Southeast Metro Regional Center

Planning Study

Final Report

February 2012

Southeast Metro Regional Center

S M R C

Southeast Metro Regional Center
Planning Study

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Southeast Metro Regional Center

Planning Study

Executive Summary

February 2012

Southeast Metro Regional Center

SMRC

LOUISVILLE JEFFERSON COUNTY

QK4

Introduction

The Fern Creek area in southeast Jefferson County, particularly the area surrounding and immediately south of the interchange of I-265 and US 31E (Bardstown Road), is experiencing development demand within the expanding Louisville Metropolitan area. In recognition of the coming growth and future traffic volumes, Louisville Metro Councilmen Stuart Benson (District 20), Robin Engel (District 22), and James Peden (District 23) united with Metro Planning and Design Services and Louisville Metro Public Works and Assets to initiate a land use and mobility study, to better address future changes the area will be facing. The result is the *Southeast Metro Regional Center (SMRC) Planning Study* that is managed by a project advisory group consisting of representatives from Metro Louisville, the Fern Creek community, and Qk4. Qk4 is a Louisville-based engineering, architectural, and planning firm that has been hired by Louisville Metro as the project consultant.

Vision Statement

"The Fern Creek Regional Center Form District will effectively and efficiently address issues that come with future growth, increased traffic volumes, development impacts, and community character, resulting in a vibrant activity center for residents, employees, and visitors. New and existing roadways shall exhibit the qualities of "complete streets"; to feature safe and efficient multi-modal transportation choices for residents and visitors of all ages and abilities. Future developments will exhibit a "Main Street" feel and embrace traditional, compact, and walkable design principles, contributing to the destination experience that promotes a variety of land uses, activities, and a high quality of life for residents and visitors."

Vision Statement

In addressing issues of traffic congestion, development impacts, and community character, and in anticipation of future growth, a proactive response is needed to guide this area toward becoming a vibrant activity center for residents, employees, and visitors. Jefferson County currently uses form districts, in addition to zoning regulations, as a tool to promote and regulate desired growth types and land use patterns. It was recognized that a Regional Center Form District designation for a part of the study area would do much to achieve the desired future development character. Developed early in the planning process by the advisory group, the vision statement is included in the inset at left.

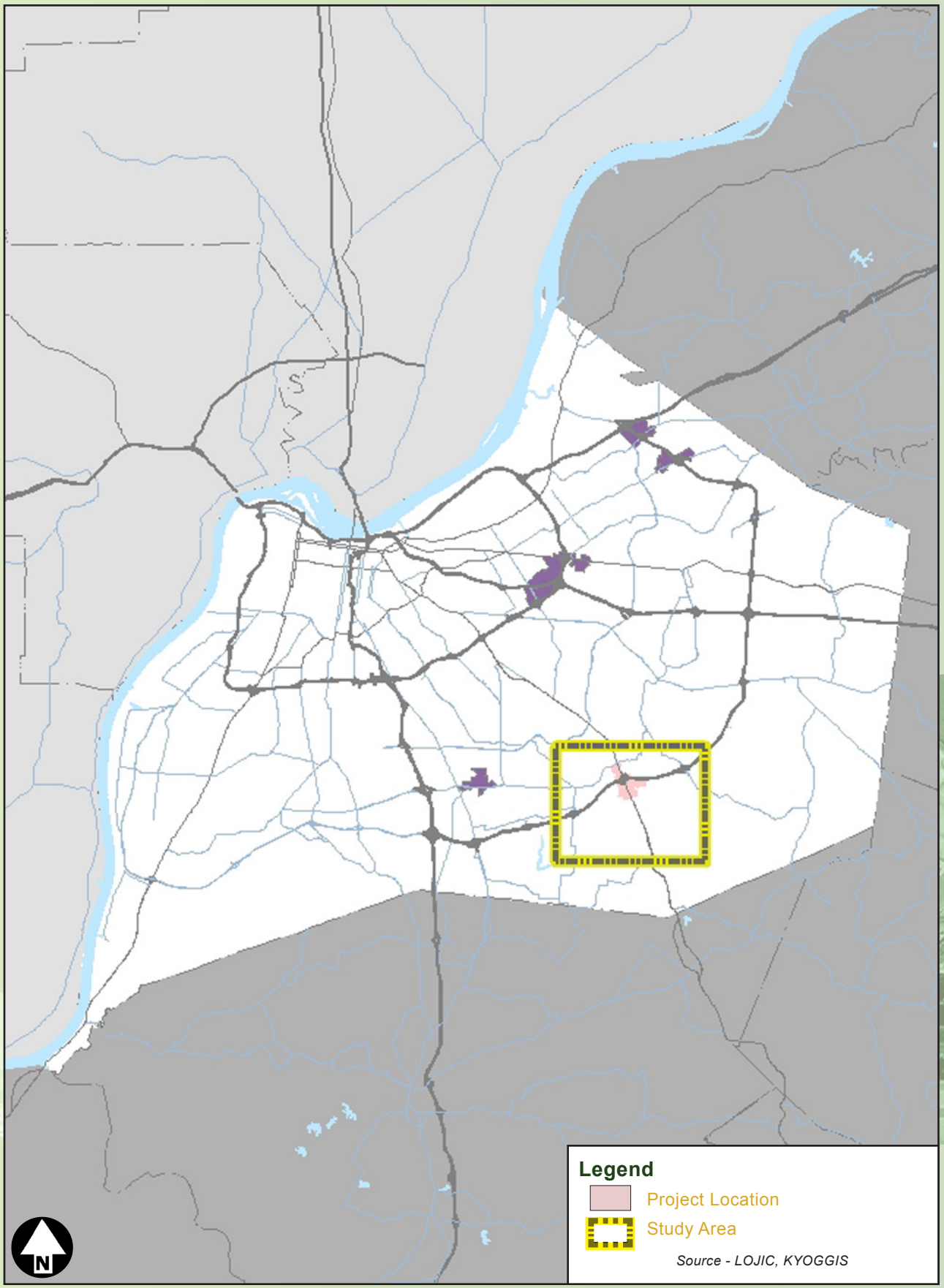


Figure ES-1: Project location area within southeast Jefferson County

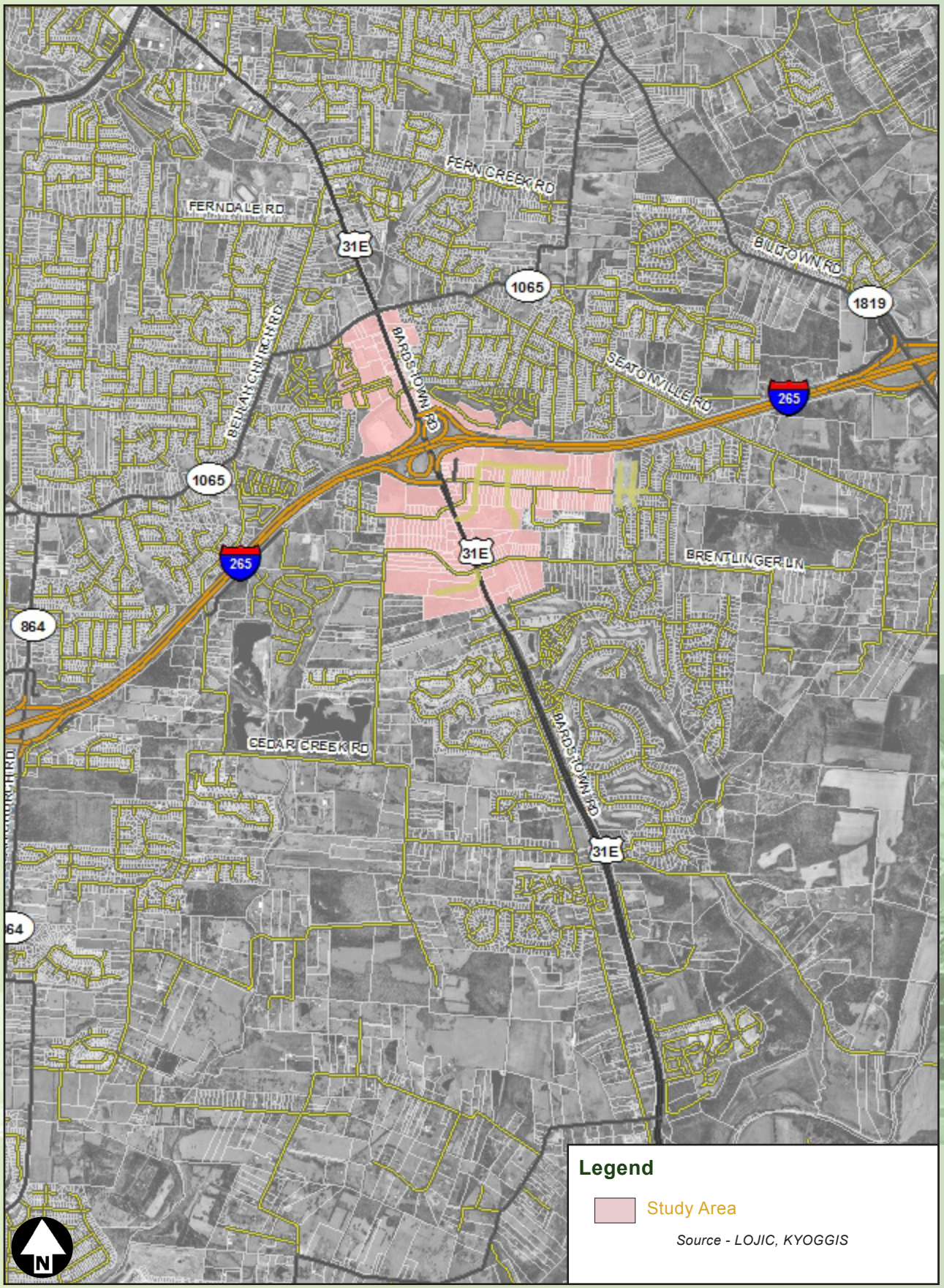


Figure ES-2 Form District Study Area (in pink) within the transportation network study area

Recommendations

Through a comprehensive planning effort of the Louisville Metro Planning and Design Services staff, Qk4, and the project advisory group, the *SMRC Planning Study* reflects the work of several months of meetings, public input, and collective discussions. The recommendations outlined in this report are based on site evaluations, past trends, future plans, and the input of stakeholders and residents. The recommendations are framed in the format of the Cornerstone 2020/ Land Development Code (LDC) planning document. Once adopted by the Metro Council, the plan recommendations are intended to supplement Cornerstone 2020 and the Land Development Code, and guide future decisions relevant to development and transportation within the SMRC study area.

Upon adoption of the *SMRC Planning Study* by Louisville Metro, the recommendations contained herein will be implemented through the cooperation of various public agencies and private entities. Implementation will require the continuing commitment of these various public agencies, stakeholders, local residents, private businesses, and the Louisville Metro Council. Each recommendation includes a brief description, agencies/parties responsible for implementation, and the probable timeframe for the recommendation.

