.00	980	$14,700.00		
TOPSOIL	SY	$15.00	980	$14,700.00	980	$14,700.00	980	$14,700.00	980	$14,700.00	980	$14,700.00	980	$14,700.00	980	$14,700.00		
EROSION CONTROL	LS	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00	1	$10,000.00		
SIGNALS																		
TRAFFIC SIGNAL	EA	$100,000.00															1	$100,000.00
UTILITIES	LS	(5%)		$30,980.00		$30,980.00		$30,980.00		$30,980.00		$30,980.00		$30,980.00		$30,980.00		$8,500.00
TRAFFIC CONTROL	L.S.	(10%)		$61,950.00		$61,950.00		$61,950.00		$61,950.00		$61,950.00		$61,950.00		$61,950.00		$17,000.00
MOBILIZATION	L.S.	(5%)		$30,980.00		$30,980.00		$30,980.00		$30,980.00		$30,980.00		$30,980.00		$30,980.00		$8,500.00
CONSTRUCTION SURVEYING & STAKING	L.S.	(5%)		$29,010.00		$29,010.00		$29,010.00		$29,010.00		$29,010.00		$29,010.00		$29,010.00		$8,500.00
SUBTOTAL OF ALL CONSTRUCTION IMPROVEMENTS:				**$772,460.00**		**$772,460.00**		**$772,460.00**		**$772,460.00**		**$772,460.00**		**$772,460.00**		**$772,460.00**		**$312,470.00**
CONTINGENCY (15%)				**$115,870.00**		**$115,870.00**		**$115,870.00**		**$115,870.00**		**$115,870.00**		**$115,870.00**		**$115,870.00**		**$46,870.00**
INFLATION (3%/YEAR)				**$79,950.00**		**$79,950.00**		**$79,950.00**		**$79,950.00**		**$79,950.00**		**$79,950.00**		**$79,950.00**		**$32,340.00**
TOTAL OF ALL CONSTRUCTION IMPROVEMENTS:				**$968,280.00**		**$968,280.00**		**$968,280.00**		**$968,280.00**		**$968,280.00**		**$968,280.00**		**$968,280.00**		**$391,680.00**
PROFESSIONAL SERVICES:																		
ENGINEERING/DESIGN (12%)	LS		1	$116,200.00	1	$116,200.00	1	$116,200.00	1	$116,200.00	1	$116,200.00	1	$116,200.00	1	$116,200.00	1	$47,010.00
CONSTRUCTION ENGINEERING/INSPECTION (15%)	LS		1	$145,250.00	1	$145,250.00	1	$145,250.00	1	$145,250.00	1	$145,250.00	1	$145,250.00	1	$145,250.00	1	$58,760.00
TOTAL ENGINEER'S ESTIMATE AMOUNT:				**$1,229,730.00**		**$1,229,730.00**		**$1,229,730.00**		**$1,229,730.00**		**$1,229,730.00**		**$1,229,730.00**		**$1,229,730.00**		**$497,450.00**

GRAND TOTAL **$9,105,560.00**

1. Does not include cost of any utility relocations (if necessary)
2. Does not include cost of right-of-way or easement acquisition (if necessary)
3. Right-of-way plans anticipated for Phase 2

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ENGINEER'S ESTIMATE - OPINION OF PROBABLE COST
University Parkway Improvements (Roundabouts)
Evansville, Indiana

Route: University Parkway
County: Evansville Vanderburgh
Agency: InDot
Project No.: 116-0067-0TE

Date: 8/7/2018
Prepared By: CJW
Checked By:

DESCRIPTION	UNIT	UNIT PRICE	MIDDLE MT. VERNON (SIGNAL)		MAJESTIC PLACE (SIGNAL)		HOGUE ROAD (SIGNAL)		UPPER MOUNT VERNON ROAD (SIGNAL)		MARX ROAD (SIGNAL)		NEW HARMONY ROAD (SIGNAL)		FIELD ENTRANCE (SIGNAL)		SR 66/DIAMOND AVE (SIGNAL)	
			QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE
ROADWAY																		
PAVED SHOULDER REMOVAL	SY	$15.00	540	$8,100.00	540	$8,100.00	540	$8,100.00	540	$8,100.00	540	$8,100.00	540	$8,100.00	540	$8,100.00	540	$8,100.00
CLASS A EXCAVATION	CY	$15.00	400	$6,000.00	400	$6,000.00	400	$6,000.00	400	$6,000.00	400	$6,000.00	400	$6,000.00	400	$6,000.00	400	$6,000.00
AGGREGATE BASE (4")	SY	$5.50	2540	$13,970.00	2540	$13,970.00	2540	$13,970.00	2540	$13,970.00	2540	$13,970.00	2540	$13,970.00	2540	$13,970.00	2540	$13,970.00
CONCRETE MEDIAN	SY	$85.00	60	$5,100.00	60	$5,100.00	60	$5,100.00	60	$5,100.00	60	$5,100.00	60	$5,100.00	60	$5,100.00	60	$5,100.00
ASPHALTIC CONCRETE PAVEMENT (12")	TON	$80.00	1710	$136,800.00	1710	$136,800.00	1710	$136,800.00	1710	$136,800.00	1710	$136,800.00	1710	$136,800.00	1710	$136,800.00	1710	$136,800.00
SIGNALS																		
TRAFFIC SIGNAL	EA	$100,000.00	1	$100,000.00	1	$100,000.00	1	$100,000.00	1	$100,000.00	1	$100,000.00	1	$100,000.00	1	$100,000.00	1	$100,000.00
UTILITIES	LS	(5%)		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00
TRAFFIC CONTROL	L.S.	(10%)		$17,000.00		$17,000.00		$17,000.00		$17,000.00		$17,000.00		$17,000.00		$17,000.00		$17,000.00
MOBILIZATION	L.S.	(5%)		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00
CONSTRUCTION SURVEYING & STAKING	L.S.	(5%)		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00		$8,500.00
SUBTOTAL OF ALL CONSTRUCTION IMPROVEMENTS:				**$312,470.00**		**$312,470.00**		**$312,470.00**		**$312,470.00**		**$312,470.00**		**$312,470.00**		**$312,470.00**		**$312,470.00**
CONTINGENCY (15%)				**$46,870.00**		**$46,870.00**		**$46,870.00**		**$46,870.00**		**$46,870.00**		**$46,870.00**		**$46,870.00**		**$46,870.00**
INFLATION (3%/YEAR)				**$32,340.00**		**$32,340.00**		**$32,340.00**		**$32,340.00**		**$32,340.00**		**$32,340.00**		**$32,340.00**		**$32,340.00**
TOTAL OF ALL CONSTRUCTION IMPROVEMENTS:				**$391,680.00**		**$391,680.00**		**$391,680.00**		**$391,680.00**		**$391,680.00**		**$391,680.00**		**$391,680.00**		**$391,680.00**
PROFESSIONAL SERVICES:																		
ENGINEERING/DESIGN (12%)		LS	1	$47,010.00	1	$47,010.00	1	$47,010.00	1	$47,010.00	1	$47,010.00	1	$47,010.00	1	$47,010.00	1	$47,010.00
CONSTRUCTION ENGINEERING/INSPECTION (15%)		LS	1	$58,760.00	1	$58,760.00	1	$58,760.00	1	$58,760.00	1	$58,760.00	1	$58,760.00	1	$58,760.00	1	$58,760.00
TOTAL ENGINEER'S ESTIMATE AMOUNT:				**$497,450.00**		**$497,450.00**		**$497,450.00**		**$497,450.00**		**$497,450.00**		**$497,450.00**		**$497,450.00**		**$497,450.00**

1. Does not include cost of any utility relocations (if necessary)
2. Does not include cost of right-of-way or easement acquisition (if necessary)
3. Right-of-way plans anticipated for Phase 2

GRAND TOTAL **$3,979,600.00**

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UNIVERSITY PARKWAY CORRIDOR PLAN

Appendix C:

Scenario Report

DRAFT 2019

Appendix C

Overview

Three future land use scenarios were developed based on information gathered during the existing conditions analysis and initial public engagement sessions. These scenarios represent the planning horizon year of 2040. Based on discussion and feedback, these three scenarios will be refined, and interim build-outs will be created for years 2025 and 2035.

The three scenarios are organized as follows:

- **Scenario 1: Existing Zoning & Development Standards** – This scenario represents a conceptual development program given existing zoning within the study area which allows for subdivisions without rezoning and specifies minimum lot sizes by the type of sewage disposal system used.
- **Scenario 2: Growth Based on Planned Infrastructure Improvements** – This scenario focuses growth south of Upper Mt. Vernon Road in coordination with planned sewer system improvements. Regulatory changes would be required to limit major subdivisions within the Agriculture district north of Upper Mt. Vernon Road.
- **Scenario 3: Preservation Focus** – This scenario reflects existing non-agriculture zoning entitlements, but seeks to preserve all other agriculture and open space lands within the study area. It would require regulatory changes focused on agriculture preservation and limiting subdivisions within the Agriculture district.

Key Terms & Abbreviations

FAR – Floor Area Ratio: The total area of all floors of a building or buildings divided by the area of the lot. Floor area ratio is a measure of development intensity commonly used for non-residential land uses.

DU/Ac. – Dwelling Units Per Acre: A measure of residential density expressed as the average number of individual living units per acre for a subdivision, apartment complex, or other development that includes residential units.

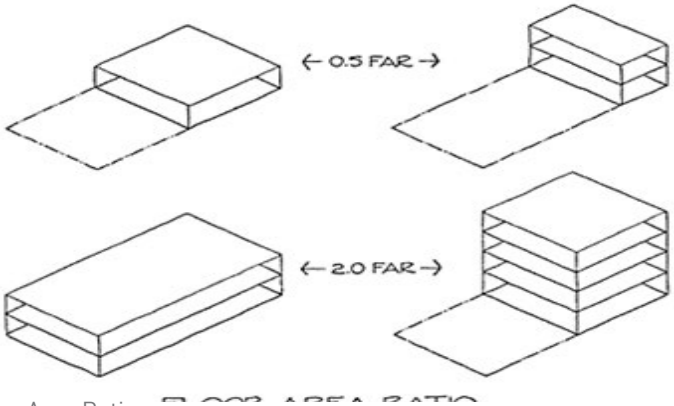


Figure C-1 Floor Area Ratio

Land Use Descriptions

Commercial

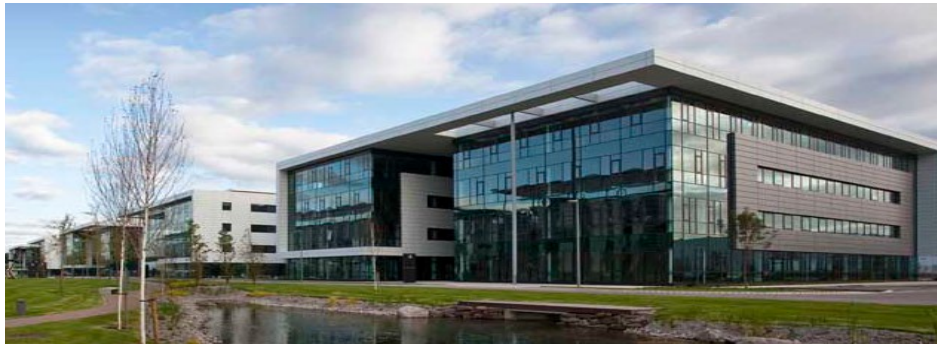
The Commercial land use area represents an activity center for a variety of uses including office, retail, restaurants, and professional service businesses. This area has the potential to be an employment and tax revenue generator for the community. Neighborhood scaled commercial uses generally serve the University Parkway residents but have the potential to serve a larger area with adequate transportation infrastructure. Higher intensity uses should be located closer to University Parkway or central to the development, with less intensive uses transitioning to established residential areas. Buildings should be arranged so that they frame and define the street network; internal drives should resemble streets rather than parking lot drive aisles. Large expanses of surface parking, particularly between the building front and the street, should be avoided. Landscape planting should be used to create more attractive developments and buffer adjacent single family residential areas, parking lots, and service areas. A coordinated pedestrian system should be provided throughout the commercial area, connecting uses on the site and between the site and adjacent properties and pedestrian facilities.

Mixed Use

The mixed used land use category provides for a diverse mix of high-activity uses within a connected and pedestrian scaled environment. A mixed use development area could be developed as part of a larger development or as a standalone building at the corner of key intersections. Appropriate uses include restaurants, small-scale retail and professional services, offices, multifamily apartments and condominiums, townhomes, and recreation amenities. Building height should typically range from two to four stories, with active commercial uses on the first floor and office or residential uses on upper floors. Mixed uses should have a coordinated development pattern with high quality architecture, bicycle facilities, wide sidewalks, plazas, and other amenities to activate the street network. Building setbacks from the primary street should be minimal. All buildings should have an entry oriented toward the primary street; first floor non-residential uses should include large windows to allow views into and out of the space to better activate the adjacent streetscape. Bicycle and pedestrian facilities should be included to connect the mixed use to adjacent developments and facilities along other public streets.

Research & Development Flex

The Research and Development (R&D) Flex area is intended for institutional, office, research and development, and small-scale prototyping and light manufacturing uses; these primary uses may be supported by limited local commercial uses as a secondary element following or integrated into the Flex development. Building types may include low-scale, larger footprint structures or multi-story buildings in a business park setting. Nearly all operations should be conducted within enclosed buildings. When parcels are subdivided into a business park, they should be designed to incorporate shared open space and stormwater management facilities. Industrial uses that involve outdoor storage or processing of materials and that generate significant truck traffic are not encouraged. The Research and Development Flex area is located to capitalize on University Parkway access, visibility, landscaped plantings, and bicycle and pedestrian facilities to better connect to adjacent development.



Estate / Rural Residential

The Estate / Rural Residential areas reflect much of the established character of the University Parkway corridor. These areas are comprised of single family homes on large lots that may include woodlands, open space, or associated agriculture activities. These areas are not commonly served by municipal water and sewer services, and therefore have a minimum lot size of 2.5 acres. Subdivisions in the Estate / Rural Residential areas should be designed around natural features to highlight forested areas, hillsides, streams and drainage courses, lakes, and tree-lined fence rows. In addition to single family residential uses, limited institutional and recreation activities may be appropriate.

Neighborhood Residential

Neighborhood Residential areas consist of single family residential subdivisions, which provide a range of dwelling and lot sizes. Typical densities are in the range of two to seven dwelling units per acre. The defined character may vary by neighborhood, but new developments should provide a transition from the existing development patterns in adjacent neighborhoods to higher densities, if applicable. New neighborhoods should have walkable, well-organized street and sidewalk systems that connect to surrounding neighborhoods and nearby destinations. They should be designed around natural features to highlight active and passive open space areas as accessible community amenities.

Mixed Residential

Mixed Residential areas provide for a range of housing types, including apartments, townhomes, condominiums, duplexes, and single-family homes on small lots. These areas allow for greater flexibility in form and scale to achieve active, cohesive, and vibrant neighborhoods. Mixed Residential developments should be designed around common open space and amenity areas. Given dwelling unit densities in the range or 10 to 20 units per acre, municipal sewer and water utilities are a requirement. Building height should typically range from two to four stories and should scale down to adjacent single-family neighborhoods or be appropriately buffered. Mixed Residential developments should include an emphasis on quality open space as a community amenity. Other common amenities associated with Mixed Residential projects include clubhouses, pools, fitness centers, playgrounds, landscaping, and multi-use paths.

Agriculture

Agriculture areas are those lands that are sparsely populated and used primarily for crop production, growing produce, raising of livestock, and single-family homes associated with agriculture use. Generally, development in these areas will utilize on-site services since public utilities are not available.

Scenarios 2 and 3: Preservation of continuous agriculture acreage is seen as important to sustain the character of the University Parkway Corridor north of Upper Mt. Vernon Road. Future subdivisions in this area should not result in densities greater than one dwelling unit per 15 acres.

Conservation

Conservation areas are identified to protect sensitive land and environmental features from development. These Conservation areas include floodplains, wetlands, forests/tree stands, and cemeteries. Conservation of these areas has an inherent long-term value. Most importantly, preventing construction in flood hazard areas has a public-safety purpose and helps to minimize property damage downstream during flood events. Crop production, tree stands, and low-impact recreation uses may take place in Conservation areas, but more intense agriculture operations and buildings should be limited to preserve the function and character of these zones. The Conservation areas generally follow environmental features, and as such, do not align with parcel boundaries. Estate/Rural residential development may still be possible on many of these parcels and should be designed to protect as much of the environmental feature as possible using such techniques as clustering development or conservation subdivision design. Any residential development should be reviewed on an individual basis to determine its appropriateness.

Recreation and Open Space

Recreation areas are large open spaces providing opportunities for leisure, recreational, and sporting activities and events. This zone would require buffering from other adjacent uses reducing the level of noise, light, or other impacts. Estate/Rural residential development may be permitted in this zone but would require appropriate buffering from the primary use. Any proposed development should be reviewed on an individual basis to determine its appropriateness.

Scenario Studies

SCENARIO 1: EXISTING ZONING & DEVELOPMENT STANDARDS

Scenario 1 is a controlled example of the potential growth and development that the current zoning and other regulations permit. This level of development may not be a true representation of 20 years of growth but is an intentional representation of how the current regulations allow residential subdivision development to occur anywhere in the corridor with no limitations. To better illustrate these points, all new residential development is projected at the minimum lot size standards allowing for the land to be maximized for development from Lloyd Expressway to Diamond Avenue.

Several parcels near the southwest corner of the University Parkway Corridor study area are zoned R-3 Residential. This zone allows for build out of apartment complexes and the surrounding farmland established as compact residential suburbs. To its north is Majestic Place, which will retain its existing zoning configuration. This will include large commercial retail district, likely characterized by large footprint anchors and associated strip and outlot retail uses. At the center of the Majestic Place project is a district zoned C-2 Commercial, which will be mixed use lifestyle center containing retail, office, and residential uses. Surrounding the retail zones is an R-3 Residential district which will be primarily apartments. Across the creek and conservation zones will be compact neighborhood residential development on the R-1 Residential zoned lands.

Additional compact neighborhood residential development is projected along both sides of University Parkway from Hogue Road to Upper Mt Vernon Road. These smaller lot sizes are predicated on planned sewer improvements. North of Upper Mt Vernon road there is significant residential growth projected on agriculture lands, but this area is not likely to have the access to municipal services, residential lots must have a minimum area of 2.5 acres.

Table C-1 : Scenario 1 Development	Acres	Sq.Ft.	Units
Estate + Rural Residential	**1,229.90**		
Estate Lot	100%		308
Neighborhood Residential	**632.16**		
Compact Lot	100%		3,032
Mixed Residential	**147.73**		
Compact Lot	25%		145
Garden Apartments	75%		720
Mixed Use	**21.30**		
Apartments	75%		240
Retail	50%	86,984	
Office	25%	43,492	
Commercial	**77.90**		
General	60%	268,469	
Restaurants	40%	143,183	
R & D Flex	**-**		
Flex	0%		
Recreational	**52.40**		
Recreational	100%	25,864	

Transportation Impacts:

- Substantially higher volumes, especially along the southern portion of the parkway.
- The new east-west connection between Middle Mount Vernon and Hogue provides good access and attracts around 4,000 ADT; similar to volumes on Middle Mount Vernon, Hogue, and Upper Mount Vernon. The new roadway would likely require a similar configuration.
- The proposed extension of Five Dollar Rd. to University Parkway, south of Marx Road attracts nominal traffic and should be reviewed. An alternate would be to provide a connection between Five Dollar Road and Marx Rd to limit the number of access points along University Parkway, while providing connection to the proposed land uses.
- The other proposed roads are important for more direct parcel access but attract little through traffic.

Utility Impacts:

To provide water and sanitary sewer service to both the residential and commercial zones, additional water and sewer mains will be needed. Please refer to Figure 1 for the proposed sewers and Figure 2 for the proposed water mains. Three sanitary sewer mains are proposed for scenario 1:

- An 18-inch extension south on Agathon Drive, west on Middle Mount Vernon Drive and south into the residential zones.
- A 15-inch running west from Creamery Road Lift Station and then south along South Roesner Road.
- A costly extension ranging from 18 to 24 inches running north from Creamery Road Lift Station, crossing under the railway tracks, then northeast toward University Parkway before turning north again and branching. One branch runs west into the residential zone while the other branch crosses east under the Parkway before turning south to reach the residential zones. This latter branch may need an inverted siphon in order to cross an existing creek bed and reach all residential zones.

Alternatively, if the community or property owners choose to provide the infrastructure funding for a denser Neighborhood Residential development, then additional lift stations will be needed. This development option is referred to as Scenario 1B. The sewer infrastructure needed to serve this growth are shown in figure 3, including the installation of two additional lift stations and seven sanitary sewer main extensions. The optional Diamond Avenue Lift Station, located to the southeast of the intersection of Diamond avenue and University Parkway, has an estimated capacity of 1.9 mgd and connects to two sewer mains:

- An 8-inch gravity main running west from Diamond avenue Lift station then south along North St Joseph Road and Koressel Road. A branch turns west along New Harmony Road and then north.
- A 12-inch force main extension running southwest from Diamond Avenue Lift Station along an existing creek bed, crossing under University Parkway and connecting to the gravity main upstream of the Marx Road Lift Station.

The proposed Marx Road Lift Station, located on Marx Road to the west of University Parkway, has a proposed capacity of 3.7 mgd and connects to three proposed sewer mains:

- A 12-inch gravity main extending north from the Marx Road Lift Station, then turning east into the rural estate zone, where it connects to the force main from Diamond Avenue Lift Station, and then north again.
- An 8-inch gravity main extending south from the Marx Road Lift Station, then turning east into the rural estate zone, with one branch turning east along Five Dollar Road.
- A 24-inch Force main extension running east along Marx Road and south along University Parkway before turning southwest at the railway track and connecting to the gravity main upstream of the Creamery Road Lift Station.

Two additional sewer mains are identified to provide services for Scenario 1B:

- A costly extension ranging from 8 to 24 inches running north from Creamery Road Lift Station, crossing under the railway tracks, then northeast toward University Parkway before turning north again and branching. One branch continues north into the rural estate zone, another runs west into the residential zone while a third crosses east under the Parkway before turning south to reach the residential zones. This latter branch may need an inverted siphon in order to cross an existing creek bed and reach all residential zones.
- An 8-inch extension, connected to the previous main, turns east along Upper Mount Vernon Road then north on Koressel Road with another branch east.

Several creeks and streams currently span the University Parkway Corridor creating the need for costly infrastructure improvements. It is estimated that eight inverted siphons may be needed to reach all rural estate zones.

Eight water main branches are identified for Scenario 1, ranging from 8 to 16 inches:

Scenario 1

- A 16-inch extension west on Middle Mount Vernon Drive and south into the residential zones.
- A 16-inch water main extending north along the west side of University Parkway before turning east into the commercial zones and then branching north along South Roesner Road and into the residential zones.
- A 16-inch extension running west along Upper Mount Vernon Road which then turns south into the residential zones west of University Parkway with branches south, west and southwest into the residential zones.

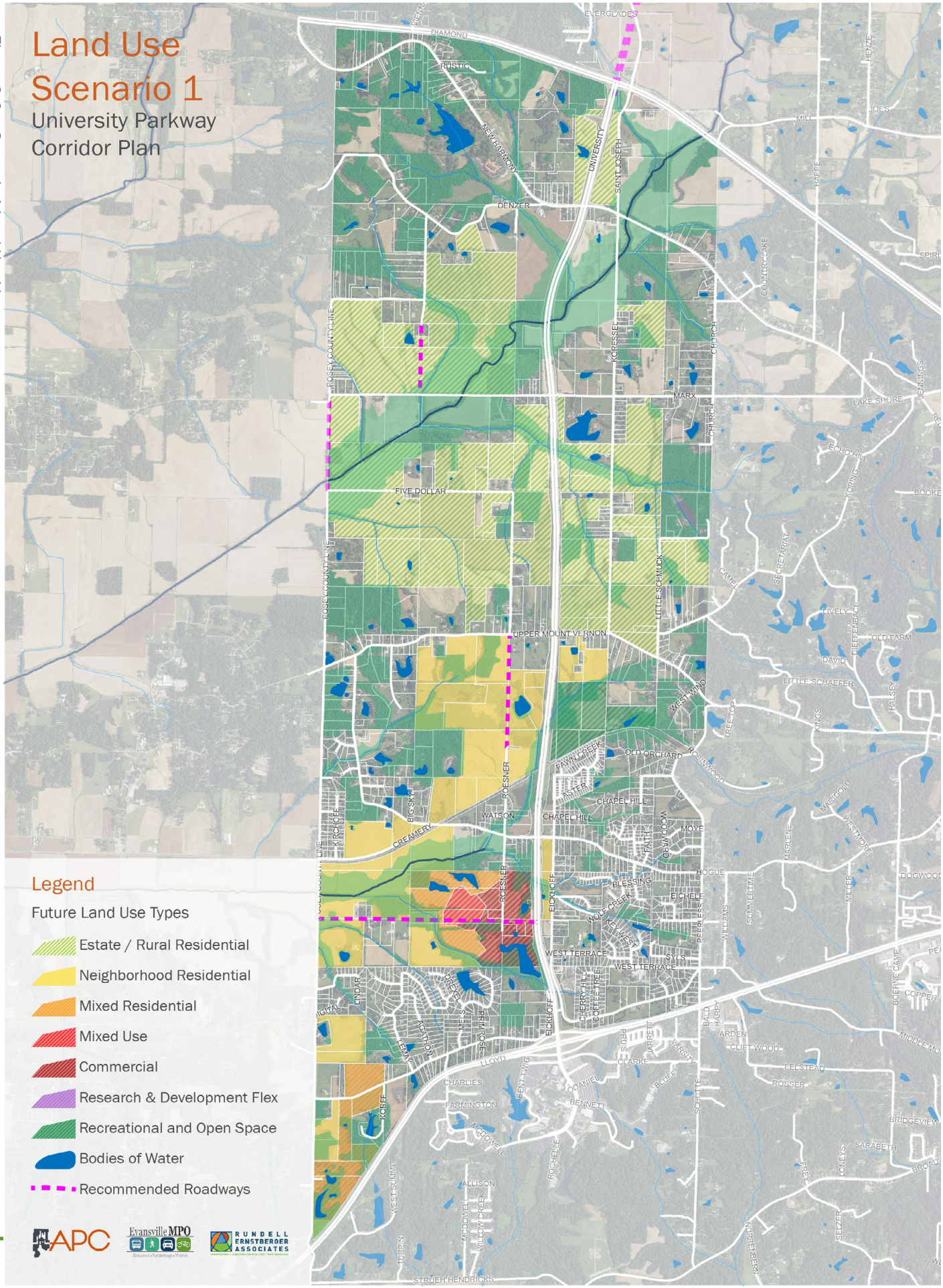
Scenario 1B

- An 8-inch main extension north and west along Five Dollar Road with a branch west into the Rural Estate zones.
- An 8-inch main extension north along Koressel Road.
- An 8-inch main extension north along Little Schmuck Road.,
- An 8-inch main extension north along North St Joseph Road and south along Koressel Rd.
- An 8-inch main extension which runs south from New Harmony Rd, west of University Parkway, before turning west into the rural estate zones.

