LOUISVILLE METRO EASTERN THOROUGHFARE PLAN

FINAL DRAFT DECEMBER 2008
21st CENTURY PARKS
Putting nature back into neighborhoods

LOUISVILLE METRO
EAStERN THOROUGHFARE PLAN

FINAL DRAFT
DECEMBER 2008

Prepared for
LOUISVILLE METRO

Prepared by
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1.0 Introduction

1.1 Purpose

The purpose of the Louisville Metro Eastern Thoroughfare Plan (Eastern Thoroughfare Plan) is to identify and plan to meet short-term, medium-term and long-range transportation needs in a primarily rural area where controlled development and the protection of natural resources are seen as mutually attainable goals.

Many changes in land use and infrastructure are planned, underway, or recently implemented in the Eastern Thoroughfare Plan study area (see Figure 1). Because of local government’s commitments to land use planning and intense focus on this unique area by several local organizations, these changes are both altering and preserving the area’s character. While suburban developments replace pastoral settings in some locations, plans for a greenway system along Floyds Fork will ensure park and recreational trail status for several thousand acres of streams, woodlands, and meadows.

All of these changes have an effect on the existing roads and will require an improved roadway network, including improvements to existing roads and new road corridors. This Eastern Thoroughfare Plan was undertaken to identify these transportation needs and recommend a transportation network that is complementary of ongoing planning and development activities in the area. To accomplish this task, the Eastern Thoroughfare Plan Project Team was assembled. The team was coordinated by Q4, Inc., and involved agencies and organizations having specific interest in or expertise relating to the study area. The Project Team included the following:

- Louisville Metro Public Works
- Louisville Metro Planning and Design Services
- Louisville Metro Parks
- Louisville Metro Economic Development
- Louisville Water Company (LWC)
- Metropolitan Sewer District (MSD)
- Kentuckiana Regional Planning and Development Agency (KIPDA)
- Kentucky Transportation Cabinet (KYTC)
- 21st Century Parks, Inc.

Two significant planning studies are ongoing in the study area:

- Louisville Metro Planning and Design Centers Study to identify future town and economic centers in the study area.
- Floyds Fork Greenway Master Plan, being prepared by Wallace Roberts & Todd to plan for a system of interconnected parks and trails along a 27-mile stretch of Floyds Fork. Over 3,000 acres of land has been assembled, by purchase or donation, toward Future Fund, Metro Parks, and by 21st Century Parks, Inc., the organization founded with the goal of obtaining land and developing the parks/greenways system for both active and passive recreational uses. Federal and private funds totaling more than $60 million have aided in this effort.

The vision for the Eastern Thoroughfare Plan is to provide a roadway network that meets the needs of the future travel demands, is coordinated with other infrastructure improvements, enhances the future land use—most notably the Floyds Fork Greenway Park—and complements the natural topography and setting of the study area.

Coordination with the Floyds Fork Greenway Master Plan (Master Plan) has been a key element of this planning process. The parks themselves, coupled with the recently extended and enhanced water and sewer services, will generate significant land use changes. Indeed, the development of the park system and implementation of the infrastructure improvements is expected to lead to significant increases in the number of proposed residential developments within the study area. These land use changes surrounding the park and the anticipated demand for travel to the park necessitated the coordinated thoroughfare planning effort.

This Eastern Thoroughfare Plan includes a description of existing conditions in the study area (Chapter 2.0), a review of design guidelines that should be considered in the implementation of the Eastern Thoroughfare Plan (Chapter 3.0), the Eastern Thoroughfare Plan recommended roadway network (Chapter 4.0), and a Road Safety Audit of the major, existing public roads in the study area (Chapter 5.0).

1.2 Study Area

The study area for the Eastern Thoroughfare Plan is bound on the north by Shelbyville Road (US 60), on the east by the Louisville Metro limit/county line, on the west by the Gene Snyder Freeway (I-265), and on the south by US 31E (Bardstown Road).

The Safety Audit boundary (“Original Study Area” in Figure 1) is within this study area and shares the study area’s boundary lines in the north, east, and west. The south boundary line for the Safety Audit area is just south of Bradbe Road and the extension in a western direction to the Snyder Freeway.

Figure 1: Eastern Thoroughfare Plan Study Area
The original study area boundary was that of the Safety Audit area. The Study Area Boundary was subsequently expanded in a southwestern direction to Bardstown Road so the corridor planning and modeling would match the Floyds Fork Greenway Master Plan area.

The original study area encompassed approximately 34 square miles, and the expanded boundary encompasses an additional 31 square miles. The communities of Eastwood and Fisherville are within the original study area, and Fern Creek is within the expanded study area. Floyds Fork (Figure 2, top picture), one of the key natural features of the area, bisects the study area and flows from north to south.

1.3 Background / Project History

The land use patterns of the area are changing today as public water and sewers become available and spur development, while, concurrently, thousands of acres of land are being obtained along Floyds Fork for dedication to the parks/greenways uses being determined in the Master Plan. These changes in land use patterns necessitate changes in the transportation system to keep up with the projected increased travel demands.

The Floyds Fork area is one of the most exceptional natural greenway corridors within the Louisville Metro area. To safeguard this corridor an ambitious plan has been formulated by the Mayor, the Metro Council, 21st Century Parks, Future Fund, and Louisville Metro Parks. The vision of these community leaders is to preserve this natural resource for future generations and to create a series of parks and open spaces that will protect the unique natural asset while providing a recreational focal point for the area. Community planners in our country have long recognized the importance of park planning and development, and the Floyds Fork planning efforts reflect many of the tenets presented by such pioneers as Frederick Law Olmsted, who...

...set forth an ambitious agenda to provide every American with access to public open space. That agenda included public acquisition of huge amounts of land for public parks, parkways, playgrounds, nature preserves, and integration into regional park systems. For developing suburban areas, he advocated setting houses back from tree-lined streets on open landscaped lots. The trees gave the houses a modicum of privacy and provided the streets and sidewalks with shade and a more natural appearance, thereby making these public spaces more pleasant for people walking or riding by.

This visionary call for parks and open spaces resonates today in the planning now underway for Floyds Fork. The Master Plan will provide for two extensive public parks along Floyds Fork and will include an over 1,100-acre tract that will become the largest park in the Louisville Metro system. This largest park will consist of recreational trails for bicyclists and walkers, as well as unpaved paths for hikers and horseback riders. There will be canoe launching sites, scenic vistas, nature preserves, and recreational fields for sports-related activities.

Accessibility to and from this extensive new park system is critical for the future success of the park. The roadway system must be designed to allow people to reach the park, must provide for interface with the park’s interior road system, and must facilitate access through or around to the “other side” of the park.