Responsible Parties:

PO	Property Owner
MC	Metro Council
PDS	Planning and Design Services
PW	Public Works
EGI	Economic Growth and Innovation
KYTC	Kentucky Transportation Cabinet

Basic Time Frames:

Short-Term	Within the next 1-5 years
Medium-Term	Within 5-10 years
Long-Term	More than 10 years
Continuing	*No particular time frame - implementation is appropriate whenever possible*

Table ES-1: SMRC Planning Study Community Form Recommendations

Number	Community Form/Land Use Recommendation Description (CF)	Responsible Parties	Timeframe
CF-1	Designate as a Regional Center Form District (RCFD) the specified area indicated on the Recommended Regional Center Form District Boundary (*Exhibit 1, Appendix A*).	PDS/MC	Short
CF-2	Within the proposed RCFD, apply appropriate design guidelines that promote mixed use, multi-modal streets, and create connections to adjoining residential and commercial properties. RCFD Guidelines are described in Chapter 5 of this report and in Chapter 5, Part 3 of the LDC (*included in Appendix C*).	PDS/MC/PO	Short
CF-3	Consider assembling a workgroup to review and revise design standards to provide additional clarity for Centers development. As is currently described in the LDC, few differences exist between RCFD and Suburban Marketplace Corridor (SMC) design standards.	PDS/PW/MC	Short
CF-4	Implement sustainable/green development techniques for new development in the RCFD in accordance with the guidelines and techniques found in the MSD Green Design Manual.	PW/PDS/MC/PO	Continuing
CF-5	Provide adequate way-finding in developments in the RCFD to facilitate pedestrian and bicycle movement throughout.	PDS	Short
CF-6	As parcels are developed and redeveloped in the RCFD, retain mature trees in the site designs as required by Chapter 10, part 1 of the LDC.	PDS	Continuing
CF-7	Review and compare the Complete Street Manual guidelines and the Mobility standards of the Land Development Code. Revise the Land Development Code to include the Complete Streets Manual guidelines and principles.	PDS/PW/MC	Short
CF-8	Consider a Planned Development District (PDD) in conjunction with the Regional Center Form District to promote mixed use and consistent design of development and to implement the recommendations of this study. Any consideration of a PDD will involve working closely with affected property owners.	MC/KYTC/EGI/PO	Short

1.0 INTRODUCTION

1.1 Background

The Fern Creek area in southeast Jefferson County, particularly the area surrounding and immediately south of the interchange of I-265 and US 31E (Bardstown Road), is experiencing development demand within the expanding Louisville Metropolitan area. In recognition of the coming growth and future traffic volumes, Louisville Metro Councilmen Stuart Benson (District 20), Robin Engel (District 22), and James Peden (District 23) united with Metro Planning and Design Services (Metro PDS), and Public Works and Assets (Public Works) to initiate a land use and mobility study, to better address future changes the area will be facing. The result is the *Southeast Metro Regional Center (SMRC) Planning Study* that is managed by a project advisory group consisting of representatives from Metro Louisville and Qk4. Qk4 is a Louisville based engineering, architectural, and planning firm that has been hired by Louisville Metro as the project consultant.

There is a strong desire among residents to preserve the area's character and natural beauty that is in conflict with the typical suburban development patterns. Residents are attracted to the area because of its quality of life and open land. However, the rapid growth rate is resulting in the consumption of those open spaces that have always identified Fern Creek's desirability and unique sense of place. Thus far, the area has typically experienced sprawling, low density growth typical of newly developed urban areas. New residential subdivisions, commercial strip development (primarily with access limited only to Bardstown Road) has exploded; however transportation infrastructure has not kept pace. Coupled with heavy commuter traffic transitioning through the area, the resulting situation is extreme gridlock, long travel times, and limited mobility options. While efficient roadways and increased mobility are top issues, the loss of even more open space and the area's scenic character is a great concern. The *SMRC Planning Study* is the result of concerted efforts by concerned leaders and citizens who realize that change is coming quickly to southeastern Jefferson County, and recognize that this is the time to take effective action to ensure that the change is positive.

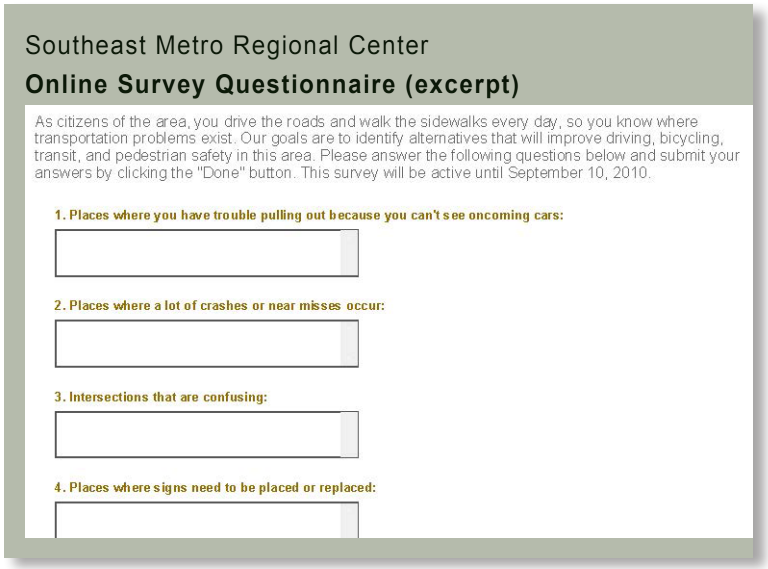
1.2 Planning Purpose and Process

The purpose of the *SMRC Planning Study* is to develop a plan to improve land use and multi-modal interconnectivity in and around the study area, centering around but primarily south of the I-265 and US 31E interchange (see Figure 1). With imminent increases in traffic volume and future development for surrounding properties, this plan seeks to proactively guide future growth and enhance the transportation network surrounding the I-265 and Bardstown Road interchange and Bardstown Road to the south. More specifically, this planning study offers an opportunity to facilitate the design of the first "original" Regional Center Form District area within Louisville Metro, *before* the new development is completed, and to enhance the area's transportation network. By gathering technical data, meeting with key stakeholders, and providing for community input, the plan will shape the future of the Bardstown Road / I-265 area. Currently, there is significant traffic congestion on Bardstown Road due to high traffic volumes and limited alternate routes within the area. Consequently, there is significant concern among area leaders and residents with regard to the capacity and efficiency of the existing transportation system, and the future demands on that system with the

By gathering technical data, meeting with key stakeholders, and providing for community input, the plan will shape the future of the Bardstown Road/I-265 area.

land use and development decisions, help to shape the transportation network, and explore multi-modal options in concert with adopted "Complete Streets" policies. The overall goal is to establish the boundaries and desired components of a fully functional regional center supported by a variety of land uses and necessary infrastructure.

Louisville Metro area planning is based on processes established by the Metro Council and set forth in the Louisville Metro Code of Ordinances, Title XV, Chapter 161, Neighborhood Development Plans, which contains language broadly outlining the purpose and process for neighborhood planning. Neighborhood planning is administered through Louisville Metro's Division of Planning and Design Services (PDS). An area planning study identifies additional goals, policies, guidelines, and programs for land use and mobility on a local level that are consistent with Cornerstone 2020 and the Land Development Code (LDC). The planning document will provide the means by which plan area stakeholders can identify their unique issues, analyze the current conditions, and set priorities. PDS staff has expanded and refined the procedures outlined in the municipal Code of Ordinances and produced the "Neighborhood Planning Guidebook." This report outlines specific procedures for drafting, adoption, and implementation of the neighborhood plan or area planning study. Each plan initiated by PDS consists of specific elements and is guided by significant public participation, particularly from its advisory groups consisting of area leaders, business and institutional representatives, and residents. These elements include an executive summary, a neighborhood identity narrative, a vision statement, a land use/community form element, a mobility element, and a plan implementation section. The plan may also contain optional components to address issues unique to each neighborhood such as housing, economic development, community facilities/services, open space/recreation, urban design, historic preservation, and environmental resources.


Southeast Metro Regional Center

Online Survey Questionnaire (excerpt)

As citizens of the area, you drive the roads and walk the sidewalks every day, so you know where transportation problems exist. Our goals are to identify alternatives that will improve driving, bicycling, transit, and pedestrian safety in this area. Please answer the following questions below and submit your answers by clicking the "Done" button. This survey will be active until September 10, 2010.

1. Places where you have trouble pulling out because you can't see oncoming cars:

2. Places where a lot of crashes or near misses occur:

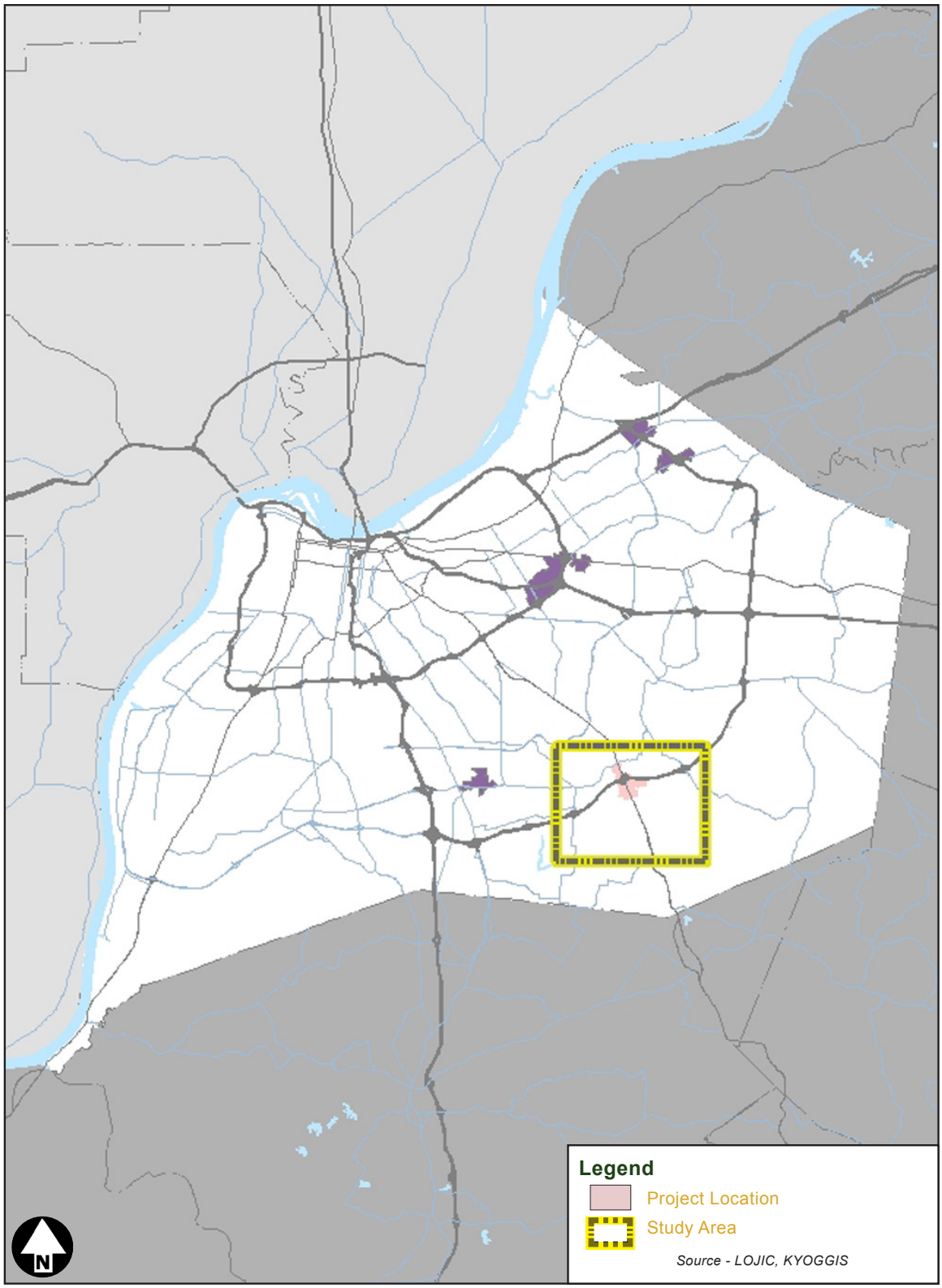
3. Intersections that are confusing:

