I-264 / Manslick Road Interchange

FEASIBILITY STUDY

I-264 between Dixie Highway and Taylor Boulevard
Jefferson County, Kentucky
Item No.: 05-436.00

Final Report

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Prepared for:

Kentucky Transportation Cabinet:
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1.0 INTRODUCTION

1.1 Purpose of the Study

This study evaluates the feasibility of providing a new interchange on I-264 (Watterson Expressway) at KY 1931 (Manslick Road), and examines four possible alternatives for the interchange configuration.

1.2 Project Background

In 1973, when the Kentucky Department of Transportation completed an Environmental Impact Statement (EIS) regarding the widening of the Watterson Expressway, part of the planned improvements evaluated was the construction of a partial interchange at Manslick Road. However, when the Watterson Expressway was widened, this interchange was not included.

The interchange concept has re-emerged in recent years as congestion problems at the Watterson Expressway / US 31W interchange have worsened, see Figure 1.

An interchange at Manslick Road was a high priority to the former City of Louisville. In 2001, the Louisville Development Authority published a report entitled *Seventh Street Road and Manslick Road Redevelopment Land Use Study*, focusing on the area of Manslick and Seventh Street. One of the study's recommendations was the construction of a partial interchange. Selected pages of the 2001 *Redevelopment Land Use Study* is included as Appendix B. (It should be noted that the specific alignment shown in the 2001 study would not be feasible because of Section 4(f) impacts to the Watterson Park and Manslick Cemetery.) Today, the project is still considered necessary by Louisville Metro, the Kentuckiana Regional Planning and Development Agency (KIPDA) and other stakeholders.

Figure 1 – Project Area

1.3 Corridor Issues

Discussions with KYTC and local officials, comments from stakeholders and citizens, on-site visits, and project team meetings identified corridor issues that centered on safety, congestion, and community resources.

- Safety concerns focused on the high volume of school buses and other traffic (including commercial trucks) traveling through residential neighborhoods to access the Watterson Expressway or avoid congestion on Taylor Boulevard and Dixie Highway.

- Traffic congestion in the area is also a major issue. Traffic regularly backs up on Taylor Boulevard and Dixie Highway, as well as their respective interchanges with the Watterson Expressway. Backups also occur frequently on the westbound Watterson Expressway to southbound Dixie Highway. South of the Watterson Expressway, Manslick Road and Dixie Highway are each congested. The intersection of Dixie Highway, KY 2049 (Crums Lane), and US 60A (Seventh Street Road) has also been identified as a problem spot for traffic congestion.

- Community resource issues identified include environmental justice, recreation facilities, and economic development concerns. Minority, low-income, disabled, and elderly population concentrations, as well as a public park and walking path, exist in the study area. The area has been identified as a potential growth corridor for commercial development.

1.4 Project Purpose, Need, and Goals

The purpose of the project is to provide a safe roadway, to alleviate traffic congestion in the project area, and to improve connectivity to the interstate network.

The need for the project is supported by the following facts:

- Over 2,000 vehicles per day (VPD) travel through the residential area around Jacob Elementary School.

- High crash rates occur along Dixie Highway, 7th St. /Berry Boulevard and I-264 in the project area.

- Level of Service (LOS) in the project area is C or worse on all but two of the major roads in the project area (Berry Boulevard. and 7th St.).

- Traffic backups occur frequently along the Watterson Expressway, Taylor Boulevard, and Dixie Highway.

Project Goals

The project goals were identified through discussions with KYTC staff, local officials and other project stakeholders. Congestion and safety issues are paramount, especially bottlenecks at the existing Dixie Highway and Taylor Boulevard interchanges with I-264.