All preliminary sewer and water main sizing are for planning purposes only and are based on the minimum design standards of the Evansville Water and Sewer Utility. Final sizing is dependent on actual site considerations and demand conditions.

Land Use Scenario 1

University Parkway Corridor Plan



Legend

Future Land Use Types

- Estate / Rural Residential
- Neighborhood Residential
- Mixed Residential
- Mixed Use
- Commercial
- Research & Development Flex
- Recreational and Open Space
- Bodies of Water
- Recommended Roadways

APC · Evansville MPO · Rundell Ernstberger Associates

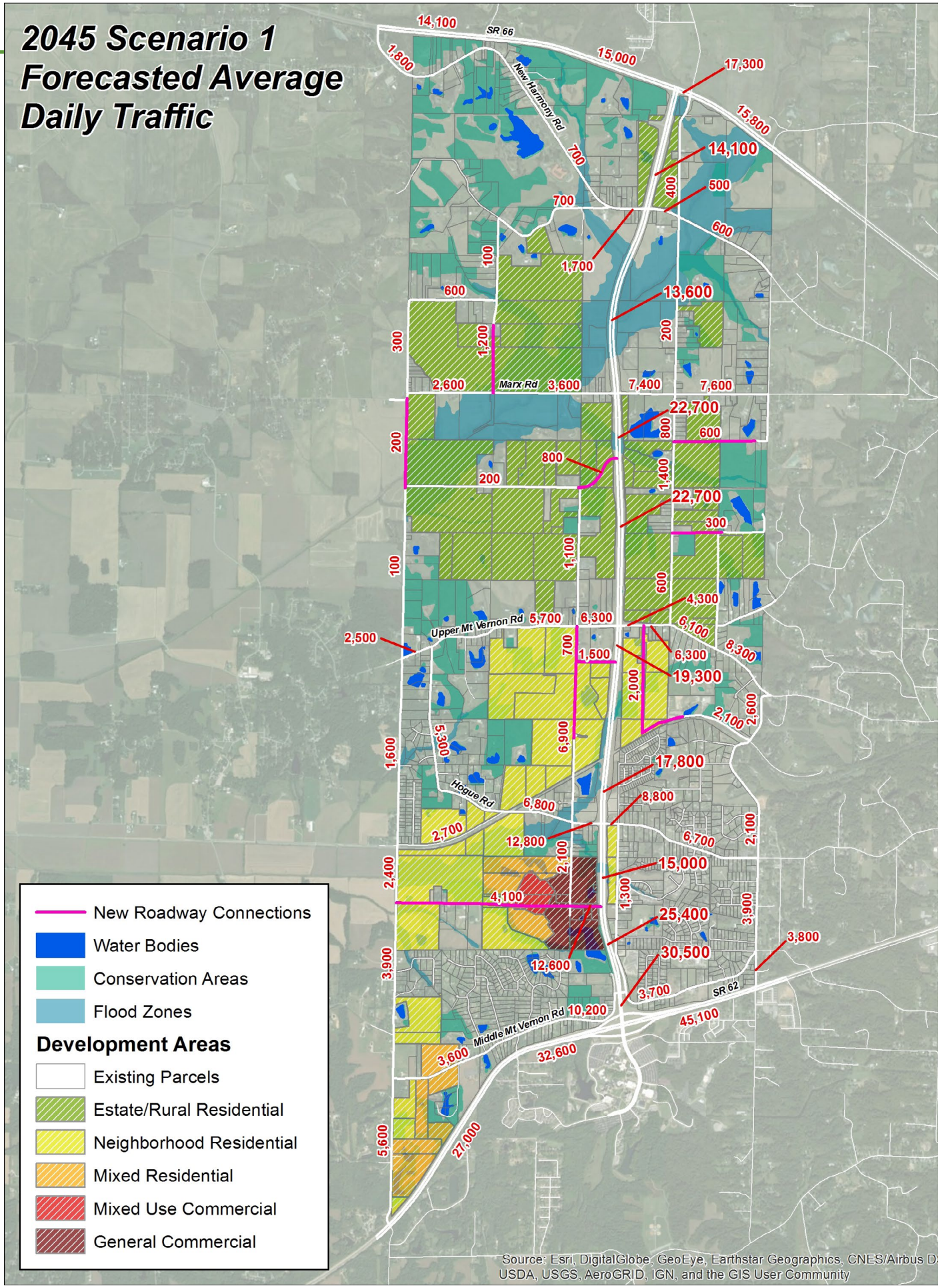
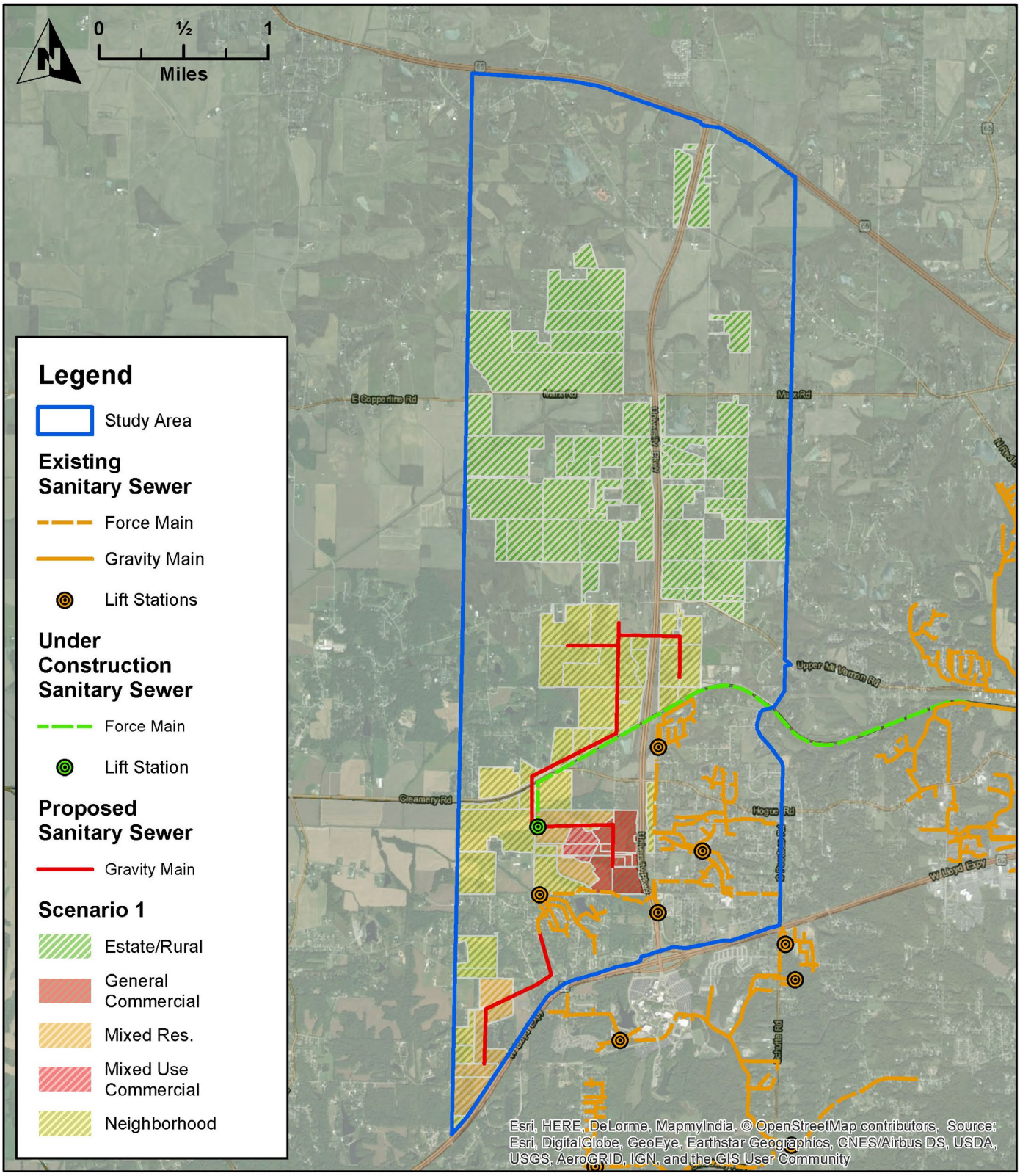
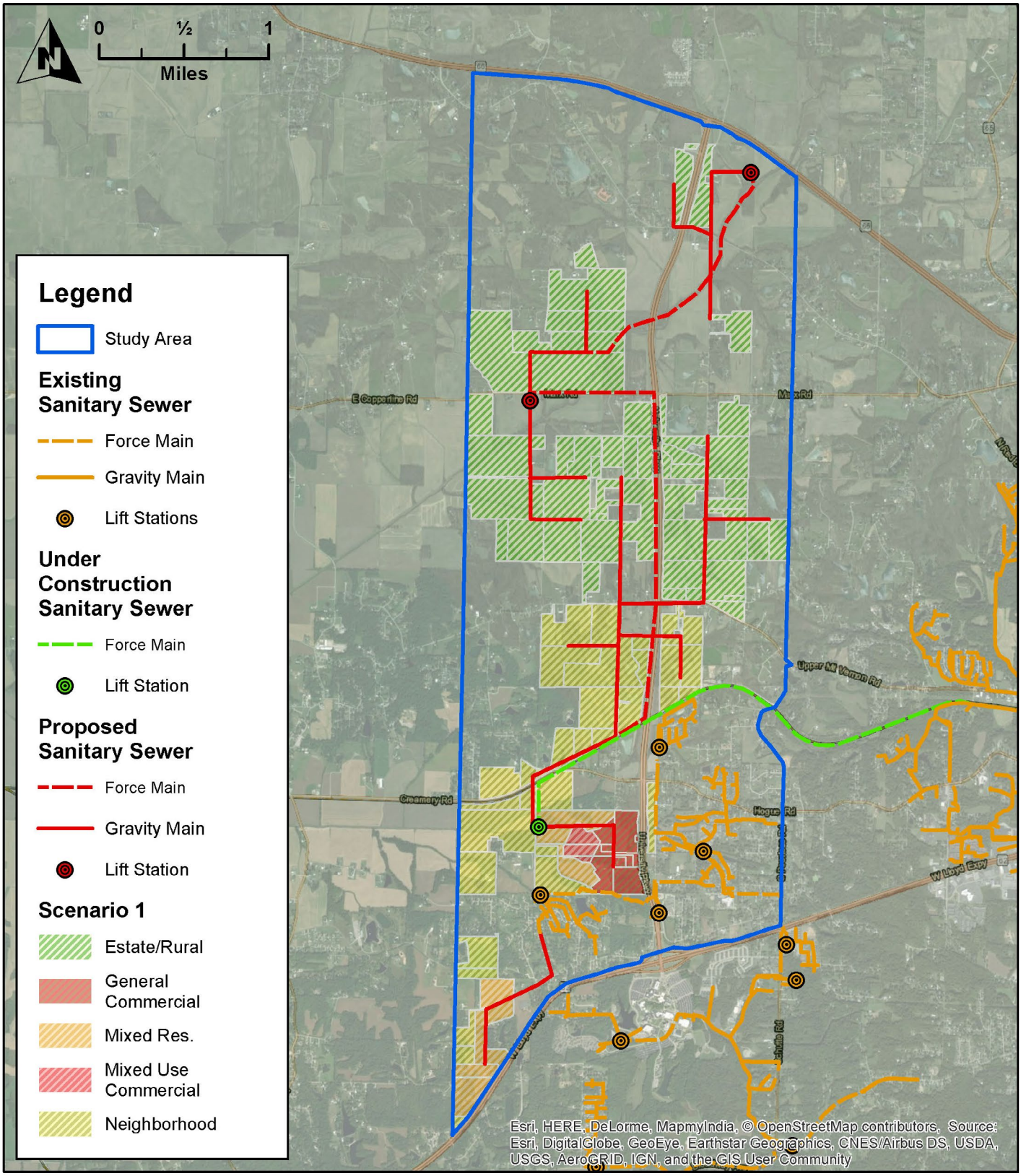


Figure C-3 2045 Scenario 1 Forecasted Average Daily Traffic Map

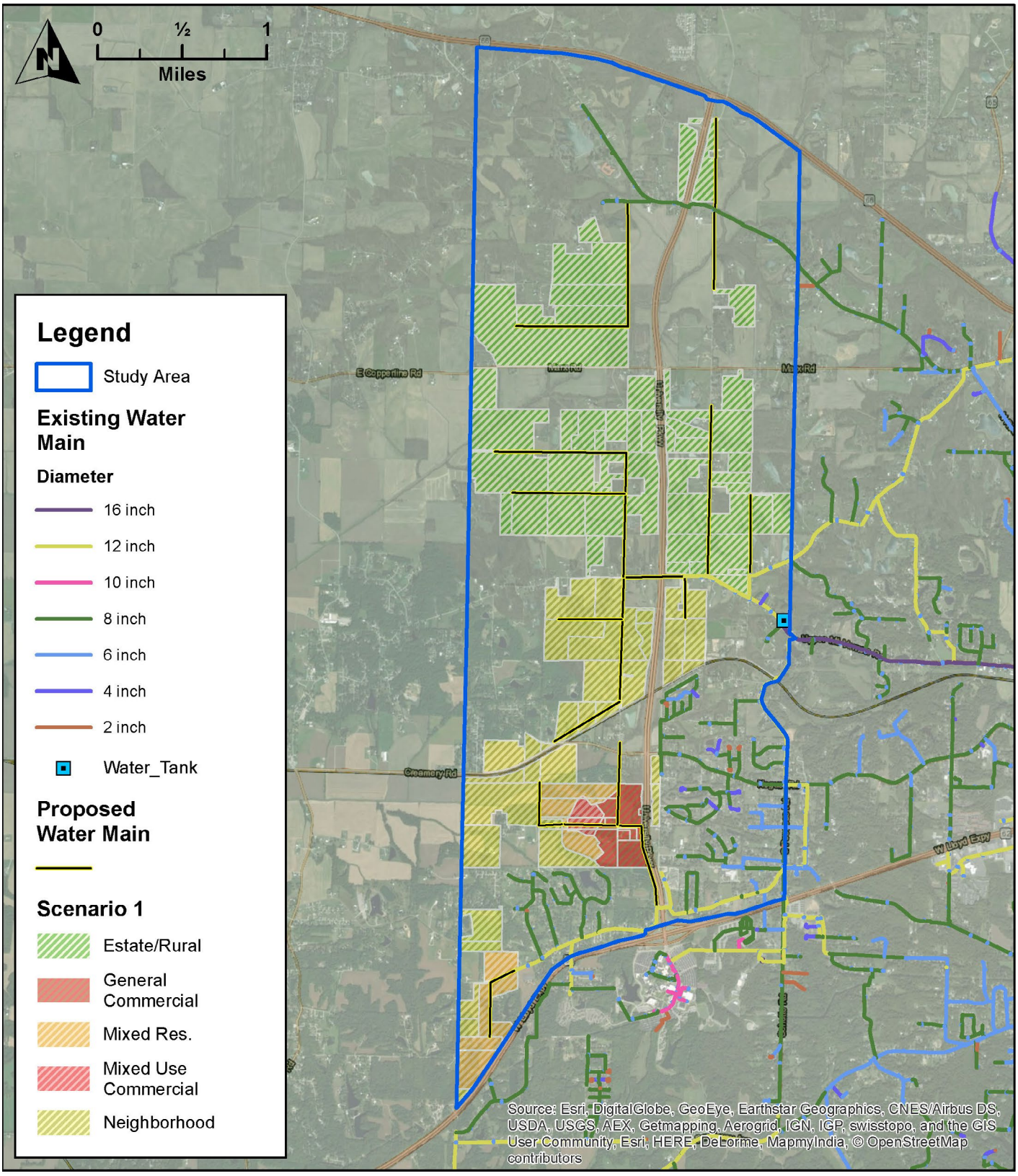


CORRIDOR MANAGEMENT AND LAND USE PLAN FOR THE UNIVERSITY PARKWAY FROM SR 62 TO SR 66: SCENARIO 1 - PROPOSED SANITARY SEWER



CORRIDOR MANAGEMENT AND LAND USE PLAN FOR THE UNIVERSITY PARKWAY FROM SR 62 TO SR 66: SCENARIO 1B - PROPOSED SANITARY SEWER

Figure C-5 Scenario 1B Proposed Sanitary Sewer Map



CORRIDOR MANAGEMENT AND LAND USE PLAN FOR THE UNIVERSITY PARKWAY FROM SR 62 TO SR 66: SCENARIO 1 - PROPOSED WATER MAIN

SCENARIO 2: INFRASTRUCTURE BASED GROWTH

Scenario 2 takes a balanced approach to growth. This development scenario addresses the desires of the community and county officials by allowing some growth but limiting its reach. This scenario corresponds with the sanitary sewer improvements planned by Vanderburgh County focusing development south of Upper Mt. Vernon Road, and most closely reflects the land use recommendations of the Comprehensive Plan than the other scenarios. Land use north of this road is left unchanged; however, some additional dwellings could be added through minor subdivisions and parcel splits of agriculture parcels.

To preserve the rural and natural landscape north of Upper Mt. Vernon Road, changes to the zoning code would be needed. Some of these regulations include:

- Restricting the size of residential subdivisions within the agricultural zone. Major residential subdivisions would require a zoning change to an appropriate residential district.
- Create a conservation zone protects natural features such as large tree stands, wetlands, and floodplains, will be created.

Areas already zoned for commercial and residential use include Majestic Place and an undeveloped R-3 area just north of Lloyd Expressway and east of the Posey County Line. Additional planned development in the area south of Upper Mt. Vernon Road would require rezoning.

In this scenario, Majestic Place has been reoriented with the mixed-use district along the parkway. The neighborhood commercial area will be located to the south of a new central roadway. This commercial zone will be a mix of neighborhood serving shops, restaurants, and housing. This district is surrounded by conservation zones buffering adjacent residential development with natural and open space. Between Roesner Rd. and University Parkway would be a mixed-use node which will provide small scale shops, restaurants, offices, and other services needed to serve the corridor. Residential units can also be located above commercial spaces or as stand-alone buildings. The northwest section of Majestic Place will be a mixed residential district surrounded by existing tree stands.

Table C-2 Scenario 2 Development	Acres	Sq.Ft.	Units
Estate + Rural Residential	**216.17**		
Rural Lot	25%		4
Estate Lot	75%		26
Neighborhood Residential	**246.36**		
Suburban Large	50%		186
Suburban Medium	25%		186
Suburban Compact	25%		309
Mixed Residential	**216.22**		
Suburban Medium	45%		182
Suburban Compact	25%		168
Duplex/Townhomes	15%		151
Garden Apartments	15%		167
Mixed Use	**22.36**		
Residential	50%		99
Retail	50%	53,709	
Office	25%	26,855	
Commercial	**90.30**		
General	40%	200,899	
Restaurants	40%	160,719	
Suburban Medium	10%		115
Duplex/Townhomes	5%		25
Garden Apartments	5%		28
R & D Flex	**79.02**		
R&D	100%	609,666	
Recreational	52.40		
Recreational	100%	25,864	
Mixed Use Node	**27.81**		
Residential	50%		112
Retail	40%	81,022	
Office	10%	20,255	

The residentially zoned parcels in the southwest corner of the corridor will serve a variety of housing needs. The core will be a mixed residential district surrounded by an existing forested and wetland area. To the north will be neighborhood residential blending into the existing residential development.

North of Hogue Road and south of Upper Mt. Vernon Road will be primarily neighborhood residential development with some recreational development adjacent to the West Side Sportsman's Club. Additionally, there will be a new research and development flex district between University Parkway and Roesner Road. The R&D flex area will be a business park intended to include office, research and development, and light manufacturing uses. Uses which generate substantial truck traffic are discouraged.

Transportation Impacts:

- Comparable, albeit slightly lower traffic volumes as compared to Scenario 1.
- Middle Mount Vernon Road, the new east-west connection, Hogue Road, and Upper Mount Vernon Road all attract a significant amount of traffic and would likely need intersection treatments at University Parkway such as additional turn lanes, signalization, or other capacity improvements.
- Portions of University Parkway that are above 20,000 ADT may require signalization at cross streets because gaps in traffic may be insufficient for side street stop intersections.
- Signalization at University Parkway and SR 66 may be required due to significant increases in traffic on University Parkway.

Utility Impacts:

To provide water and sanitary sewer service to the residential, commercial and flex zones, additional water and sewer mains will be needed. Please refer to Figure 4 for the proposed sewers and Figure 5 for the proposed water mains. Three sanitary sewer lines are proposed for Scenario 2:

- A 12-inch extension running south on Agathon Drive, west on Middle Mount Vernon Drive and then south into the residential zones.
- An extension ranging from 8 to 15 inches running west from Creamery Road Lift Station and then along South Roesner Road.
- A costly extension ranging from 15 to 21 inches running north from Creamery Road Lift Station, crossing under the railway tracks, then heading northeast toward the Flex zone before turning north again and branching west into the residential zone. A second branch goes to the residential zones east of University Parkway.

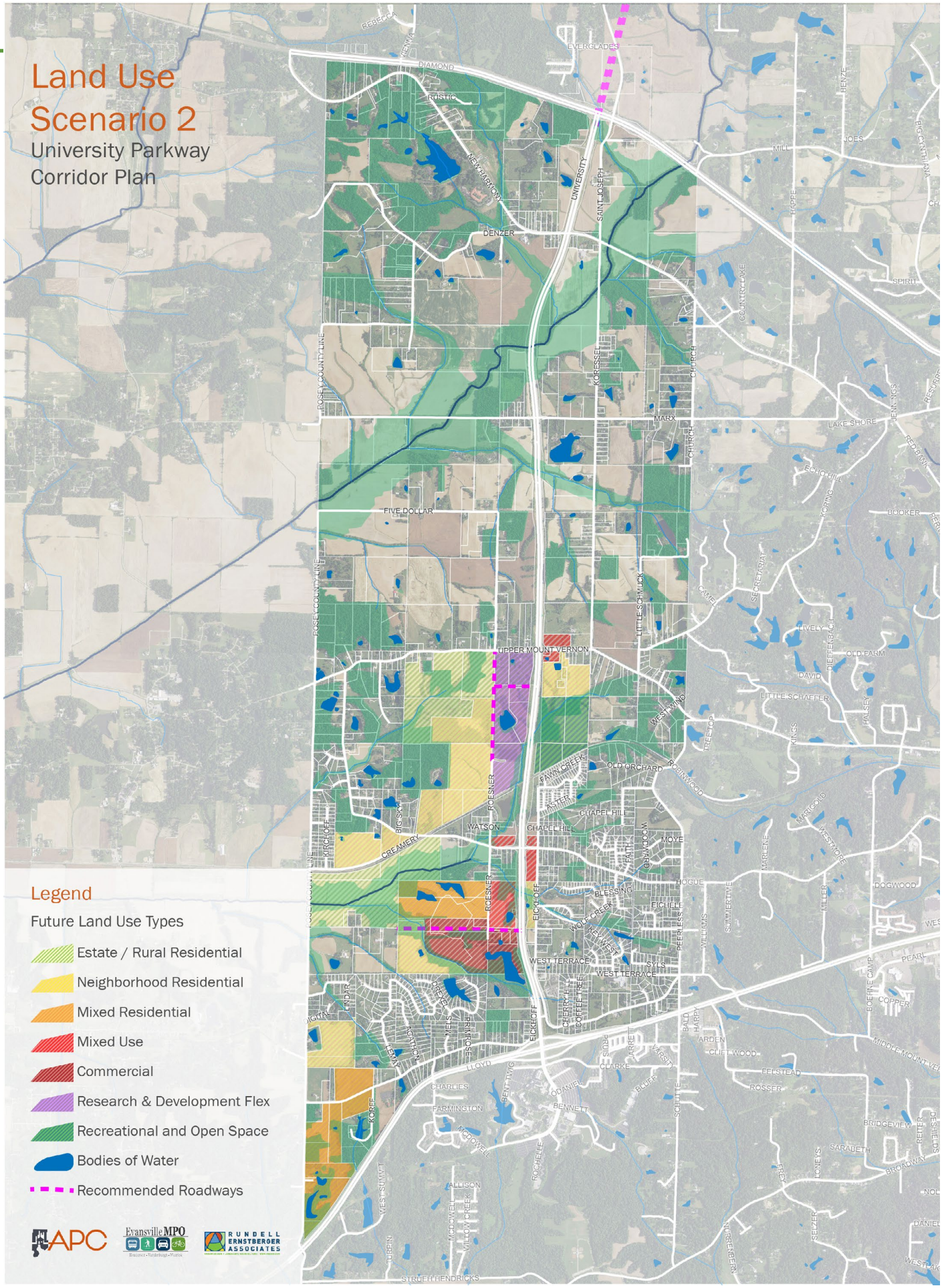
Three water main branches are proposed for Scenario 2 ranging from 12 to 16 inches:

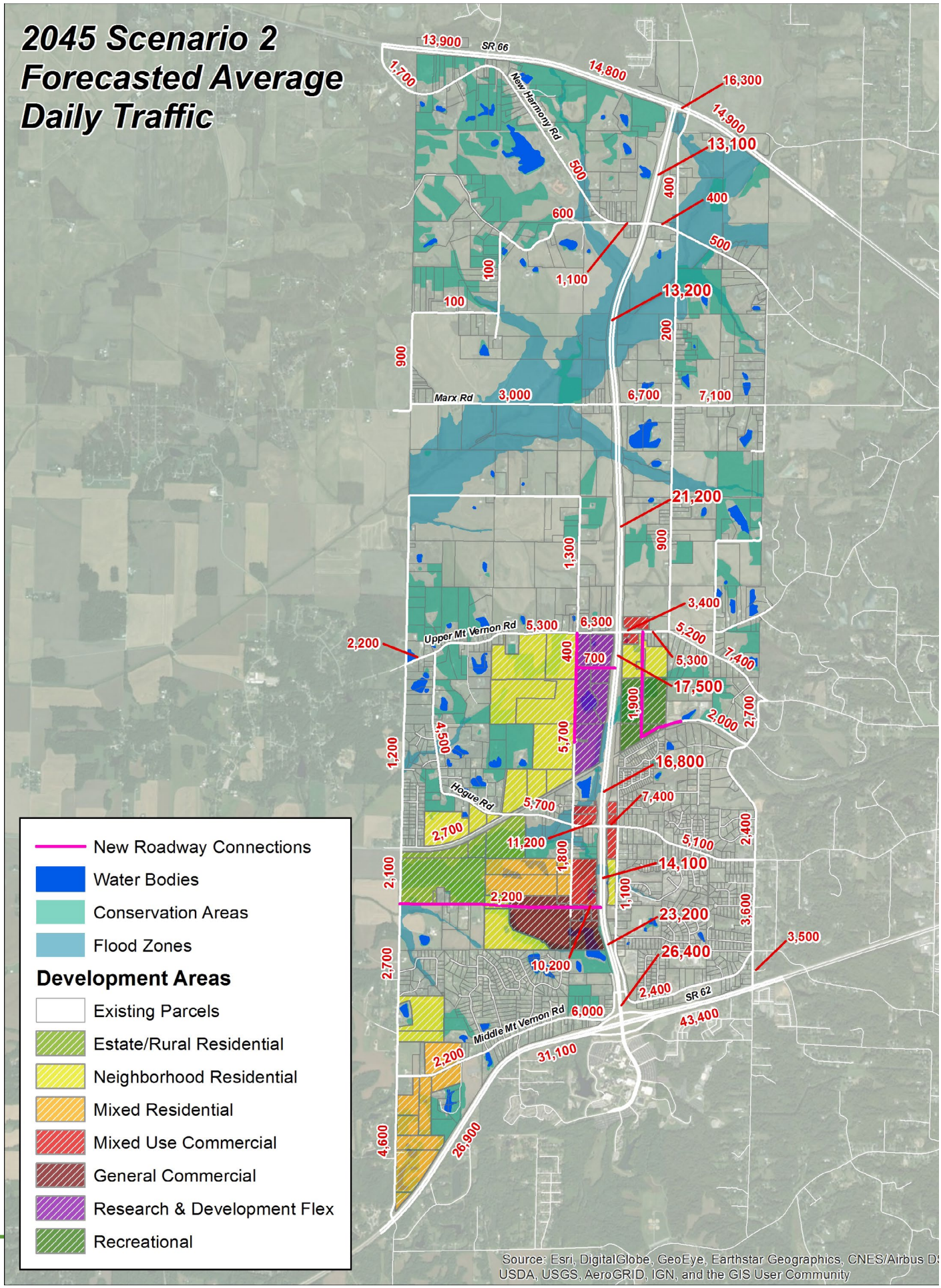
- A 12-inch extension running west on Middle Mount Vernon Drive and then south into the residential zones.
- A 16-inch water main extending north along the west side of University Parkway before turning east into the commercial zones and branching north along South Roesner Road and into the Rural Estate zones.
- A 16-inch extension running west along Upper Mount Vernon Road before turning south after the flex zones with branches south, west and southwest into the residential zones.