4. Places where signs need to be placed or replaced:

An advisory group approach was used that was led by Metro PDS staff and consisted of representatives from the Louisville Metro Council, local Fern Creek business owners and residents, and the project consultant, Qk4. Advisory group meetings were held on the following three dates in 2010: June 14, July 19, November 15, March 21, 2011, and on February 6, 2012. Public involvement activities also included the following: two public meetings—the first on August 18, 2010, at the Fern Creek Community Center (6104 Bardstown Road), and the second on April 18, 2011, at Fern Creek High School (9115 Fern Creek Road); an online survey questionnaire (active from July 20 to September 23, 2010); and current project information available via the project website (www.louisvilleky.gov/PlanningDesign/Neighborhood+Plans/SMRC_Study.htm). The questionnaire produced 46 responses from area residents and provided significant insight and valuable suggestions that were incorporated into the final planning study recommendations. In addition to the public activities planned as part of the *SMRC Planning Study* project, an open house was hosted by Councilman Robin Engel (District 22) on September 27, 2010, at the Fern Creek High School. The event included information made available to the public regarding the progress of the *SMRC Planning Study*, and was attended by an advisory group representative (Doug Heberle, Qk4). Questionnaire forms were also provided, of which three were completed and returned. Meeting minutes, notes, and all other public feedback are included in Appendix B.

1.3 Study Area

The study area in Fern Creek, in the southeast section of Jefferson County, is focused on the area of the I-265 and US 31E (Bardstown Road) interchange. While there are no formal boundaries, the study area extends south to approximately Thixton Lane and east and west to the Billtown Road and Beulah Church Road interchanges with I-265, respectively.



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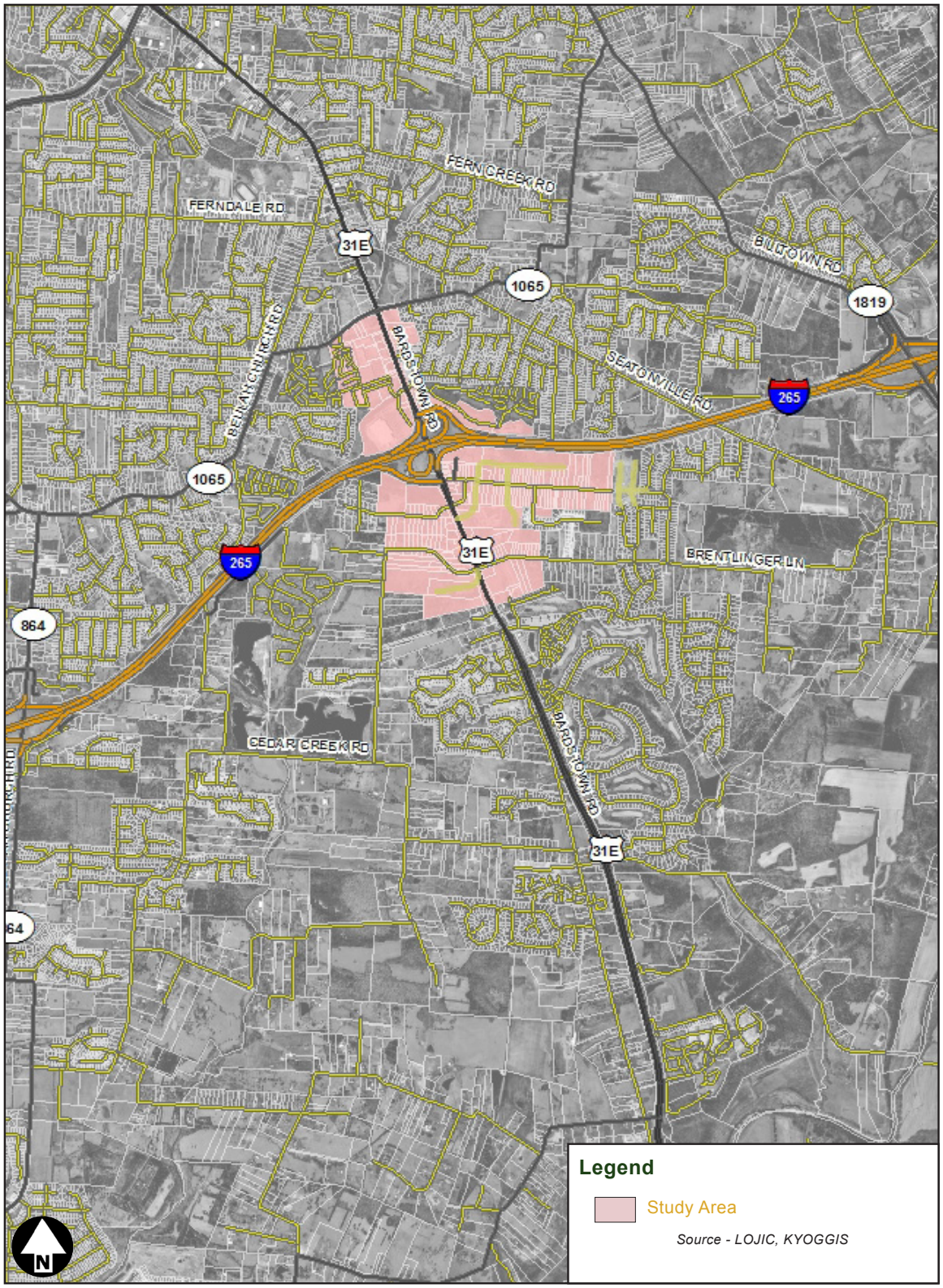

Figure 2: Form District Study Area (in pink) within the transportation network study area

2.0 VISION STATEMENT

In addressing issues of traffic congestion, development impacts, and community character, and in anticipation of future growth, a proactive response is needed to guide this area toward becoming a vibrant activity center for residents, employees, and visitors. Jefferson County currently uses form districts, in addition to zoning regulations as a tool to promote and regulate desired growth types and land use patterns. It was recognized that a Regional Center Form District designation for a part of the study area would do much to achieve the desired future development character. Developed early in the planning process by the advisory group, the vision statement is included in the inset at right.

Vision Statement

"The Fern Creek Regional Center Form District will effectively and efficiently address issues that come with future growth, increased traffic volumes, development impacts, and community character, resulting in a vibrant activity center for residents, employees, and visitors. New and existing roadways shall exhibit the qualities of "complete streets"; to feature safe and efficient multi-modal transportation choices for residents and visitors of all ages and abilities. Future developments will exhibit a "Main Street" feel and embrace traditional, compact, and walkable design principles, contributing to the destination experience that promotes a variety of land uses, activities, and a high quality of life for residents and visitors."

3.0 NEIGHBORHOOD IDENTITY

3.1 History

Located in southeastern Jefferson County about twelve miles from Downtown Louisville, the community of Fern Creek is home to 17,870 residents, according to the 2000 U.S. Census. In 2003, the area was annexed to the new Louisville Metro Government as part of the merger between the city of Louisville and Jefferson County. It is currently considered a neighborhood in Louisville Metro.

The primary trail providing access to this area was originally created by buffalo transitioning from the Ohio River to the numerous salt licks along the lower Salt River. This trail was also traveled by Indians and early settlers, and later became known as Bardstown Pike. As the primary road through the area, Bardstown Pike connected Louisville to Bardstown, Kentucky. This eventually became the Louisville and Bardstown Turnpike and, ultimately, Bardstown Road.

Fern Creek was established along Bardstown Pike in the late 1700s and named for the large number of ferns growing near a creek in the area. The community was initially called Stringtown on the Pike, because the earliest homes and buildings were developed in a linear pattern along Bardstown Pike, but was called Fern Creek by the 1870s. Fern Creek steadily grew as an agricultural community due to the extensive number of creeks and springs, and Bardstown Pike running north-south connecting the area with Louisville. By 1908, the interurban railway line was introduced to Fern Creek, thereby providing additional connectivity to Louisville and the surrounding area. The Jefferson County Fairgrounds were also located off Bardstown Road from 1900 to 1928. The community remained primarily agricultural until the advent of suburban development that has been occurring in Jefferson County since the 1960s.

3.2 Demographics

The study area, which surrounds but is largely located to the south of the I-265/US 31E interchange, is located to the south of the Fern Creek Census Designated Place (CDP). The study area is not included in a CDP, but lies in parts of both the Jefferson Central (91866) and Jefferson Southeast (91869) Census County Divisions (CCD). In a typical demographic analysis for small area plans, census tracts and block groups are the most common level of analysis. Analyzed on the block group level according to U.S. Census 2010 data, the study area section southeast of the I-265/US 31E interchange exhibits a population density of 285 people per square mile; while southwest of the interchange the census records 1,059 people per square mile. The block groups immediately north of the interchange exhibit the highest population densities with 2,703 people per square mile to the north east, and 3,509 people per square mile to the northwest.

3.3 Community Characteristics

The study area, which encompasses the southern areas of the Fern Creek neighborhood, has many amenities to serve the needs of residents and visitors. These amenities range from commercial services, residential properties, churches, schools and the approximately 95-acre Mahoney Park property that is still in the planning phase. Nevertheless, the aspect most valued by area residents is the semi-rural nature of the study area that is found just beyond the Bardstown Road corridor. Large residential parcels, mature trees, and an abundance of natural open space including the world-class Floyds Fork Parklands project to the east, make the area a unique and valuable section of Jefferson County. However, like many suburban and exurban areas in the country, Fern Creek is experiencing increasing development pressures within the growing Louisville Metropolitan area.

New, single-family residential subdivisions and strip commercial developments are proliferating along Bardstown Road while improvements to the area's transportation infrastructure lag. The results are traffic congestion, additional vehicle miles traveled, and little options for bike and pedestrian mobility due to the auto-oriented development. While efficient roadways and increased mobility are top issues, the loss of even more open space and the area's scenic character is a great concern.

3.4 Other Area Plans and Projects

There are several other plans and projects (some adopted and some incomplete) in the vicinity of the *SMRC Planning Study* area, though unaffiliated with the *SMRC Study*, that were reviewed in the process of its preparation. These plans and projects, briefly described below, were reviewed and evaluated for any relationship to and possible effects on the recommendations of the *SMRC Planning Study*. The listing does not imply that elements from these plans were incorporated in the *SMRC Study*, only that they were reviewed as part of the planning process. Website addresses are included for further review.