The project study team developed the following project goals:

- Improve traffic operations and safety within the study area, including Taylor Boulevard and Dixie Highway and their respective interchanges with I-264

- Reduce congestion and congestion-induced crashes

- Improve connectivity with the Watterson Expressway

- Improve access to stakeholders that are heavily dependent on traffic circulation and interstate connectivity, including:
    - Sts. Mary and Elizabeth Hospital and their ambulance service response times
    - Jacob Elementary School and the Jefferson County Public Schools' Nicholas Bus Compound, the latter of which generates over 1,000 bus-trips per day during the school year using neighboring streets to access the Watterson Expressway
    - Louisville Metro Fire Station Engine #12, located on Manslick Road south of the Watterson Expressway, and their response times
    - Park Hill Industrial area located north of the study area that has no direct interstate access
    - Residential areas including Hazelwood, Cloverleaf, and Iroquois neighborhood

2.0 EXISTING CONDITIONS

2.1 Project Location

The project is located in southwestern Louisville, in Jefferson County, Kentucky. The project area centers on Manslick Road and is roughly bounded by Dixie Highway on the west, Taylor Boulevard on the east, Berry Boulevard on the north, and Bluegrass Avenue on the south (see Exhibit 1, *Project Location*, in Appendix A).

2.2 Roadway Characteristics

The number of lanes and functional classification of the roadways in the project area are illustrated on Exhibit 2; the key roads are summarized as follows:

- Manslick Road: Urban Major Arterial; two lanes from Bluegrass Avenue to just south of I-264, and four lanes from south of I-264 to Berry Boulevard
- Taylor Boulevard: Urban Principal Arterial; four lanes throughout the project area
- US 31W (Dixie Highway): Urban Principal Arterial; six lanes south of I-264, and four lanes north of I-264
- I-264: Urban Interstate; six lanes throughout the project area

2.3 Traffic Conditions

Existing traffic volumes (year 2006) were obtained from the KYTC Highway Information System (HIS) database. Traffic analyses were prepared by KIPDA for a base year of 2009 and a horizon year of 2030. The traffic analyses and forecasts are included in Appendices C and D, respectively.

Traffic volume/roadway capacity (V/C) analyses were then developed V/C ratios near or over 1.00 indicate that traffic is or will be over the roadway's intended capacity, which can lead to congestion and delay problems.

- Manslick Road currently has traffic volumes averaging 13,700 vehicles per day (vpd) in the project area, which are projected to increase to 39,400 vpd by the year 2030 (see Exhibit 8, *No Build Traffic 2009/2030 ADT and 2030 LOS*, in Appendix A). The volume/capacity (V/C) ratio is both currently and projected to be 1.3 to 1.4. It should be noted that these projections take into account the planned widening of Manslick Road from two to four lanes south of I-264 (see Appendix E, KIPDA Long-Range projects).

- Traffic volumes on Dixie Highway average 60,900 vpd south of the Watterson Expressway but only 31,500 vpd north of that point. These traffic volumes are projected to increase to 65,050 vpd and 33,050 vpd respectively by the year 2030. This small growth in forecasted traffic volumes, only 7 and 5 percent, respectively, reflects the fact that Dixie Highway is already operating over capacity, and can grow relatively little.

- Taylor Boulevard currently has traffic volumes averaging 24,100 and 22,800 vpd south and north of the Watterson Expressway, respectively. Traffic volumes are projected to increase about 53 and 50 percent, respectively, to 36,900 vpd south of the Watterson Expressway, and 34,100 vpd north of that point by the year 2030.

- Traffic volumes on the Watterson Expressway currently average 95,700 vpd in the project area, and are projected to increase to 107,500 vpd by the year 2030. This represents a projected traffic volume increase of about 12 percent. The current V/C ratio between Taylor Boulevard and Dixie Highway is 0.9 to 1.0; while the future ratios are projected to range from 1.0 to 1.1.

Vehicle Mile Traveled (VMT) and Vehicles Hours Traveled (VHT) are two performance measures used to assess changes resulting from a proposed project. KIPDA prepared these numbers, as shown in Table 1, for the 2009 base year and 2030 horizon year for the existing plus committed highway network.

Table 1 2009 and 2030 VHT and VMT

Do-Nothing Scenario	Vehicle Hours Traveled (VHT)	Vehicle Miles Traveled (VMT)
2009 Base Year	1,319,766	32,664,105
2030 Horizon Year	2,848,994	42,839,874

2.4 Level of Service

"Level of service" (LOS), as defined in the *2000 Highway Capacity Manual* published by the Transportation Research Board, is 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 "F" 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). According to the national standards, the lower levels of

service (*i.e.*, D, E, and F) are unacceptable for safe and efficient operation since they generally reflect unstable traffic flows, and drivers have little freedom to maneuver.