All preliminary sewer and water main sizing are for planning purposes only and are based on the minimum design standards of the Evansville Water and Sewer Utility. Final sizing is dependent on actual site considerations and demand conditions.

Land Use Scenario 2

University Parkway Corridor Plan




2045 Scenario 2
Forecasted Average
Daily Traffic
SR 66
New Harmony Rd
Marx Rd
Upper Mt Vernon Rd
Hogue Rd
Middle Mt Vernon Rd
SR 62
13,900
1,700
14,800
16,300
14,900
13,100
500
400
600
400
500
100
1,100
100
13,200
200
900
3,000
6,700
7,100
21,200
1,300
900
3,400
2,200
5,300
6,300
5,200
400
700
5,300
7,400
17,500
1,900
2,000
2,700
1,200
4,500
5,700
16,800
Hogue Rd
5,700
7,400
2,700
11,200
5,100
2,400
2,100
1,800
14,100
2,200
1,100
23,200
3,600
3,500
2,700
10,200
26,400
2,400
6,000
43,400
2,200
31,100
4,600
26,900
New Roadway Connections
Water Bodies
Conservation Areas
Flood Zones
Development Areas
Existing Parcels
Estate/Rural Residential
Neighborhood Residential
Mixed Residential
Mixed Use Commercial
General Commercial
Research & Development Flex
Recreational
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS
USDA, USGS, AeroGRID, IGN, and the GIS User Community

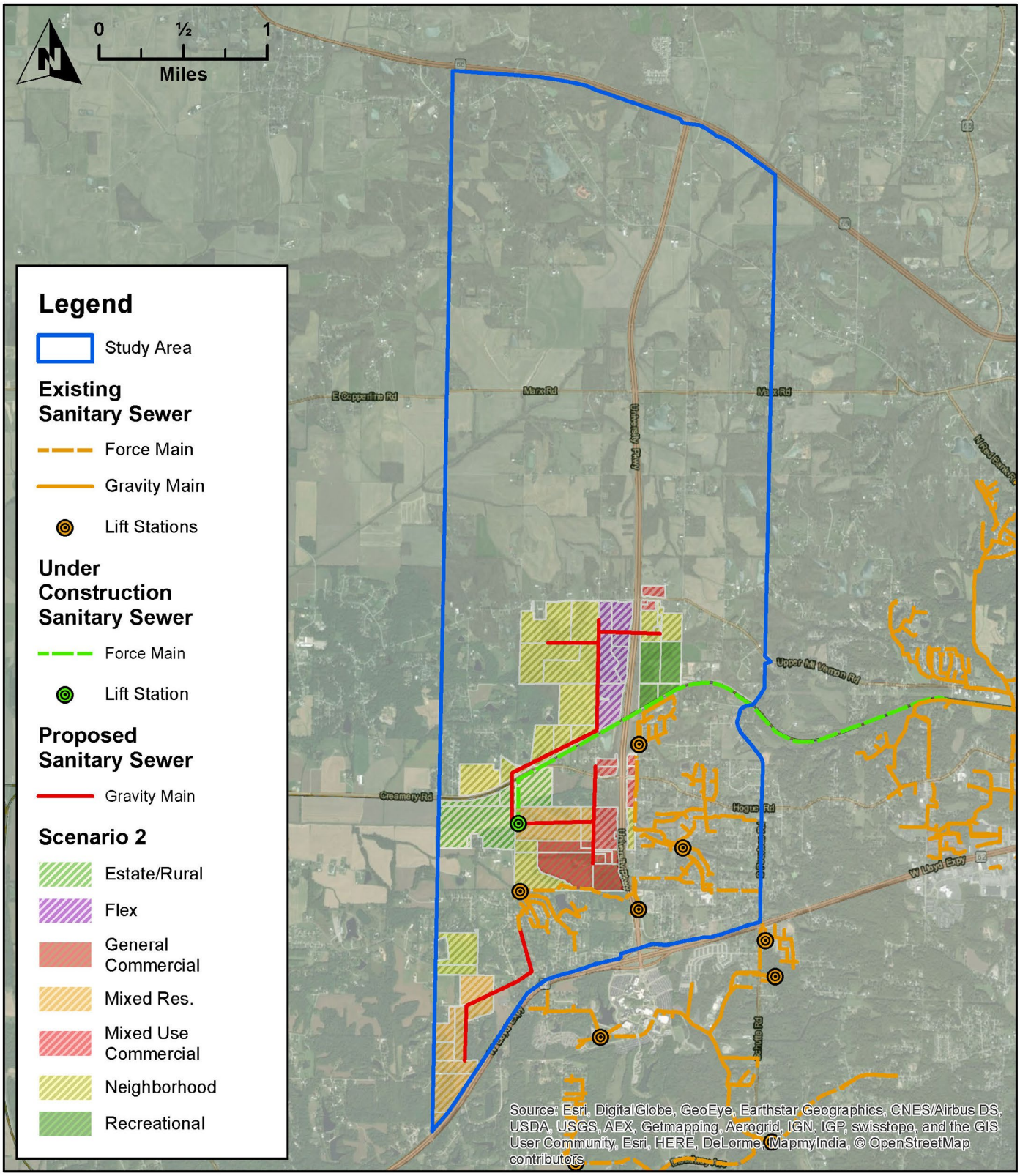
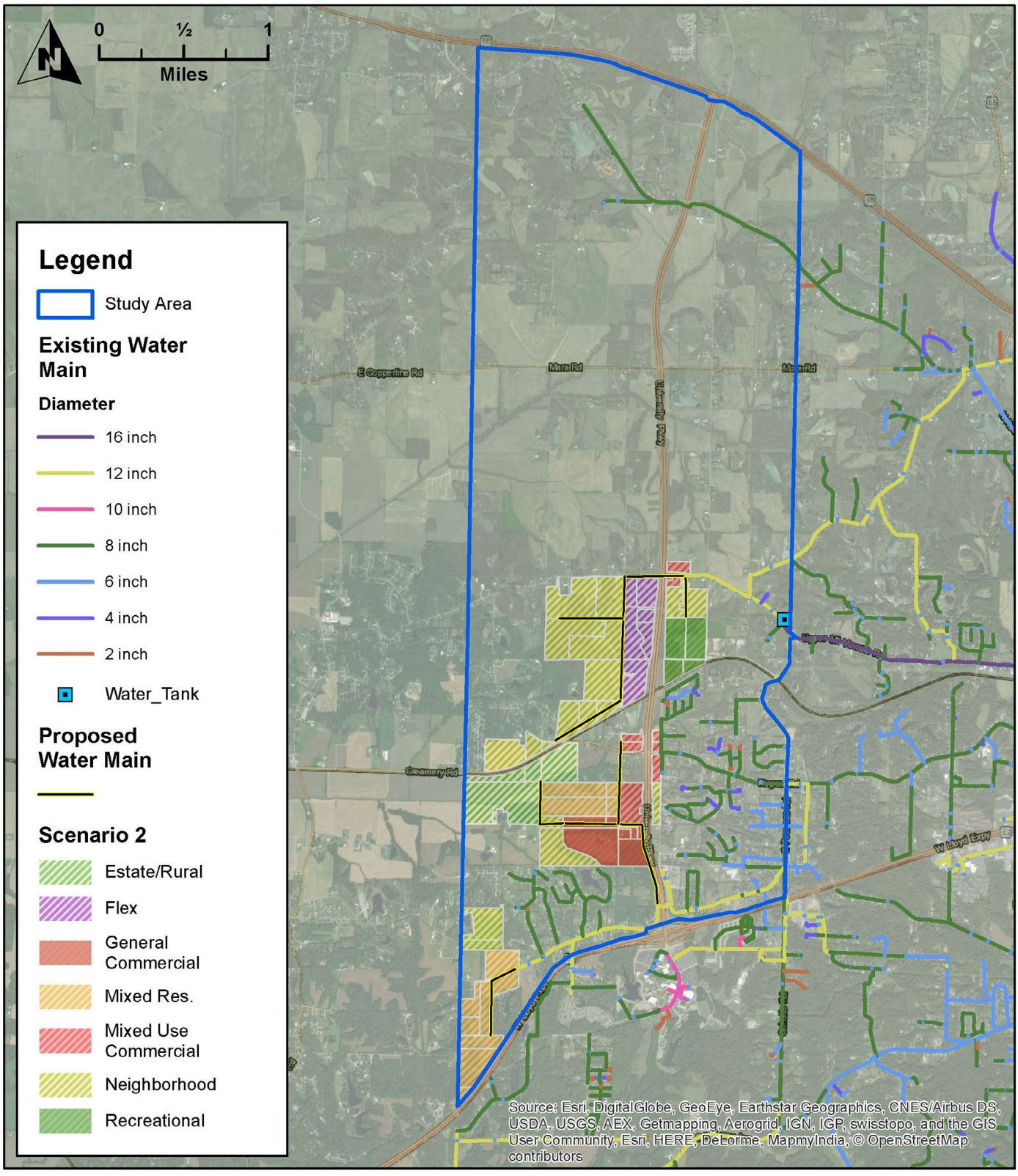


Figure C-9 Scenario 2 Proposed Sanitary Sewer Map

CORRIDOR MANAGEMENT AND LAND USE PLAN FOR THE UNIVERSITY PARKWAY FROM SR 62 TO SR 66: SCENARIO 2 - PROPOSED SANITARY SEWER

POWERS ENGINEERING



CORRIDOR MANAGEMENT AND LAND USE PLAN FOR THE UNIVERSITY PARKWAY FROM SR 62 TO SR 66: SCENARIO 2 - PROPOSED WATER MAIN

Scenario 3: Corridor Preservation

Scenario three is the most conservative development scenario which strives to restrict development of existing agriculturally zoned land. To preserve the rural and natural landscape, changes to the zoning code and new regulations would be imposed by the overlay district. Some of these regulations include:

- Restricting the size of residential subdivisions within the agricultural zone. Major residential subdivisions would require a zoning change to an appropriate residential district.
- Creation of the conservation zone which protects natural features such as large tree stands, wetlands, and floodplains.

Majestic Place has been reoriented with the mixed use district along the parkway. The commercial area will be located to the south of the entrance from University Parkway. This commercial zone will be a mix of neighborhood serving stores, restaurants, and housing. This commercial district is surrounded by conservation zones buffering the adjacent residential development with natural and open space. Between Roesner Rd. and University Parkway would be a mixed use node which will provide small scale shops, restaurants, offices, and other services needed to serve the corridor. In addition, residential units can be located above commercial spaces or as stand-alone buildings. The northwest section of Majestic Place will be a mixed residential district surrounded by existing tree stands.

The residentially zoned parcels in the southwest corner of the corridor will serve a variety of housing needs. It will be a mixed residential district surrounded by an existing forested and wetland area.

Table C-3 Scenario 3 Development	Acres	Sq.Ft.	Units
Estate + Rural Residential			
Rural Lot	0%		4
Estate Lot	0%		26
Neighborhood Residential	**36.27**		
Suburban Large	30%		10
Suburban Medium	40%		27
Suburban Compact	30%		33
Mixed Residential	**138.74**		
Suburban Medium	35%		125
Suburban Compact	30%		179
Duplex/Townhomes	15%		134
Garden Apartments	20%		197
Mixed Use	**22.36**		
Residential	50%		99
Retail	50%	53,709	
Office	25%	26,855	
Commercial	**90.30**		
General	60%	301,139	
Restaurants	40%	160,607	
R & D Flex			
R&D	0%		
Recreational	**52.40**		
Recreational	100%	25,864	

Transportation Impacts:

- Lower growth in traffic than Scenarios 1 and 2.
- Middle Mount Vernon Road, the new east-west connection, and Hogue Road all attract a significant amount of traffic and would likely need intersection treatments at University Parkway such as additional turn lanes, signalization, or other capacity improvements.
- Additional capacity or intersection modifications likely not required north of Hogue Road due to nominal growth in traffic compared to existing conditions.

Utility Impacts:

To provide water and sanitary sewer service to both the residential and commercial zones, additional water and sewer mains will be needed. Please refer to Figure 6 for the proposed sewers and Figure 7 for the proposed water mains. Two 12-inch sanitary sewer lines are proposed for Scenario 3:

- An extension running south on Agathon Drive, west on Middle Mount Vernon Drive and south into the residential zones.
- An extension running west from Creamery Road Lift Station and then south on South Roesner Road.

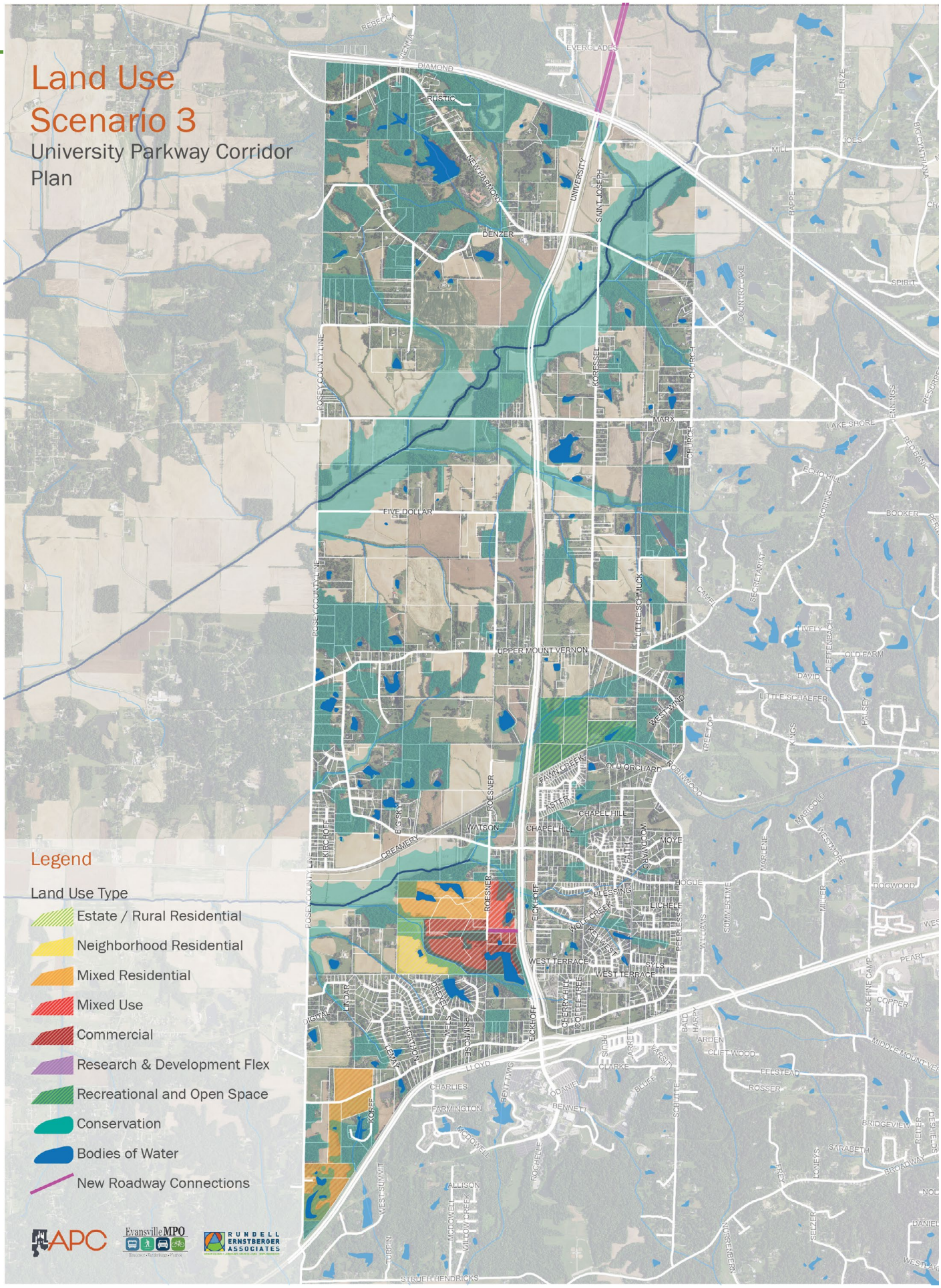
Two water main branches are proposed for Scenario 3, ranging from 12 to 16 inches:

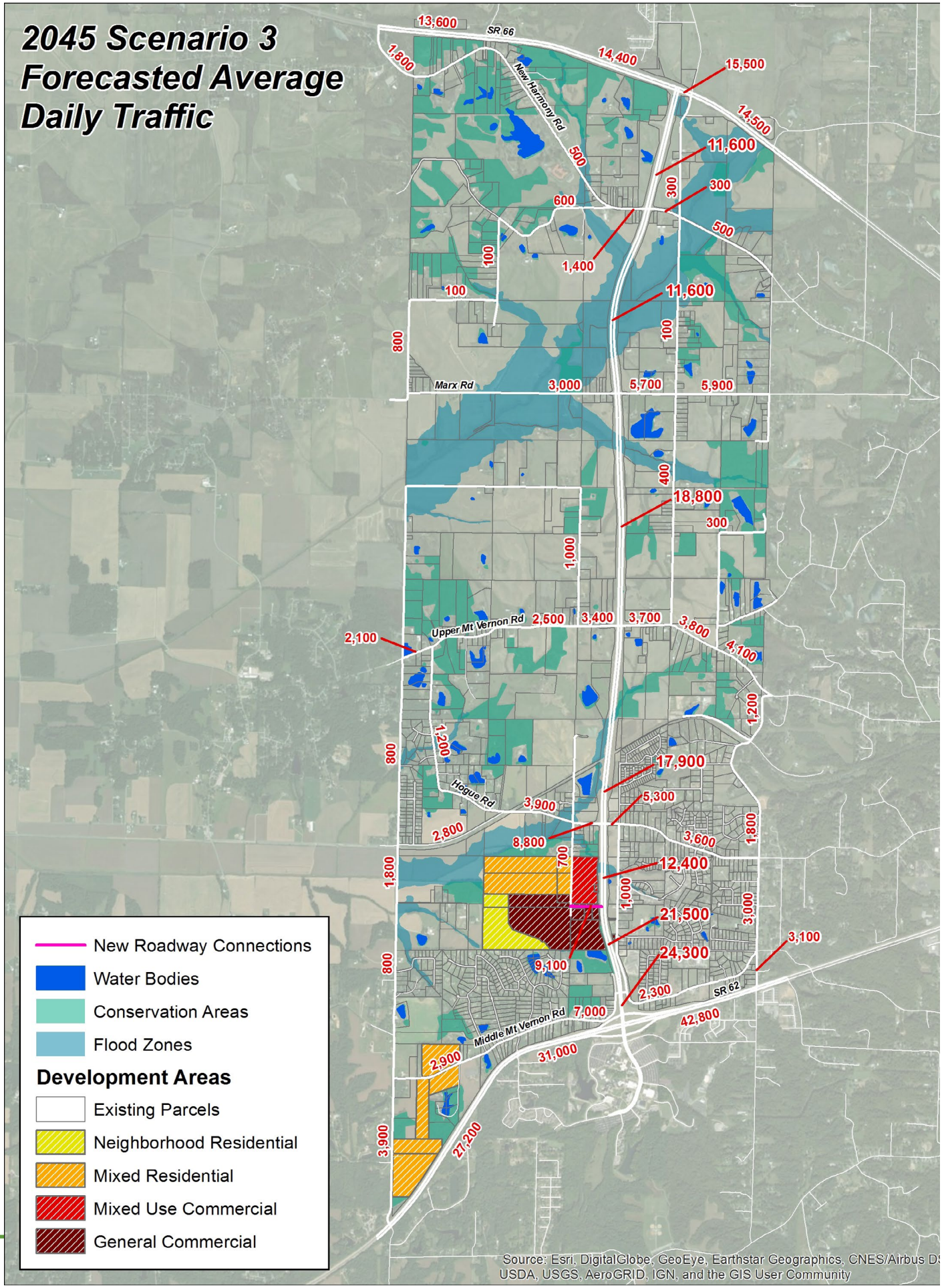
- A 12-inch extension west on Middle Mount Vernon Drive and south into the residential zones.
- A 16-inch water main extending north along the west side University Parkway before turning east into the commercial zones.

All preliminary sewer and water main sizing are for planning purposes only and are based on the minimum design standards of the Evansville Water and Sewer Utility. Final sizing is dependent on actual site considerations and demand conditions.

Land Use Scenario 3

University Parkway Corridor Plan




2045 Scenario 3
Forecasted Average
Daily Traffic
SR 66
New Harmony Rd
Marx Rd
Upper Mt Vernon Rd
Hogue Rd
Middle Mt Vernon Rd
SR 62
13,600
1,800
14,400
15,500
14,500
11,600
500
300
600
1,400
100
800
3,000
5,700
5,900
400
18,800
1,000
2,500
3,400
3,700
3,800
2,100
4,100
1,200
17,900
5,300
3,900
2,800
8,800
3,600
12,400
700
21,500
3,100
24,300
9,100
2,300
7,000
42,800
31,000
2,900
27,200
New Roadway Connections
Water Bodies
Conservation Areas
Flood Zones
Development Areas
Existing Parcels
Neighborhood Residential
Mixed Residential
Mixed Use Commercial
General Commercial
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS
USDA, USGS, AeroGRID, IGN, and the GIS User Community

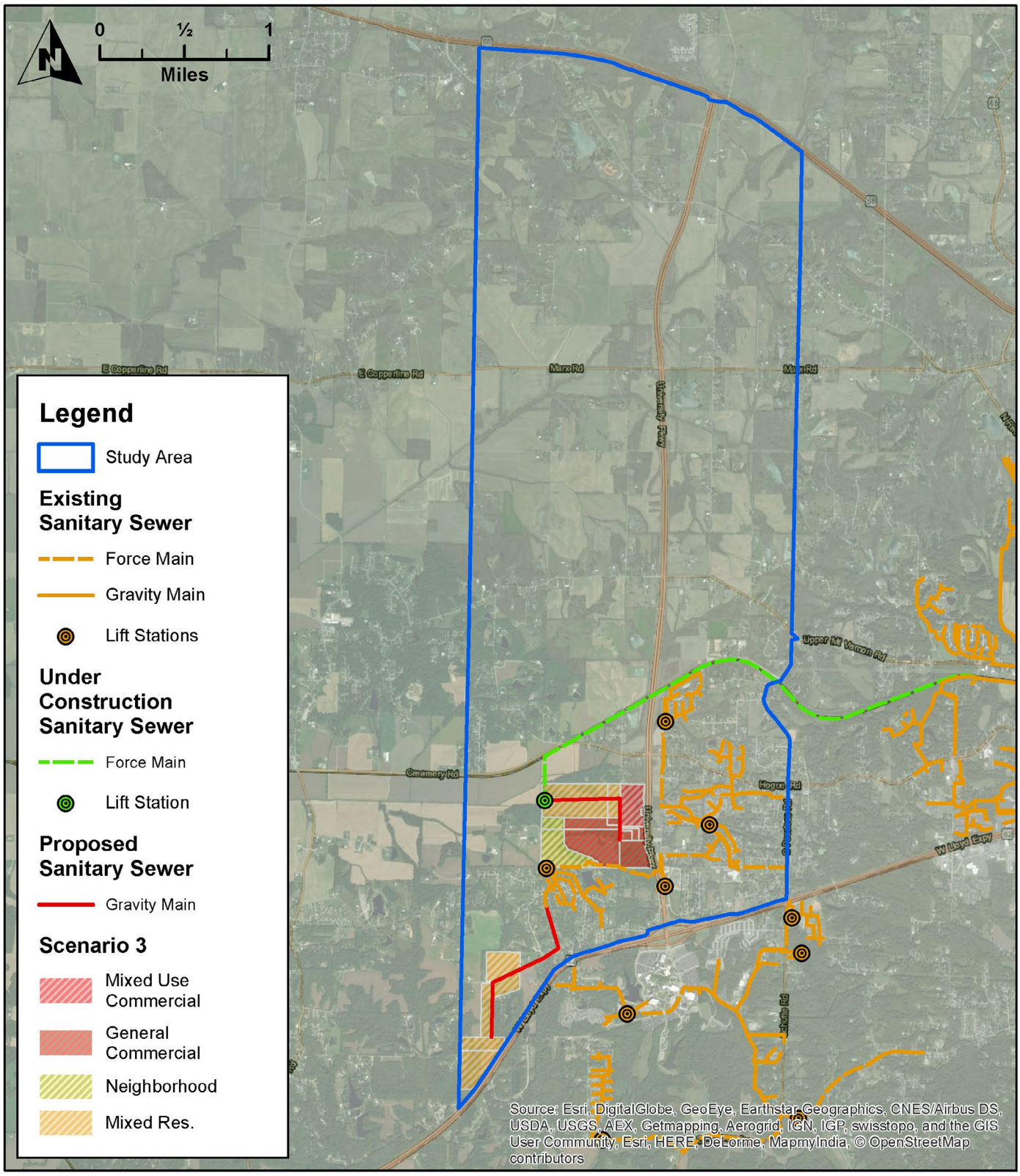
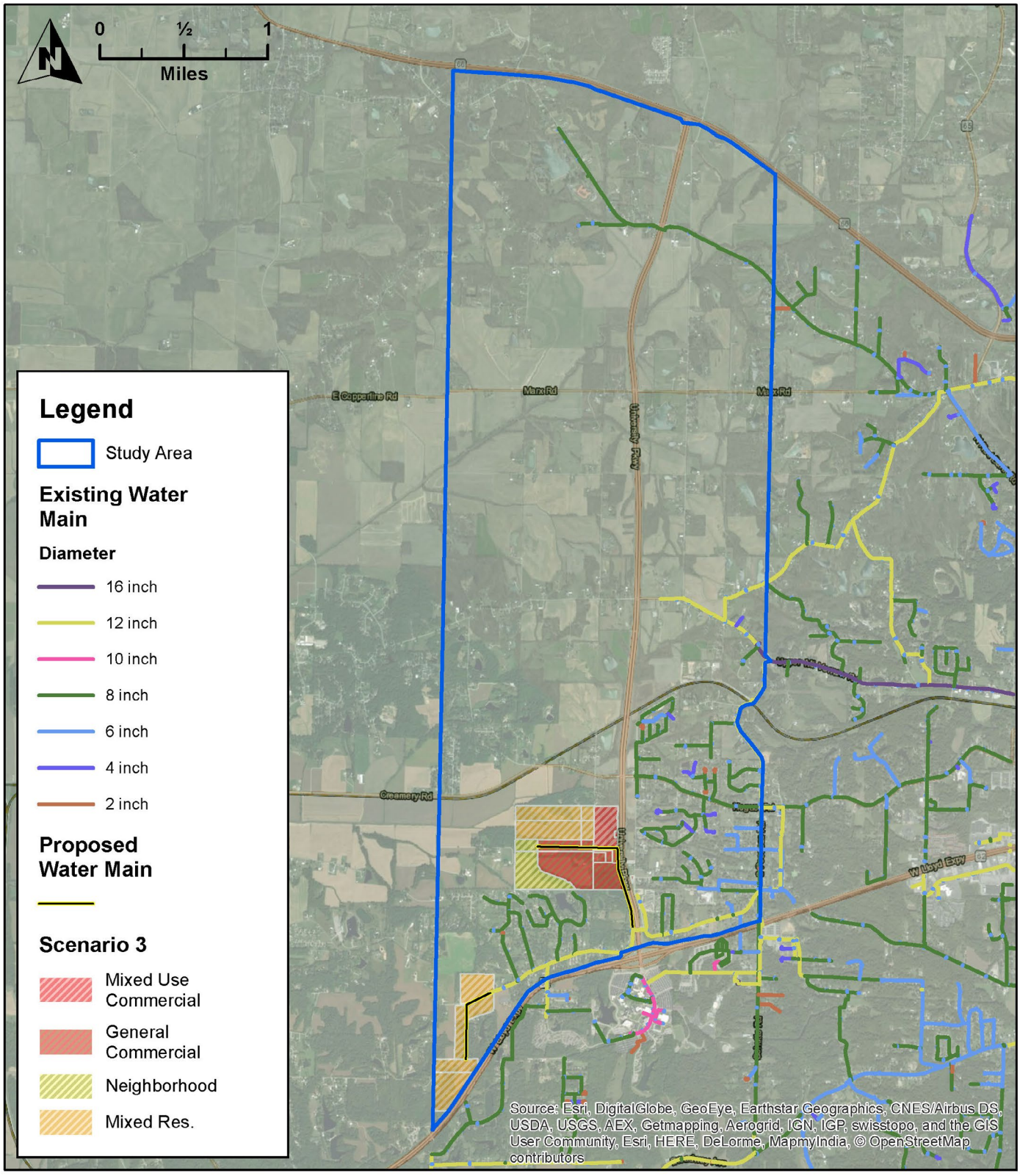


Figure C-13 Scenario 3 Proposed Sanitary Sewer Map

CORRIDOR MANAGEMENT AND LAND USE PLAN FOR THE UNIVERSITY PARKWAY FROM SR 62 TO SR 66: SCENARIO 3 - PROPOSED SANITARY SEWER



CORRIDOR MANAGEMENT AND LAND USE PLAN FOR THE UNIVERSITY PARKWAY FROM SR 62 TO SR 66: SCENARIO 3 - PROPOSED WATER MAIN

POWERS ENGINEERING

Summary

The three land use scenarios created unique situations which contain advantages and disadvantages for the County, the residents and property owners within the University Parkway Corridor. To proceed a preferred scenario or features of the scenarios will need to be chosen.