The intense focus on this area—due to growing development pressures coupled with the desire to preserve and manage for recreation the unique natural resources along Floyds Fork—creates an opportunity to properly manage growth by assuring that an appropriate transportation network is in place or planned prior to the approval of new subdivisions and the construction of new homes. The Eastern Thoroughfare Plan is the first step in the ambitious effort to meet critical park system access needs and to aid in managing the growth of the surrounding area.

Figure 2: Floyds Fork Scenic Vistas

In the Eastern Thoroughfare Plan Study area, ridgeline and valley views include Floyds Fork (top); a two-lane roadway through the valley (center); and a view across farmland, the predominant land use in the area (bottom).
2.0 Existing Conditions

2.1 Demographics

The bulk of the Eastern Thoroughfare Plan study area lies in two census tracts: 116.01 and 116.02. Year 2000 populations for these two census tracts are 3,085 and 4,940, respectively.

2.2 Land Use

Land use in the study area over the last few years has been transitioning from rural residential/agricultural/undeveloped to suburban residential.

Most of these suburban residential developments are located throughout the study area, but concentrated along Shelbyville Road (US 60) and Taylorsville Road (KY 148/KY 155). More intense land use, including multi-family developments and a commercial area, have been proposed and a commercial area, have been proposed and approved within the larger Eastwood area along Shelbyville Road (US 60).

Within the interior of the study area (i.e., excluding the Shelbyville Road (US 60) and Taylorsville Road (KY 148/KY 155) corridors), existing land uses are primarily single-family residential subdivisions; rural residences on scattered sites; and a combination of open, undeveloped agricultural land and forest.

Some crop and pasture land is present and there is one small industrial area off English Station Road in Fisherville, just north of Taylorsville Road (KY 148/KY 155) and the Norfolk Southern railroad. The Floyds Fork and Long Run floodplains and the land use in the east, within and near Shelby County, account for the majority of the less intensive, rural land uses. The planned Floyds Fork park and trail system has included deed restrictions that acquired land will remain in parkland use in perpetuity.

It is anticipated by Louisville Metro that the land use will continue the trend of suburban development. This assumption is based on the existing zoning, which is mostly R4 (approximately four houses per acre), the recent expansion of the sewer service in the area (especially the expansion of the Floyds Fork Wastewater Treatment Plant located just south of I-64), and the amenities from the planned park lands.

The Kentucky Transportation Cabinet (KYTC) is currently planning a new interchange with I-64 and a new north-south connector road, which is also a contributing element in the forecasting growth, as well an important element to meet the transportation demand from the future growth.

The Jefferson County land use elements in the study area are illustrated on Exhibits 1 and 2, pages 6-8.

Shelby County’s plan is for future growth to be concentrated around existing urbanized areas. Growth is to be contained within an Urban Service Boundary, which is a 2-mile fringe around Simpsonville and Shelbyville.

The growth trend in Spencer and Bullitt counties has been relatively high, and that trend is expected to continue. According to U.S. Census data, Spencer County was the 18th fastest growing U.S. county with 10,000 or more population in 2006.

2.2.1 Communities

There are two small communities in the original study area: Eastwood and Fisherville. The community of Eastwood is located in the northern section of the study area and centered on Shelbyville Road (US 60) in the vicinity of the Gilliland Road and the Eastwood-Fisherville Road intersections. The community of Fisherville is located south of Eastwood in the vicinity of the intersection of Taylorsville Road (KY 148/KY 155) and Eastwood-Fisherville Road. In the south, as part of the expanded study area, the community of Fern Creek is located along US 31E, Bardstown Road. (See Exhibit 2.)

2.2.2 Floyds Fork Development Review Overlay (DRO)

The “Land Development Code” (LDC)—which contains form district and zoning district regulations that operate in tandem with Louisville Metro’s Cornerstone 2020 Comprehensive Plan—protects the Floyds Fork corridor as a Special District due to its unique and valuable natural character. The district, referred to as the Floyds Fork Development Review Overlay (DRO), encompasses an area that includes Floyds Fork and its major tributaries. (See Exhibit 1.)

2.2.3 Form Districts

Nearly all of the study area is in a Cornerstone 2020 Neighborhood Form District. The only non-Neighborhood Form District is in and surrounding the community of Eastwood. Eastwood is a Village Form District, which is centered on a mixed-use Village Center.
2.2.4 Zoning

The majority of land in the study area is zoned residential, primarily R4. There are pockets of industrial (M2) and commercial (C1, C2) uses in the vicinity of the intersection of Taylorsville Road (KY 148/KY 155) and KY 148, and some commercial uses can be found in the communities of Eastwood and Fisherville. (See Exhibit 1.)

2.2.5 Parks

Existing and future parks are important features of the local vision for this study area. Four publicly owned parks in the study area (see Exhibit 1) were identified:

- Eastwood Park (about 5 acres) is located south of Eastwood Cutoff Road on the east side of Eastwood.
- William F. Miles Park (about 130 acres) is adjacent to Floyds Fork, just south of Shelbyville Road (US 60). Miles Park provides canoe access to Floyds Fork.
- Floyds Fork Park (about 102 acres) is located south of Old Taylorsville Road. It will be an integral part of the future park area along Floyds Fork.
- Fisherman’s Park (about 65 acres) is located at Old Heady Road, just east of I-265 and features 8 lakes for fishing.

Tyler Schooling Property (about 284 acres) is a conservation area set aside for future development as parkland. It is located at 15601 Deer Run Road.

Each of these parks will be linked and included within the Floyds Fork linear park system.

2.3 Utilities

The Eastern Thoroughfare Plan study area is served by the Louisville Water Company. Service is currently for low density development with low water pressure. Appendix B consists of a map of the existing water conditions and the purposes of the transportation plan and a description of how the transportation plan would affect the Louisville Water Company CIP plans. However, most of the study area is not served by a sewerage system. Sewer service extends just slightly to the east of I-265 in the area south of I-64. In the area north of I-64, sewer service extends to nearly the county line. Through most of the study area east of I-265 and south of I-64, sewer service is virtually non-existent. MSD is currently evaluating alternatives for expansion of the present system in order to serve this study area in the future.

2.4 Transportation System

The following sections describe the current status of the surface transportation system in the Eastern Thoroughfare Plan study area. It should be noted that no transit services exist in this portion of Louisville Metro; therefore, it is not addressed herein. The transportation elements described herein are illustrated on Exhibits 3, and 4. Exhibit 3 shows the existing transportation network and functional classifications of all roadways within the study area. Exhibit 4 shows committed and planned transportation projects in the study area.

### 2.4.1 Traffic Volumes, LOS, Interstates, Arterials, and Collectors

Existing traffic volumes for year 2006 were provided by KYTC, Division of Planning. Table 1 summarizes the existing No-Build traffic volumes for the study area roads. Included are the Average Daily Traffic (ADT) and the Level of Service (LOS) figures for 2006.