Traffic conditions on study area roadways were examined to determine the existing and projected LOS. This analysis indicates the 2009 LOS ranges from A to E (see Table 2, *2009 and 2030 Traffic Conditions*). By the year 2030, LOS is predicted to generally decrease, resulting in a range from A to F. The increasing traffic volumes would eventually cause regularly occurring peak hour congestion and associated delays in accessing businesses, along with increased driver frustration and the likelihood for higher crash rates. Typically, LOS D is considered the minimum acceptable in urban areas. LOS E and F are, therefore highlighted yellow and orange, respectively.

2.5 Crash Analysis

Crash report data in the project study area from the five-year period January 2001 – December 2005 was examined to identify roadway sections with abnormally high crash rates. This analysis indicates four roadway sections in the project study area are experiencing high crash rates. Table 3, *Crash Analysis Summary*, lists the high crash locations for the project area. A critical crash rate factor (CCRF) greater than 1.0 indicates that the high rate of crashes is statistically significant, i.e. this high crash rate is not occurring randomly. The complete analysis is shown in Appendix F.

Table 2 2009 and 2030 Traffic Conditions

Route	Begin Point	End Point	2009 ADT	2030 ADT	2009 V/C Ratio	2030 V/C Ratio	2009 LOS	2030 LOS
I-264	Cane Run Rd.	US 31 W	57,900	74,900	0.5	0.7	C	D
	US 31 W	Taylor Blvd.	103,600	107,500	0.9 – 1.0	1.0	E	**F**
	Taylor Blvd.	KY 1020	117,300	122,000	1.2	1.2	D	E
US 31 W	Brick Kiln Ln.	Gagel Ave.	65,350	65,100	1.5 – 1.6	1.5 – 1.6	D	D
	Gagel Ave.	Kendall Ln.	65,700	65,000			D	D
	Kendall Ln.	I-264	64,700	65,000			D	D
	I-264	Garrs Ln.	35,600	35,700	1.2 – 1.3	1.1 – 1.3	C	C
	Garrs Ln.	Crums Ln.	33,500	33,100			C	C
	Crums Ln.	Luken Dr.	20,900	22,800			B	B
Manslick Rd.	Tunisian Way	Gagel Ave.	20,600	44,300	1.4	1.4 – 1.5	E	D
	Gagel Ave.	Knight Rd.	14,900	38,200			D	D
	Knight Rd.	Bluegrass Ave	19,900	50,500			E	E
	Bluegrass Ave.	Lance Dr.	19,400	39,400			D	C
	Lance Dr.	I-264	19,300	39,200			B	D
	I-264	Crums Ln.	19,300	39,200	1.4	1.4 – 1.5	B	C
	Crums Ln.	March Blvd.	14,400	25,800			B	C
	March Blvd.	Berry Blvd.	14,000	19,200			A	B
Taylor Blvd.	Southern Pkwy.	Bluegrass Ave.	25,100	26,700	n/a	n/a	C	C
	Bluegrass Ave.	Bicknell Ave.	25,500	26,100			C	C
	Bicknell Ave.	I-264 EB Ramp	35,600	36,000			D	D
	I-264 EB Ramp	I-264 WB Ramp	33,100	33,500			C	C
	I-264 WB Ramp	Camden Ave.	32,900	34,100			C	C
	Camden Ave.	Berry Blvd.	24,700	26,900			B	C
	Berry Blvd.	Clara Ave.	15,700	18,600			B	B
7th St.	US 31 W	Leroy Ave.			n/a	n/a	B	A
	Leroy Ave.	Manslick Rd.					B	A
	Manslick Rd.	Powell Ave.	17,100	14,300			B	C
Berry Blvd.	Manslick Rd.	Powell Ave.	14,300	15,900	0.8	0.9	A	B
	Powell Ave.	Taylor Blvd.	14,300	16,400			A	B
Crums Ln.	North Ln.	US 31 W	6,700	7,800	0.8 – 0.9	1.0	D	D
	US 31 W	Manslick Rd.	12,900	14,000			D	D
Bluegrass Ave.	Manslick Rd.	Hazelwood Ave.	17,700	19,300	0.7	0.8	D	D
	Hazelwood Ave.	Taylor Blvd.	24,400	22,800			E	E
	Taylor Blvd.	Henry Ave.	17,800	21,600			D	E
Gagel Ave.	US 31 W	Sanders Ln.	11,400	10,500	0.8 – 0.9	0.7	C	C
	Sanders Ln.	Manslick Rd.	11,100	11,100			C	C