- *Cornerstone 2020 and the Land Development Code*—This is the long-range, comprehensive plan for Jefferson County. The goals, objectives, recommendations, and codes in this document serve as the guidelines for land use and development in the Louisville Metro area. This plan is amended as needed to reflect the recommendations that are adopted from subsequent planning documents. http://www.louisvilleky.gov/NR/exeres/E821F21C-FA36-40D5-B6D1-881F6F3E73B0.htm

- *Louisville Metro Complete Streets Manual*—This comprehensive document requires providing accommodation on all new and reconstructed roadways for all users: vehicles, transit users, bicyclists, pedestrians, and people with disabilities. http://www.louisvilleky.gov/BikeLouisville/Complete+Streets/

- *Fern Creek Small Area Plan*—Adopted in 2001, this plan reviewed current development trends and provided future land use recommendations including identifying and targeting areas for development and providing guidance as to the type of preferred development within the Fern Creek Area. http://www.louisvilleky.gov/NR/rdonlyres/261FB7C8-BA0F-4C59-9F38-470F303515C4/0/FernCreekBook_sm.pdf

- *Floyds Fork Area Study (Not Adopted)*—The purpose of the Floyds Fork Study is to guide future growth and development in a positive and responsible manner. This study is intended to protect the unique and natural character of the area and guide the development of Floyds Fork Greenway, Louisville Loop, and other proposed developments. The Floyds Fork Area Study is currently in the draft stage and, as of this writing, has not been adopted by Louisville Metro. http://www.louisvilleky.gov/PlanningDesign/floydsforkstudy.htm

- *Floyds Fork Greenway Master Plan*—The Floyds Fork Greenway Master Plan establishes the design for over 4,000 acres of new parkland at the southeastern edge of Louisville, Kentucky's metro region. The greenway is composed of 16 distinct parks and nature preserves; 46 miles of planned multi-purpose and use-specific trails, as well as a central park drive, connect the parks to each other and to adjacent communities. Methods are recommended to increase biodiversity through habitat preservation and enhancement, improve water quality through innovative stormwater management techniques, and preserve agricultural land. http://21cparks.org/

- *Smart Growth Implementation Assistance (SGIA) Project (Not Adopted)*—*The Potential of Suburban and Planned Retrofit Strategies: Policy Exploration and Louisville, Kentucky Case Study* (Working Title)—This ongoing, collaborative effort involves technical assistance provided to Louisville by the U. S. Environmental Protection Agency (EPA), U. S. Department of Housing and Urban Development (HUD), and the U. S. Department of Transportation (DOT). The team, led by the EPA, will provide technical assistance to help develop a plan to retrofit the suburban community to create a more vibrant activity center where walking, bicycling, and public transportation are realistic options for residents. The study area for this project is essentially the same as that of the SMRC Planning Study, but focuses more on land use and design (the development of centers), than on the transportation network. This project is currently in the draft stage. http://www.louisvilleky.gov/PlanningDesign/Neighborhood+Plans/SGIA.htm

- *2010 Bike Master Plan*—The Bike Master Plan, conducted by Louisville Metro, is the long-range

plan for bicycling activity in Louisville Metro. It explores existing conditions, recommends new bicycle projects and programs, establishes performance measures, and sets forward a plan for implementation through the year 2030. http://www.louisvilleky.gov/BikeLouisville/bikefriendly/2010bikemasterplan.htm

- *Mahoney Park Master Plan*—Louisville Metro Parks purchased a 95-acre property on Brentlinger Road, and is currently in the process of producing a master plan for the property's development as Mahoney Park. http://www.louisvilleky.gov/metroparks/cityofparks/projects/mahoneypropertyplanning.htm

- *Bullitt County Transportation Study*—This is a county-wide study conducted by the Kentuckiana Regional Planning and Development Agency (KIPDA). The study involves various transportation improvements throughout Bullitt County. Among those proposed improvements is a new connector route from KY 44 to I-265. This limited access arterial into Jefferson County, which includes a new crossing over Floyds Fork, would provide an additional travel alternative for traffic to/from Louisville. At this writing, no alignment alternatives have been identified though Jefferson County. This project appears to be a very long–term objective. http://www.gobullitt.com/index.php?option=com_frontpage&Itemid=1

- *Cooper Chapel Road Extension*—In an effort to reduce traffic congestion at the I-265/Bardstown Road interchange, KYTC and Louisville Metro Public Works is engaged in extending Cooper Chapel Road approximately three miles, from Beulah Church Road to Bardstown Road. It will include a multi-use path, sidewalks, and bike lanes. The long-range projection for the road opening is 2020. The KYTC project number is 05-404.01 http://www.louisvilleky.gov/PublicWorks/Engineering/Cooper_Chapel_III.htm http://transportation.ky.gov/progmgmt/2010_RHP/CountyListings/Jefferson.pdf

- *I-265/US31E Interchange Rebuild*—To increase safety, KYTC and KIPDA propose improvements to the interchange of I-265/US 31E (Bardstown Road) to include the addition of one southbound lane on Bardstown Road from the Kroger driveway to the I-265 westbound on-ramp. The KYTC project number is 05-264.00, and the KIPDA ID is 1483. http://www.kipda.org/files/PDF/Transportation_Division/Information/KIPDAInterchangeStudyFINALREPORT.pdf http://transportation.ky.gov/progmgmt/2010_RHP/CountyListings/Jefferson.pdf

- *US 31E Improvements*—To increase safety and better accommodate increased traffic volume, US 31E (Bardstown Road) is proposed by the KYTC to be improved from the I-265 interchange (mile point 4.926) to the future Southpointe Boulevard intersection (mile point 4.5) just south of existing Wingfield Avenue. This project involves the provisions of turn lanes and new access. The KYTC project number is 05-264.10. http://transportation.ky.gov/progmgmt/2010_RHP/CountyListings/Jefferson.pdf

4.0 MOBILITY

The central focus of the Southeast Metro Regional Center Planning Study is to effectively identify and anticipate connections to enhance mobility by providing a safe, pleasant, and properly functioning multi-modal transportation network that will enhance the quality of life in the growing community. The review of existing conditions revealed a significant lack of connectivity in the study area. This condition results in longer vehicle trips and significant congestion on Bardstown Road, which hosts predominately commercial land uses located around the I-265 interchange. The significant congestion on Bardstown Road and lack of connectivity among the rural and residential roads in the area result in a negative experience for residents and visitors as well as a significantly decreased quality of life. In addition to being located in the highest growth rate portion of Jefferson County, the anticipated development near the Bardstown Road corridor will only serve to increase congestion on a roadway that already experiences approximately 35,500 vehicles per day. Therefore, as development continues to occur, additional connections must be identified and constructed to improve traffic conditions and to provide motorists, cyclists, and pedestrians a safe, efficient and viable transportation network.

4.1 Mobility Priorities

With mobility and connectivity serving as the highest priorities in the SMRC Planning Study, it is important to understand the priorities of the residents within the community. Included in the goals of Cornerstone 2020 is the desire to "provide a safe, economical, accessible, and efficient system for transporting people and goods that is consistent with Community Form, Marketplace and Livability goals and objectives, promote orderly development, and afford a choice of travel modes." In the effort to recognize the goals of the Cornerstone 2020 Comprehensive Plan, Mobility/Transportation elements include guidelines that address circulation, transportation facility design, and accommodations for bicycle, pedestrian, and transit facilities. These three major transportation policy guidelines including the appropriate intentions listed in Cornerstone 2020 are as follows:

Guideline: Circulation

Ensure a balanced and comprehensive multi-modal transportation network that is coordinated with desired growth and development patterns and provides for the movement of people and goods.

Intent:

- To provide for safe and proper functioning of the street network with a coordinated hierarchy of arterial, collector and local roads.
- To ensure that new developments do not exceed the carrying capacity of streets.
- To ensure that internal and external circulation of all new development provides safe and efficient travel movement by all types of transportation.
- To provide improved public transportation facilities.
- To address congestion and air quality issues.
- To ensure that transportation facilities are compatible with form district goals and objectives.

Guideline: Transportation Facility Design

Design transportation facilities that are safe and efficient, that minimize adverse impacts upon the community and that accommodate, where possible, all modes of travel, such as trucks, automobiles, transit, pedestrians and bicycles.

Intent:

- To provide for the safe and convenient accommodation of the special mobility requirements of the County's elderly and physically challenged population.
- To protect and enhance public enjoyment of such facilities as scenic roadways, parkways streetscapes, and transit corridors.
- To provide an efficient, safe and attractive system of roadways, transit routes, sidewalks and other pathways for the timely movement of people and goods.

Guideline: Bicycle, Pedestrian and Transit

Support transit and non-motorized methods of travel. Provide

the necessary infrastructure improvements to accommodate alternative modes of travel.

Intent:

- To increase energy efficiency, as well as to promote improved air quality and recreational opportunities.
- To manage the demand for travel and improve the efficiency of the transportation system.
- To improve pedestrian access to public transportation routes from places of residence and employment
- To reduce major conflicts between vehicular, bicycle and pedestrian movements for improved safety.

Local Priorities

Throughout the planning process residents and other stakeholders were consulted at public meetings and via the online survey to identify what their priorities were for mobility in the area. The following public responses illustrate a common theme and serve as validation for the Cornerstone 2020 goals.

- Provide interconnectivity within the fragmented transportation network
- get thru-commuter traffic originating from Mt. Washington off Bardstown/Snyder interchange
- Right-in/Right-out access for developments
- New and rebuilt roadways should exhibit the multi modal "complete street" characteristics to accommodate all users
- Bike and walking facilities needed to connect developments
- Improve pedestrian access to Bardstown Road
- Adopt connectivity ratio requirements for new developments and redevelopments

4.2 Mobility Evaluation

In the advisory group's efforts to evaluate mobility conditions in the study area, the following factors were identified, reviewed, and explored to generate recommendations on how to improve the mobility situation.

US 31 E (Bardstown Road) is a major connector linking the city of Bardstown in Nelson County to Louisville in Jefferson County. Located in Bullitt County, the city of Mt. Washington is situated along Bardstown Road and contributes commuter traffic accessing Louisville. Classified as an Urban Principal Arterial in the project study area, Bardstown Road carries an estimated 35,500 vehicles per day to access I-265 at the interchange with Bardstown Road. Gridlock is experienced by drivers on Bardstown Road on a daily basis. Commuter traffic transitioning to and from Mt. Washington (to the south of the study area) is significantly contributing to the congestion.

The lack of connectivity from Bardstown Road to the other I-265 interchanges (Beulah Church and Billtown Road) contributes to significant congestion at the Bardstown Road and I-265 interchange. Many subdivisions and developments in the Fern Creek study area (commercial and residential) have only been provided frontage access to Bardstown Road. This requires all vehicles accessing development in the area to do so from Bardstown Road. Additional "rear" access for these developments would provide alternatives for residents to avoid Bardstown Road. The existing network of rural and urban local roads in the study area serves primarily rural residences. Lane widths are very narrow on these facilities and there are few or no shoulders, conditions that present a challenge for pedestrian/bike access. Moreover, the rural network lacks connectivity, thereby compounding the need for vehicles to utilize the already congested Bardstown Road rather than have the option of an alternative interconnected route.