#### Table 1: Summary of Existing No-Build Traffic Volumes

<table>
<thead>
<tr>
<th>Begin Route (MP)</th>
<th>End Route (MP)</th>
<th>2006 Existing ADT</th>
<th>LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i-265 (18.9)</td>
<td>Jefferson C/L</td>
<td>50,000</td>
<td>D</td>
</tr>
<tr>
<td>I-265</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KY 155 (23.1)</td>
<td>I-64 (25.5)</td>
<td>34,000</td>
<td>C</td>
</tr>
<tr>
<td>i-64 (25.5)</td>
<td>US 60 (26.8)</td>
<td>49,000</td>
<td>C</td>
</tr>
<tr>
<td>US 60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i-265 Ramp (12.0)</td>
<td>Wickfield Drive</td>
<td>28,000</td>
<td>C</td>
</tr>
<tr>
<td>Wickfield Drive</td>
<td>(13.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring Drive</td>
<td>(14.6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring Drive</td>
<td>Eastwood CutoffRoad (14.7)</td>
<td>15,000</td>
<td>A</td>
</tr>
<tr>
<td>Eastwood Cutoff</td>
<td>Jefferon C/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road (14.7)</td>
<td>(17.4)</td>
<td>9,000</td>
<td>D</td>
</tr>
<tr>
<td>KY 148 (5.0)</td>
<td>I-64 (8.1)</td>
<td>500</td>
<td>A</td>
</tr>
<tr>
<td>i-64 (8.1)</td>
<td>US 60 (9.1)</td>
<td>500</td>
<td>A</td>
</tr>
<tr>
<td>KY 155</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jefferson C/L</td>
<td>KY 148 (4.3)</td>
<td>15,100</td>
<td>E</td>
</tr>
<tr>
<td>KY 148</td>
<td>I-265 (6.1)</td>
<td>16,000</td>
<td>E</td>
</tr>
<tr>
<td>KY 155 (0.0)</td>
<td>Jefferson C/L</td>
<td>2,000</td>
<td>C</td>
</tr>
</tbody>
</table>

LOS is commonly used to evaluate and describe roadway functions. It is defined as a qualitative measure of operational conditions, and the motorists’ perception of those conditions. The conditions are usually defined in terms such as speed, travel time, maneuverability, delay, and comfort and convenience. The letters “A” through “E” designate the six levels of service. LOS A represents the best operating conditions (i.e., free flow conditions), while LOS F defines the worst (i.e., severe congestion).

The road network in the study area includes significantly more capacity for east-west travel than for north-south travel, with the exception of I-265. I-64 is a 4-lane facility with full access control. Shelbyville Road (US 60), Taylorville Road (KY 148/KY 155), and KY 148 are major arterials that provide east-west travel. North-south travel, however, is by way of the following substandard 2-lane rural roads: Eastwood-Fisherville Road (KY 1531), Beckley Station Road, Echo Trail, Rount Road and portions of English Station Road, minimal passing opportunities, utilities often located adjacent to the travel lanes, and residences offset at various distances.

2.4.2 Railroads

There are two railroad corridors that cross the study area east-west (see Exhibit 3). The Norfolk-Southern (NS) railroad is located in the south, north of and parallel to Taylorville Road (KY 148/KY 155) throughout the study area. The RJ Corman Group railroad is located in the north, south of and parallel to Shelbyville Road (US 60) between Eastwood and Shelby County. At Eastwood, the CSX railroad tunnels under the community, and Shelbyville Road (US 60) and Eastwood Cutoff Road. No passenger service is provided on either railroad.

2.4.3 Crash Analysis

Crash data is always an important factor in the analysis conducted for a transportation planning project. The data can identify not only where crashes are occurring, but also why. The crash data analyzed for this study was from January 2005 through December 2007. The data identified no high crash areas on state roads in the Eastern Thoroughfare Plan study area. Crash data obtained for county roads did not indicate any high crash areas. Crash data is depicted on Exhibit 8.
2.4.4 Planned Transportation Improvement Projects in the Area

The condition of the existing local road network in this area is substandard and has been the subject of concern for many years. After the City of Louisville and Jefferson County merger in 2003, Mayor Jerry Abramson formulated a task force to study and evaluate this issue. The Mayor’s task force, in partnership with the Louisville Homebuilders Association and the Louisville Apartment Association, created a System Development Charge (SDC) for transportation in order to address the most urgent roadway deficiencies. A System Development Charge is a fee imposed at the time a building permit is issued for infrastructure improvements. SDC projects in the study area are as follows:

- Eastwood Fisherville Road (4.9 miles), from KY 148 to US 60
- Wibble Hill Road (0.71 mile), from Poplar Lane to South Beckley Station Road
- Poplar Lane (1.13 miles), from Pope Lick Road to South English Station Road
- Rehl Road (0.37 mile), from South Pope Lick Road to Poplar Lane
- South English Station Road (2.10 miles), from Poplar Lane to Echo Trail
- Brentlinger Lane (1.90 miles), from Bardstown Road to Broad Run Road

In addition to the SDC projects, there are several KYTC highway projects and KIPDA planned highway projects within the study area. KYTC highway projects in the 2008-2012 Six-Year Highway Plan are identified below. Each of these is also included in KIPDA’s Long-Range Plan and Transportation Improvement Program (TIP).

- 05-21.00, Gene Snyder Freeway. Reconstruct the I-265/I-64 interchange. The first phase would be a flyover ramp from northbound I-265 to westbound I-64. Other stages would include a total of four flyover ramps.
- 05-41.00, Gene Snyder Freeway. Reconstruct the I-265/ Shelbyville Road (US 60) interchange to enhance capacity and safety. This would include a triple-left turn from I-265 northbound to Shelbyville Road (US 60) westbound.
- 05-64.00 and 65.01, I-64, Jefferson and Shelby counties. Widen I-64 to 6-lanes from near the Gene Snyder Freeway to the KY 53 interchange at Shelbyville Road (US 60). This project is to be under construction in 2008.
- 05-208.00, Shelbyville Road (US 60). Extend left-turn lane on Shelbyville Road (US 60) at I-265 to improve safety.
- 05-266.00, Gene Snyder Freeway. Reconstruct the I-265/KY 155 interchange to include dual-left turns from I-265 southbound to KY 155 eastbound, as recommended by KIPDA’s interchange study to improve safety.
- 05-8200.00, I-64. Construct new eastern Jefferson County Interchange on I-64, in the vicinity of Gilliland Road.
- 05-8203.00, KY 1819. Reconstruct Billtown Road from I-265 northwest to Fairground Road.