Table 3 Crash Analysis Summary

Route	Begin Milepoint	End Milepoint	Location Description	CCRF
I-264	7.0	7.8	Dixie Hwy. interchange to west of Manslick Rd.	1.3 – 6.0
I-264	8.8	9.3	West of Taylor Blvd. interchange to Taylor Blvd. interchange	1.1 – 1.5
US 31W	13.6	16.7	South of Gagel Ave. to north of Crums Ln., which is through the I-264 interchange	1.0 – 4.0
Berry Blvd.	0.0	0.6	Dixie Hwy. to Manslick Rd.	1.5 – 2.2

2.6 Environmental Overview

This environmental overview identifies issues in the project study area likely to require consideration during this and future stages of project development. It is based upon literature, archival, known database, and map research and limited amounts of fieldwork. Refer to Exhibit 3 in Appendix A for the locations of these resources.

Historic, Archaeological, and Cultural Resources

The study area contains no sites currently listed on the National Register of Historic Places (NRHP). The Manslick Cemetery is a known old pauper's cemetery that, today, includes very few headstones although it covers a large area. It would most likely be eligible, but a survey of this site (or any site) is beyond the scope of this study.

Aquatic Resources

Mill Creek and two tributaries serve as drainage channels cross the project area, parallel and in the right-of-way of the north side of the Watterson Expressway.

Watterson Lake is located adjacent to the Watterson Expressway on the north side, and east of Manslick Road.

Hydric soils are prevalent in the study area; therefore, impacts to wetlands are anticipated.

Threatened and Endangered Species

Databases of the US Fish and Wildlife Service (USFWS), the Kentucky State Nature Preserves Commission (KSNPC), and the Kentucky Department of Fish and Wildlife Resources. (KDFWR) were researched to identify protected species potentially present in the study area. Table 4, *Protected Species in Jefferson County, Kentucky*, lists the protected species identified for Jefferson County. The list includes fourteen endangered, threatened, or candidate species: one plant, eight mussels, two insects, one bird, and two mammals. During future stages detailed field surveys may be required to determine the presence or absence of protected species and habitat in the study area.

Table 4 Protected Species in Jefferson County, Kentucky

Common Name	Scientific Name	Federal Status[1]	State Status[1]
Vascular Plants			
Running Buffalo Clover	*Trifolium stoloniferum*	E	T
Freshwater Mussels			
Clubshell	*Pleurobema clava*	E	E
Fanshell	*Cyprogenia stegaria*	E	E
Fat Pocketbook	*Potamilus capax*	E	E
Orangefoot Pimpleback	*Plethobasus cooperianus*	E	E
Pink Mucket	*Lampsilis abrupta*	E	E
Ring Pink	*Obovaria retusa*	E	E
Sheepnose	*Plethobasus cyphyus*	C	E
Spectaclecase	*Cumberlandia monodonta*	C	E
Insects			
American Burying Beetle	*Nicrophorus americanus*	E	H
Louisville Cave Beetle	*Pseudanophthalmus troglodytes*	C	T
Birds			
Interior Least Tern	*Sterna antillarum athalassos*	E	E
Mammals			
Gray Bat	*Myotis grisescens*	E	T
Indiana Bat	*Myotis sodalis*	E	E

1 - Status: E=endangered; T=threatened; C=candidate; H=historic

Hazardous Materials Concerns

Land use in the study area is predominantly residential, with some industrial and institutional facilities included. The Kentucky Transportation Cabinet provided a map showing two possible hazardous material contamination sites. Relevant data on these and other sites was collected from federal and state databases and a windshield survey of the study area (see Table 5, *Possible Contamination Sites*). Construction activities in or near these sites would require further investigations to determine the risk and extent of any contamination, and may require special procedures and permits.