Scenario 1 is a vast amount of growth for this corridor and the level of build out depicted is much greater than the County or residents are prepared for and is four times more growth than projected for Perry Township in the Evansville-Vanderburgh Comprehensive Plan. This projection for the corridor is unrealistic but is valuable in that it demonstrates the development built-out possible based on existing conditions. The theory of this scenario is it focuses primarily on existing zoned land and what is allowed by and could happen under the current County Zoning Code. It does not rezone any property and focuses on existing development patterns.

Scenario 2 is more balanced than the other scenarios. If focuses primarily on existing zoned land but also incorporates components of the Comprehensive Plan. This scenario tries to preserve the corridor and agricultural land north of Upper Mt Vernon Road, while calling for moderate development in the southern portion of the study area. It however has a few features / land uses which could be unfavorable for some of the residents. This scenario would have approximately 1,758 new housing units which would be approximately 3,498 new residents along the corridor. These estimations are similar to those projected by the Comprehensive Plan. The differences between these can be attributed to Majestic Place maturing into a more mixed use pattern allowing residential uses within both commercial districts.

	Scenario 1	Scenario 2	Scenario 3
Acres of Development			
Gross	2,109	951	327
Net	1,659	653	229
Residential			
Single-Family Unit	3,486	1,353	508
Multi-family Units	960	405	296
Commercial			
Retail (Sq.Ft.)	498,636	496,349	515,456
Office (Sq.Ft.)	43,492	47,110	26,855
R & D Flex			
R&D (Sq.Ft.)	0	609,666	0
Recreational and Open Space			
Recreational (Sq.Ft.)	0	25,864	25,864

Table C-4 Scenario Land Use Summary

Scenario 3 is the most conservative and limiting option. It focuses on prohibiting development of agriculturally zoned land. Although this alternative might be perceived as favorable with many residents, it does not produce much return on investment to the County for their part in funding the road project and for their investment in the sanitary sewer. Furthermore, there is the additional issue of the severe limitations that would be imposed on property rights of residents. This scenario would discourage property owners from seeking a rezone to develop their land for other uses such as residential. Due to a lack of development in the area, specifically residential growth, many utilities will likely not expand further into the Corridor. Agricultural uses do not encourage utility or other services like internet or broadband to improve access. The amount of residential growth predicted for this scenario of 1,800 new residents is about 900 people less than the projection in the Comprehensive Plan for Perry Township.

UNIVERSITY PARKWAY CORRIDOR PLAN

Appendix D:

Existing Conditions Report

DRAFT 2019

Introduction

The Evansville - Vanderburgh County Comprehensive Plan 2015-2035 identifies the University Parkway as a corridor in need of further study. The overall direction of the comprehensive plan was to promote infill development in the City of Evansville, especially in the older downtown neighborhoods. However, because the Evansville Water and Sewer Utility (EWSU) is constructing a new southern pump station located at Creamery Road, the County needed to study the corridor sooner than anticipated. Therefore, Vanderburgh County is conducting this study to establish a plan which will guide development in the coming years.

The study will address land use, transportation, infrastructure, and physical features within the corridor study area and include a market analysis to provide direction on the amount of certain future uses in the area.

Corridor Study Area

University Parkway serves an important role in western Vanderburgh County. This route connects State Route 62, (Lloyd Expressway) and the University of Southern Indiana north to State Route 66, (Diamond Avenue). The area around the parkway being studied is bounded by State Road 66 to the north; State Road 62 to the south; Peerless Road and Church Road to the east; and the Vanderburgh/Posey County line to the west. The area is bisected by two distinct townships: German township to the north and Perry Township to the South.

History

Transportation plans since the 1950s have called for the development of a major transportation facility on the west side of Vanderburgh County, with the 1979 "Recommended Transportation Plan" prepared by the Evansville Urban Transportation Study conceiving of the need for the thoroughfare to connect SR 62 and I-64. This was followed by a design study in the 1980s to establish the preferred location, settling on the southern terminus at its present location at SR 62. The project was originally named Eickhoff-Koressel Road for the two rural roads that were originally recommended to be connected in the Plan. However, additional studies determined that the two-lane connector would not be adequate for future traffic, so the Parkway was planned as a four-lane road. The first segment, completed in 1994, consisted of the interchange at SR 62 and a short stub north to Middle Mt Vernon Road. The next segment, "Phase 1", extending from SR 62 to Upper Mt Vernon Road, opened in 2006. "Phase 2", from Upper Mount Vernon Road to Marx Road, opened in 2011. "Phase 3", from Marx Road to SR 66, opened in 2012. The extension of the Parkway north of SR 66 is in the MPO Transportation Plan for construction in 2035 and 2040. Typical cross sections from the "Phase 1" through "Phase 3" construction plans are shown in Figures 6 through 8, on page 11.

Relevant Plans & Studies

The purpose of this section is to summarize the review of existing plans and studies, relevant to the future planning of non-transportation infrastructure, as they pertain to the study area. Those plans and studies that have been reviewed and included are:

- Evansville-Vanderburgh County Comprehensive Plan 2015 - 2035
- Sustainable Evansville Area Coalition Millennial Plan

Evansville-Vanderburgh County Comprehensive Plan 2015-2035

The Evansville-Vanderburgh County Area Plan Commission (APC) produced the Evansville-Vanderburgh County Comprehensive Plan 2015-2035. The City and County use the plan as a guide for future land use and planning decisions to improve the quality of life for its residents and visitors. The plan focuses on several themes which directly influence the corridor:

- Avoid leapfrog development by creating contiguous, responsible, and orderly growth and economic development.
- The conservation of natural, cultural, and historic resources; public and private investments, and other unique community assets.
- Maximize the existing infrastructure and underdeveloped or underutilized land.

The plan documented that the City of Evansville is progressively losing population to suburban sprawl development in the county and surrounding region. However, projections have a positive outlook estimating a growth rate between 6 and 12 percent in the next 20 years for the city and county.

The Plan characterizes the study area at a high level as agricultural and suburban style residential development containing low vacancy with high owner-occupancy rates. This development pattern is expanding and transitioning existing agricultural land to residential.

The plan shows that housing will be a major component of the corridor's future. To the south in Perry township projections show moderate growth (10.7 percent increase in population and 13.6 percent increase in housing). In contrast, on the northern portion of the study area, located in German Township, is expected to have a stable increase in the growth rate (9.5 percent increase in population and 10.9 percent increase in housing).

Key strategies that apply to the study area:

- Encouraging housing diversity beyond detached single-family to include townhomes, senior housing, low-rise apartments, condos, etc.
- Address the older or blighted housing stock, incentivizing homes to be rehabilitated and preserved or rebuilt where appropriate.

New commercial location factors

- High visibility and traffic volumes in the area
- Easy access (frontage roads for this corridor)
- Adequate existing population in the area
- Shovel ready or minimal infrastructure investments required to begin construction.

The comprehensive plan recommends that commercial development in Evansville and Vanderburgh County be built to avoid or mitigate major impacts to existing infrastructure and the visual character of the area. It is anticipated that there will be potential for new commercial, where developers can create compact commercial or mixed use buildings. Where appropriate, commercial should be built at a neighborhood scale at major intersections to avoid impacting adjacent neighborhoods.

Within the study area, a future commercial and mixed-use development was designated west of University Parkway and north of Lloyd Expressway. Mixed use nodes are designated at key intersections in the southern portion of the corridor supporting existing and future housing development.

The study area currently contains no industrial uses, but the comprehensive plan calls for a new industrial/research park along the existing rail line bisecting the corridor. New industrial is encouraged to use new and clean best practices minimizing waste and reducing the impacts on adjacent properties. To minimize the impacts, industrial projects should use appropriate space and vegetative buffers when adjacent to residential development.

While the plan focuses a great deal on new development, it also promotes the preservation of existing agricultural and environmentally sensitive areas. The study area contains a large quantity of farmland, forested areas, and wetlands. During development, conscious efforts should be made to minimize the loss of these assets especially higher yield farmland. The use of compact development patterns will also help minimize the land needs of future development.

Summary of Relevant Policies for Land Use

Policies for land use planning listed in the Comprehensive Plan which may impact development within the study area include:

- Explore the use of form based codes or overlay zones and incentives as means to upgrade the urban form and intensity of use.
- Examine alternative development types, including cluster developments and planned unit developments, as a means of protecting green space and environmentally sensitive areas.
- Promote more mixed–use development. Encourage street level commercial uses in mixed-use structures that generate pedestrian activity such as retail, restaurants, and services.
- Discourage rezonings that will require a variance to meet code requirements.
- Encourage the wide variety of housing types, which include single family owner-occupied units, condo/townhouse, rental apartments, mobile homes, and progressive senior living (aging-in-place).
- Multi-family housing should be viewed as an appropriate "buffer" use between single family and commercial developments.
- Investigate changes to the Zoning and Subdivision Ordinances that would require rezoning from Agricultural to Residential prior to platting major residential subdivisions.
- Encourage small-scaled, commercial uses that primarily serve neighborhood residents at major intersections or in existing commercial centers within residential areas.
- Encourage new industrial developments to be open and environmentally attractive with good access, parking, circulation, landscaping and utility services.
- Promote development of a new research park (possibly located near University Parkway north of USI) and an intermodal logistics park (possibly located along the U. S. 41 North industrial corridor) on appropriate sites in Vanderburgh County.
- The conversion of moderate to high yield farm lands within the Rural area for urban development shall be discouraged, except in areas designated for other uses on the Future Land Use-2035 Map and in the existing Rural communities.
- Encourage compact development as a way to preserve/protect contiguous parcels of land supporting effective agricultural operations.

Utility/Infrastructure

The need to extend utility services to this area is noted as a potential development constraint. The Comprehensive Plan discusses public utilities (water, sanitary sewer, storm sewer/drainage, and solid waste) that serve the Evansville metro area. Other utilities, including cable, electric, trash collection, natural gas, and telephone, are provided by private companies. It is noted that the location and availability of water and sewer utilities, in particular, are essential to support future development and must be in place before extensive development may occur. Information regarding public utilities, as presented by the Comprehensive Plan, is summarized below:

Water

The Evansville Water and Sewer Utility (EWSU) provides water to approximately 93 percent of the residents within Vanderburgh County with a total of over 60,000 residential and commercial customers. EWSU also has four wholesale customers, one of which includes the German Township Water District. Figure 15: Water Service Area (approximate) on page 220 of the Comprehensive Plan represents those areas of Vanderburgh County currently served, or planned to be served, by EWSU. In the southern portion of the study area, water is generally available east of the Parkway, but west of the Parkway is generally not yet served by EWSU. The northern portion of the study area is primarily served by the German Township Water District, except for a small strip served by only EWSU.

EWSU faces many challenges, including increased costs to operate and maintain aging infrastructure, as well as investments needed to replace or expand existing infrastructure to support future growth. Water treatment plant and storage capacities exceed projected demands through 2035. Therefore, the extension of water utility service to the study area will need to focus on evaluating the impacts and any required upgrades to the distribution system. Throughout the planning stages for future development of the study area, developers should coordinate with EWSU to assess the location and capacity of existing infrastructure, review any planned improvements to expand water service within the area, and evaluate any required upgrades to the distribution system.

Sewer

EWSU's sanitary sewer service area is approximately 60 square miles and includes the City of Evansville and portions of Vanderburgh County as shown on Figure 17-2: Sewer Service Area (approximate) on page 222 of the Comprehensive Plan. This figure also shows the areas where it is proposed to extend sanitary sewer service.

The study area is outside of the combined sewer area, however, any new sanitary flows will eventually discharge to the combined sewer system located downstream and may impact combined sewer overflows (CSOs). The addition of sanitary flows may also potentially impact sanitary sewer overflows (SSOs) within the separate sanitary sewer system. EWSU has entered into a federal Consent Decree agreement to correct system deficiencies and construct capital improvements projects designed to address CSOs and SSOs in accordance with its "Renew Evansville" program.

Additionally, EWSU Is developing a 30-Year Sewer Master Plan for non-Consent Decree projects to upgrade the sanitary sewer and treatment systems. It discusses the extension of sanitary sewer service to support future growth, including the area around University Parkway south of Upper Mt. Vernon Road. Any new development along the study area should be coordinated with EWSU to determine any potential negative impacts to the downstream collection systems, identify the location of planned sewer service extensions, and determine any necessary system upgrades that may be required.

Stormwater Drainage

Management of storm water in Vanderburgh County is generally the responsibility the Vanderburgh County Drainage Board (County Commissioners). Because the control of surface water drainage is an important concern, any new development should be planned and designed at the outset to attempt to prevent those drainage issues typically associated with the addition of significant amounts of impervious area or the placement of substantial amounts of fill. This includes the control of storm water runoff to prevent surface flooding, as well as the use of best management practices to reduce runoff volumes and flow rates to mitigate negative impacts to receiving waters. Generally, new development is constructed with separate storm sewers that discharge to drainage basins where the runoff can be temporarily stored and released over time. The design of proposed storm water drainage management systems for development projects are evaluated through the commercial site review and subdivision review processes.

Rural Septic Systems

Currently most of the existing development (except for the southern portion of the corridor) is connected to septic systems. Future sanitary sewer service has not been designated for much of the study area. Where service may not be extended, on-site sewage disposal is the primary alternative. However, the majority of the soils in Vanderburgh County have severe limitations for on-site sewage disposal. In areas not served by sanitary sewers and where soils are unfavorable, the County requires a minimum lot size of 2.5 acres for new septic systems. This will impact the density at which new development can occur in unserved areas.

Solid Waste

Allied Waste and Veolia Environmental Services are two major companies that provide trash collection in the City and the County. Several other independent companies also provide service to unincorporated areas of Vanderburgh County. The Vanderburgh County Solid Waste District has adopted a Solid Waste Management Plan to address solid waste services, waste reduction education, and recycling. The District oversees an ongoing program that emphasizes reduction, reuse, and recycling, especially in the residential and commercial sectors. Additionally, the District offers several public programs for household hazardous waste collection and electronics recycling.

Summary of Relevant Policies for Utilities

Policies for planning non-transportation related infrastructure that are listed in the Comprehensive Plan and which may impact development within the study area include:

- All costs associated with extending and/or accessing the water and sanitary sewer network for new service to a development are the responsibility of the developer.
- After inspection and acceptance, the utility shall assume ownership and maintenance of all water and wastewater facilities installed in the service area.
- Unaccepted water and wastewater facilities not meeting adopted standards shall be privately maintained and their expansion shall be prohibited until standards can be met.
- Ensure that the water and sewer system improvements necessary to accommodate new development are in place when needed to mitigate development impacts.
- Ensure that post development storm water runoff is controlled in accordance with applicable ordinances and does not exceed pre-construction volumes, thereby reducing the impact of new development on the existing drainage system.
- Encourage the incorporation of green infrastructure concepts and other best management practices for storm water management in planning and design of new development/redevelopment.
- Encourage developers in growing areas to work together on constructing regional storm water detention facilities that will serve multiple, large scale developments.

The Millennial Plan for 2040: A Regional Plan for Sustainable Development Vol. 2

The Millennial Plan for 2040: A Regional Plan for Sustainable Development (Millennial Plan) is a planning document that outlines long-term growth and development strategies to guide future policy changes, capitalize on existing regional assets, and optimize the use of available resources to enhance quality of life in the Evansville metro area and promote sustainable growth.

The plan's vision establishes several themes guiding the plan: Great Life, Community, Environment, and People. These themes support compact development and redevelopment establishing hubs for employment, housing, education, open space, and recreational opportunities. These centers should be easily accessible by walking, biking, driving, or public transit.

The plan focuses on key themes supporting its vision:

- Sustainable infrastructure
- Infrastructure extensions
- Annexation
- Compact development
- Environmental Stewardship
- Alternative energy
- Renewable energy
- Land conservation and management
- Smart systems
- Connectivity

To provide insight on how these themes could come to fruition, a few development nodes were created. Two of these development nodes fell in the University Parkway Corridor Study area indicating its potential for future growth. One in particular is located north of University of Southern Indiana (USI) and south of Hogue Road along the west side of University Parkway. This concept development referred to as Lakewood Hills, contains a mixed use walkable core and radiates outward with housing which wanes in density as it moves outward.

A second development node was designated along the corridor. North of the railroad along the east side of University Parkway is the other mixed use concept and technology park. Founder Town would be a regional collaboration between Naval Services Warfare Center (NSWC), the Growth Alliance for Greater Evansville, and USI. The hub of this development would be a business accelerator which partners with a downtown co-working space.

The Millennial Plan also contains land use scenarios which were based on existing land use and past development trends. One scenario served as a baseline, while the other scenarios transitioned from being more focused on outward development to promoting mostly infill development in each successive scenario. In these scenarios, the University Parkway Corridor's area varied greatly from vast suburban growth to targeted or managed growth contained to the southern portion of the corridor.

The future economic development plan proposes several transportation projects that would impact the University Parkway Corridor. This includes Bus Rapid Transit (BRT), that would service both the City and County. The final phase shows two routes traveling along SR 62 and SR 66. Both BRT routes conclude where the state roads intersect with University Parkway. Additionally, University Parkway has been designated to become a part of the future highway loop servicing the Evansville metro area. Both transportation projects would increase visibility and access to the corridor.

Utilities

The Millennial Plan offers the following recommendations regarding non-transportation related infrastructure, including utilities:

Municipal "Smart Systems" Policy: New utility management technologies, such as handling peak load periods, and distributing power demand through an electric "Smart Grid", or monitoring water consumption through "Smart Metering", would allow for greater efficiency and less waste. For electric utilities, this means less risk of power brown-outs and fewer periods of down time. For water utilities, smart systems can help detect costly leaks. This type of technology is essential for wise allocation of utility resources.

Compact Growth Policy: The plan documents show a proposed development's ability to generate enough tax revenue to cover its financial impacts to a municipality is directly related to its "intensity of development". Therefore, it is less expensive to provide basic infrastructure services to compact growth than to less dense "sprawl" developments. The plan recommends the establishment of minimum building intensity levels to promote cost-efficient development. Alternatively, if developers build in a less intensive manner, it is recommended to charge impact fees or other value-added levies to supplement tax revenues and cover the expenses of providing utility services.

Green Infrastructure Policy: Private and public development should incorporate green infrastructure strategies to manage storm water runoff including rain gardens, bioswales, pervious pavements, and natural retention systems.

Internet Access Policy: Access to broadband telecommunications infrastructure is important. For educational, commercial, and governmental uses, a modern broadband Internet system can help reduce the operational costs, while improving products and services. Increasingly, the way residents work, play and live are structured and framed by technology. It is critical that wireless broadband linkages be accessible.

Existing Physical Conditions

Land Use

Located on the edge of Vanderburgh County, the University Parkway Corridor study area, as shown in the figures below is primarily agricultural and low-density residential development. In the last few decades, the southeast section of the corridor has developed into suburban style residential as Evansville utilities have become available. The residential growth is supported by local institutions, including West Terrace Elementary School, the University of Southern Indiana and several places of worship. The corridor study area has no retail within its boundaries. Residents currently drive 1 ½ miles east to the nearest shopping district along Lloyd Expressway for goods and services.

German Township

The north area of the corridor is dominated by agricultural land which comprises 45 percent of its land area. Thirty-one percent of the Township is large lot single family with some larger land users like the Daughters of Charity Ministries, Seton Harvest, and a few churches. The Township has a lower population and growth rate with only a 5.4 percent change in population (378 people) from 1990 to 2010. Commercial and industrial uses are limited in German Township accounting for less than one percent of the Township.

Perry Township

Perry Township is similar, however, the area has a higher population base and growth rate. Perry Township recorded a 21.8 percent increase in population between 1990 and 2010. Residential development is expanding west around Lloyd Expressway. Perry Township's residential growth is supported by local institutions like USI, West Terrace School, and several churches. Residents in Perry Township also access the retail along the Lloyd Expressway for their daily goods and services.