In KIPDA’s Horizon 2030, The Long-Range Transportation Plan for the Louisville (KY-IN) Metropolitan Planning Area, adopted November 29, 2005, by the Transportation Policy Committee, the KIPDA Transportation Planning Division identified the following roadway projects in the study area as regional priorities:

- KIPDA ID # 262, Brentlinger Lane. Reconstruct as a 2-lane road from US 31E (Bardstown Road) to KY 1819 (Seatonville Road).
- KIPDA ID # 283, Fairmount Road. Upgrade as a 2-lane road from US 31E (Bardstown Road) to Broad Run Road.
- KIPDA ID # 474, Urton Lane. Construct a new road and use portions of existing roads to create a parallel road west of and parallel to I-265.
- KIPDA ID # 953, Shelbyville Road (US 60). Widen Shelbyville Road (US 60) from 2 to 3 lanes (third lane will be a center left-turn lane) from Spring Drive to Clark Station Road, approximately 2 miles, to enhance safety and reduce congestion.
- KIPDA ID # 956, KY 155 (Taylorsville Road). Widen KY 155 from 2 to 3 lanes (third lane will be approximately 2 miles, to reduce congestion.
- KIPDA ID # 958, I-265 (Gene Snyder Freeway). Widen I-265 from 4 to 6 lanes from I-64 to I-71, approximately 9.25 miles.
- KIPDA ID # 959, I-265 (Gene Snyder Freeway). Widen I-265 from 4 to 6 lanes from US 31E to I-64, approximately 8 miles.

KIPDA ID # 1507, KY 155 (Taylorsville Road). Reconstruct intersection of KY 155 and KY 148

KIPDA ID #1514, I-265 (Gene Snyder Freeway). Construct a new interchange on I-265 at Rehl Road.

Exhibit 4 shows, by identification number, the above-referenced SCD, KYTC, and KIPDA projects in the Eastern Thoroughfare Plan study area.

Louisville Metro Eastern Thoroughfare Plan Louisville Metro Eastern Thoroughfare Plan Louisville Metro Eastern Thoroughfare Plan Louisville Metro Eastern Thoroughfare Plan
Source Citation

Topographic data, including utilities and imagery and less historic, aquatic and terrestrial courtesy of the Kentucky Office of Geographic Information Systems (KYOGIS) and the Louisville/Jefferson County Information Consortium (LOJIC). Qk4 makes no claim to the accuracy of that data shown on this map.
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**ZONING AND PROPOSED/EXISTING SUBDIVISIONS**

**Louisville Metro Eastern Thoroughfare Plan**

- **Exhibit 1 Sheet 2 of 2**

- **Route**: RT, RD, RD
- **Township**: TAYLORSVILLE LAKE, SEATONVILLE, ROUTT
- **State**: KY
- **City**: JEFFERSON, SPENCER, BULLITT
- **Project Area**: VICINITY MAP

- **ZONING**: COMMERCIAL, NEIGHBORHOOD COMMERCIAL, RESIDENTIAL, LIGHT INDUSTRIAL, MANUFACTURING, OFFICE/RESIDENTIAL, OFFICE/TOURIST FACILITY, PLANNED EMPLOYMENT CENTER, RESIDENTIAL SINGLE FAMILY, RESIDENTIAL MULTI FAMILY
- **DRO**: FLOYDS FORK DEVELOPMENT REVIEW OVERLAY (DRO)
- **Overlay**: METRO PARK, TYLER RURAL SETTLEMENT DISTRICT, FLOYDS FORK/GREENWAY PROPERTY

- **Legend**: EXISTING SUBDIVISION, PROPOSED SUBDIVISION, STUDY AREA
Source Citation:
Topographic data, including utilities and imagery and less historic, aquatic and terrestrial courtesy of the Kentucky Office of Geographic Information Systems (KYOGIS) and the Louisville/Jefferson County Information Consortium (LOJIC). Qk4 makes no claim to the accuracy of that data shown on this map.

FORM DISTRICTS AND PROPOSED/EXISTING SUBDIVISIONS
Louisville Metro Eastern Thoroughfare Plan

Exhibit 2 Sheet 1 of 1

FORM DISTRICTS AND PROPOSED/EXISTING SUBDIVISIONS

The form districts and proposed/existing subdivisions in this map are:

- NEIGHBORHOOD CAMPUS SUBURBAN MARKETPLACE CORRIDOR
- SUBURBAN WORKPLACE TOWN CENTER VILLAGE VILLAGE CENTER
- METRO PARK TYLER RURAL SETTLEMENT DISTRICT FLOYDS FORK GREENWAY PROPERTY EXISTING PROPOSED SUBDIVISION STUDY AREA

Page 8
### 3.0 Design Guidelines

#### 3.1 Introduction

A key goal of the Eastern Thoroughfare Plan is for any new roads or road reconstructions to include consideration of the users’ needs, sensitivity to the character of the area, and understanding of the potential effects of the project(s) on the surrounding environment—in a phrase, “Context Sensitive Design.” This chapter highlights key design elements that should be employed to ensure these goals are met.

The following sections summarize major features of the recently adopted Louisville Metro Complete Streets Manual (Section 3.2.1), and identify Context Sensitive Design (CSD) solutions (Section 3.2.2) that would apply to the study area to be considered along major thoroughfares and at interfaces with the Floyds Fork greenway system now being planned.

#### 3.2 Design Elements

##### 3.2.1 Louisville Metro Complete Streets Manual

In October 2007 Louisville Metro adopted the Complete Streets Manual that establishes as a goal the development of “a multi-modal network that manages the demand for travel and improves the efficiency of the community’s transportation system as envisioned in Cornerstone 2020.” (p.1)

The manual sets forth procedural and technical guidelines for the planning and design of a multi-modal transportation network that responds to users’ current and future needs while remaining sensitive to the context and character of the area and adherence to the design criteria presented in the manual. One of the stated objectives to be achieved is: “New transportation and reconstruction projects shall adhere to design criteria identified within the Complete Streets Manual.” (p.2)

The manual identifies the transportation user groups—pedestrians, bicyclists, transit users, and motorists—and the facilities and policies associated with each. Facility design criteria present guidelines that “are representative of current best management practices for Complete Streets design and bicycle, pedestrian, and motor vehicle facilities.” National, state, and local guidelines are listed that also should be considered in conjunction with those presented in the manual.

As noted in the manual, the area’s character and the functional classification of the roadway(s) determine the “appropriate Complete Street facilities for any given roadway corridor.” (p. 21) A matrix is provided (p. 22) as an aid to identifying appropriate facilities based on character and functional class. A summary of key elements associated with user groups, facilities, policies and design criteria is presented below. See Chapters 3 and 4 of the manual for detailed discussions related to these categories.