Table 5 Possible Contamination Sites

Site	Site Name or Description	Area of Concern
1	Frito-Lay, Inc., 1600 Crums Ln.	Food preparation/manufacturing. Onsite treatment of hazardous materials (nitric and phosphoric acid)
2	Bratcher Apollo Lubricants 1508 Crums Ln.	Vehicle refueling; automotive paint, body, and interior repair/maintenance
3	Louisville Metro Animal Clinic	Biological and medical equipment and waste
Not indicated on map	Centeon Bio-Services 1517 Crums Ln.	Biological product manufacturing
Not indicated on map	Louisville Fire Department, Engine Co. 12 4535 Manslick Rd.	RCRA Conditionally Exempt Small-Quantity Generator

Air Quality

Jefferson County is located within the Louisville Interstate Air Quality Control Region. The study area is designated as a Maintenance Area for 8-hour Ozone and a Non-attainment Area for fine particulate matter ($PM_{2.5}$), as per the 1990 Clean Air Act Amendments. A detailed air quality analysis will be required if a build alternative is advanced in future project development phases.

Traffic Noise

Highway noise is a concern in the area due to the proximity of residences and Watterson Park to the Watterson Expressway. At present, there is a concrete noise barrier along the south side of the Watterson Expressway from Manslick Road west to Dixie Highway providing noise relief to Cloverleaf Subdivision. (See pictures 36 and 37 in Appendix G.) If a new interchange were constructed, a detailed traffic noise analysis would be required to determine what, if any, incremental additional impacts would occur to nearby noise-sensitive land uses from the interchange itself. As a matter of policy, the KYTC and FHWA do not mitigate for noise on an existing highway (know as Type II noise mitigation), but do mitigate for new roadway construction, which would include the interchange ramps (known as Type I noise mitigation).

Community Facilities

This study identified the following culturally sensitive locations in the immediate project area:

- Manslick Cemetery located off Manslick Road north of I-264
- Cloverleaf Christian Church located off Manslick Road south of I-264
- Three public schools: Jacob Elementary School, Hazelwood Elementary School, and the Hazelwood Educational Facility
- The Hazelwood Medical Facility is located adjacent to the educational facility
- Two public parks: Watterson Lake, located adjacent to the Watterson Expressway east of Manslick Road; and Dumeyer Park, located south of the Watterson Expressway and west of Taylor Boulevard
- A walking path and pedestrian bridge linking the neighborhoods on the south side of the Watterson Expressway with Watterson Lake on the north side (See Pictures 20 and 21 in Appendix G.)

Environmental Justice

KIPDA prepared an *Environmental Justice Community Impact Assessment* (Appendix H). It focused on minority, low-income, elderly, and disabled population areas, and made efforts to identify any high concentrations of any of these specific population groups.

The environmental justice assessment concluded that minority, low-income, elderly, and disabled population concentrations each exist in the study area, concentrated along and east of Manslick Road and north of the Watterson Expressway, and in the vicinity of Iroquois Homes and the Hazelwood

Subdivision. It states “project-level impact determination, mitigation measures, and public involvement activities should be tailored to be most inclusive of such persons,” should this project be advanced.

3.0 CABINET, STAKEHOLDER, AND PUBLIC INPUT

3.1 Project Team Meetings

The Manslick Road Interchange Study project team met three times during this study. These meetings were documented with meeting minutes (see Appendix I). A brief summary of the major topics discussed at each meeting follows:

- May 17, 2006, at KYTC District 5. This was the team’s kick-off meeting where members were introduced, the type of study discussed, and the study’s scope and schedule reviewed. Major topics of discussion included: the existing conditions; issues, problems, needs, and goals. Additional topics addressed included data collection, local officials and stakeholders meetings, and resource agency coordination.