A tool that can be utilized to gauge the connectivity of a given area is the Street Connectivity Index. This index results from the number of street links divided by the number of nodes (intersection and dead ends) in a particular area. The higher the connectivity index, the more connected the road network. A connectivity index of 1.40 is a reasonable standard to ensure a connected roadway network. For more information on the connectivity index, see the *Street Connectivity Zoning and Subdivision Model Ordinance* produced by KYTC, included in Appendix C.

4.2.1 Infrastructure Financing

One of the most significant obstacles to infrastructure improvements is funding. Historically in Louisville Metro, the process of funding infrastructure improvements as part of new development has not been limited to one standard set of procedures. Rather, each project has been handled on a case by case basis. Some techniques used may include conducting impact or traffic studies from which impacts are predicted and developer fees are then determined that reflect a percentage of the increased traffic impact to the area.

However, an alternative funding vehicle for public infrastructure that is gaining in popularity is Tax Increment Financing (TIF). According to the Kentucky Economic Development Finance Authority, TIF is a tool to use future gains in taxes to finance the current improvements that will create those gains. When a public project is advanced, the value of the surrounding real estate often increases. This increased site value and investment activity creates increases in the values of taxable property and activities, which increases tax revenues; referred to as the "tax increment." TIF dedicates that increased revenue to finance debt issued to pay for the public infrastructure of the project. TIF creates funding for public projects that may otherwise be unaffordable to localities.

The first step for a TIF program is the identification of a TIF development area (district) by Louisville Metro. The TIF district must then first be approved by the Louisville Metro Council and then by the Kentucky Economic Development Finance Authority. Once approved, the TIF projects within the district can be initiated and increments can begin to accrue.

4.2.2 Traffic Volume Analysis

When the study area was reviewed as a whole, including traffic volumes and patterns of local residents and commuters transitioning between I-265 and Bullitt County, the need for directional enhancements became evident. Currently, all traffic transitioning between I-265 and Bullitt County as well as local traffic almost exclusively utilizes Bardstown Road. As previously mentioned, this creates a condition of severe congestion on the Bardstown road corridor. The planned Cooper Chapel Road Extension (currently in the design phase) will provide some alleviation of the Bardstown Road condition, but is not scheduled to be completed until 2020. Additional corridors needed to be identified to alleviate congestion on Bardstown Road and to provide additional alternatives for traffic in anticipation of future growth in Fern Creek. Figure 3 shows a very conceptual network that is the focus of increasing connectivity and transportation efficiency in the SMRC study area.

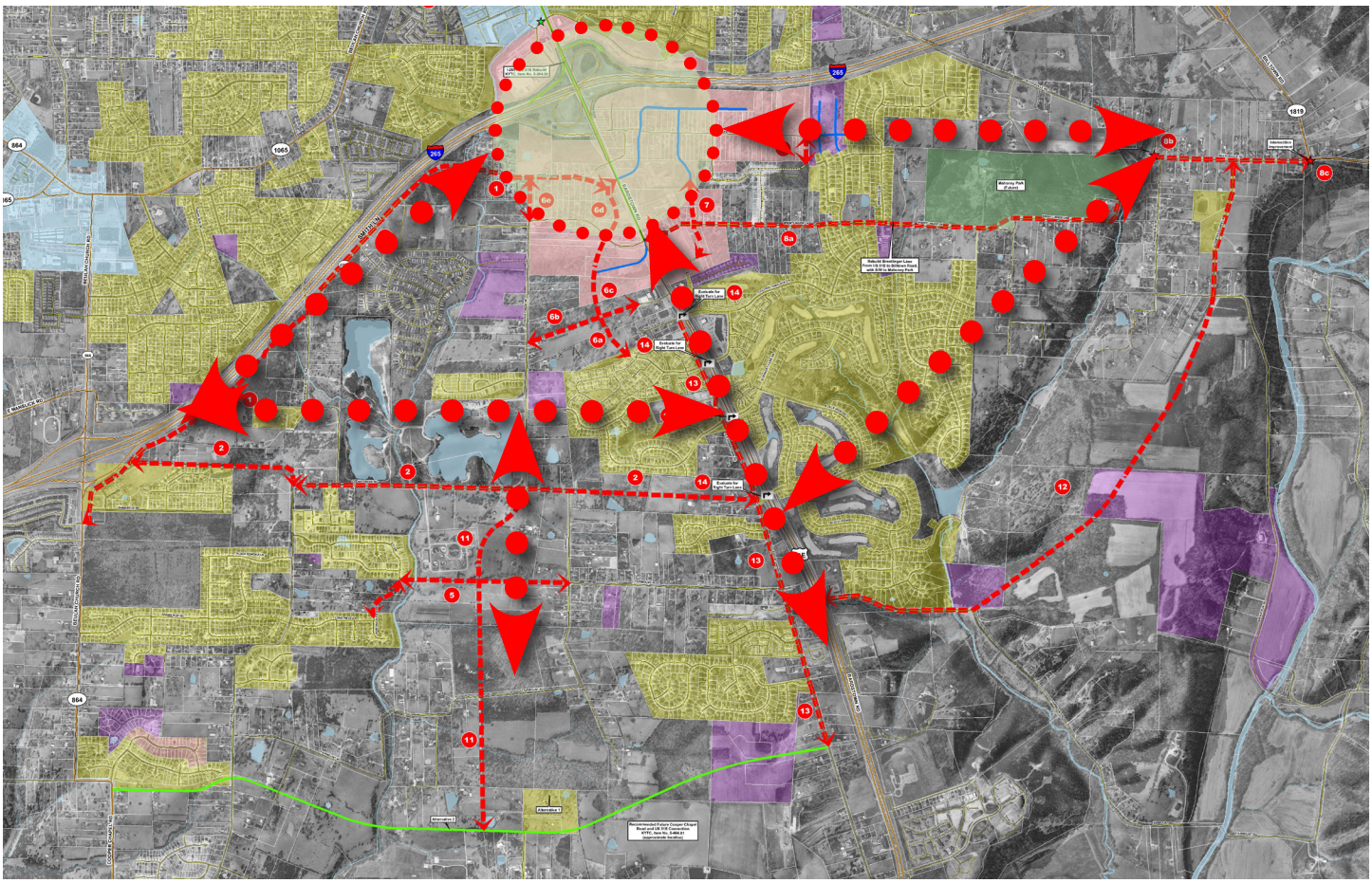

Figure 3: Conceptual Directional Enhancements

Existing traffic volumes (2011) were reviewed and forecasts for the build year (2035) were developed under consideration of an enhanced roadway network. Current average daily traffic (ADT) volumes on Bardstown Road range from 35,500 vehicles per day (vpd) from Thixton Lane to Brentlinger Lane and 34,700 vpd from Brentlinger to I-265. If the transportation network is not enhanced, then those volumes are anticipated to increase by 2035 to 46,200 vpd and 45,100 vpd, respectively. Conversely, if the recommended improvements are made to the roadway network, congestion on Bardstown Road will be reduced by approximately 19% from I-265 to Brentlinger Lane and approximately 16.5% south of Brentlinger Lane. If improvements are made, traffic is expected to increase only 1,000 vpd on Brentlinger Lane by 2035 due to area growth and increased volume transitioning from Bardstown Road. Table 1 shows existing and projected volumes for Bardstown Road and Brentlinger Lane. Existing and projected traffic volumes are illustrated on Exhibit 4 and 5 in Appendix A.

Table 1: Current and Projected Traffic Volumes

Route	Functional Class	Beginning Feature	Ending feature	Number of Lanes	ADT (2011) Existing	ADT (2035) No Build	ADT (2035) Build
US 31 E Bardstown Road	Urban Principal Arterial	I-265	Brentlinger Lane	4	34,700	45,100	36,500
		Brentlinger Lane	Cedar Creek Connector (Future)	4	35,500	46,200	38,600
		Cedar Creek Connector (Future)	M1-12 Connector (Future)	4			40,100
		M1-12 Connector (Future)	Cooper Chapel Connector (Future)	4			42,600
		Cooper Chapel Connector (Future)	Thixton Ln.	4			46,200
Brentlinger Lane	Urban Local	Bardstown Rd.	Sewell Dr.	2	6,700	8,500	9,500
		Sewell Dr.	M1-12 Connector (Future)	2	N/A	N/A	

4.3 Mobility Recommendations

The recommendations for mobility improvements range from signal/signage warrant analysis to the construction of new roads on new alignment. The intent is threefold: (1) to reduce traffic on Bardstown Road by providing alternative routes; (2) to provide better service and access to the inevitable growth areas through interconnectivity that is not dependent on Bardstown Road; and (3) to provide traffic transitioning to and from I-265 with more efficient routes other than Bardstown Road—namely the interchanges at Billtown Road and Beulah Church Road.

The recommendations for physical improvements are illustrated on the Proposed Multi-Modal Network Improvements (Exhibit 2) and Proposed Roadway Network Improvements (Exhibit 3), both found in Appendix A. The illustrations in these exhibits show conceptual linkages that will be driven by future development. With the exception of those recommendations to rebuild an existing facility, the connectors do not reflect a specific alignment; rather, they illustrate the potential need for a future connection between two points. A more detailed version of Tables 2 and 2A, below, summarizes the planning study mobility recommendations and proposed network improvements. A more detailed version of the Table 2A, which includes planning level cost estimates and projects listed as ranked by the project advisory group, can be found in Appendix A following Exhibit 3.