#### Table 2: Summary of Key Elements Associated With User Groups, Policies, and Design Criteria

<table>
<thead>
<tr>
<th>User Group</th>
<th>Facilities</th>
<th>Policy</th>
<th>Design Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrians (i.e., afoot / wheelchair)</td>
<td>Sidewalks, paths, shared use paths (multi-use trail), road shoulders</td>
<td>Facilities promoting “safe pedestrian trips for individuals of all ages and abilities.” (p.12)</td>
<td>Accessible curb ramps and pedestrian signals, detectable warnings, widths, interchange crossings, slopes (maximum grades), surface types</td>
</tr>
<tr>
<td>Bicyclists</td>
<td>Road shoulders, wide curb lanes, bicycle lanes, and shared use paths</td>
<td>“Bicycle facilities shall be a part of roadway design and construction along bikeway corridors.” (p. 15)</td>
<td>Widths, lane/path locations, markings and signs, surfaces, parking</td>
</tr>
<tr>
<td>Transit Users</td>
<td>Boarding areas, bus pull-offs, HOV lanes, transit stops, park and ride lots, transit routes</td>
<td>“Transit facilities will be a part of all future roadway improvements and private developments . . . [and] should accommodate people of all abilities . . .” (p.17)</td>
<td>Shelter installation and location, transit stops</td>
</tr>
<tr>
<td>Motorists</td>
<td>Roadway lanes and onroad facilities (e.g., on-street parking)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chapter 6 of the manual calls for the preparation of a Streetscape Master Plan for each new public road or infill/existing road reconstruction project. As the manual notes:

- The Master Plan would provide continuity for the roadway corridor or block face by establishing a plan for:
  - Appropriate bicycle and pedestrian facilities
  - Access management and connectivity
  - Street trees
  - Unified streetscape lighting and furnishings, where required. (p. 52)

##### 3.2.2 Context Sensitive Design (CSD)

Context Sensitive Design is an approach to the development of a project—in this case a transportation project—that considers designs that are in context with the physical setting and preserve scenic, aesthetic, historic, and environmental resources while maintaining safety and mobility. CSD is an approach that considers the total context within which a project will exist. Public input is generally a key feature of CSD.

CSD allows those responsible for implementing transportation projects to balance providing efficient, safe, and cost-effective facilities with being sensitive to the surrounding environment and responsive to community values. The four most essential aspects of all successful Context Sensitive Design projects are as follows:

- Effective decision making and implementation
- Outcomes that reflect community values
- Recommendations that are sensitive to the environmental resources
- Solutions that are safe and financially feasible
The design solution(s) should never be pre-determined, but rather adjusted to fit the particular project. Within the scope of the Eastern Thoroughfare Plan, CSD considerations would include, but not be limited to, the following:

**Examination of Alternatives—**

Chapter 4, herein, addresses the process by which thoroughfare alternatives were identified and the results of the evaluation of alternatives.

**Maintenance of Wildlife Movements and Habitat Connectivity—**

Transportation projects often fragment wildlife habitats and force animals to cross roadways frequently to reach food or shelter. To ensure that wildlife and ecosystems remain healthy, it is necessary to provide connectivity and permeability through what would otherwise become a barrier. One approach to maintaining connectivity between habitats crossed by roadways is by incorporating wildlife crossings into a project’s design. Also known as “eater crossings,” such features can range from simply modifying planned culverts to constructing extensive span bridges over habitat corridors. In this way CSD can help to create roads with fewer impacts on wildlife.

Wildlife crossings are not only beneficial in linking wildlife habitats fragmented by roadways, they have proven successful in reducing animal-vehicle collisions that result in numerous motorists fatalities and injuries as well as a high death toll among wildlife. It is estimated that 1.5 million deer-vehicle collisions occur annually throughout the United States, and each year these crashes cause 29,000 human injuries and at least 200 deaths.

The study area is predominantly rural in nature, with suburban-type residential developments on the rise but still surrounded by wildlife habitat composed of streams—most notably Floyds Fork—open/agricultural fields, and woodlands. Without appropriate planning and a commitment to mitigating impacts, the land development and transportation improvements currently underway and planned for the study area will adversely impact habitats and the wildlife they serve.

Before a new roadway alignment is designed or an existing roadway is redesigned, a study should be undertaken within the larger roadway corridor to identify area wildlife, wildlife habitat and travel/use patterns, and potential locations for and types of wildlife crossings that may be incorporated into each transportation project where the need for such is identified. The effort should be coordinated with the Kentucky Department of Fish and Wildlife Resources.

All wildlife crossing types should be determined and designed considering size, placement, substrate, vegetative cover, moisture, temperature, light, and human disturbance. In addition, consideration should be given to planting unpalatable species near roadways to reduce the likelihood of wildlife attraction. The need for and locations of roadway warning signs and flashers should also be studied as part of this effort.

**Aesthetics—**

From the standpoint of visual appeal from the roads, views from ridgeline vistas and along tree-shaded valley roads would provide motorists with an aesthetically pleasing driving experience. Views of the roads can be enhanced by the use of CSD treatments on bridges, retaining walls, signage, etc., with a focus on materials and designs that complement the pastoral nature of the landscape. The use of CSD may also include, but not be limited to, planting native grasses and wildflowers along roadways, as appropriate, particularly in areas disturbed by construction.

**Lighting—**

Consideration should be given to identifying measures that would prevent/minimize light pollution, including following guidelines from the International Dark Sky Association (www.darksky.org). Such measures could include using full cut-off fixtures to eliminate light spillover, minimal foot-candles, low pressure sodium lighting where possible, etc.

**Water Body Modifications and Drainage—**

The existing and proposed roadways cross numerous drainage ditches and intermittent or perennial streams, including Floyds Fork. Some of these streams will be crossed more than once, and some streams will not be crossed but will be adjacent and parallel to roadways for some of their length. To avoid or minimize impacts to these sensitive resources, CSD solutions may include the following, where appropriate and reasonable:

4.0 Roadway Network Analysis

As stated at the beginning of Chapter 1, the purpose of the Louisville Metro Eastern Thoroughfare Plan is to identify and plan to meet short-term and long-range transportation needs in the study area. Land use and surface transportation are the two key elements taken into account in this study. The relationship between the two is often discussed in planning research, which concludes the two are interdependent—i.e., changes in land use as a result of development warrant improved road networks, which often encourage additional development. Cases proving this relationship are found in nearly every community within the Louisville Metro area. But transportation is not the only infrastructure system that results from and spurs land use changes. Sewer service and potable water are also important factors in identifying potential locations for future development and projecting the resulting transportation needs. Therefore, MSD and LWC were included on the Project Team and their infrastructure expansion plans were taken into consideration. Because the public benefits from coordinated land use, infrastructure, and transportation planning, a collaborative process was implemented for this study, as described below.