- October 3, 2006, at KYTC District 5. Summaries of the minutes of the two stakeholders meetings were reviewed. Team members also reviewed the environmental footprint/overview, traffic data, and preliminary concepts for the improvement alternatives.

- April 24, 2007 at KYTC District 5. Team members reviewed updated designs and cost estimates for the improvement alternatives, the characteristics of existing roads in the area, and traffic information. The team identified a preferred alternative, but no decisions were to be made until a meeting was held with other stakeholders and local officials.

3.2 Local Officials / Stakeholders Meetings

Stakeholders meetings were held on September 6 and 13, 2006 to discuss issues surrounding the feasibility of a new interchange. Issues, problems, and needs identified in those meetings closely paralleled those previously identified by the project team.

A meeting was held on May 15, 2007 with local officials to present project information and the preliminary recommendation from the last Project Team Meeting. Information discussed in the meeting included traffic volumes, level of service, and crash data for the area; detailed descriptions of and initial construction cost estimates for each alternative; and other road projects being planned for the area. On August 2, 2007, a meeting was held with the City of Shivley to discuss the project and proposed recommendations.

The above meetings were documented with meeting minutes (see Appendix I).

4.0 STUDY ALTERNATIVES CONSIDERED

Transportation System Management (TSM) involves relatively low-cost improvements, but effective in nature, that can be quickly implemented through roadway maintenance activities. TSM improvements generally refer to such things as signing at critical locations, traffic lights at intersections, lighting, and simple roadway improvements such as pavement striping, removing vegetation to improve visibility, or improving the radius of a street corner. No TSM options are prudent to improve the interstate connectivity in the study area. However, because of the lack of access management on US 31W, TSM improvements should be investigated as possible short-term safety projects.

4.1 Spot Improvements

During the course of the study two spot improvements were identified that could be implemented to improve traffic flow and safety (see Figure 2, below). These would not meet the goals of the project but could provide some isolated relief and safety improvement. Two spot improvements that are recommended to be studied in further detail are as follows:

- Spot 1: Extend merge lane from I-264 westbound to US 31W northbound. At present, this ramp ends abruptly onto US 31W and causes one of the highest crash spots in the area according to comments from local officials and residents. Existing traffic must come to a complete stop after negotiating a sharp curve on the ramp. On coming traffic from I-264 cannot see around the sharp curve nor the vehicles stopped to merge onto US 31W. The proposed spot improvement would be to extend the merge ramp north along US 31W to Crums Lane. This would require closing the Herbert Avenue entrance to Dixie and utility relocations. See photos 5 and 6 in Appendix G.

- Spot 2: Replace I-264 westbound flyover to US 31W southbound with a triple-left turn. The ramp could be replaced with a triple-left turn onto US 31W. This would remove the current bottle neck at the southern end of this ramp which currently accommodates both this movement and the movement from eastbound I-264 to southbound US31W. At present, four lanes merge into two in a distance of about 200 feet. Congestion occurs daily and crashes are higher than average—many locals identified this as the top safety concern in the area.. The triple-left would be at a T-intersection with US 31W and appears to provide an option to improve flow through the area. See photos 8 and 11 in Appendix G.

Both of these spot improvement options are illustrated on the image below, which is copied from Exhibits 6 and 7 in Appendix A.