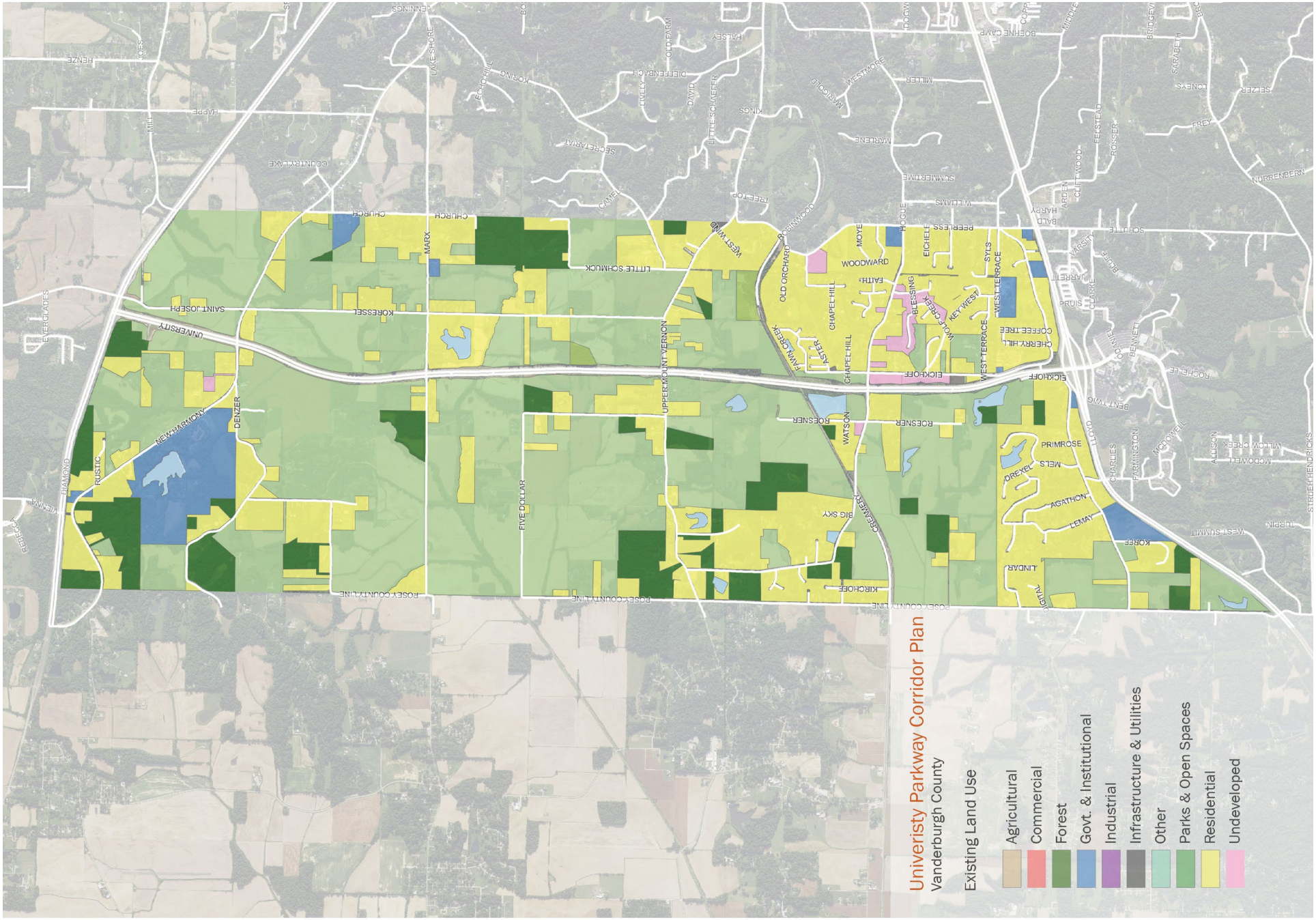


Figure D-1 Existing Land Use Map

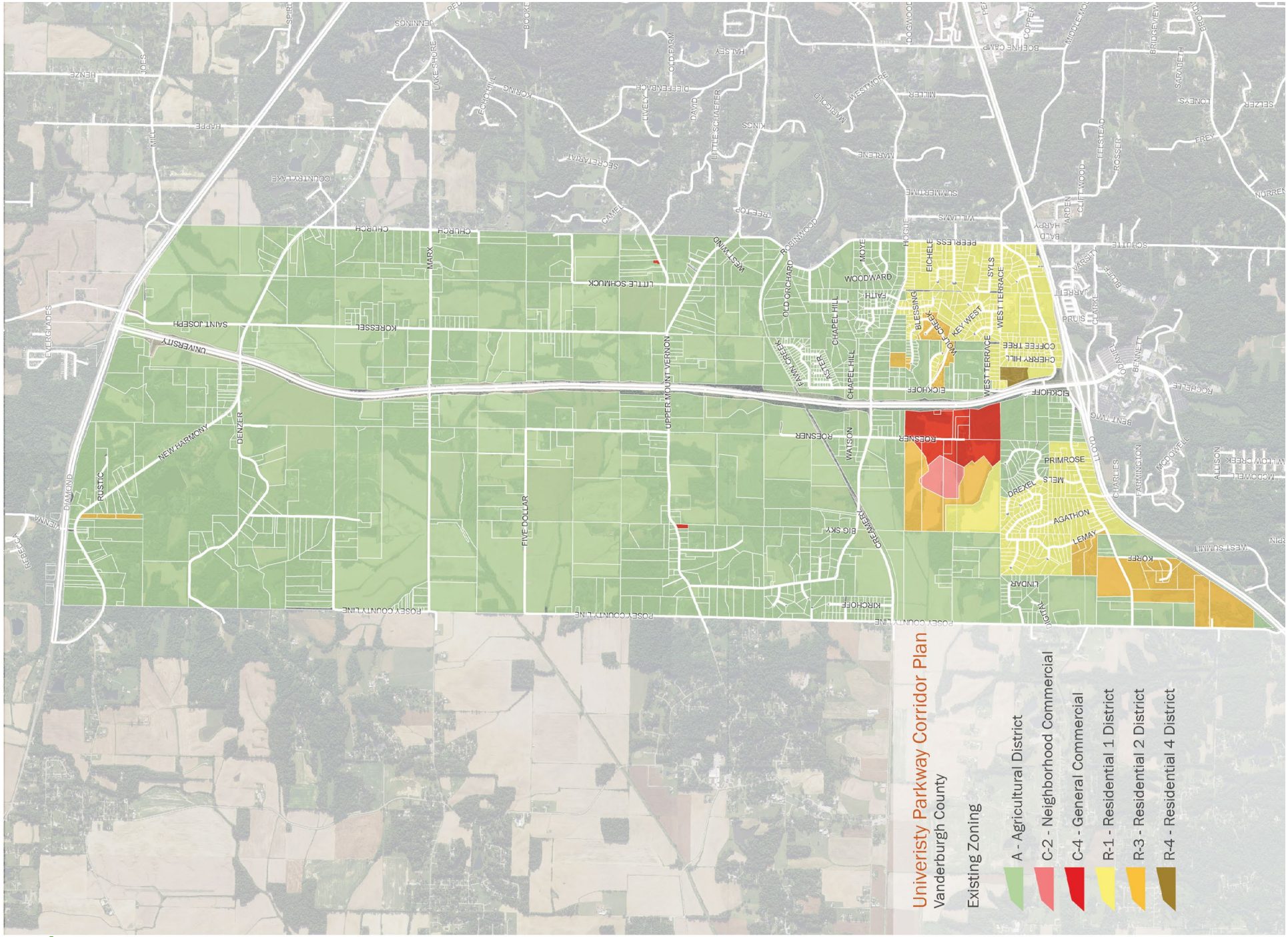


Figure D-2 Existing Zoning Districts Map

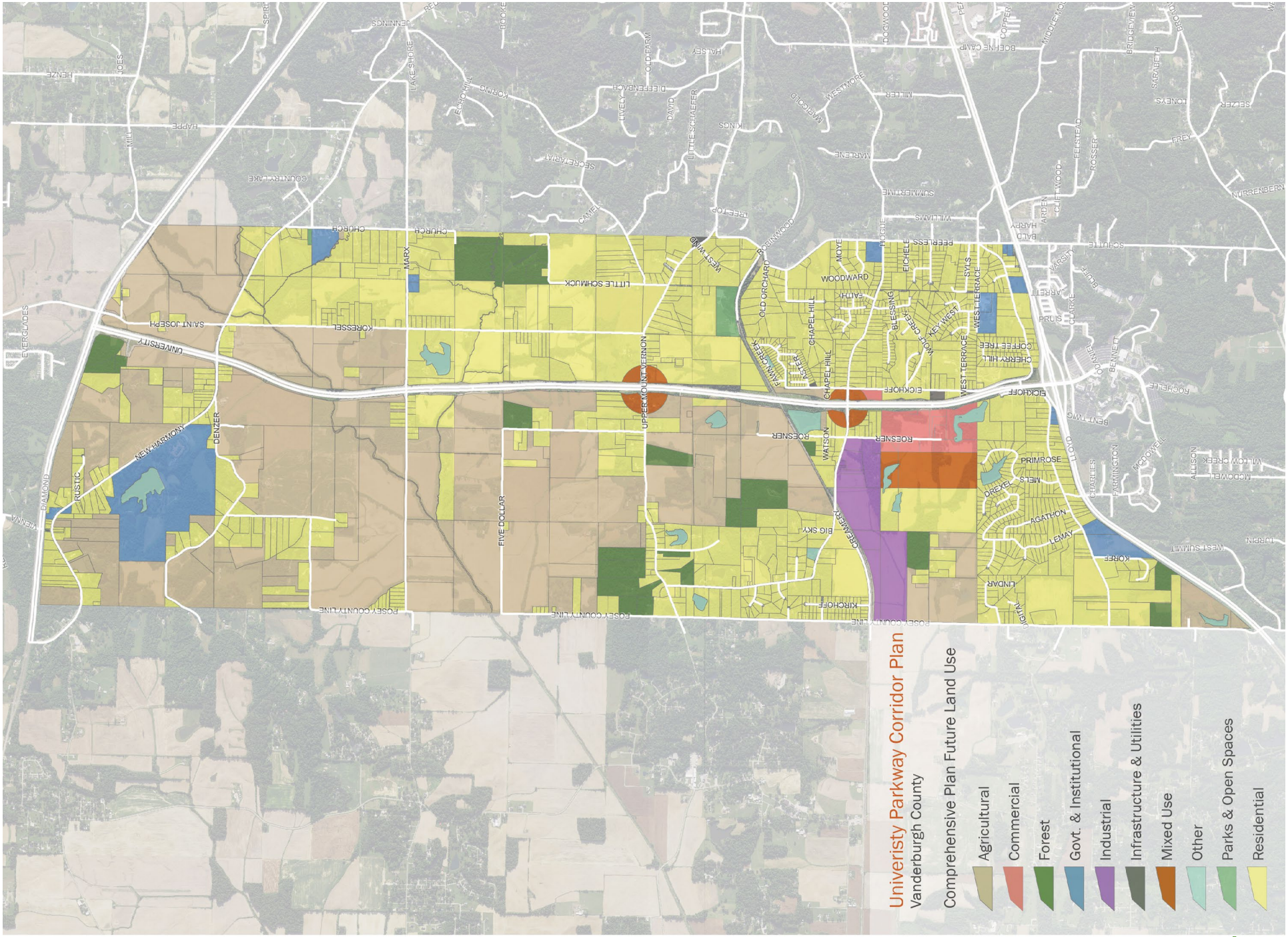


Figure D-3 Comprehensive Plan Future Land Use Map

Development Policies

The University Parkway Corridor is primarily zoned agricultural comprising 85 percent of the area, as shown in Figure D-4. The second most prominent zoning category is residential (R-1) at seven percent. Both zoning districts require a 6,000 square feet (s.f.) minimum lot size and minimum setbacks at 25 feet for front and rear and 5 ft. for side yards (except corner lots which are 10 ft.). These standards work well for these types of districts when served by sewer. However, when not served by sewer, a minimum lot size of two-and-a-half-acres is required to allow for septic tank installation and a backup if that one fails. These large lot sizes quickly consume agricultural land when residential development occurs without public utilities.

A Tax Increment Financing District (TIF) was established that runs narrowly along the University Parkway and expands near the intersection with SR 66, as shown in Figure 3. The TIF is a funding source due to the collection of an increment of tax dollars within the boundary which can be used for infrastructure improvements. The TIF District is narrow and misses key opportunities in the southern half of the corridor, some of which is designated by the Comprehensive Plan for mixed use and industrial growth.

Natural Features

The corridor study area has some physical limitations but overall does not hinder development. The study area is generally flat with exceptions north of Little Creek and to the west between Little Creek and Wolf Creek. Little and Wolf Creeks are the major tributaries in the study area which create floodplains. The Federal Emergency Management Agency (FEMA) requires new structures located within floodplains to be built to different standards.

Soils

- Most soils have moderate limitations for development
- The majority of the corridor has soils that are rated moderate yield for crop productivity
- Corn, soybeans, and winter wheat are the major crops grown in the county

Forest Resources

- The corridor has several large forested areas
- Oak, hickory, hard and soft maple, and tulip poplar are the most prevalent species

Wetlands

- 131 acres of wetlands exist in the study area
- Most of the wetlands are associated with a lake or pond suggesting most are lacustrine or palustrine wetlands

Floodplains

- Little Creek has a substantial 1,000 acre floodplain (100 year) in the study area
- Regulations require new structures within the flood zone to be elevated at least two feet above the floodplain, and covered by flood insurance, in addition to other standards
- These floodplains place limitations on development in the corridor

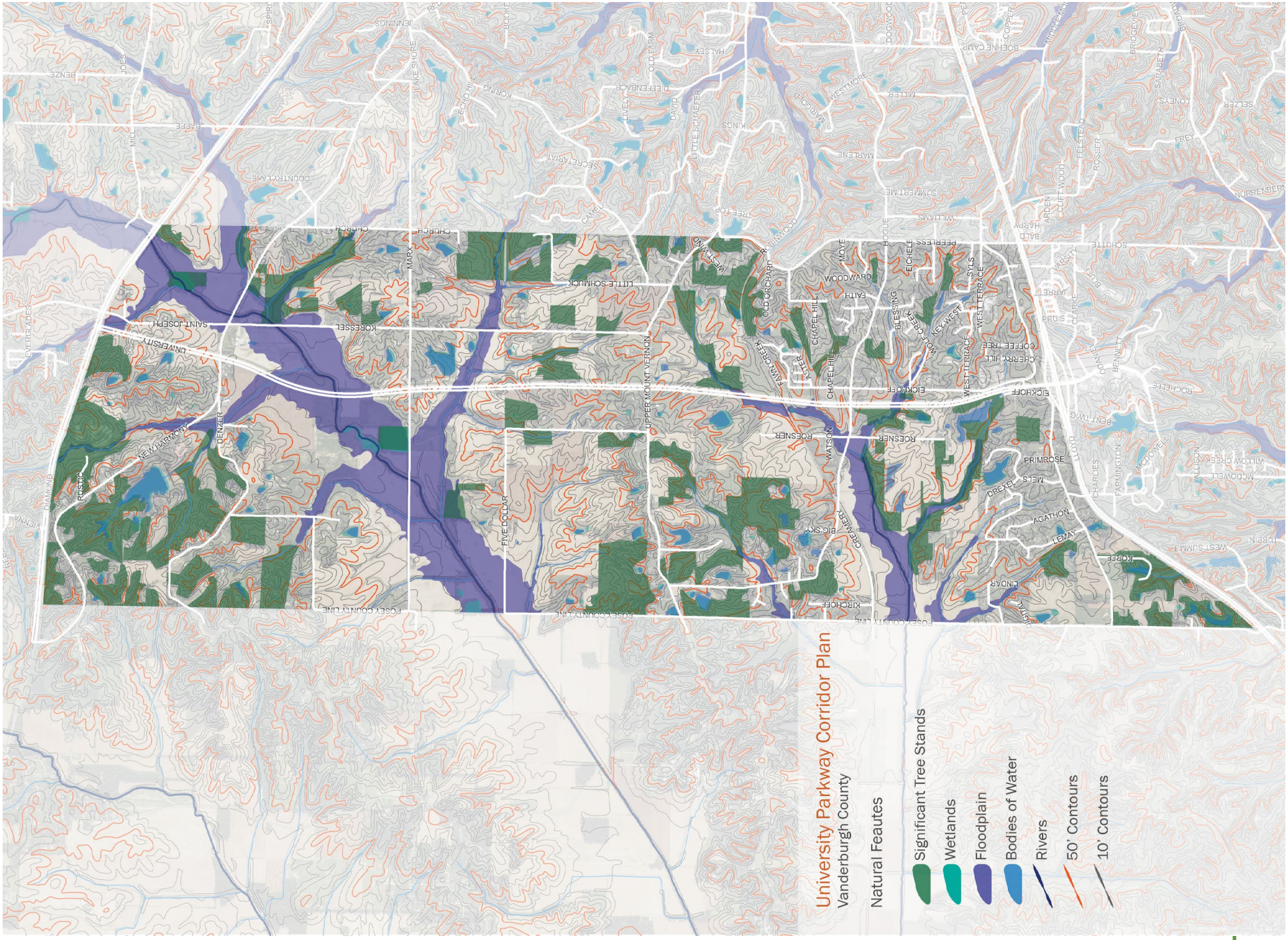


Figure D-4 Corridor Natural Features and Constraints Map

Transportation System

Introduction

The study limits include University Parkway from Diamond Avenue (SR 66) to the north and Middle Mount Vernon Road to the South. The interchange at the Lloyd Expressway (SR 62) is being analyzed as part of a separate, concurrent study of SR 62 / SR 66 from St. Phillips Road in Posey County to SR 261 in Warrick County.

Functional Characteristics

University Parkway is the primary north/south road through southwestern Vanderburgh County. Classified as a Minor Arterial, it extends five miles from SR 62 and the University of Southern Indiana (USI) North to SR 66. University Parkway is limited access, offering a high degree of mobility along the corridor.

The functional classification map in Figure 5 shows the functional classification of University Parkway and each of the intersecting roads.

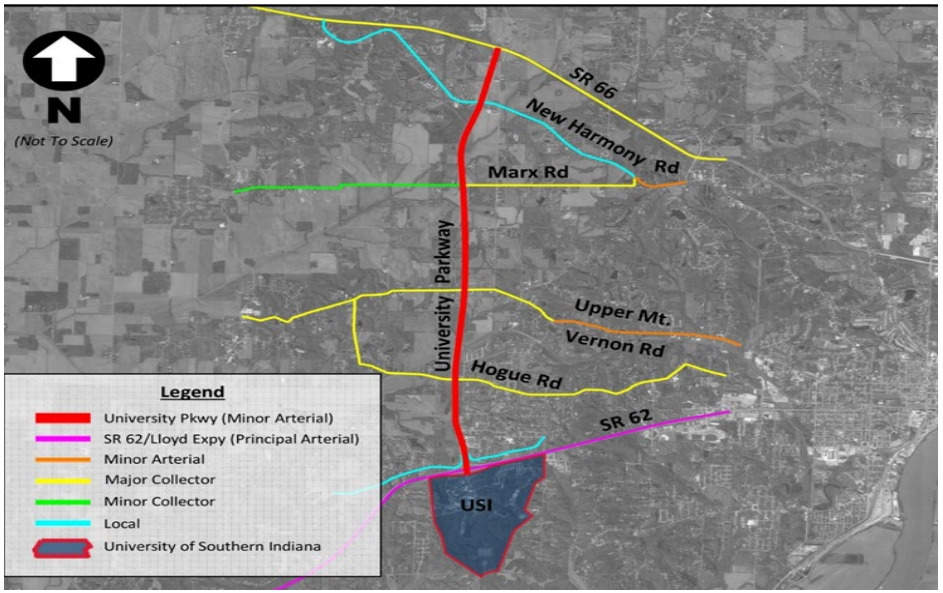


Figure D-5 Existing Thoroughfare Functional Classification

Roadway Conditions

The cross section of University Parkway remains constant throughout the length of the corridor. Four 12-foot lanes, paved shoulders, a wide grass median, and long turn bays to accommodate, the full deceleration distance of turning vehicles, are provided between SR 66 and Middle Mount Vernon Road ("Phase 1" through "Phase 3"). The Lloyd Expressway interchange, completed 12 years prior to the subsequent three phases, built a paved median rather than a wide grass median and shorter turn bays at the ramp intersections.

The posted speed limited along University Parkway is 55mph except for the 45mph section in the immediate vicinity of the SR 62 interchange. There are no existing bicycle or pedestrian facilities along University Parkway. The existing lane configuration and intersection traffic control is shown on the following page in Figure 9.

Operating Conditions

Turning movement counts were performed on Tuesday, August 27, 2017 for peak period traffic during the morning (6:30 AM to 8:30 AM) and afternoon (4:00 PM to 6:00 PM) at the six major intersections along the corridor:

- University Parkway and Diamond Avenue (SR 66)
- University Parkway and New Harmony Road
- University Parkway and Marx Road
- University Parkway and Upper Mt Vernon Road
- University Parkway and Hogue Road
- University Parkway and Middle Mt Vernon Road

The counts revealed that the peak hours of traffic occurred from 7:00 AM to 8:00 AM and 4:15 PM to 5:15 PM. The existing AM and PM peak traffic volumes are summarized in Figure 10 with additional details provided in Appendix A.

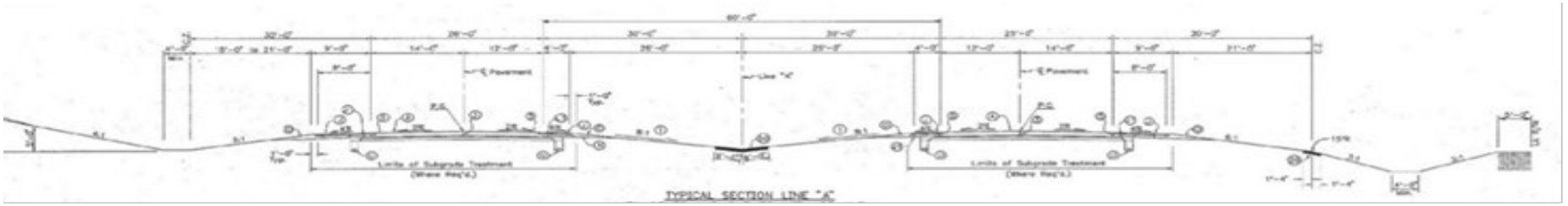


Figure D-6 Typical Cross Section from Phase 1 plans, 2013 (R-26719

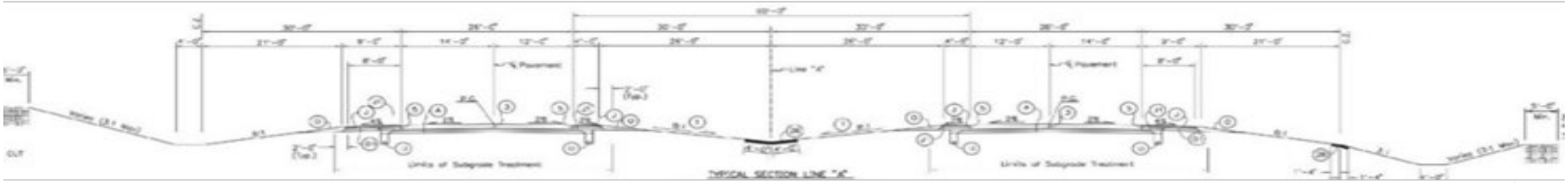


Figure D-7 Typical Cross Section from Phase 2 plans, 2009 (R-30654

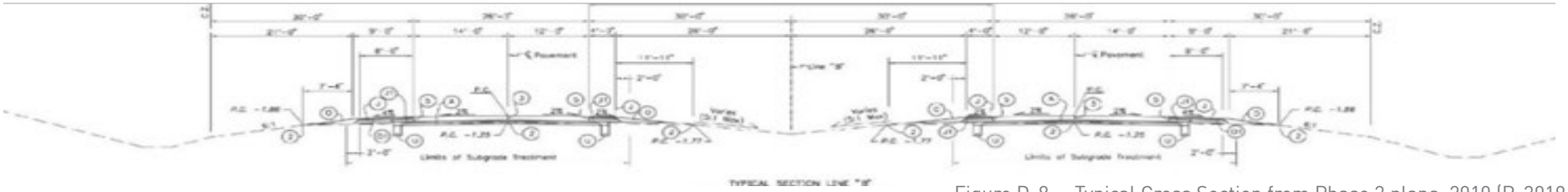


Figure D-8 Typical Cross Section from Phase 3 plans, 2010 (R-30194)

Table D-1. University Parkway AADT count

Year	Days	AADT	Truck %age	Light Vehicles (ADT)	Buses (ADT)	Single-Unit Trucks (ADT)	Two-Unit Trucks (ADT)
2017	Jun 12-13	7,131	7%	7,081	47	296	178

(Count Station ID: 82X150, approximately 1,500' south of Hogue Road)

The Average Daily Traffic (ADT) is summarized in Figure D-10. Data from the INDOT Traffic Count Database System (TCDS) was used to populate this figure and supplemented with ADTs calculated from the turning movement count data summarized in Figure D-9. To best match the available AADT data provided by INDOT, a K-factor of 12.5% was assumed for both major and minor pplying this K-factor to the peak hour turning movement volumes produced ADTs for the remaining roadway segments.

Summarized in Table D-1 the INDOT vehicle count data shows approximately 7% trucks along University Parkway. For comparison, truck percentages along US 41 between SR 62 and I-64 vary from 12% to 18%.

Figure D-9 Existing Traffic Control and Lane Configurations

Figure D-10 Existing AM and PM peak hour traffic volumes

Figure D-11 Existing AADT traffic volumes

Traffic operating conditions at the study intersections were evaluated using Synchro 10 traffic modeling software. The performance of the transportation system is quantified by Levels of Service (LOS), which are measures of traffic flow that consider factors such as speed, delay, interruptions, safety, driver comfort, and convenience. There are six levels of service ranging from LOS A ("free flow") to LOS F ("oversaturated"). For design purposes, LOS D is commonly considered to be the minimum acceptable operating conditions with LOS C or better considered to be desirable operating conditions.

Level of service criteria vary depending upon the roadway component being evaluated. Intersections are commonly evaluated because roadway capacity is typically dictated by the number of vehicles that can be served at critical intersections. For intersections, the level of service criteria are based on delay and the type of control (i.e., signalized vs. unsignalized). Signalized intersections reflect higher delay tolerances as compared to unsignalized and roundabout locations because motorists are accustomed to accepting of longer delays at signals.

For all-way stop intersections, the average control delay per vehicle is estimated for each movement and then aggregated for each approach and the intersection as a whole. For intersections with partial (side-street) stop control, delay is calculated for the minor movements only (side-street approaches and major road left-turns), since through traffic on the major road is not required to stop.

The thresholds for intersection levels of service are summarized in Table D-2. The existing operating conditions for the AM and PM peak hours are summarized in Figure D-12 respectively, and are presented in terms of Level of Service, delay (seconds per vehicle), and 95th percentile queue length (feet). The detailed Synchro reports are provided in Appendix B.

The minor street approaches of Upper Mt. Vernon Road and Hogue Road currently operate with unacceptable traffic conditions (LOS E or worst) during the peak hours. Of the remaining intersections, only Middle Mt. Vernon Road operates at desirable conditions (LOS C or better) during all hours of the day. The minor street approaches of Upper Mt. Vernon Road and Hogue Road also experience queues in excess of 100 feet, or approximately four cars, during the peak hours.

LOS	Delay Per Vehicle
A	↖ 10 sec
B	→ 10 sec and ↖ 15 sec
C	→ 15 sec and ↖ 25 sec
D	→ 25 sec and ↖ 35 sec
E	→ 35 sec and ↖ 50 sec
F	→ 50 sec

*Unsignalized Intersections Only

Table D-2. LOS Criteria

Crash Analysis

Throughout the crash analysis period (January 2012 through December 2016), there were 188 crashes on University Parkway between SR 66 and the westbound SR 62 ramps. Shown in Figure D-13 is a breakdown of the accidents by location, accident type, manner of collisions, severity, and time of day. Fifteen percent of crashes caused injuries, out of which two were incapacitating injuries. There was one crash that resulted in a fatality.

28 percent of the crashes were right-angle collisions, closely followed by 20 percent rear-end collisions, 12 percent head-on collisions (not including animal collisions), and 12 percent run-off the road. Narratives provided in the police crash reports listed animal or object in roadway as causes for approximately 25 percent of the crashes. Another 25 percent of the crashes were reported as of failure to yield right of way. Other prevalent factors causing crashes were:

- Following too closely (20%),
- Unsafe backing (8%), and
- Ran off Road (7%).

Figure D-12 PM Peak Hour LOS, delay, and 95th percentile queue

Intersection	Average Daily Traffic	Total Crashes	Crash Rate/MEV
University Parkway/SR 66	12,606	37	1.61
University Parkway/New Harmony Rd	7,520	6	0.44
University Parkway/Marx Rd	7,928	11	0.77
University Parkway/Upper Mt. Vernon	9,328	9	0.54
University Parkway/Hogue Rd	9,708	9	0.52
University Parkway/Mid Mt. Vernon	8,613	3	0.19

Table D-3. Crash Rate per MEV for individual intersections (2012-2016)

Segment	Average Daily Traffic	Total Crashes	Length	Crash Rate/HMVMT
SR 66/New Harmony Rd	6,368	11	0.67	142.33
New Harmony Rd/Marx Rd	6,728	8	1.01	64.51
Marx Rd/Upper Mt Vernon	7,464	10	1.23	59.68
Upper Mt. Vernon/Hogue Rd	7,656	9	1.05	61.35
Hogue Rd/Middle Mt. Vernon Rd	7,728	12	0.91	93.81
Middle Mt. Vernon Rd/SR 62 Ramps	7,544	2	0.38	38.53

Table D-4. Crash Rate per MEV for individual intersections (2012 - 2016)

Right-angle collisions are common at unsignalized intersections and are mainly caused by:

- Restricted sight distance,
- Inadequate roadway lighting,
- Excessive speed on approach, and
- High intersection volumes.

Rear-end collisions at unsignalized intersections also frequently occur due to excessive speed, large numbers of turning vehicles, and because of drivers not being aware of the intersection far enough in advance.

Tables D-3 and 4 show crash rates per million entering vehicles (MEV) for intersections and crash rates per hundred million vehicle-miles of travel (HMVMT) for segments. Since the crash rate/MEV is highest for the University Parkway and SR 66 intersection, a detailed crash diagram is provided for this intersection in Figure 14.

There were 37 crashes at the intersection of Diamond Avenue (State Road 66) and University Parkway throughout the crash analysis period. The crash rate for the intersection was 1.61/MEV, which is the highest amongst the intersections in the study area.