4.1 Core Goals of the Roadway Network

To achieve the envisioned plan outcome for the study area, the following core goals were identified to provide focus and guide the decision makers through the road network alternatives analysis.

- Provide for an adequate network of arterial, collector, and local roads to meet future LOS and traffic needs of the area and reduce bottleneck congestion.
- Plan for the responsible, future development of the study area.
- Employ a Context Sensitive Design approach (CSD) in the design and construction of the road network in relation to the existing and future environment.
- Improve safety through improvements to the existing roads and recommendations for future road corridors.
- Promote and maintain the separate, natural identity of the Floyds Fork linear park system. Maintain the park system’s separate identity from the surrounding area via gateways and access management while discouraging non-park-related (i.e., “cut-through”) traffic.

4.2 Overview of Analysis Process

The task of the Eastern Thoroughfare Plan Project Team was to identify the short-term, medium-term and long-term transportation needs and recommend a transportation network that will effectively accommodate the future land uses forecast for the area, and support the ongoing planning and development activities in the area. The proposed road network for the study area must meet the core goals listed in Section 4.1. To accomplish this objective, the proposed road network alternatives were developed based on various land use “growth scenarios” established by Louisville Metro Planning and Design Services as part of this thoroughfare planning effort. These scenarios are described below.

4.2.1 Proposed Land Use Scenarios

Roadway network alternatives were conceived based on the traffic to be generated from six projected growth scenarios produced by the Louisville Metro Planning and Design Services for the study area. These six growth scenarios were identified as Option F1, Option F2, Option F3, Option F4, Option F5A and Option F5B. The Project Team then selected the following three alternatives as having the most potential to be realized, and these three were forecasted for the year 2030:

- **Option F1**: Based on existing Form Districts and an overall low intensity land use. This option results in an estimated saturation population of 56,300 residents with 21,400 households.
- **Option F4**: Based on new Form Districts of medium intensity and with Traditional Neighborhood Form Districts between the Gene Snyder Freeway (I-265) and Floyds Fork. This consists of a special neighborhood district east of I-265, and lower density single family outside I-265. This option results in an estimated saturation population of 89,300 with 35,400 households.
- **Option F5B**: Residential and employment land use based on existing zoning east of I-265 with an average development density approaching the theoretical maximum density of 4.84 dwelling units per acre. This option results in an estimated saturation population of 213,000 with 81,000 households.

The Project Team then identified Options F1 and F4 as best representing what is likely to be the 2030 land use scenario.

4.2.2 Project Team Tasks

The Eastern Thoroughfare Plan Project Team was composed of the following organizations: Louisville Metro Public Works, Louisville Metro Planning and Design Services, Louisville Metro Parks, Louisville Metro Economic Development, LWC, MSD, KIPDA, KYTC District 5, and 21st Century Parks. The Project Team’s primary goal was to identify transportation corridors for the study area that would meet the goals described in Section 4.1, based on the land use scenarios in Section 4.2.1. Following a kick-off meeting February 19, 2007, five additional Project Team meetings were held: April 16, June 18, August 20, October 15, and December 17, 2007.

Beginning early in the process, the Project Team was divided into three sub-committees. The member affiliations of each subcommittee are as follows:

**Sub-Committee #1**: Louisville Metro Planning and Design Services, Louisville Metro Public Works, Louisville Metro Parks, MSD, 21st Century Parks, and KYTC

**Sub-Committee #2**: Louisville Metro Planning and Design Services, Louisville Metro Public Works, Louisville Metro Parks, MSD, KIPDA, 21st Century Parks, and KYTC

**Sub-Committee #3**: Louisville Metro Mayor’s Office, Louisville Metro Planning and Design Services, Louisville Metro Public Works, Louisville Metro Economic Development, MSD, KIPDA, 21st Century Parks, and KYTC

These working groups were charged with identifying future roadway corridors via a context sensitive approach. This was accomplished by reviewing the existing conditions; conducting field investigations; evaluating the major stream crossing locations; and reviewing land use scenarios, traffic forecasts, and existing plans. The subcommittees also identified specific roadway design elements that could be incorporated into CSD recommendations.

The Project Team had specified that the park system should have enhanced gateways leading into the parks and setting the tone and character of the destination. These gateways should serve as a primary...
means of promoting and maintaining a separate park identity (per core goal) while providing for effective traffic management throughout the area.

These critical park access points should be linked to the regional arterial road network, and through traffic in the area should be routed around the park system; use of park roads by “cut-through” traffic should be discouraged.

4.2.3 Project Team Findings

Toward the end of the process each subcommittee provided detailed suggestions on the future of the transportation network in the Floyds Fork study area based on a broad range of screening factors, including topography, land use, steep slopes, environmentally sensitive areas, and parklands.

The subcommittees’ recommendations are listed below:

Sub-Committee #1—

- The parks should be accessed through a combination of enhanced radial arterial parkways (i.e., Shelbyville Road (US 60), Taylorsville Road (KY 148/KY 155), Billtown Road, Bardstown Road, etc.) and improved collector level roadways (i.e., Brentlinger Lane, Gellhaus Lane, South English Station Road, etc.).
- The parks should be encircled with a series of scenic byways that consist primarily of enhancements to many of the existing 2-lane, rural roads in the area.
- Consideration should be given to using the existing Broad Run Road Bridge to access Fairmount Road and Bardstown Road.
- The Gilliland Road extension over Floyds Fork should be for pedestrian and bike traffic, only; motorized vehicular access should be prohibited.

Sub-Committee #2—

- An outer beltingway along the Rount Road alignment should be constructed.
- The outer beltingway should consist of 5 lanes from Shelbyville Road (US 60) to Taylorsville Road (KY 148/KY 155) and then be reduced to a 2- or 3-lane facility as the route continues in a southerly direction.
- There should be a new connection over Floyds Fork at Gilliland Road. This connection would provide access to the active recreational areas, including the planned soccer fields on the current sod farm.
- Old Heady Road should be extended from Fisherman’s Park, across Floyds Fork, to Thurman Lane.
- A connection over Floyds Fork from Broad Run Road/Fairmount Road to Bardstown Road was favored. A connection to the existing Broad Run Road Bridge (if feasible) would be an acceptable alternative.

Sub-Committee #3—

- Right-of-way should be preserved. Arterial radial parkways should be created to make it easier to reach the Floyds Fork corridor.
- Once the parks are accessed there should be careful design consideration given to how these internal park roads are integrated into the park (cut through traffic should be discouraged).
- A by-pass road for “cut-through” traffic should be created both between I-265 and Floyds Fork, and between Floyds Fork and the Louisville Metro line (an inner and outer beltingway should be part of the long-range transportation plan).
- The concept of created scenic byways around the parks was endorsed.
- Additional connections across Floyds Fork should occur at Fairmount Road, Old Heady Road, and Gilliland Road.
- The overall design of roads should be considered critical, and the principles of Context Sensitive Design should be applied.