Table 2: SMRC Planning Study Mobility Recommendations

Number	Mobility Recommendation Description (M)	Responsible Party	Timeframe
M-1	Incorporate into the plan the network improvements (connectors and facility rebuilds) indicated on the Proposed Roadway Network Improvements and Descriptions (Exhibit 3, Appendix A) and in the **following Table 2A for M-1 series of roadway improvement descriptions**.	PDS/PW/KYTC	Short-Long
M-2	Evaluate for improvements the following four (4) Bardstown Road intersections for safe and efficient bike/pedestrian accommodations (sidewalk connections, countdown pedestrian signalization for every direction, pedestrian refuge islands): Cedar Look, Brentlinger Lane, Colonel Hancock, and Glenmary Farm Drive.	PW/KYTC	Short
M-3	Construct sidewalks on the east side of Bardstown Road from future Southpointe Boulevard to Brentlinger Lane.	PDS/PW	Short
M-4	Construct sidewalk connection on the east side of Bardstown Road from existing sidewalk stub near Captain Place, southbound to Glenmary Farm Drive.	PW/KYTC	Short
M-5	Require sidewalk connection on the west side of Bardstown Road from the future intersection of Southpointe Boulevard to the existing sidewalk stub at Ichabod Drive (Thornton's Gas Station) as further development occurs.	PDS/PW	Medium-Long
M-6	Consider sidewalks on Brentlinger Lane (to be compatible with future Brentlinger widening) from Bardstown Road to future Mahoney Park.	PW	Short
M-7	Evaluate the need for two (2) I-265 Pedestrian Bridge crossings at Johnson School Road and at the Southpointe Commons RCFD as development occurs. Also consider a Pedestrian Bridge crossing at Bardstown Road near Southpointe Boulevard. Cost estimate per pedestrian bridge is $800,000.	PDS/PW/KYTC	Medium-Long
M-8	Consider the incorporation of sidewalks in the I-265/Bardstown Road interchange redesign. Current KYTC interchange plans do not include sidewalks.	PDS/PW/KIPDA/KYTC	Short-Medium
M-9	Establish Old Bardstown Road as the preferred north/south bike route with lanes and signage.	PDS/PW	Short-Medium
M-10	Establish Cedar Creek Road/Brentlinger Lane/Seatonville Road as the preferred east/west bike route with lanes and signage.	PDS/PW	Short-Medium
M-11	Coordinate with TARC to establish a transit stop on Bardstown Road at or near Wal-Mart.	PDS/PW/TARC	Short
M-12	Coordinate with TARC to provide continuous Bardstown Road service from Mt. Washington. Establish a Park & TARC near Bardstown Road between Mt. Washington and Thixton Lane.	PDS/PW/TARC	Short-Medium

These recommendations are illustrated in Exhibit 2, Appendix A

Table 2A: SMRC Planning Study Proposed Roadway Network Improvements, Mobility (M1 Subset) Recommendations*

M 1	Connector Recommendation Description	Responsible Party	Timeframe
M1-1	Connector on new and existing alignment between Beulah Church Road and Bardstown Road. This I-265 frontage road to use existing alignment on Bartley Drive and Rocky Lane.	PDS/PW/PO	Medium-Long
M1-2	Cedar Creek Road extension on new and existing alignment to provide a continuous connection between Beulah Church Road and Bardstown Road.	PDS/PW/PO	Short
M1-5	Connector between Fairmount Road/Gentry Lane to Eli Drive/Hunting Stock Place.	PDS/PW/PO	Development Driven
M1-6A	North/South Connector at Broadwood Drive stub to future Ichabod Drive Extension (6B).	PDS/PW/PO	
M1-6B	East/West Ichabod Drive Extension to Cedar Creek Road.	PDS/PW/PO	
M1-6C	North/South Connector from Ichabod Drive Extension to Cedar Creek Road.	PDS/PW/PO	
M1-6D	North/South Connector from Cedar Creek Road to tie into Bardstown Road at future Southpointe Commons Boulevard Intersection.	PDS/PW/PO	
M1-6E	North/South Connector from Cedar Creek Road to Bartley Drive.	PDS/PW/PO	
M1-7	Future Southpointe Commons Development North/South Access Road "A" Extension to intersect with Brentlinger Lane and continue south to connect to existing stub at Kohl's development. Detailed construction cost estimate, plan and profile for extension from planned stub to Brentlinger Lane only is included in Appendix A.	PDS/PW/PO	
M1-8A	Widen Brentlinger Lane to three lanes with bicycle/pedestrian accommodations from Bardstown Road to Billtown Road.	PDS/PW/MP/ PO/KYTC	Short-Medium
M1-8B	Rebuild the Brentlinger Lane/Seatonville Road/Broad Run Road Intersection.	PDS/PW/MP/ PO/KYTC	
M1-8C	Rebuild the Brentlinger Lane/Seatonville Road/Billtown Road Intersection.	PDS/PW/PO/ KYTC	
M1-10	North/South Connector between Reeseman Road in Chism Trail Subdivision and Wingfield Road.	PDS/PW/PO	Development Driven
M1-11	North-South connector between the future Cooper Chapel Road to Cedar Creek Road.	PDS/PW/PO	Long
M1-12	Connector between Fairmount Road to Seatonville Road; thereby providing an alternate for traffic transitioning from Bullitt County to the Billtown Road/I-265 interchange. This link would also provide a connection for the proposed subdivisions of Glenmary Ridge and Broad Run Estates.	PDS/PW/PO	Development Driven
M1-13	Rebuild Old Bardstown Road to three lanes with bicycle/pedestrian accommodations from Hillock Drive to future terminus with Cooper Chapel Road Extension (Louisville Loop).	PDS/PW/PO	Medium-Long
M1-14	Evaluate the need for Right-Turn Lanes for northbound Bardstown Road at the following intersections: Long Home Road, Glenmary Farm Drive, Captain Place, and Colonel Hancock Drive.	PW/KYTC	Short
M1-15	Consider a signal warrant analysis at the intersection of Beulah Church Road and Fern Creek Road. Currently a yellow flashing caution signal condition exists at this intersection.	PW	
M1-16	Evaluate the signal timing on Bardstown Road in and surrounding the study area.	PW/KYTC	

*** These recommendations are illustrated in Exhibit 3, Appendix A, followed by a version of this table that includes project ranking and planning level cost estimates**

5.0 LAND USE/COMMUNITY FORM

5.1 Land Use/Community Form Priorities

Cornerstone 2020 comprehensive goals include the use of "the land use policies as a guide for the location, type and design of future land development, transportation and community facilities." To achieve the vision of the Fern Creek Regional Center Form District by creating more mixed-use and pedestrian-friendly centers, the land use priorities of the community and goals for Cornerstone 2020 must be addressed. Below are the appropriate guidelines from Cornerstone 2020 that apply to the land use aspects of the *Southeast Metro Regional Center Planning Study.*

Guideline: Community Form

Use existing and emerging forms or patterns of development and local plans developed in accordance with the Comprehensive Plan to guide land use decisions and design of development.

Intent:

- To ensure that new development will be designed to be compatible with the scale, rhythm, form and function of existing development as well as with the pattern of uses.
- To ensure land use decisions that preserve and improve identified existing and emerging patterns of development.
- To use the patterns of development set forth below, identified as "community forms" as guides for land use decisions, and as the basis for community form districts, containing regulations to guide future developments.

Guideline: Centers

Encourage mixed land uses organized around compact activity centers that are existing, proposed or planned.

Intent:

- To promote efficient use of land and investment in existing infrastructure.
- To lower utility costs by reducing the need for extensions.
- To reduce commuting time and transportation-related air pollution.
- To provide an opportunity for a mixture of residential development that includes housing types and building styles that accommodates people of different ages and incomes and that are compatible with the existing development pattern of the Form District.
- To provide an opportunity for neighborhood centers and marketplaces that includes a diversity of goods and services and that are designed to be assets to the community.
- To encourage vitality and a sense of place in neighborhoods and the community.
- To restrict individual or isolated commercial uses from developing along streets in non-commercial areas.
- To encourage commercial revitalization in redeveloping areas.

Guideline: Compatibility

Ensure that land uses and transportation facilities are located, designed and constructed to be compatible with nearby land uses and to minimize impacts to residential areas, schools and other sensitive areas in the community.

Intent:

- To allow a mixture of land uses and densities near each other as long as they are designed to be compatible with each other.
- To prohibit the location of sensitive land uses in areas where accepted standards for noise, lighting, odors, or similar nuisances are violated or visual quality is significantly diminished (unless adequate abatement measures are provided).
- To preserve the character of existing neighborhoods.

Guideline: Open Space

Ensure well-designed permanently protected open space that meets community needs.

Intent:

- To enhance the quality of life in Jefferson County through the provision of accessible and functional open space.

Guideline: Natural Areas and Scenic and Historic Resources

Protect natural areas, natural features and important scenic and historic resources. Locate development, whenever possible, in areas that do not have severe environmental limitations.

Intent:

- To guide future public and private economic development, investment, and preservation within areas identified as an important resource by the community.

Guideline: Economic Growth and Sustainability

Provide a positive culture for attracting and sustaining business within Louisville and Jefferson County.

Intent:

- To ensure the availability of necessary usable land to facilitate commercial, industrial and residential development.
- To reduce public and private costs for land development.
- To reduce the time involved in the review of land development proposals.
- To ensure an adequate level of staffing for the efficient and expeditious review of development proposals.
- To ensure that regional scale workplaces and industrial land uses have access to people, goods, services and appropriate locations needed for them to conduct business.

Green Infrastructure

As land and infrastructure development progresses, consideration should be given to the incorporation of "green infrastructure" or Green Management Practices (GMPs). The Metropolitan Sewer District (MSD) of Louisville Metro defines green infrastructure/GMPs as engineered systems that are created to mimic natural landscapes to capture, cleanse and ultimately reduce the amount of stormwater entering sewers, creeks and waterways. These GMPs are designed to infiltrate rain water into the ground rather than it running into combined sewers or area waterways. Examples of green infrastructure include rain gardens and bioswales, pervious pavement, green roofs, infiltration drains and water harvesting cisterns. The utilization of green infrastructure contributes to a reduction in flooding risks and an improvement of water quality. MSD promotes GMPs to supplement development and construction methods to encourage environmental sustainability and compliance with the Clean Water Act. More on green infrastructure can be found on MSD's website: www.msdlouky.org.

Centers Development

The SMRC Planning Study intends to identify approaches that guide growth in established neighborhoods and, as a result, protect the open space and rural character that is so highly valued. This approach to suburban development advocates the development of centers; i.e., areas of mixed-use activities that combine residential, commercial, office, retail, and entertainment. Centers are typically thought to create a better quality of life and increased desirability for the communities they serve. Through planning efforts and adherence to prescribed guidelines, suburban communities can achieve many of the following benefits:

- Pedestrian friendly mixed-use neighborhoods featuring amenities and services
- Regeneration and diversification of residential assets
- Creation of new economic opportunities that provide residents with nearby employment opportunities
- Enhancements in roadway connectivity and multi-modal transportation choices
- Preservation of open space, agricultural, cultural, and natural areas

Public Comments

Through the advisory group visioning process and gathering public input during the planning process, and largely through the survey questionnaire, the following elements were identified as potentially desirable by the area residents:

- Sound barriers – context sensitive
- Buffering – control noise and visual impact
- Greenspace/parks
- Environmentally sensitive – connect to certain natural features
- Main Street character
- Tram – transit within center
- Multi-family condos

- Adequate capacity for streets
- Central Information – visitor center way finding
- Design for people with disabilities, elderly, children
- Respect cultural and historical assets
- Consider architectural character
- Signage controlled – small scale
- Small-town character
- No adult entertainment
- Urgent care facilities
- Enclosed shopping – stay out of the weather
- Larger scale shops (department stores)
- Library
- Theater
- Intensity away from Bardstown Road
- Connectivity within centers
- Centralized/shared parking
- Decrease intensity as development moves south
- Pedestrian/Bike bridge across Bardstown Road
- Westport Village
- Masonry material brick
- Preserve trees – design around them
- More internal access and connectors
- Sports fields
- Hotels
- Post office and other institutional uses
- Connectivity between commercial uses
- Green space, gathering spaces, places to eat and sit
- Recycling centers
- Non-retail commercial; office, workplace
- Community Center significant

These elements identified by Fern Creek residents and the project advisory group reflect many of the standard characteristics of centers development; and mixed-use, walkable, interconnected, green, and compact development. In only one instance was the comment made that Fern Creek was not an appropriate area for centers development. Through the input of the involved citizens of Fern Creek, it was recognized that centers development as characterized by a Regional Center Form District in the study area is an effort that has found much local support.