More than half of the crashes at Diamond Avenue and University Parkway involved vehicles on the northbound approach. The intersection has a stop sign for the northbound vehicles and most of the crashes were reported as the drivers not yielding the right of way or stopping in time, due to which most of the crashes were either rear end collisions (52%) or right-angle collisions (14%).

During the study period, a crash at the Diamond Avenue and University Parkway resulted in a fatality and an additional four crashes resulted in injuries. Also of note is that three of the five westbound crashes occurred while the road surface was wet or snowy.

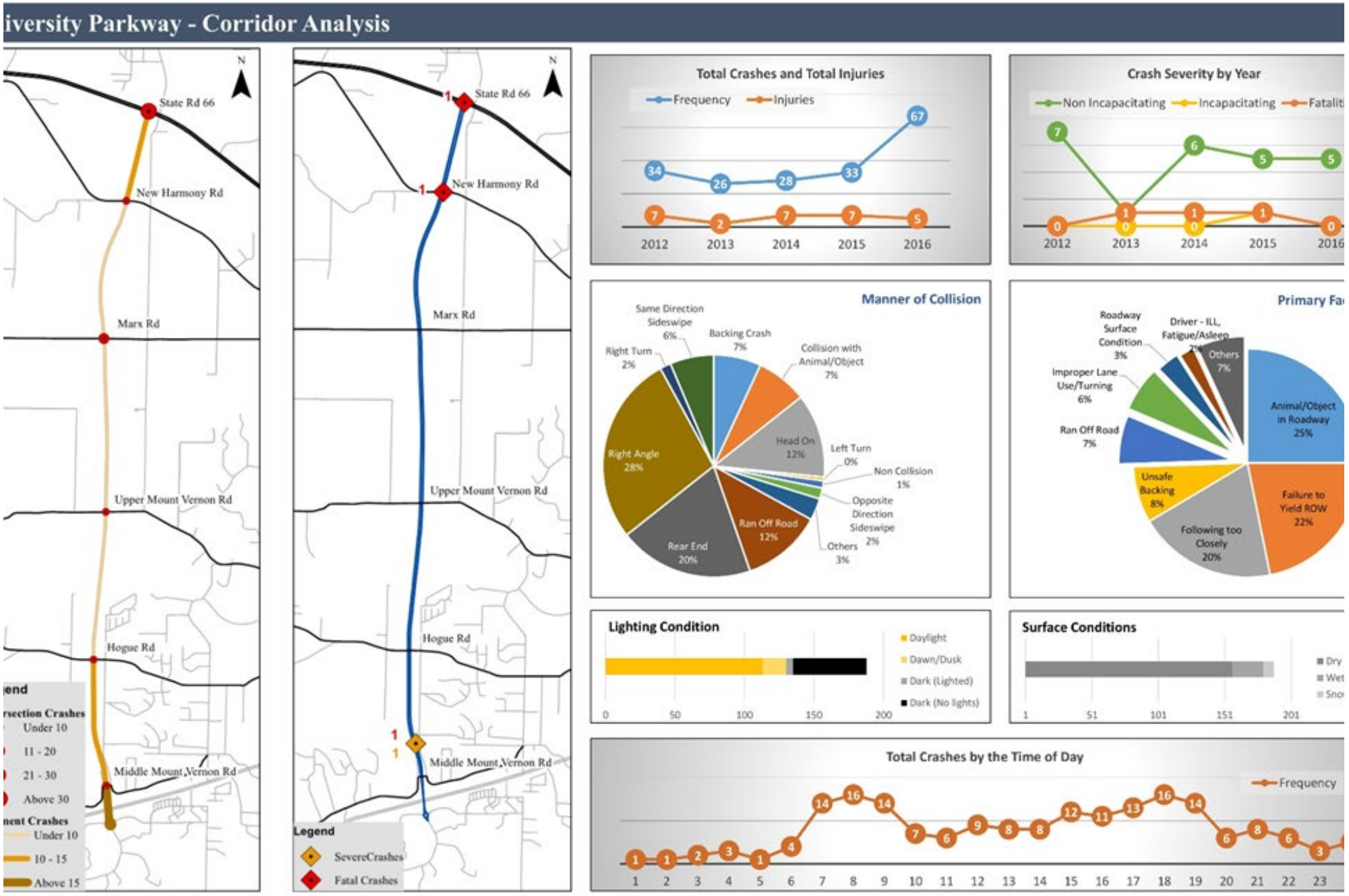


Figure D-13 Corridor Crash Summary

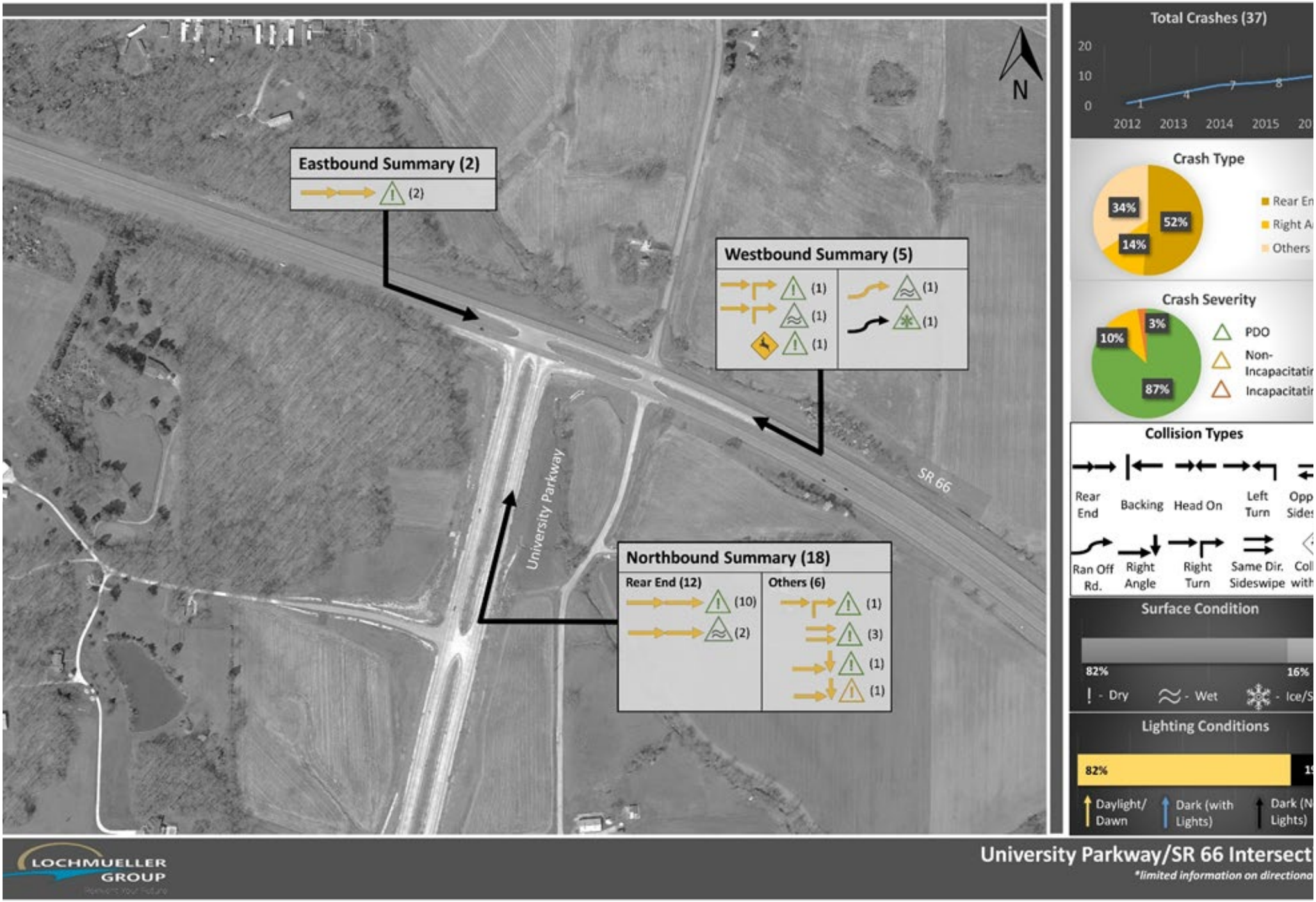


Figure D-14 University Parkway and SR 66 Intersection Crash Diagram

Utility & Infrastructure

The purpose of this section is to summarize the review of existing utility planning documents and discussions with utility staff regarding the planning of non-transportation infrastructure as it pertains to the study area.

WATER

The Evansville Water and Sewer Utility (EWSU) owns, maintains, and operates water utility infrastructure that currently serves some portions of the study area, as shown in Figure D-14. According to the Evansville-Vanderburgh County Comprehensive Plan for 2015-2035, the remaining areas are primarily served by the German Township Water District (which is a wholesale customer of EWSU).

EWSU has developed a Water Master Plan, which outlines water line improvements needed to upgrade aging infrastructure and support future growth. These planned improvements are part of EWSU's "Refresh Evansville" program, a long-term strategy to replace aging infrastructure and ensure a reliable supply of safe drinking water. Those planned projects which have a direct impact on the study area are on Figure 16 and include the following:

- Eickhoff Road Water Main Extension
- Middle Mt. Vernon Road Water Main Extension
- Hogue Road Water Main Replacement

These projects will increase the reliability of the existing distribution system and will help ensure that needed capacities are available to support future growth and service extensions within the study area.

Areas of Deficiencies and Potential Need

EWSU is implementing system-wide improvements to the water distribution system on an ongoing basis, through the "Refresh Evansville" program, to address deficiencies and necessary upgrades. Throughout the planning stages for future development of the study area, developers should coordinate with EWSU to assess the location and capacity of existing infrastructure, review any planned improvements to expand water service within the area, and evaluate any required upgrades/ extensions of the distribution system. Additionally, a portion of the study area, at the northern end, is located within the German Township Water & Sewer District. Separate coordination will be required with the District for development within their service area.

SANITARY SEWER

EWSU owns, maintains, and operates sanitary sewer utility infrastructure that currently serves residential areas located in the southern portion of the study area, as shown in Figure D-15. Based on available GIS mapping information, this infrastructure primarily consists of 8-inch to 10-inch diameter gravity sewers and four small lift stations with 6-inch to 8-inch diameter force mains.

According to the Evansville-Vanderburgh County Comprehensive Plan for 2015-2035, although a majority of the study area is not currently served by sanitary sewers, much of the area is planned to be served in the future. Based on discussions with EWSU, a regional lift station is planned to be built on Creamery Road with the purpose of serving future service areas, as well as accepting flows from the service areas of four existing small lift stations so that they may be decommissioned.

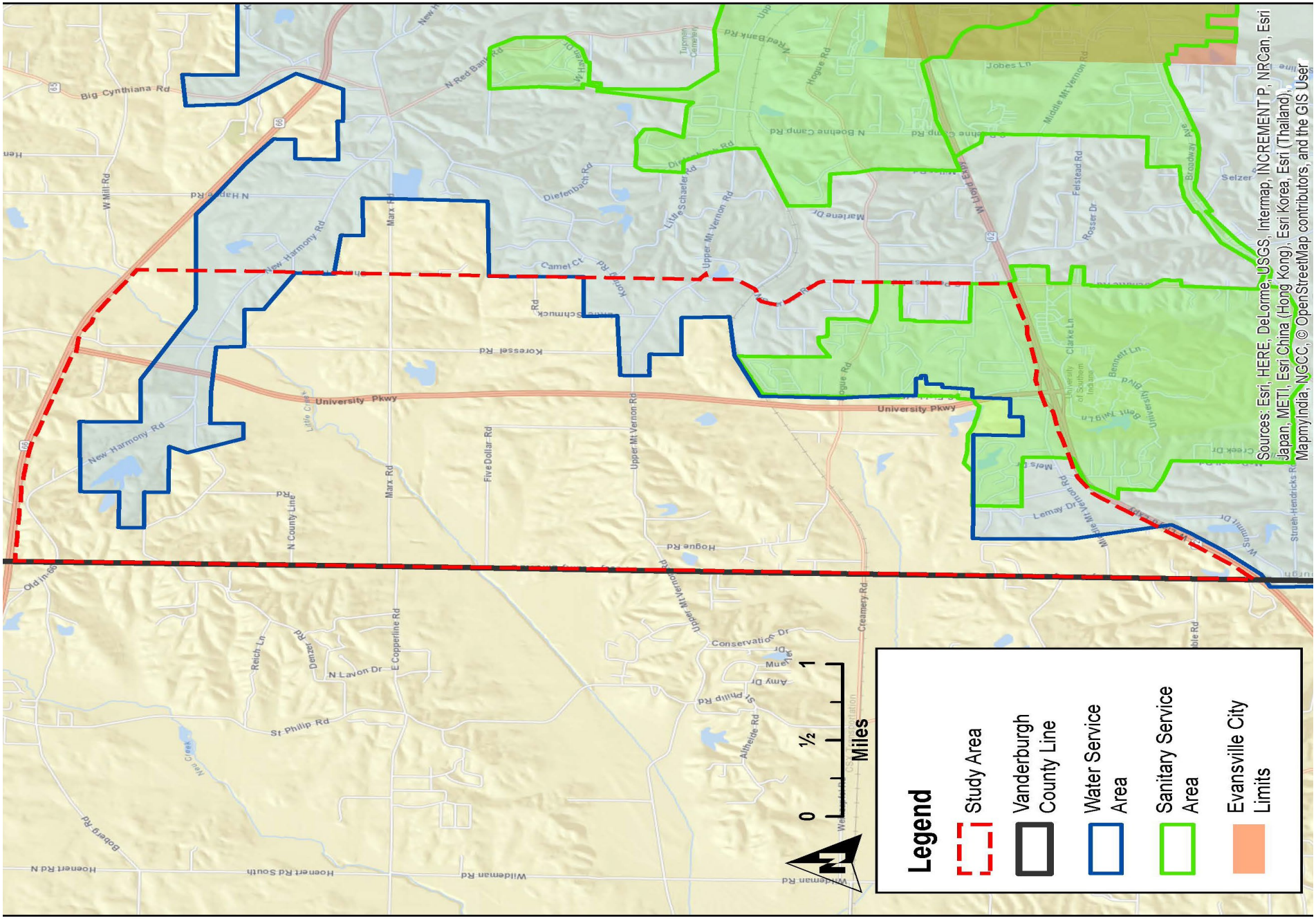


Figure D-15 Existing Water and Sanitary Sewer Service Areas

EWSU is also planning to make several improvements to its existing sanitary sewer infrastructure. As part of a consent decree agreement with the Environmental Protection Agency, EWSU recently completed a Sanitary Sewers Remedial Measures Plan (SSRMP), as part of its overall "Renew Evansville" program and federally-mandated Integrated Overflow Control Plan (IOCP). EWSU is also in the process of developing a Sewer Master Plan (SMP) to address sanitary sewer system (SSS) needs not addressed by the SSRMP. Both plans include provisions for upgrades to the existing SSS that are needed to address sanitary sewer overflows (SSOs) and support future growth and development. The development of the plans included field investigations, flow data collection, and hydraulic modeling to identify system defects and capacity constraints. This effort also included the use of flow projections for future anticipated residential, commercial, mixed-use, and industrial flows to plan necessary capital improvements projects.

The SSS basins which pertain to the study area are identified as the Northwest and Southwest basins in the SSRMP and SMP. System defects and capacity constraints were identified. Several remediation and system upgrades are recommended to correct existing defects and support capacity requirements to meet future demands, including:

- Inflow Reduction Projects
- Manhole Rehabilitation Projects
- Sewer Main Rehabilitation
- Lift Station Capacity Upgrades
- New Lift Stations
- Upsize Existing Trunk Sewers
- New Relief Sewers

In accordance with the schedule requirements of the consent decree, the system rehabilitation projects identified in the SSRMP for the Northwest and Southwest basins will be constructed between 2023 and 2027. Capacity upgrades to existing lift stations and trunk sewers, as well as new lift stations and relief sewers, will be constructed between 2027 and 2028. Those planned projects which have a direct impact on the study area are as shown on Figure 16 and include, but are not necessarily limited to, the following:

- Creamery Road Regional Lift Station
- Middle Mt. Vernon Road Neighborhood Manhole Rehabilitation Projects
- Trunkline Capacity Upgrade from near Red Bank Road & Upper Mt. Vernon Road to the West Wastewater Treatment Plant
- Trunkline Capacity Upgrade Along Broadway Avenue

These projects will help increase the reliability of the existing collection system and will help ensure that needed capacities are available to support future growth within the study area.

Areas of Deficiencies and Potential Need

EWSU is implementing system-wide improvements to its sanitary collection and treatments systems on an ongoing basis, through the "Renew Evansville" program, to address deficiencies and necessary upgrades. Throughout the planning stages for future development of the study area, developers should coordinate with EWSU to assess the location and capacity of existing infrastructure, review any planned improvements to expand sanitary service within the area, and evaluate any required upgrades/extension of the collection system. Additionally, a portion of the study area, at the northern end, is located within the German Township Water District. Separate coordination will be required with the District for development within their service area.

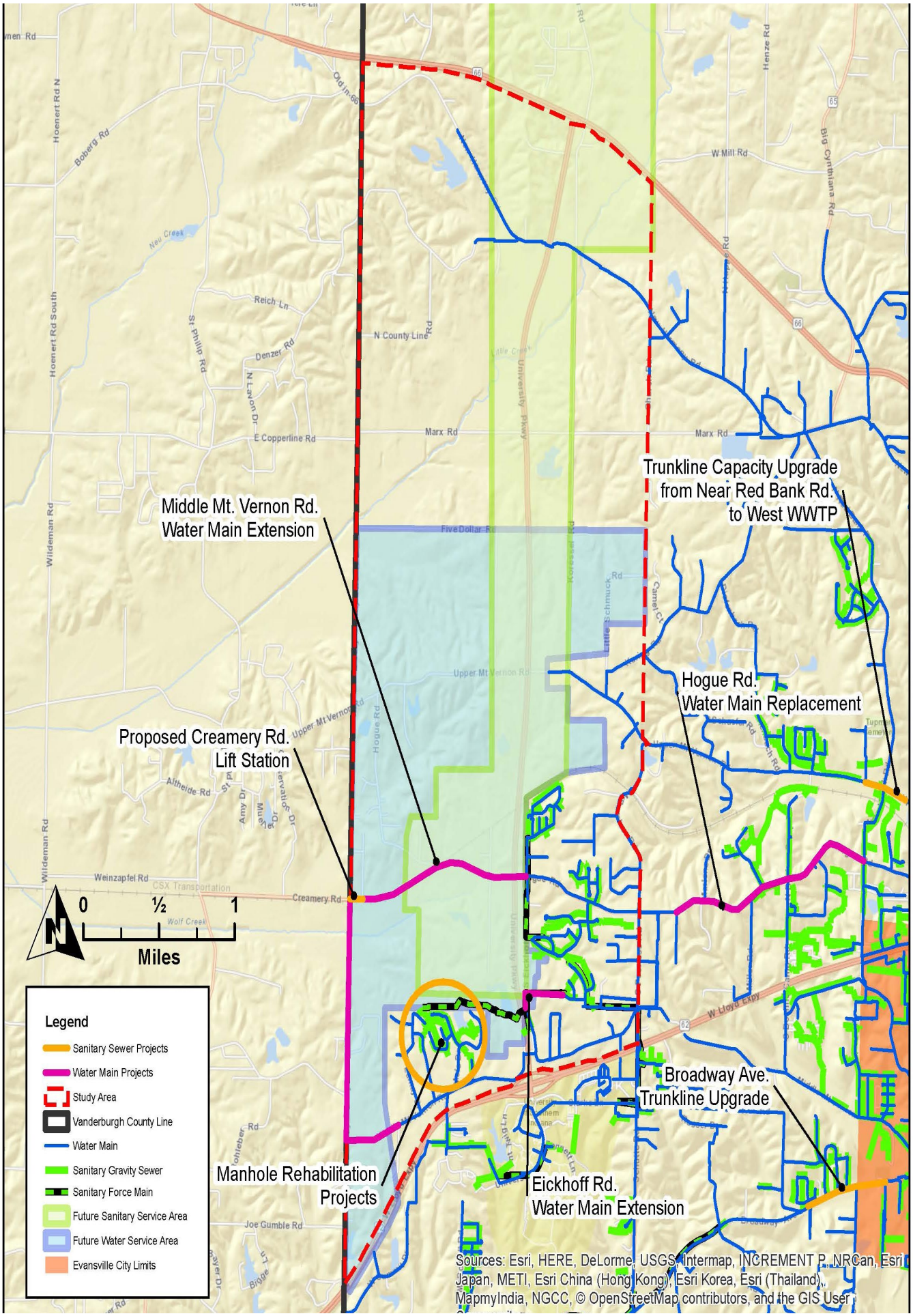


Figure D-16 Future Water and Sanitary Sewer Service Areas

STORMWATER DRAINAGE

The corridor sits on predominately rolling terrain of largely undeveloped farmland which drains primarily southerly and westerly to two tributaries of Big Creek. The primary soils types are eroded Hosmer silt loams and eroded Alford silt loams, and the balanced comprised of Stendal silt loams, Wilbur silt loams and various other silt loams as indicated on the USGS Soils Map or USDA website.

In the northern section of the corridor, the Little Creek-Headwaters watershed encompasses 12,640 acres. It begins near St. Wendel Road, located to the north of the University Parkway corridor then generally flows south then northwesterly to Big Creek which ultimately flows west into the Wabash River. Three Little Creek tributaries cross under the University Parkway in the northern segment of the corridor, from south of Marx Road to S.R. 66. 100-year flood plain extends into the University Parkway corridor for these tributaries.

In the southern section, the Little Creek-Wolf Creek watershed encompasses 6,815 acres. Wolf Creek begins south of Hogue Road and to the west of Rosener Road, then generally flows westerly. Little Creek-Headwaters into Big Creek which ultimately flows west into the Wabash River. Little Creek-Wolf Creek tributaries do not cross under the University Parkway in the northern segment of the corridor, from south of Marx Road to S.R. 66. However, the 100-year flood plain extends upstream east of the University Parkway corridor in at least three locations.

Please refer to Figure D-17 for existing drainage conditions.

Vanderburgh County Engineering Department Considerations

The Engineering Department is under the jurisdiction of the Vanderburgh County Board of Commissioners. The department is charged with providing technical advice to the County Highway Department and the Board of Commissioners of Vanderburgh County. The Department is also responsible for road and bridge improvement projects let by the Board of Commissioners. The department maintains over 560 miles of County maintained roads in unincorporated areas and over 150 bridges throughout the entire County.

Since the University Parkway is in an unincorporated area of Vanderburgh County, it is maintained by Vanderburgh County. The Parkway was built in several sections, the last of which was completed in 2012. The County also maintains several bridges, box culverts, drainage pipes and appurtenances under and along the University Parkway right-of-way. There are no additional drainage easements or regulated drains that tie into the University Parkway.

There are no known drainage issues recorded at the Vanderburgh County Engineering Department along the University Parkway, attributable to the parkway construction or the tributaries of Little Creek-Headwaters or Little Creek-Wolf Creek. Any development along the corridor would have to meet the County Drainage Board policies which are published in the Vanderburgh County Drainage Code 13.04.

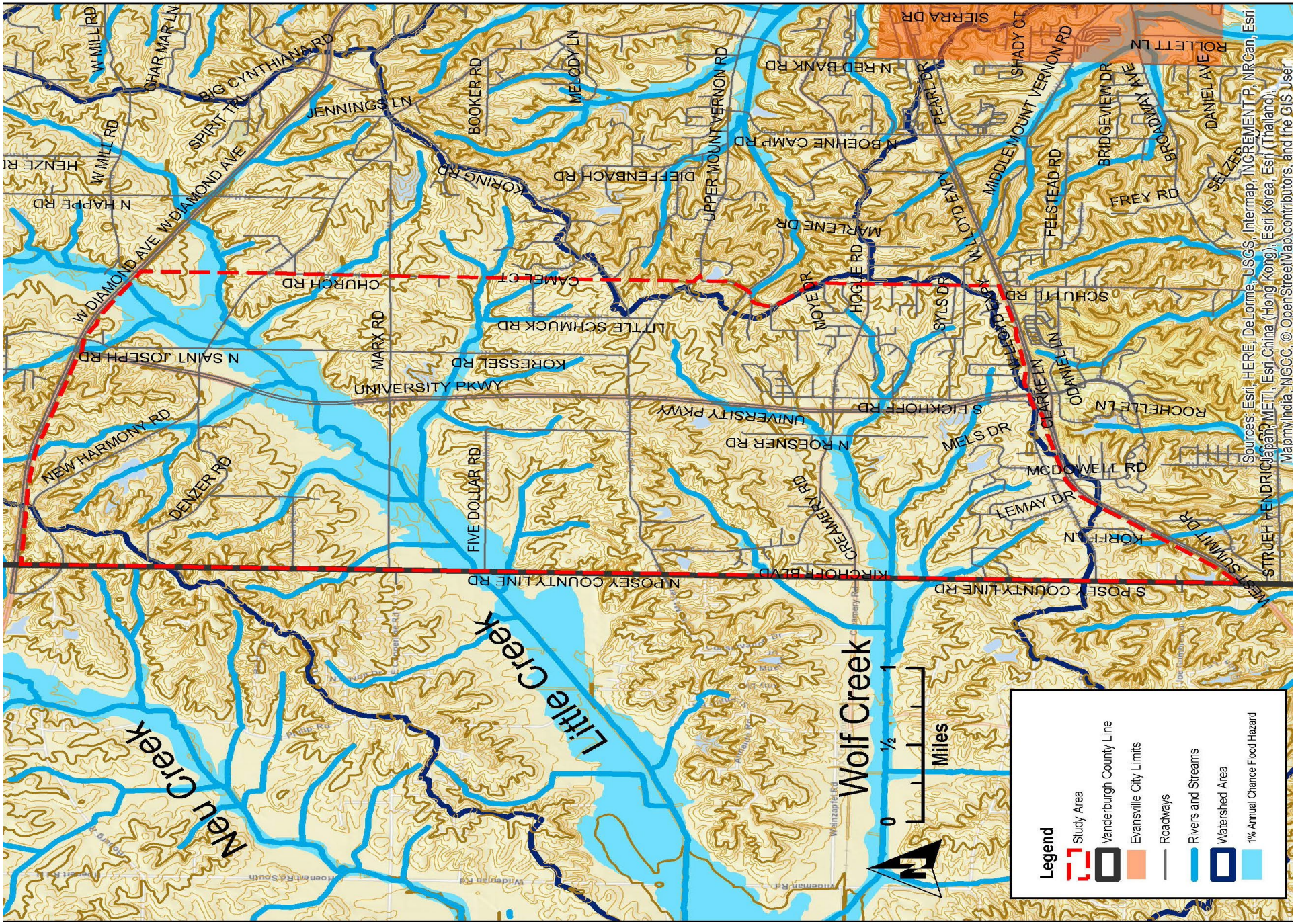


Figure D-17 Drainage Conditions

Vanderburgh County Surveyor's Office Considerations

The Vanderburgh County Surveyor performs several duties under the Indiana Code. As related specifically to drainage, the County Surveyor is a non-voting member of the County Drainage Board and serves as the Technical Advisor to the Board. The County Surveyor's statutory duties and powers with regard to the County Drainage Board and regulated drains are more specifically described at IC 36-9-27 and in the County Drainage Board policies as published in the Vanderburgh County Drainage Code 13.04. The County Surveyor's office is responsible for seeking public bids for drainage construction projects, as well as construction and maintenance of all existing or proposed regulated drains in the county. Regulated drains are large drains, open ditches or piped storm water systems serving tributary areas of agricultural, residential, commercial, and industrial land. Vanderburgh County maintains about 80 miles of regulated drain systems with about 20 miles of urban drains located within the corporate limits of Evansville.