4.2.4 Water and Wastewater Infrastructure

LWC and MSD coordinated their long-term infrastructure plans as they relate to the land use scenarios (Options F1, F4, and FSB). These plans were taken into consideration by Louisville Metro Planning and Design Services while the land use scenarios were prepared. The MSD and LWC plans are summarized below:

- MSD prepared future flow projection assumptions that were based on known developments, vacant land, and “medium” population densities. Existing infrastructure capability was identified in relation to MSD service zones. Specifically, the existing Floyds Fork Wastewater Treatment Plant is expected to reach capacity by the year 2010. To address this issue, MSD has begun planning for expansion that will increase the plant’s capacity from 3.25 million gallons per day (MGD) to 6.25 MGD. This planned expansion is a critical element in the determination of land use scenarios, and the transportation network to support it.

LWC’s plans are in accordance with the supply standards of rural vs. urban water supply systems as they relate to the study area. The existing water lines were designed and constructed based on Cornerstone 2020 land use projections, which do not assume development that is more intense than rural neighborhood (the predominant existing land use). However, if the demand increases, LWC will respond to the area’s needs.

4.2.5 Land Use and Transportation Analysis

KIPDA is the regional Metropolitan Planning Organization (MPO) and therefore responsible for maintaining the travel demand forecasting model for the MPO (or 5-county) region and Louisville Metro, including the study area. In the KIPDA travel demand forecasting model, the key variables are the land use and socioeconomic data, and the existing and future transportation network. For this study, KIPDA analyzed the various land use scenarios for year 2030 and socioeconomic data projections provided by Louisville Metro Planning and Design Services. This required updating the 12 Traffic Analysis Zones (TAZs) that are included within or are adjacent to the study area. The urban service areas and land use types of Shelby and Spencer counties were also analyzed to show relation to the study area.

KIPDA ran the model for the Base year (2000) and three scenarios: low intensity (Option F1); medium density—more dense between Floyds Fork and I-265 and lower density to the east of Floyds Fork (Option F4); and higher density both east and west of Floyds Fork (Option FSB). These scenarios include traffic volumes traveling to and from Bullitt, Shelby, and Spencer counties. Appendix A contains KIPDA’s “Travel Demand Forecasting Model” data, referenced below.

KIPDA then added the socioeconomic data to the land use and transportation network projections, which identified density and LOS forecasts for the study area based on the previously mentioned road corridor alternatives. KIPDA studied the 12 TAZs in the study area and applied the household and employment forecast scenarios to determine future traffic volumes and LOS.

Vehicle Miles Traveled (VMT), Vehicle Hours Traveled (VHT), and Regional Delay were identified for the four scenarios for the design year 2030: Base, F1, F4, and FSB. Figures for VMT, VHT, and Delay were the lowest for the Base scenario and increased consecutively, ending with alternative FSB exhibiting the highest figures in each category. The KIPDA presentation also showed the relationship between Horizon
2030 planned projects in the study area and how those will effectively complement this specific project analysis network. The LOS results mirrored the trends shown by the VMT, VHT, and Delay. LOS became problematic as the analysis progressed towards the F5B scenario.

The analysis revealed that, for the overall network, the level of service (LOS) is acceptable at both Options F1 and F4. In addition, there is little difference between Options F1 and F4 in terms of traffic and LOS. The Project Team identified both scenarios as having potential to be realized; therefore, both scenarios were used in the development and evaluation of the road network alternatives.

4.3 Floyds Fork Park Master Plan and Transportation Network Cohesion

Concurrent with this Eastern Thoroughfare Planning process has been the development of a Master Plan for the Floyds Fork linear park system. Coordination between the two has been ongoing, and the common theme of the two is connectivity. “Making the fork one” is one of the visions of the Master Plan, toward which goal a 20-mile-long, north-south-oriented, recreational “Park Road” is proposed to connect the open space along the Floyds Fork park system. The Park Road is illustrated in the exhibit to the right and on Exhibit 9 in the back pocket. The Master Plan recommendation is for this drive to use existing roads where possible. It is also recommended to use a coherent, Olmsted-style “Gateway System” to establish a distinct sense of arrival and departure when entering and exiting the park.

Four gateways are proposed in the vicinities of Shelbyville Road (US 60), Taylorsville Road (KY 148/KY 155), US 31E, and a location to be determined in the Old Heady Road area. “Pods,” or recreation activity centers, are proposed along the 20-mile-long park drive. Several major arterials originating in Louisville and fanning out to the east and southeast are proposed to intersect with the “spine” of the Floyds Fork park drive.

4.4 Recommended Transportation Network

The preferred transportation network for the Eastern Thoroughfare Plan consists of a grouping of an arterial, several collectors, and scenic byways that are compatible with the future Options F1/F4 land use scenarios. Where possible, the network utilizes existing roadways and rights-of-way. The backbone of the network consists primarily of a proposed Inner Connector, which is anticipated to be a 3-lane, north-south collector facility located east of I-265 and west of Floyds Fork, and a proposed Outer Parkway between Floyds Fork and the Louisville Metro line. This Outer Parkway will be on an arterial level with 3- to 5-lane construction. Interconnectivity between the inner and outer corridors and Floyds Fork park system is provided via a system of multi-directional collector corridors and scenic byways.

Figure 4 illustrates the recommended transportation network by classifications—Arterial (blue), Collector (yellow), and Scenic Byway (tan). Figures 5 through 8 show rural typical cross sections, proposed and illustrative. Exhibit 9, “Recommended Transportation Network,” (folded insert) shows the network in greater detail (i.e., enlarged and with road names, the Floyds Fork parks/greenway locations, and other features). The details of this network and its classifications are described on the following pages.

In addition to Louisville Metro, KIPDA, KYTC and FHWA, 21st Century Parks should be a stakeholder in the design of this future roadway network.

Figure 4: Recommended Transportation Network—Illustrative Map
Throughout the recommended transportation network, only one arterial-level facility has been proposed. The need for a facility of this type is only required for north/south vehicular access. The description of the recommended arterial is as follows:

- **Outer Parkway:** This north-south-oriented, 3- to 5-lane arterial between Floyds Fork and the Louisville Metro line connects at Shelbyville Road (US 60) and terminates at the Bullitt-Jefferson County Line. As the Outer Parkway proceeds south from Shelbyville Road (US 60), it interchanges with I-64; intersects with Taylorsville Road (KY 148/KY 155), KY 155, and several of the collector corridors and scenic byways; and terminates at the county line. The interchange and northern portion of this arterial are being advanced by KYTC as Item 5-8200, which is in the Alternatives Planning Phase.
Several multi-directional collector corridors are proposed that provide interconnectivity among the proposed inner and outer corridors, the scenic byways, and the Floyds Fork park system, itself. The corridors are:

- **Inner Connector:** This is a north-south-oriented, 3-lane collector between I-265 and the Floyds Fork park system that joins Shelbyville Road (US 60) with US 31E. As this inner connector proceeds south from Shelbyville Road (US 60), it passes over I-64 as South Beckley Station Road; intersects with Rehl/Pope Lick Road, KY 155, Old Heady Road, Billtown Road; and terminates at US 31E as an improved Brentlinger Lane.