5.2 Land Use/Community Form Evaluation

Regional Centers

The land use aspect of the Southeast Metro Regional Center Planning Study is intended to provide guidance and recommendations for the implementation of regional centers. Centers serve as clusters of mixed-use activities that typically combine various types of residential and commercial, such as retail, office space, hotels, restaurants, and entertainment. The development of regional centers can provide many benefits to the communities they serve. These benefits can include the preservation of open space and natural/cultural areas, due to the compact nature of centers development. Benefits of the diverse and flexible uses within centers contribute to trip reduction leading to a decrease in vehicle miles traveled (VMT) and providing more employment opportunities near homes. Further benefits include:

- *Local trip reduction from major thoroughfares relieves pressure on the transportation network—* Because centers serve as local destinations for shopping, entertainment, and work, they help remove cars from the primary roadways as transit, walking, and biking trips replace automobile trips as the primary travel mode In addition, local vehicle trips within the center tend to divert cars from the major roadways on the outskirts of centers developments, and keep more trips internal. A reduction in Bardstown Road traffic in the Fern Creek area will be a primary benefit of a regional center.

- *Increased density of centers development preserves open space, agriculture, and natural areas*—Centers focus development in specific areas at concentrations sufficient to support the development of pedestrian friendly amenities. Through strategic placement of form districts that identifies potential and existing centers, including areas outside the desired growth area, centers may help draw density away from open space and other areas where growth is less desired.

- *Reduced distances between home and work*—Centers accommodate diversified housing characteristics, including apartments, condominiums, and multi- and single-family residences. This provides residents with various housing options that allow them to downsize or upsize, depending on their life situations, without having to leave the area.

- *Creating Economic Opportunities*—Centers serve as hubs of activity where people work, shop, and socialize. Due to the mixed-use nature, the economic diversity of centers creates a resiliency that can provide more economic stability than suburban strip development.

- *Developing a sense of place*—Centers provide a unique area of focus and neighborhood identity. They typically provide activities for 24 hours, when residential uses are included (18 hours for commercial, only). Centers typically offer formal spaces (built environment) and informal spaces (open space) to gather.

Obstacles and Objections to Centers Development

Establishing a type of centers development may be challenging in an established suburban community that is new to the idea. Some of the barriers to centers development may include:

- *Regulations and existing zoning codes*—In many communities, higher density and mixed use is discouraged by traditional zoning and building codes. In addition, parking requirements in commercial areas are often in conflict with the goals of smart growth. Persistence from the developers and support from the community are required to advance this type of new development.

- *Lack of funding for infrastructure improvements*—Major upgrades and modifications are often required for suburban redevelopment of existing development, which can be extremely costly. Creative funding and public/private partnerships can help in securing the necessary capital for these improvements.

- *Land Acquisition*—Mixed use development typically requires large tracts of land. This may be difficult for developers to achieve due to the costs of the properties. In addition, the possible relocation of existing residents and businesses can complicate the development process.

- *Financial risk*—Lending institutions may be reluctant to fund new and unique types of development that emphasize mixed use, connectivity, and higher densities. The funding of lower density developments is relatively comfortable and low-risk. Development often requires complex financing arrangements that may involve multiple parties and sometimes public entities. Some financial institutions find this level of uncertainty too risky for investment.

- *Not in my back yard (NIMBY)*—Residents can express resistance to higher density development and changes to the neighborhood character. Efforts on the part of local government and developers to include the community in public outreach efforts and seek public comments can help the development efforts to be successful. As previously mentioned, the guarantee that open and natural spaces will be a priority in redevelopment efforts can garner much public support.

5.3 Land Use/Community Form Recommendations

The area surrounding (and further to the south of) the I-265/Bardstown Road interchange is a prime area for increased growth and commercial development. It has been recognized as an area that would benefit the surrounding locations by being redesignated as a Regional Center Form District. Currently, the area to the north of the interchange is Town Center Form District while everything to the south of the interchange is Neighborhood Form District. Considering the proposed growth of the study area, these current form

district designations no longer seem appropriate. The advisory group reviewed several proposed boundaries for a Regional Center Form District and have identified the recommended district boundaries, shown in Figure 4 and in Exhibit 1, Appendix A.

The official Louisville Metro definition of the Regional Center Form District can be found in Chapter 5; Part 3; Section 3 of the Land Development Code (LDC). The LDC description includes the relationship of the Regional Center Form District to the Cornerstone 2020 comprehensive plan goals and objectives as well as intent and applicability and dimensional standards. Section 5.3.3 of the LDC is included in Appendix C.

Connectivity

One of the benefits of a regional center is a high level of multi-modal connectivity. Upon review of similar projects, the minimum number of recommended connections to provide access outside the boundary to an external roadway, or to a collector level roadway or greater within the form district boundary is one connector per every 20 to 30 acres. A tool that can be utilized to gauge the connectivity of a given area is the Street Connectivity Index. This index results from the number of street links divided by the number of nodes (intersection and dead ends) in a particular area. The higher the connectivity index, the more connected the road network. A connectivity index of 1.40 is a reasonable standard to ensure a connected roadway network. For more information on connectivity index standards, the *Street Connectivity Zoning and Subdivision Model* Ordinance from KYTC is included in Appendix C.

Table 3 describes the Community Form Recommendations.

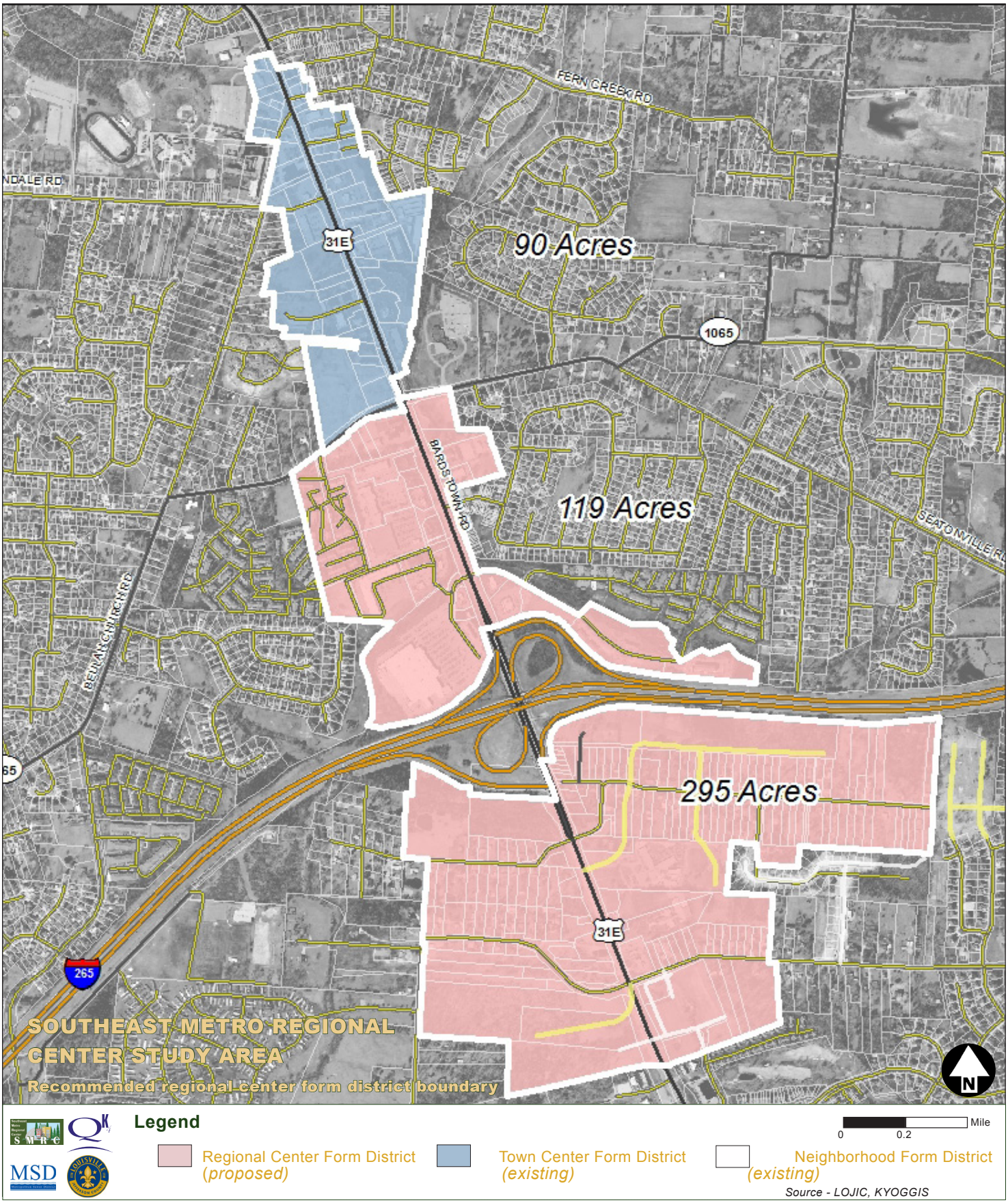

Figure 4: Recommended Regional Center Form District Boundary

(Exhibit 1, Appendix A)

Table 3: SMRC Planning Study Community Form Recommendations

Number	Community Form/Land Use Recommendation Description (CF)	Responsible Parties	Timeframe
CF-1	Designate as a Regional Center Form District (RCFD) the specified area indicated on the Recommended Regional Center Form District Boundary (Exhibit 1, Appendix A).	PDS/MC	Short
CF-2	Within the proposed RCFD, apply appropriate design guidelines that promote mixed use, multi-modal streets, and create connections to adjoining residential and commercial properties. RCFD Guidelines are described in Chapter 5 of this report and in Chapter 5, Part 3 of the LDC (included in Appendix C)..	PDS/MC/PO	Short
CF-3	Consider assembling a workgroup to review and revise design standards to provide additional clarity for Centers development. As is currently described in the LDC, few differences exist between RCFD and Suburban Marketplace Corridor (SMC) design standards.	PDS/PW/MC	Short
CF-4	Implement sustainable/green development techniques for new development in the RCFD in accordance with the guidelines and techniques found in the MSD Green Design Manual.	PW/PDS/MC/PO	Continuing
CF-5	Provide adequate way-finding in developments in the RCFD to facilitate pedestrian and bicycle movement throughout.	PDS	Short
CF-6	As parcels are developed and redeveloped in the RCFD, retain mature trees in the site designs as required by Chapter 10, part 1 of the LDC.	PDS	Continuing
CF-7	Review and compare the Complete Street Manual guidelines and the Mobility standards of the Land Development Code. Revise the Land Development Code to include the Complete Streets Manual guidelines and principles.	PDS/PW/MC	Short
CF-8	Consider a Planned Development District (PDD) in conjunction with the Regional Center Form District to promote mixed use and consistent design of development and to implement the recommendations of this study. Any consideration of a PDD will involve working closely with affected property owners.	MC/KYTC/ED/PO	Short

6.0 PLAN IMPLEMENTATION

6.1 Introduction

Through a comprehensive planning effort of the Louisville Metro Planning and Design Services staff, Qk4 (the planning consultant) and the project advisory group, the *Southeast Metro Regional Center Planning Study* reflects the work of several months of meetings, public input, and collective discussions. The recommendations outlined in this chapter are based on site evaluations, past trends, future plans, and the input of stakeholders and residents. The recommendations are framed in the formats of three particular categories appropriate to the planning document: Cornerstone 2020/Land Development Code (LDC), Mobility Improvements, and Policy Recommendations. Once adopted by the Metro Council, many of the plan recommendations are intended to supplement Cornerstone 2020 and the Land Development Code, and guide future decisions relevant to development and transportation within the SMRC study area.