Vanderburgh County Drainage Board Considerations

Management of storm water in Vanderburgh County falls under the purview of the Vanderburgh County Drainage Board. The Drainage Board consists of the three county commissioners. The County Surveyor is also a technical advisor to the board.

Since the University Parkway is in an unincorporated area of Vanderburgh County, stormwater runoff from existing or proposed development is controlled by Vanderburgh County. However, there are no regulated drains or drainage easements that tie into the University Parkway.

There are no known drainage issues recorded at the Vanderburgh County Surveyor's Office or with The Vanderburgh County Drainage Board along the University Parkway, attributable to the parkway construction or the tributaries of Little Creek-Headwaters or Little Creek-Wolf Creek. Any development along the corridor would have to meet the County Drainage Board policies as published in the Vanderburgh County Drainage Code 13.04.

Areas of Deficiencies and Potential Need

Both the County Engineering Department and the County Surveyor's Office commented that higher standards than outlined in the County Drainage Board policies could be considered for the corridor. Consideration to designate the area an Impacted Drainage Area should be determined allowing more stringent design parameters. Currently, the post development peak release rate of storm water runoff during a one hundred (100) year return period storm in an Impacted Drainage Area is limited to the peak release rate during a ten (10) year return period storm from the same land area prior to its development. In all other areas, the post development controlled peak release rate of stormwater runoff during a twenty-five (25) year return period storm from a project is limited to the peak release rate during a ten (10) year return period storm from the same land area prior to its development. The County Drainage Board would have to approve any changes to the policies.

Additionally, the County Surveyor's Office commented that adding regulated drains along the University Parkway corridor may be beneficial to the protection of downstream regulated drains.

Telecommunications

The University Parkway study area may be serviced by several telecommunications companies, including AT&T, Spectrum, WOW, etc. AT&T provides wireless, internet, and cable. Internet is only available in the southern portion of University Parkway, whereas wireless and cable are available throughout. Spectrum provides internet, phone and cable and it is available throughout the corridor. WOW is business fiber and its only offered in the southern portion of University Parkway. These service lines may be buried or overhead on shared Vectren poles.

Areas of Deficiencies and Potential Need

Consideration should be given to how many utilities may need to share a utility easement to determine a reasonable width. Additionally, railroad crossings as well as INDOT road crossings should be avoided if possible.

Market Analysis

Introduction

A market analysis studies the trends and growth rates of a specified market area. This analysis can identify the opportunities for future growth and limitations for various industries. This study will focus on Vanderburgh County's laborshed, economic baseline; and commercial, industrial, and housing real estate analyses.

The emphasis will be on the Vanderburgh County market area to establish a baseline for the University Parkway Corridor Plan. This information will assist in predicting the development potential of University Parkway and what industries would be best suited for this corridor.

Data Sources

Data for the following report was collected from the US Census Bureau, Evansville-Vanderburgh County Comprehensive Plan, and ESRI ArcGIS Records provided by the county, Reis Retail Report, ESRI Retail MarketPlace Profile, Stats Indiana data, and Hoosier by the Number. Data was then consolidated, aggregated, and analyzed by REA to depict Vanderburgh County's current economic conditions.

Methodology

Laborshed, Commute, Economic Base

US Census data tools such as OnTheMap and FactFinder were used to establish a base demographic and commuter trends for Vanderburgh County. This highlighted where the economic strengths of the housing interest lie. Stats Indiana used 2015 tax data to assist in the illustration of daily employment exports and imports.

Commercial

The commercial analysis utilized REIS commercial real estate report for the metro region and ESRI retail marketplace profile for designated market sectors to provide insight on retail in the county relating to the study area. The data from each report was aggregated and analyzed to illustrate the existing community needs.

Industrial

Hoosier by the Number, an Indiana Department of Workforce Development tool, was used to gather data on the industrial sectors. This data was compiled to determine employment trends.

The North American Industry Classification System (NAICS) 5-digit code for manufacturing were used to represent various industry groups like plastic and rubber product or paper manufacturing. This depicts a broadened perspective yet offers enough detail needed to recognize what the focuses for the County should be.

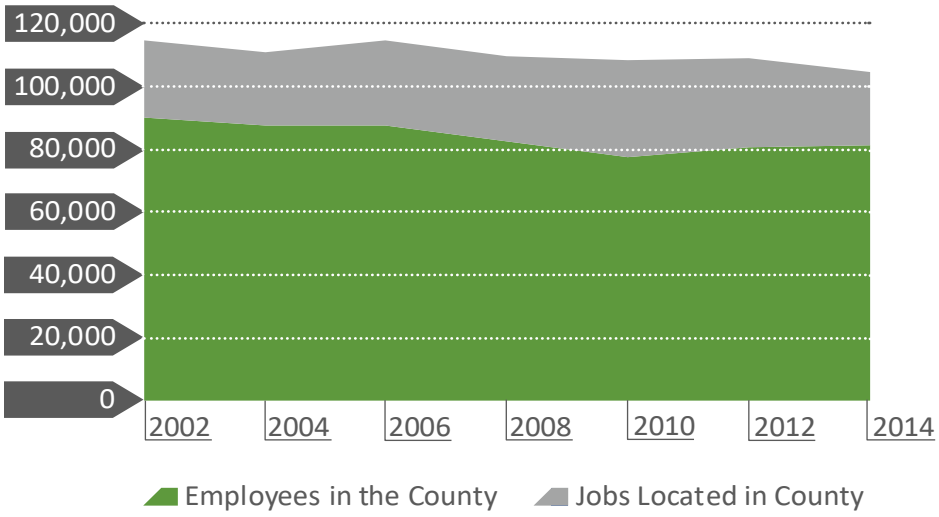


Figure D-18 Employment and Residential Workforce Comparison

Economics and Demographics

Vanderburgh/Evansville Profile

According to the US Census Bureau, the county's population in 2010 was approximately 179,700 and in 2016 was estimated at 181,692 people. Evansville had a recorded population of 117,429 in 2010 and is estimated to have increased to 120,156 by 2016. The study area was found to have 4,146 residents in 2010. This is an improvement for the city which saw a 7.0 percent drop between 1990 to 2010.

Populations change over time due to births, aging and deaths. Observing these trends within the corridor study area, there are shifts that have occurred over the last 20 years. The population group that is 55 and older has been steadily increasing while other age groups have fluctuated or been decreasing.

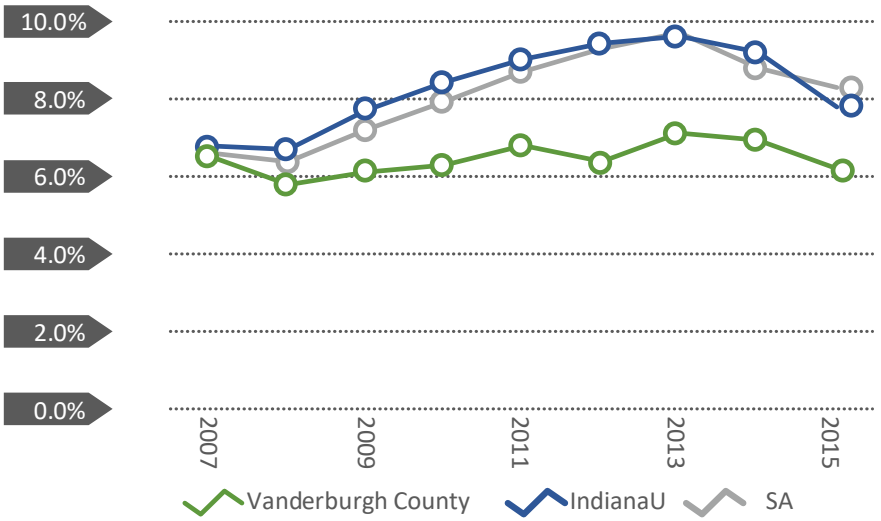


Figure D-19 Unemployment Rate Comparison

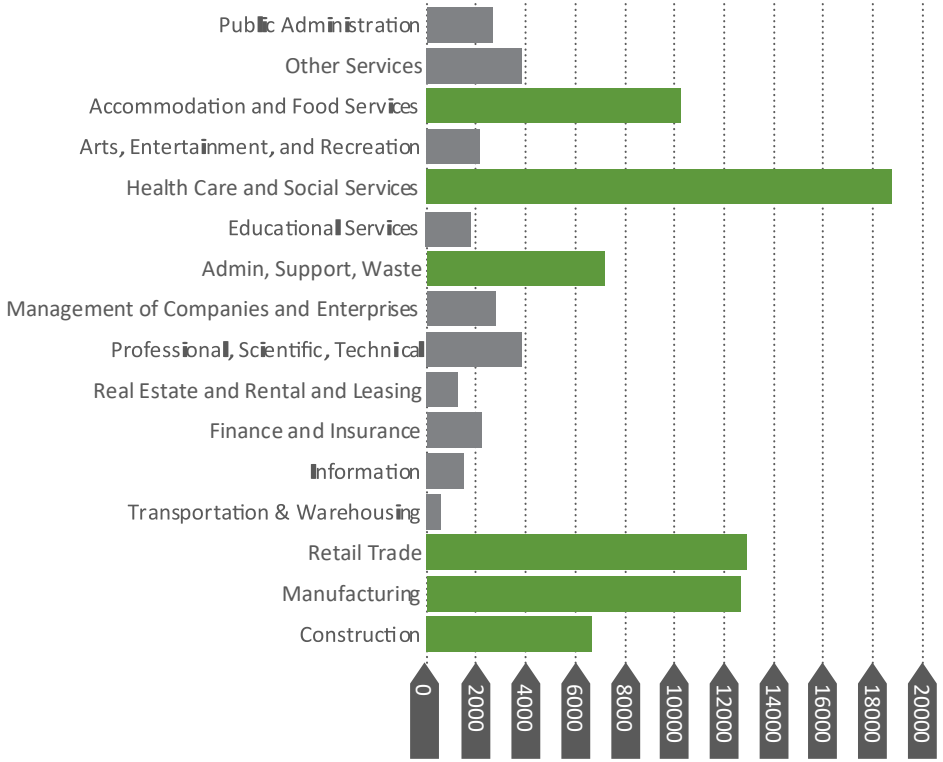


Figure D-20 Employment Distribution by NAICS Code

Since 2010, the education level of Vanderburgh County's citizens has risen. The percent of citizens with a Bachelor's Degree or greater was 22 percent in 2000 and rose to 25 percent in 2016. Residents without a high school diploma decreased from 12 percent in 2010 to 11 percent in 2016. These changes result in a more qualified workforce in the region creating a more attractive market for prospective businesses.

Vanderburgh County has historically, and continues to be, a net importer of jobs. In 2016, the county drew over 28,000 employees while retaining over 104,000 (78%) of the county's workforce.

Figures D-18 and 19 illustrate prior and present employment figures. The county has more jobs than workers in its borders therefore, it imports workers from adjacent counties, with Warrick County being the most prevalent. Even during the recession, unemployment remained relatively low. This can be attriubuted to the surplus of jobs with a current unemployment rate of 6.5 percent.

Industry Distribution

Vanderburgh County has a number of industries within its labor market that offers a variety of employment. In 2016, according to Indiana Business Research Center (IBRC), health care led the employment market with over 18,850 employees. Following behind were food and drinking establishments; administrative and support staff; etc. as seen in Figure D-20. Other sectors that employ large numbers of residents include retail trade and manufacturing. Retail trade generally is lower in wages than healthcare and manufacturing jobs. This means retail workers may have less disposible income to spend in the community.

Laborshed

Labor availability, skilled workforce, or training opportunities for employees can be a determining factor for new or expanding businesses. Establishing what constitutes the labor market depends on several factors such as commute time, transportation costs, individual priorities, and wages paid.

Residents of Vanderburgh / Evansville

Figures D-23 to 24 depict the general laborshed for Vanderburgh County in 2014. The colored regions represent the location of households of those employed within Vanderburgh County. Darker areas indicate larger quantities of employees. Counties like Warrick (14,566 workers) and Posey (4,874 workers) export many workers to Vanderburgh County.

Workers who Live in Vanderburgh / Evansville but are Employed Elsewhere

Individuals living in Vanderburgh County generally work in the county. Figure D-24 depicts the dispersal of jobs held by County residents. The center for employment in the region is Evansville's downtown which supports a majority of Vanderburgh's population. Other areas of employment include the area surrounding the intersection of Lloyd Expressway and N. Green River Road, and Toyota Motor Manufacturing Indiana.

Daily Commute

Workers willingness to travel for work is an important component for new or expanding employment centers. Within Evansville and Vanderburgh County, workers are most likely to live less than 10 miles from home with a commute of 20 minutes on average as seen in Figures D-21 and 22.

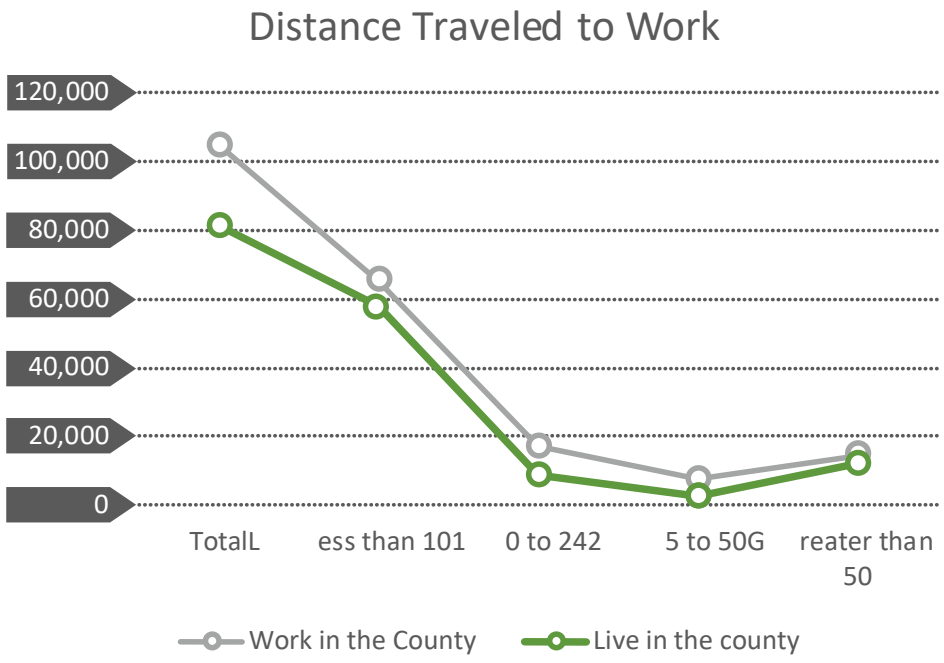


Figure D-21 Distance Traveled to Work

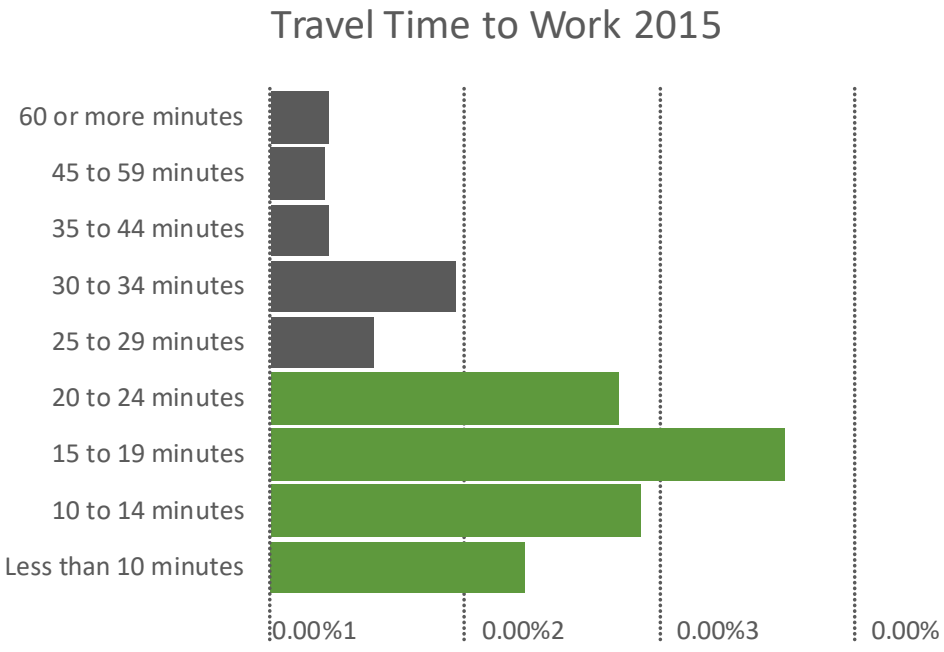


Figure D-22 Travel Time to Work 2015

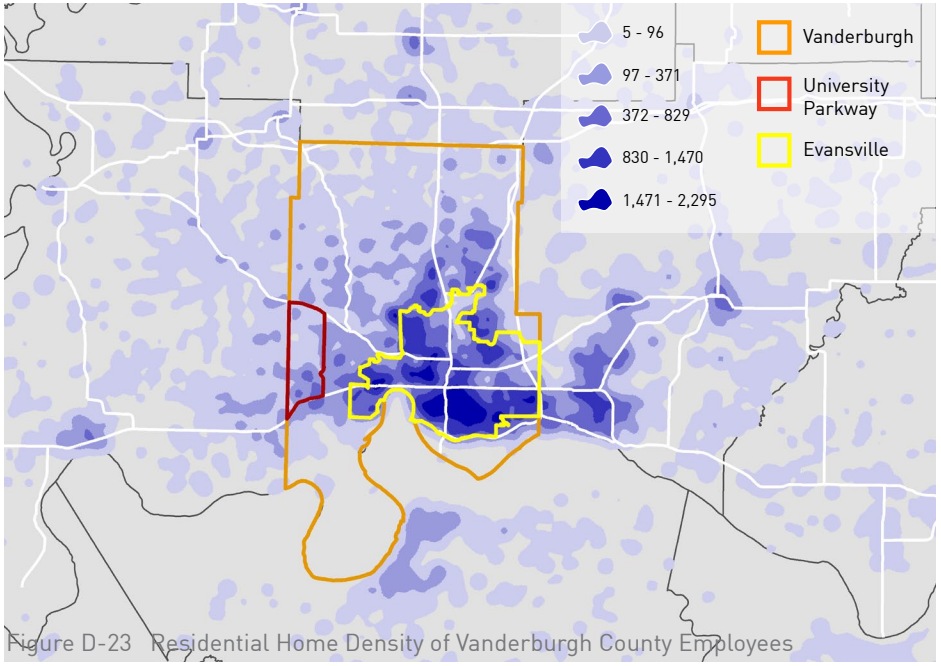


Figure D-23 Residential Home Density of Vanderburgh County Employees

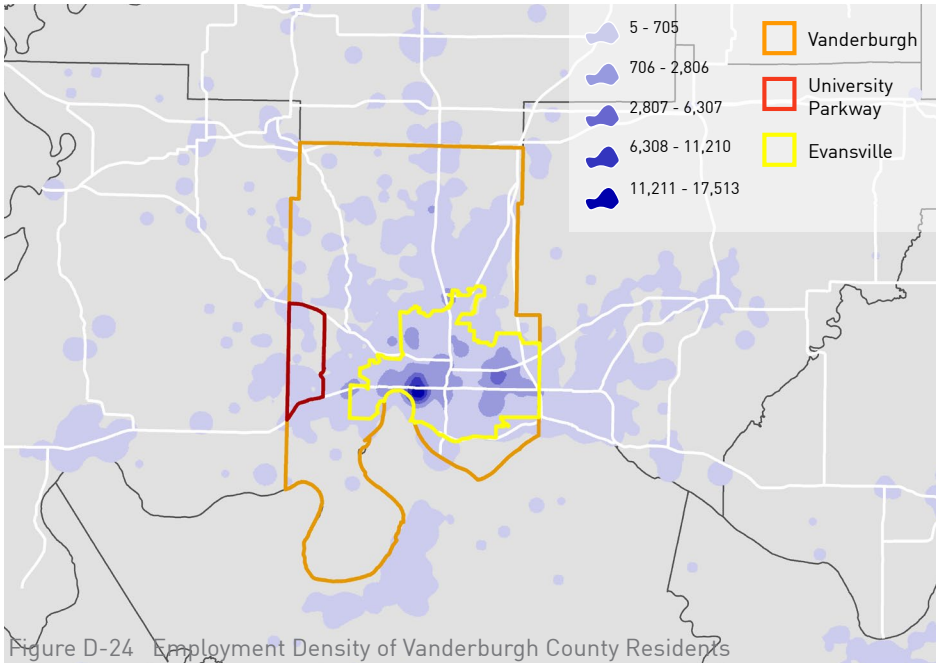


Figure D-24 Employment Density of Vanderburgh County Residents

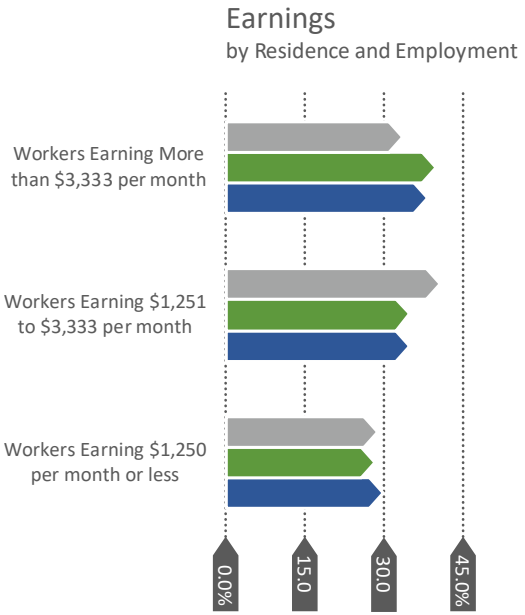


Figure D-25 Earnings by Residence and Employment

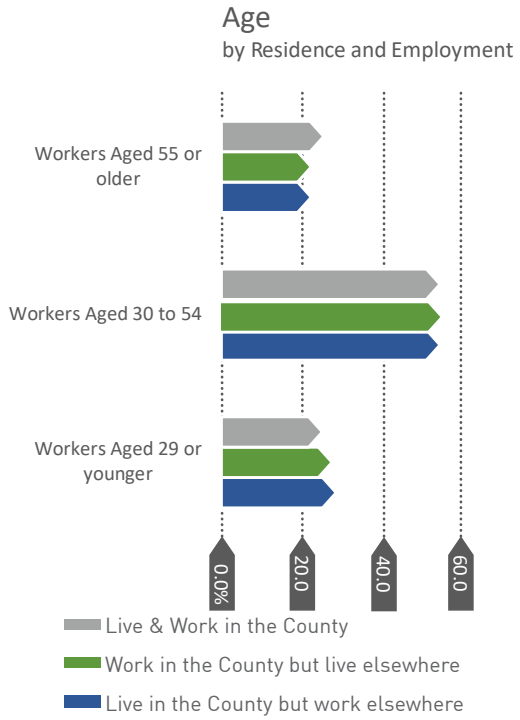


Figure D-26 Age by Residence and Employment

Commercial

Evansville Metro Area

To understand the study area's capacity for retail development, a better understanding of the surroundings area's market is needed. The study area currently has no retail within its boundaries. Analyzing the surrounding retail market offers insight on whether the study area is appropriate for retail, how much, and/or what kind.

The Evansville Metro Area has a well-established retail market. The makeup of the metro's existing retail is seen in Figure D-27. Regional malls represent seven percent of the market. These centers are typically enclosed or interconnected by a common space with major anchor department stores like Macy's, Sears, J.C. Penny, Nordstrom, etc. Typically, these have at least 400,000 square feet of leasable space. Most of the retail, approximately 50 percent, is classified as community shopping centers. Power Centers are a grouping of three or more anchor stores accounting for 75 percent of a center containing more than 250,000 square feet of retail space. These centers often act similarly to regional malls/centers serving a larger market. Community shopping centers are large retail properties like Walmart or Target which have a large building footprint and offer a wide range of merchandise. Neighborhood shopping centers make up one fourth of the market. These neighborhood centers have an anchor of a supermarket, drugstore or other large daily needs store. They are small and draw from the immediate surrounding neighborhoods rather than a larger market.

The retail centers in the Evansville Metro Area vary in age. However, 45 percent of the existing stock was constructed in the 1980's, as shown in Table D-5. Within these retail centers there are the nonanchor stores. Their rental rates vary by age of construction, as shown in Table D-6. The newest constructed retail has the highest rents. However, nonanchors which were constructed in the 1980's are outperforming the newer establishments from the 1990's.