- **Outer Collector:** This north-south collector road connects Shelbyville Road (US 60) to Taylorsville Road (KY 148/KY 155).

- **South English Station Road Connector:** This east-west connector road is the section of South English Station Road between Poplar Lane and Wibble Hill Road.

- **East/West Connector:** This collector road proceeds east from near the Gilliland Road / Echo Trail intersection, connects with the Outer Parkway, and continues east to the Outer Collector.

- **Pope Lick Connector:** This east-west collector road proceeds east from the Inner Connector to South English Station Road (one of the scenic byways). The Pope Lick Connector utilizes the existing rights-of-way of Pope Lick and Rehl Roads.

- **Old Heady Road Connector:** This east-west collector road proceeds east from the Outer Parkway to the Metro/Spencer County line.

- **Gateway Connector:** This east-west collector road proceeds east from US 31E and provides a connection at the park system’s south gateway. Once inside the park, the Gateway Connector turns north to intersect with the terminus of the Outer Parkway.
The scenic byways network provides for low-volume and low-speed travel through the study area. The network of scenic byways provides connections to the collector corridors and the Inner Connector and Outer Parkway, while discouraging traffic cutting through the park. These byways also provide for direct access to the park amenities and the previously described “park drive.” Photos at right illustrate the pastoral nature of scenic byways. Descriptions of the recommended scenic byways in the study area are as follows:

- **South Beckley Station Road**: Connects Shelbyville Road (US 60) with the East/West Connector. It proceeds south from its intersection with Shelbyville Road (US 60) on the west side of Floyds Fork and terminates at its intersection with the East/West Connector. This byway uses much of the existing South Beckley Station Road right-of-way.
- **Wibble Hill Road**: A byway that extends west from the Park Road to South English Station Road.
- **South English Station Road**: Connects the Pope Lick Connector and KY 148. It proceeds south from its intersection with the East/West Connector, connects to the east terminus of the Pope Lick Connector, crosses Floyds Fork, and terminates at KY 148.
- **Gilliland Road**: Connects Shelbyville Road (US 60) with the East/West Connector. It proceeds south from its intersection with Shelbyville Road (US 60) on the east side of Floyds Fork, and then intersects with the East/West Connector, then continues west to the Park Road.
- **Echo Trail North**: The southern continuation of Gilliland Road from its intersection with the East/West Connector. It proceeds south and terminates at an intersection with South English Station Road, north of Taylorville Road (KY 148/KY 155).
- **Old Taylorville Road**: A short, east-west scenic byway that spans Floyds Fork, while paralleling Taylorville Road (KY 148/KY 155) between the Inner Connector and the Outer Parkway.

- **Thurman Road/Echo Trail South**: Proceeds in a south-westerly direction from the Outer Parkway to Floyds Fork, then turns south to terminate at its intersection with Seatonville Road/Brush Run Road.
- **Old Heady Road West/Old Heady Road East**: Connects the Inner Connector and the Outer Parkway, via an intersection at Thurman Road/Echo Trail South. At its intersection with Outer Parkway, Old Heady Road East turns into the Old Heady Road Connector. From the Inner Connector the road extends past I-265 to the future Urton Lane extension.
- **Seatonville Road/Brush Run Road**: Connects the Inner Connector and the Outer Parkway. Proceeding east from the Inner Corridor, Seatonville Road intersects with Billtown Road, and then crosses Floyds Fork, before its intersection with Echo Trail South. It then continues as Brush Run Road to the Outer Parkway.
- **Billtown Road**: A very short byway that provides a connection with the Inner Corridor, as it proceeds in a south easterly direction, to Seatonville Road.
- **Broad Run Road**: Provides a connection, at its intersection of the Inner Corridor and Seatonville Road, to the intersection of the Outer Parkway and the Gateway Connector.

This varied network of collector connectors and scenic byways traverses and provides access to the park system and the park drive, while providing safe and efficient transportation throughout the Eastern Thoroughfare Plan study area and surrounding points.
2003 LOUISVILLE METRO TRANSPORTATION THOROUGHFARE PLAN

PROGRAMMED IMPROVEMENTS - Funding has been committed.
SHORT TERM - Project initiation within 5 years.
MEDIUM TERM - Project initiation in 5 to 10 years.
LONG TERM - Project initiation after 10 years.

SYMBOL LEGEND
- PROPOSED ROADWAY PROJECTS
- FUTURE ROADWAYS
- PROPOSED BRIDGE PROJECTS
- PROPOSED INTERCHANGE STUDIES / IMPROVEMENTS
- PROPOSED AREA STUDIES
- METRO COUNCIL DISTRICTS

2008 LOUISVILLE METRO EASTERN THOROUGHFARE PLAN
5.0 Road Safety Audit (RSA)

FHWA defines a road safety audit (RSA) as “a formal safety performance examination of an existing or future road or intersection by an independent audit team.” An RSA can be conducted during any phase of a transportation project, whether on existing roads or in the planning through construction phases of new roads.

The RSA is a proactive approach to transportation safety—it identifies roadway hazards and recommends improvements to help minimize potential crashes.

As a primary task in the preparation of the Eastern Thoroughfare Plan, Qk4 conducted a road safety audit of 24 existing roadways in the study area (see Figure 9). The RSA included the following steps for each road audited:

- Obtain and review traffic volume and crash data
- Conduct comprehensive and strategic field inspection and road inventory (measuring travel lanes, inspecting drainage structures, verifying signage, etc.)
- Create a pictorial file, and plan and profile sheets
- Assess safety issues/hazards
- Identify priority projects and recommendations

The audit found that many segments of the existing roadway network in the study area are substandard from an operations and safety perspective. A comprehensive conditions review and upgrade of these existing roads have never been conducted; instead, improvements and modifications to individual roads/road sections have occurred on a piecemeal basis over time as funding became available.

Figures 10 through 12 show some of the major problems identified by the RSA:

The audit information is presented by the topics indicated on the RSA Table of Contents (Page 22), as follows:

- Road Safety Audit Data
- Sign Inventory, Exhibit 7, Sheets 1-8
- Crash Data, Exhibit 8
- Cost Estimates

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