6.2 Project Recommendations

Upon adoption of the plan by Louisville Metro, the recommendations contained herein will be implemented through the cooperation of various public agencies and private entities. Implementation will require the continuing commitment of these various public agencies, stakeholders, local residents, private businesses, and the Louisville Metro Council. The recommendations are divided into three categories: Cornerstone 2020/Land Development Code, Policy revisions, and Mobility Improvements. Each recommendation includes a brief description, agencies/parties responsible for implementation, and the probable timeframe for the recommendation. The basic timeframes for implementation are:

Short-Term	Within the next 1-5 years
Medium-Term	Within 5-10 years
Long-Term	More than 10 years
Continuing	No particular time frame - *implementation is appropriate whenever possible*

Responsible Parties

PO	**Property Owner**
MC	**Metro Council**
PDS	**Metro Planning and Design Services**
PW	**Metro Public Works and Assets**
MP	**Metro Parks**
EGI	**Metro Economic Growth and Innovation**
TARC	**Transit Authority of River City**
KYTC	**Kentucky Transportation Cabinet**
KEDFA	**Kentucky Economic Development Finance Authority**

Table 4: SMRC Planning Study Community Form, Policy, & Mobility Recommendations

Number	Community Form/Land Use Recommendation Description (CF)	Responsible Parties	Timeframe
CF-1	Designate as a Regional Center Form District (RCFD) the specified area indicated on the Recommended Regional Center Form District Boundary (Exhibit 1, Appendix A).	PDS/MC	Short
CF-2	Within the proposed RCFD, apply appropriate design guidelines that promote mixed use, multi-modal streets, and create connections to adjoining residential and commercial properties. RCFD Guidelines are described in Chapter 5 of this report and in Chapter 5, Part 3 of the LDC (included in Appendix C).	PDS/MC/PO	Short
CF-3	Consider assembling a workgroup to review and revise design standards to provide additional clarity for Centers development. As is currently described in the LDC, few differences exist between RCFD and Suburban Marketplace Corridor (SMC) design standards.	PDS/PW/MC	Short
CF-4	Implement sustainable/green development techniques for new development in the RCFD in accordance with the guidelines and techniques found in the MSD Green Design Manual.	PW/PDS/MC/PO	Continuing
CF-5	Provide adequate way-finding in developments in the RCFD to facilitate pedestrian and bicycle movement throughout.	PDS	Short
CF-6	As parcels are developed and redeveloped in the RCFD, retain mature trees in the site designs as required by Chapter 10, part 1 of the LDC.	PDS	Continuing
CF-7	Review and compare the Complete Street Manual guidelines and the Mobility standards of the Land Development Code. Revise the Land Development Code to include the Complete Streets Manual guidelines and principles.	PDS/PW/MC	Short
CF-8	Consider a Planned Development District (PDD) in conjunction with the Regional Center Form District to promote mixed use and consistent design of development and to implement the recommendations of this study. Any consideration of a PDD will involve working closely with affected property owners.	MC/KYTC/ED/PO	Short

Number	Policy Recommendation Description (P)	Responsible Parties	Timeframe
P-1	Provide and adopt a financial incentive program such as a Tax Increment Financing District (TIF) to fund future mobility enhancements as development occurs (see further examples in Appendix C).	PO/PDS/PW/ EGI/MC/KEDFA	Continuing
P-2	Provide shuttle service in and around the Regional Center development and coordinated with TARC facilities within the current and future Regional Center developments as and where appropriate.	PO/PDS/PW/ TARC	Continuing

Number	Mobility Recommendation Descriptions (M)	Responsible Parties	Timeframe
M-1	Incorporate into the plan the network improvements (connectors and facility rebuilds) indicated on the Proposed Roadway Network Improvements and Descriptions (Exhibit 3, Appendix A) and in the following Table 2A for M-1 subset of roadway improvement descriptions.	PDS/PW/KYTC	Short-Long
M-2	Evaluate for improvements the following four (4) Bardstown Road intersections for safe and efficient bike/pedestrian accommodations (sidewalk connections, countdown pedestrian signalization for every direction, pedestrian refuge islands): Cedar Look, Brentlinger Lane, Colonel Hancock, and Glenmary Farm Drive.	PW/KYTC	Short
M-3	Construct sidewalks on the east side of Bardstown Road from future Southpointe Boulevard to Brentlinger Lane.	PDS/PW	Short
M-4	Construct sidewalk connection on the east side of Bardstown Road from existing sidewalk stub near Captain Place, southbound to Glenmary Farm Drive.	PW/KYTC	Short
M-5	Require sidewalk connection on the west side of Bardstown Road from the future intersection of Southpointe Boulevard to the existing sidewalk stub at Ichabod Drive (Thornton's Gas Station) as further development occurs.	PDS/PW	Medium-Long
M-6	Consider sidewalks on Brentlinger Lane (to be compatible with future Brentlinger widening) from Bardstown Road to future Mahoney Park.	PW	Short
M-7	Evaluate the need for two (2) I-265 Pedestrian Bridge crossings at Johnson School Road and at the Southpointe Commons RCFD as development occurs. Also consider a Pedestrian Bridge crossing at Bardstown Road near Southpointe Boulevard. Cost estimate per pedestrian bridge is $800,000.	PDS/PW/KYTC	Medium-Long
M-8	Consider the incorporation of sidewalks in the I-265/Bardstown Road interchange redesign. Current KYTC interchange plans do not include sidewalks.	PDS/PW/KIPDA/KYTC	Short-Medium
M-9	Establish Old Bardstown Road as the preferred north/south bike route with lanes and signage.	PDS/PW	Short-Medium
M-10	Establish Cedar Creek Road/Brentlinger Lane/Seatonville Road as the preferred east/west bike route with lanes and signage.	PDS/PW	Short-Medium
M-11	Coordinate with TARC to establish a transit stop on Bardstown Road at or near Wal-Mart.	PDS/PW/TARC	Short
M-12	Coordinate with TARC to provide continuous Bardstown Road service from Mt. Washington. Establish a Park & TARC near Bardstown Road between Mt. Washington and Thixton Lane.	PDS/PW/TARC	Short-Medium

M2 - M11 Recommendations are illustrated on Exhibit 2, Appendix A
M1 - Subset Recommendations are illustrated in Exhibit 3, Appendix A

Table 4A: SMRC Planning Study Proposed Roadway Network Improvements, Mobility (M1 Subset) Recommendations*

M 1	Connector Recommendation Description	Responsible Party	Timeframe
M1-1	Connector on new and existing alignment between Beulah Church Road and Bardstown Road. This I-265 frontage road to use existing alignment on Bartley Drive and Rocky Lane.	PDS/PW/PO	Medium-Long
M1-2	Cedar Creek Road extension on new and existing alignment to provide a continuous connection between Beulah Church Road and Bardstown Road.	PDS/PW/PO	Short
M1-5	Connector between Fairmount Road/Gentry Lane to Eli Drive/Hunting Stock Place.	PDS/PW/PO	Development Driven
M1-6A	North/South Connector at Broadwood Drive stub to future Ichabod Drive Extension (6B).	PDS/PW/PO	
M1-6B	East/West Ichabod Drive Extension to Cedar Creek Road.	PDS/PW/PO	
M1-6C	North/South Connector from Ichabod Drive Extension to Cedar Creek Road.	PDS/PW/PO	
M1-6D	North/South Connector from Cedar Creek Road to tie into Bardstown Road at future Southpointe Commons Boulevard Intersection.	PDS/PW/PO	
M1-6E	North/South Connector from Cedar Creek Road to Bartley Drive.	PDS/PW/PO	
M1-7	Future Southpointe Commons Development North/South Access Road "A" Extension to intersect with Brentlinger Lane and continue south to connect to existing stub at Kohl's development. Detailed construction cost estimate, plan and profile for extension from planned stub to Brentlinger Lane only is included in Appendix A.	PDS/PW/PO	
M1-8A	Widen Brentlinger Lane to three lanes with bicycle/pedestrian accommodations from Bardstown Road to Billtown Road.	PDS/PW/MP/ PO/KYTC	Short-Medium
M1-8B	Rebuild the Brentlinger Lane/Seatonville Road/Broad Run Road Intersection.	PDS/PW/MP/ PO/KYTC	
M1-8C	Rebuild the Brentlinger Lane/Seatonville Road/Billtown Road Intersection.	PDS/PW/PO/ KYTC	
M1-10	North/South Connector between Reeseman Road in Chism Trail Subdivision and Wingfield Road.	PDS/PW/PO	Development Driven
M1-11	North-South connector between the future Cooper Chapel Road to Cedar Creek Road.	PDS/PW/PO	Long
M1-12	Connector between Fairmount Road to Seatonville Road; thereby providing an alternate for traffic transitioning from Bullitt County to the Billtown Road/I-265 interchange. This link would also provide a connection for the proposed subdivisions of Glenmary Ridge and Broad Run Estates.	PDS/PW/PO	Development Driven
M1-13	Rebuild Old Bardstown Road to three lanes with bicycle/pedestrian accommodations from Hillock Drive to future terminus with Cooper Chapel Road Extension (Louisville Loop).	PDS/PW/PO	Medium-Long
M1-14	Evaluate the need for Right-Turn Lanes for northbound Bardstown Road at the following intersections: Long Home Road, Glenmary Farm Drive, Captain Place, and Colonel Hancock Drive.	PW/KYTC	Short
M1-15	Consider a signal/sign warrant analysis at the intersection of Beulah Church Road and Fern Creek Road. Currently a yellow flashing caution signal condition exists at this intersection.	PW	
M1-16	Evaluate the signal timing on Bardstown Road in and surrounding the study area.	PW/KYTC	

*** These recommendations are illustrated in Exhibit 3, Appendix A, followed by a version of this table that includes project ranking and planning level cost estimates**

6.3 Work Plan

The work plan below establishes a process to implement the framework of ideas developed within the SMRC Planning Study. This framework provides guidance on the issues outlined during the study process. The following work plan outlines the major issues to be reviewed through the cooperation of various public agencies and private entities. Implementation will require the continuing commitment of these various public agencies, stakeholders, local residents, private businesses, and the Louisville Metro Council.

- Identify the boundaries and characteristics with consideration of a Planned Development District (PDD) within the Regional Center Form District.
- Establish a Tax Increment Financing (TIF) District to provide public infrastructure funding within the RCFD.
- Assemble a workgroup to review existing RCFD development standards in the LDC and make recommendations to further highlight differences from existing Suburban Marketplace Corridor development standards.

Identify, adopt and incorporate into the Land Development Code:

- the guidelines from the complete streets manual
- signage and wayfinding guidelines to be utilized within the regional center form district