Inventory by Center Age	
Year Built	**Percent**
Before 1970	17.0 %
1970-1979	12.0 %
1980-1989	45.0 %
1990-1999	7.0 %
2000-2009	19.0 %
After 2009	0.0 %
All	100.0 %

As of July 31, 2017

Table D-5. Inventory of Existing Retail Centers by Age

Nonanchor Asking Rent by Age	
Year Built	**Rent**
Before 1970	$ 11.50
1970-1979	$ 12.86
1980-1989	$ 12.33
1990-1999	$ 13.17
2000-2009	n/a
After 2009	$ 9.81
All	$ 10.89

As of July 31, 2017

Table D-6. Existing Rent by Age of Nonanchor Retailers

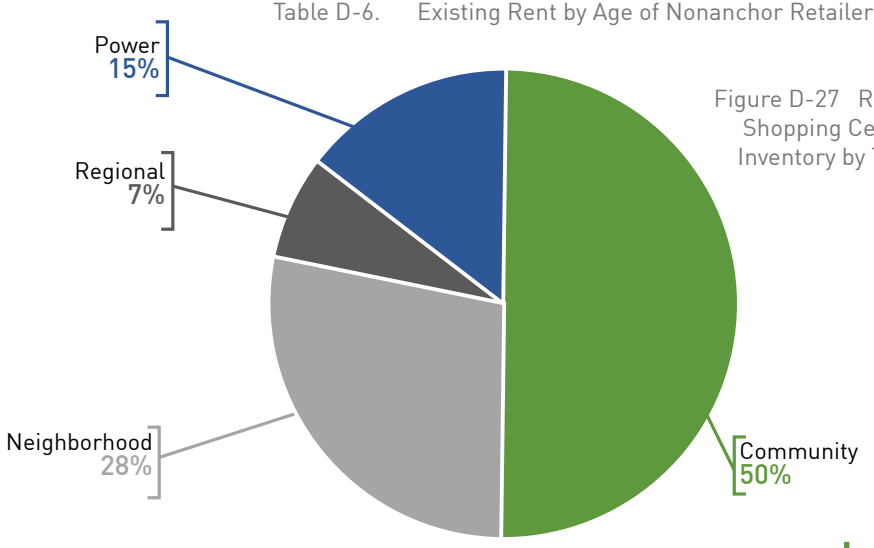


Figure D-27 Retail Shopping Center Inventory by Type

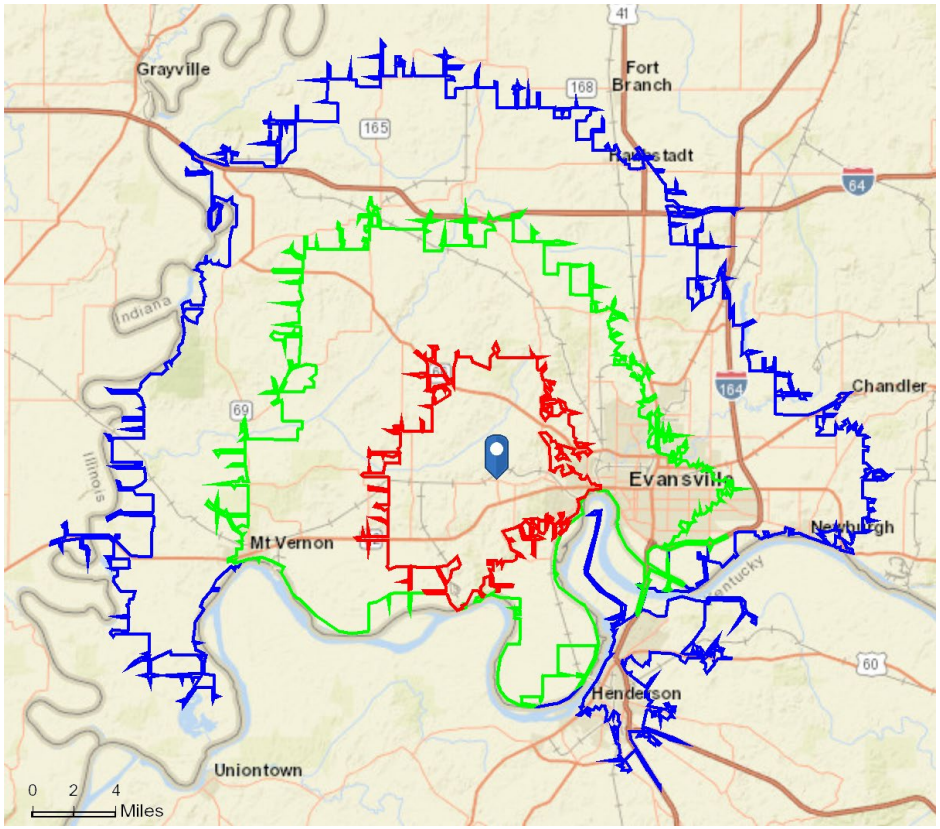


Figure D-28 Drivetimes Illustrated for the intersection of Hogue Rd. and University Parkway

Drive time Markets Analysis

An ESRI Retail Marketplace Profile was used to estimate the retail demand and supply establishing a better understanding of the market conditions affecting the study area and its surroundings. The demand is based on the retail potential or the typical household spending in selected areas. Supply is represented by the actual retail sales and where households are spending within a selected region (surplus) or outside (leakage).

Drivetime zones were created to establish how far people are required to travel for basic services and retail needs. This indicates gaps and what types of retailers may be needed as the study area develops.

The intersection of Hogue and University Parkway was used as the point of origin to create 10, 20 and 30-minute drivetime areas. These identify levels of convenience for the study area. The ten-minute includes the entire study area and the nearby Lloyd Expressway/Pearl Dr. retail center. The 20-minute zone offers access to the downtown and to a majority of Evansville, including a portion of the Green River Rd. corridor. Finally, the 30-minute area captures a majority of the county.

10-Minute Market

The 10-minute zone, outlined in red in Figure D-28, is the immediate area around the study area. Figure 31 on page 31 depicts the surplus and leakage present in this zone.

The areas of surplus are Building Materials, Garden Equipment & Supply; General Merchandise Stores; Food Service & Drinking Places; and Restaurants/Other Eating Places. A majority of the surplus is likely due to the Lloyd Expressway/Pearl Dr. commercial center. Major retailers that contributed to this surplus include Home Depot, Lowes, Walmart, numerous other smaller retail, and food and drink establishments, etc. This indicates the daily convenience needs are met in this 10-minute drive time. The retail leakage is mostly specialty stores and retailers which are infrequent purchases. The only exception would be Food & Beverage Stores.

20-Minute Market

The 20-minute zone, outlined in green on figure 30, offers a surplus of retail in all industry subsectors, seen in Figure 32 on the previous page. The only exceptions are Gasoline Stations and Nonstore Retailers. This means that the daily and regional needs are well met within a short drive for current and future residents of the University Parkway Corridor. The Nonstore Retails are infomercials, online sales, catalog sales, etc. which means it is highly unlikely any community will have a surplus in this category.

30-Minute Market

The 30-minute zone, outlined in blue on Figure 30, offers a surplus in all industry subsectors. The only exception in this market area is Nonstore Retailers. The county metro area is well served by all retail services and even draws shoppers/diners from larger areas outside of the County.

Vacancy

Retail vacancy within the Evansville Metro Area appears to be higher on average than the Midwest and national average at 16.7 percent. Figure D-32 depicts this difference with the Midwest at 13.3 percent and the country at 10.6 percent. The vacancy rates are the most apparent in buildings constructed between 1980 and 1999 shown in Table D-7. The 1990's retail should be functional and in good condition so the vacancy could be due to a large anchor leaving a center affecting the adjacent retail. Additionally, the national trend in retail has been shifting away from bricks and mortar buildings to online sales. This has affected many communities, including Evansville and Vanderburgh County, increasing vacancy. This high availability raises the question of whether the metro has too much retail, if there is a need for a different variation, or location.

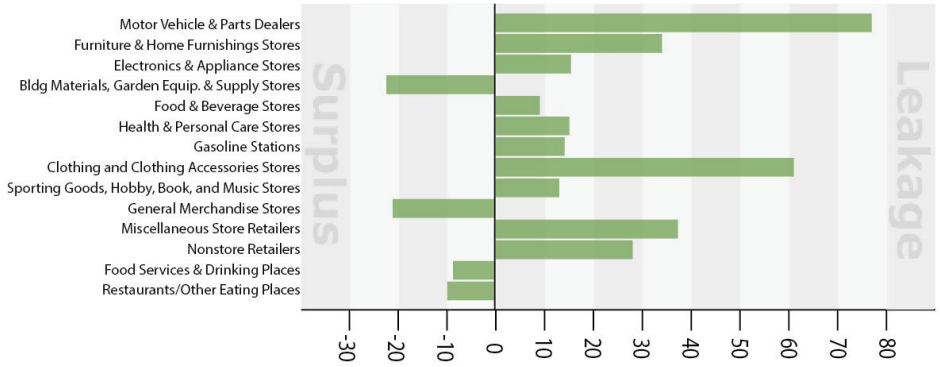


Figure D-29 10-Minute Market Industry Subsectors Surplus & Leakage Analysis

Figure D-30 20-Minute Market Industry Subsectors Surplus & Leakage Analysis

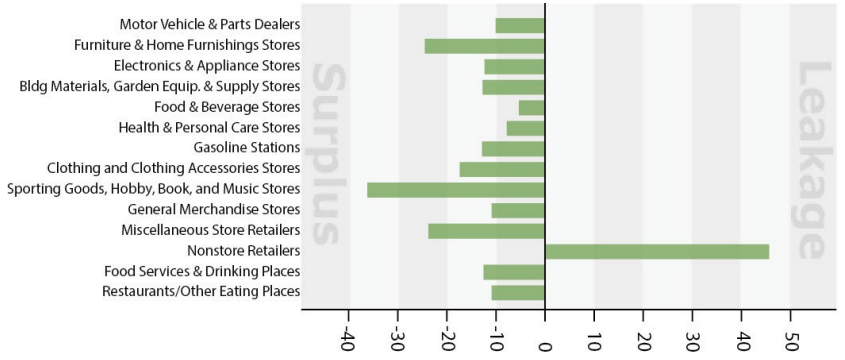
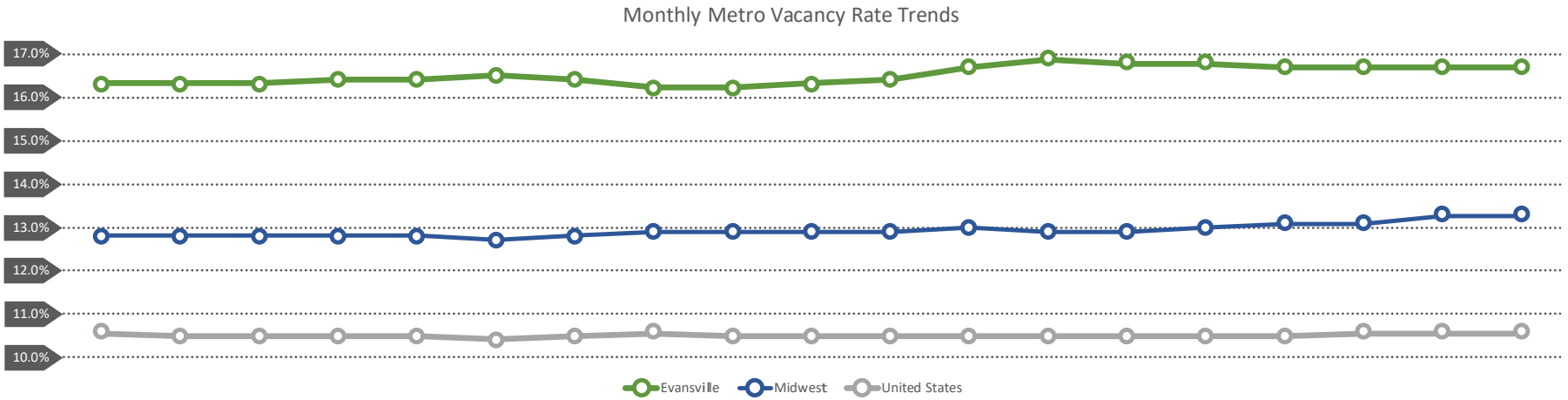


Figure D-31 30-Minute Market Industry Subsectors Surplus & Leakage Analysis



	JanF	eb	MarA	pr	MayJ	un	JulA	ug	SepO	ct	NovD	ec	JanF	eb	MarA	pr	MayJ	un	Jul
Evansville	16.3%1	6.3%	16.3%1	6.4%	16.4%1	6.5%	16.4%1	6.2%	16.2%1	6.3%	16.4%1	6.7%	16.9%1	6.8%	16.8%1	6.7%	16.7%1	6.7%	16.7%
Midwest	12.8%1	2.8%	12.8%1	2.8%	12.8%1	2.7%	12.8%1	2.9%	12.9%1	2.9%	12.9%1	3.0%	12.9%1	2.9%	13.0%1	3.1%	13.1%1	3.3%	13.3%
United States	10.6%1	0.5%	10.5%1	0.5%	10.5%1	0.4%	10.5%1	0.6%	10.5%1	0.5%	10.5%1	0.5%	10.5%1	0.5%	10.5%1	0.5%	10.6%1	0.6%	10.6%
						2016										2017			

Figure D-32 Evansville Metro Area Vacancy Rate Comparison

Inventory by Center Age	
Year Built	**Vacancy Rate**
Before 1970	**7.4 %**
1970-1979	**11.9 %**
1980-1989	**38.4 %**
1990-1999	**3.8 %**
2000-2009	**n/a**
After 2009	**9.1 %**
All	**100.0 %**

As of July 31, 2017

Table D-7. Metro Vacancy Rates by Year Built

INDUSTRIAL

In Vanderburgh County, industrial accounts for 12 percent of the economy by employment. As noted in Figure 38 on page 39, the County has diverse industries. However, a few industries stand out in the county including plastic and rubber manufacturing which is one fourth of all the manufacturing jobs in the county.

Existing Industrial Location and Land

In Vanderburgh County, a majority of the industrial land is concentrated along major highways. Industrial sites that are marketed by Indiana Economic Development Corporation strive to be no farther than a mile from an interstate. There are exceptions where industrial locates farther from major interstates, such as the Toyota site in Gibson County (1996). Most of the new industrial sites are concentrated in Scott and Center townships on the northeast side of Vanderburgh County. US 41 and SR 57 are these industrial site's main access roads leading directly to Interstate 69 or 64. There are also scattered sites that fall outside these townships.

In evaluating potential industrial sites, an important consideration is the readiness of the site for development. The Shovel Ready Indiana Site Certification is a program designed to reduce the risk associated with economic development, create a state-wide marketing tool, and emphasize a community's dedication to economic development. These sites appeal to potential builders, developers, industry leaders and entrepreneurs. Indiana has a tiered system of certifications including Silver, Gold, and at the top is Prime Certification. Important criteria for consideration for certification are:

- Transportation infrastructure
- Rail corridor adjacency
- Utility infrastructure
- Appropriate zoning
- Environmental conditions
- Topography and other natural features
- Contiguous acres of land

In addition to the prime locations mentioned above, there are other sites that are shovel ready according to these standards; and at least one site is Indiana Site Certified Gold.

Lease and Sale Trends

Industrial space purchase or rental prices have been steadily climbing over the last few months. According to Loopnet, prices for the County dropped close to $4.40/SF/YR for rental leases and $29/SF sale price in 2016 from $32/SF asking price and $4.60/SF for rental rates. These have improved in the last year rising to $4.64/SF/YR for rent and $34.36/SF by June 2016. This has likely continued to increase into 2017.

In comparison, Evansville usually out performs the County slightly. The State has consistently outperformed the City, County, and Metro except in 2016 where the Metro region experienced major increases in sale price per square foot.

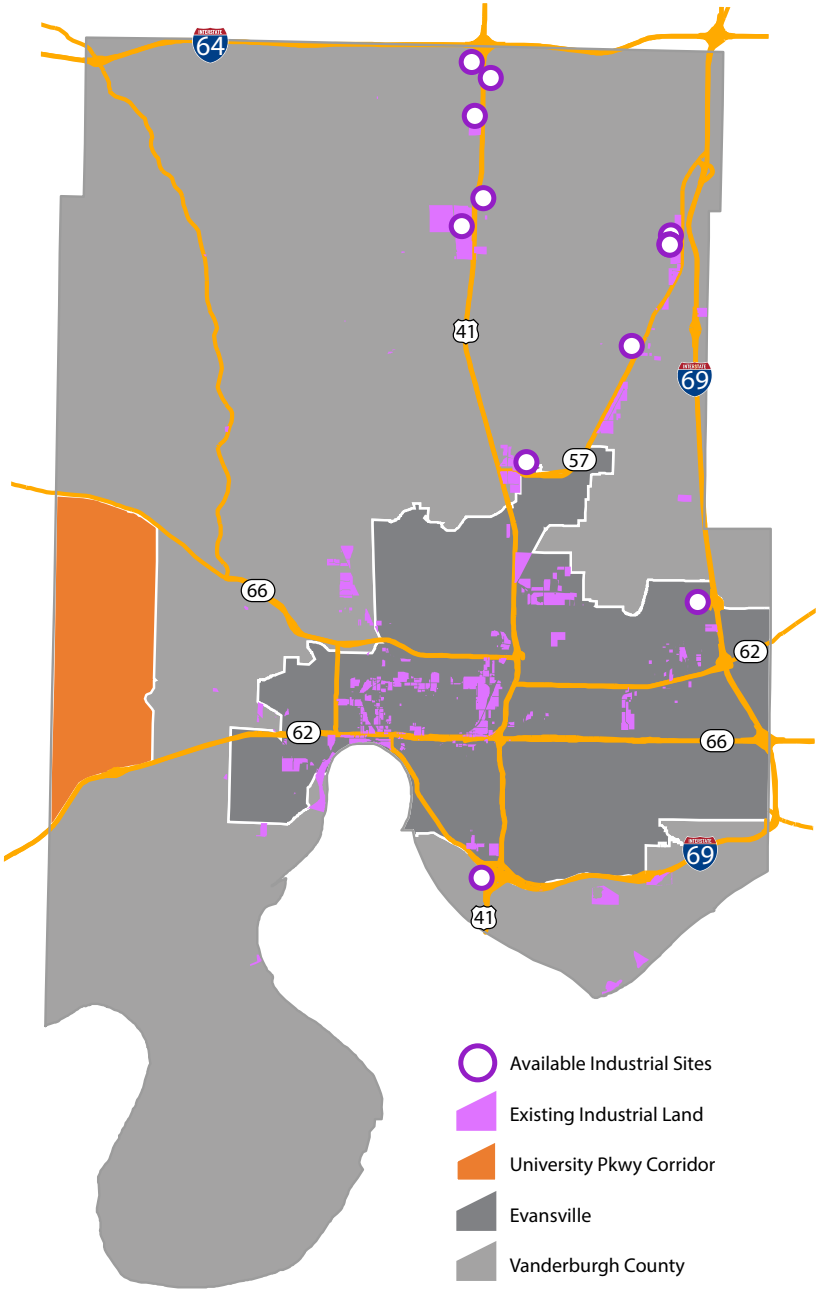


Figure D-33 Existing Industrial Land Use and available parcels for industrial development

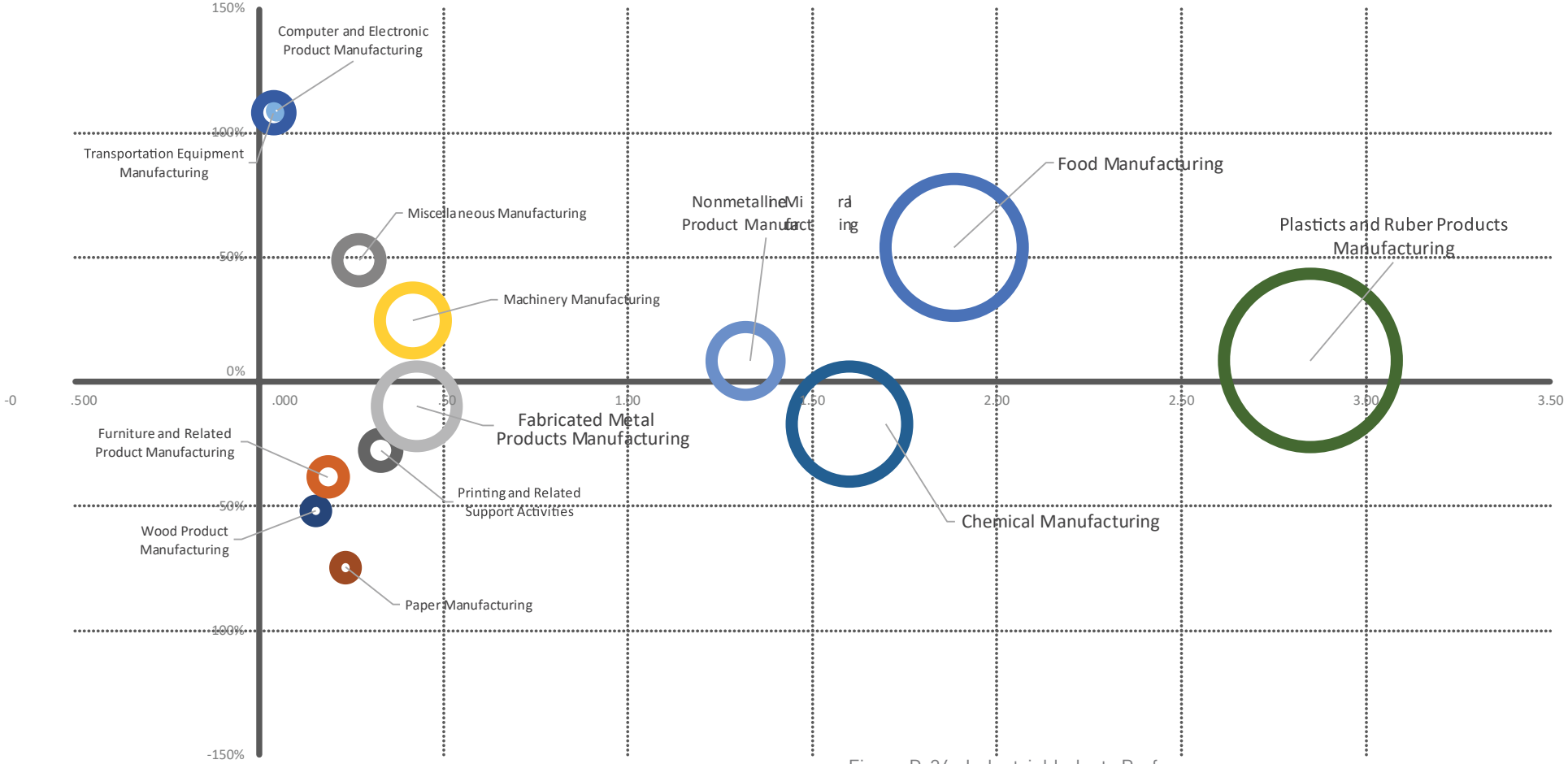


Figure D-34 Industrial Industy Performance

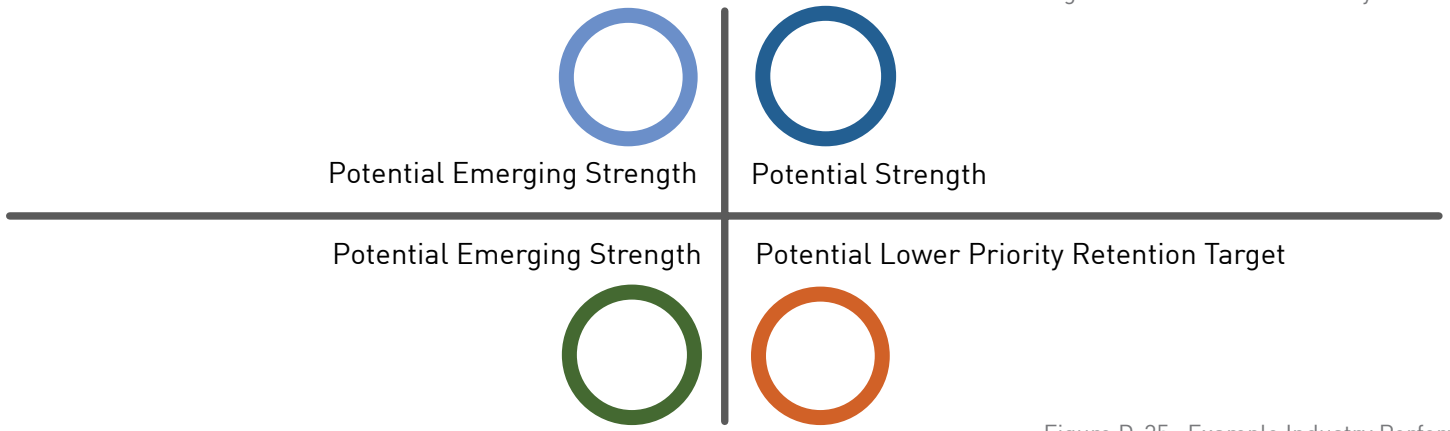


Figure D-35 Example Industry Performance

Location Quotient/Industry Performance

The Industry Performance has four quadrants, each of which represents a specified sector. These include successful, emerging strength, a lower priority for retention, and an industry with limited potential. The bubble's size represents its employment in relation to others in the manufacturing sector.

The US Bureau of Labor Statistics established groupings of various employment sectors. The intent was to establish a base for similar employment sectors to be generalized together and analyzed. The sector in Figure D-35 is Manufacturing displaying the performance of the various employment sectors.

The Industry Performance graphic on page 43 displays the analysis results depicting the current emerging and existing strengths for manufacturing. Three industries that showed potential included:

- Plastic and rubber product manufacturing
- Food manufacturing
- Nonmetallic mineral product manufacturing

Plastic and rubber product manufacturing outperformed all the other sectors by far appearing to be an existing strength for Vanderburgh County.

Potential Emerging Strengths had much smaller labor forces but still offer potential for improving over time.

- Computer and electronic product
- Transportation equipment
- Miscellaneous manufacturing
- Machinery manufacturing

Housing

Vanderburgh County has been expanding its housing rapidly in various townships across the city. On average, the percent change in housing units is about 11.5 percent between 1990 and 2010. The largest growth, absorbing a large portion of the market is unincorporated Center Township at 95 percent change and Scott Township with an 87 percent of change, both in the northeast part of the county. The townships along University Parkway Corridor did not experience the same level of growth. Unincorporated Perry Township experienced a more moderate housing unit increase of 50 percent, while German Township grew by 13 percent.

Future housing projections for 2035, in the Comprehensive Plan, follow similar trends. Scott Township continues to dominate the housing market with the largest percent change at 36 percent. The remaining townships are on the moderate end of growth reaching an average of 14 percent of change. This includes the townships for the University Parkway Corridor, Perry and German Township, which between them have a projected average of 12 percent change in the next 20 years. This change accounts for about 1,650 housing units.

Population and housing projections are based on assumptions made during the comprehensive plan process. These projections had some basic assumptions which directed the results of the model.

For example, the various modeling scenarios in the Plan displayed different levels of growth occurring as infill development in the City, as opposed to outward development in areas akin to University Parkway. The Comprehensive Plan chose a moderate infill scenario. Each township also had different assumptions on lot size and housing mix which were stated in the Comprehensive Plan, as "parcelizations of 5 or more acres, subdivided lots with septic systems at 2.5 acres or more per lot; homes in an urban setting on the minimum 6,000 square foot lot allowed by the Zoning Code; and a higher density mix of single family and some multi-family use" (Evansville-Vanderburgh Comprehensive Plan).

Conclusions

Advantages & Disadvantages

The corridor study area is located in the County and remains relatively undeveloped. Being a greenfield creates a blank slate for new development whether that may be housing, mixed-use, industrial, or agriculture.

Developing this corridor offers several benefits for a prospective developer. Land prices are likely cheaper due to lower demand along the corridor in comparison to the east side of the county where land is in high demand. In addition, the access to an active railway could help industrial prosper in the area.

There are some issues that could deter developers. At present, the lack of sanitary sewer in much of the study area is a disadvantage. However, this will become less in the future with the planned sewer extension to service more of the corridor. Substantial slope exists in most of the study area but becomes more prevalent along the Posey-Vanderburgh County Line. Little Creek, in the northern portion of the study area, has a flood zone and likely a floodway which will have limitations for development in the future.

The market study illustrates that there will be some limitations on the amount of development. Retail vacancy rates are high in comparison with the Midwest and country indicating either a lack of need, the wrong type, or location. Retail will not be in great demand until the existing retail has been addressed. Industrial may also have difficulty due to the limited access the study area has to Interstates 64 or 69. A number of available industrial sites, on the east side of the county have this advantage over the study area.

Conclusions

The study area has a great deal of potential for the future. Residential development is already sprouting in the southeast corner of the study area. If there is continued new residential development, more neighborhood retail can be supported. Neighborhood commercial or small scale nodal development would be more beneficial for the residents of the area and would also avoid syphoning retail potential from other parts of the county, particularly the commercial centers on west Lloyd Expressway between Rosenberger Avenue and S. Boehne Camp Road.

The feasibility of larger retail within the study area may be limited. With the combination of retail surpluses nearby and higher vacancy rates in the metro area, large retail is not needed. Limited convenience retail and restaurant uses may be in demand with the growth of population in the area, office development, or increased USI enrollment.

The industrial or the technology park will likely need to take advantage of the opportunities and partnerships with the University of Southern Indiana. Due to limited access to a major interstate, industrial in this area will be limited even with access to the active railroad.