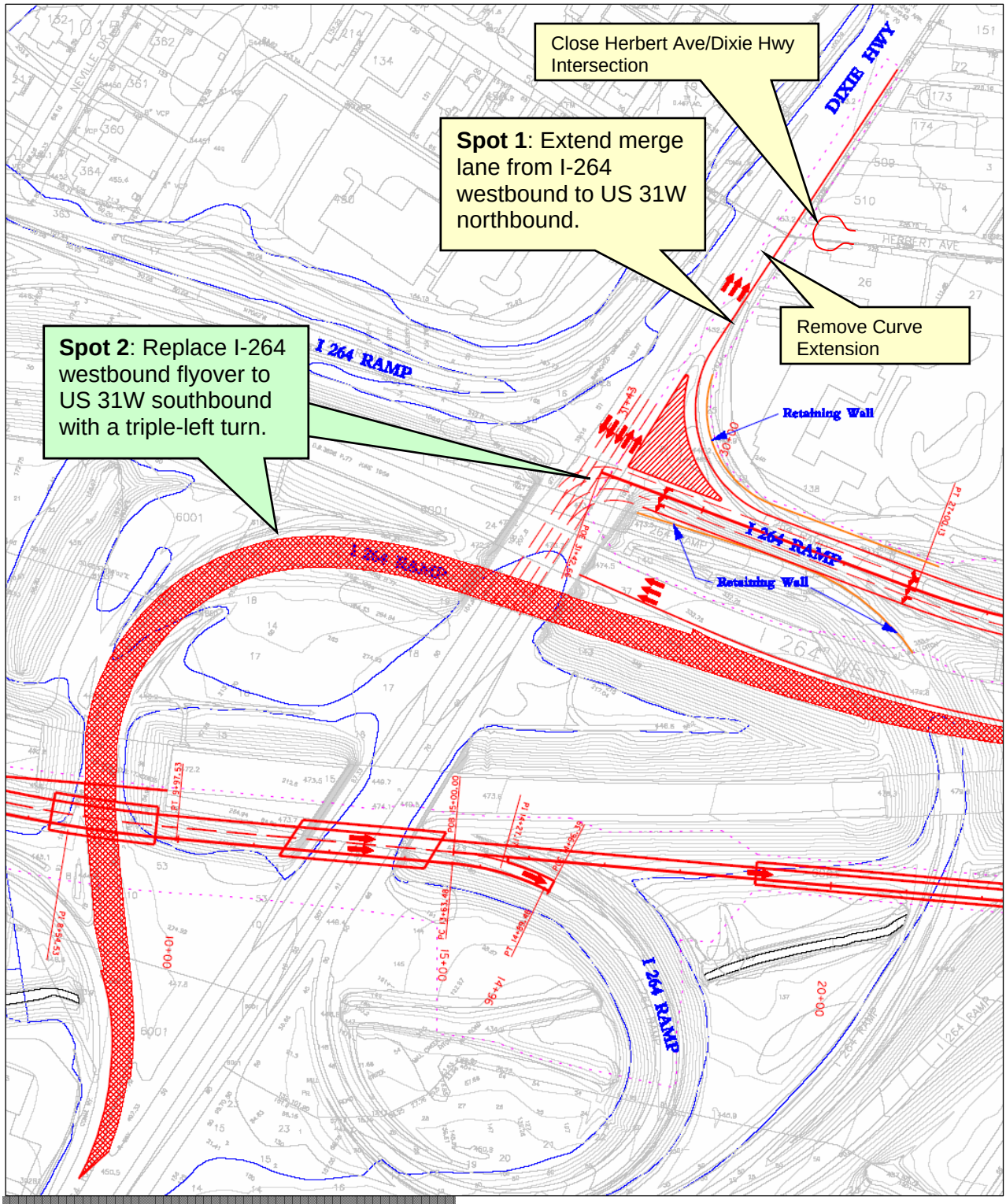


Figure 2 – Spot Improvements

4.2 Access Connections and Design

A do-nothing and four ramp configuration alternatives were evaluated for this Feasibility Study. The five alternatives are described below.

Do-Nothing Alternative. The Do-Nothing Alternative involves only routine roadway maintenance and improvements that are already planned (such as widening Manslick Road south of I-264 to four lanes). No action will be taken to construct a new interchange. This option will be referred to as appropriate for baseline comparisons throughout the decision making process.

Interchange Design Alternatives. The following alternatives for the interchange configuration were evaluated:

- **Alternative 1** – construct a full interchange with Manslick Road, with traffic coming from Manslick Road going west only able to access Dixie Highway, not I-264 westbound. The construction, design, right-of-way, and utility cost estimates for this alternative is $32,500,000. See Exhibit 5.

- **Alternative 2** – construct a full interchange with Manslick Road, with traffic coming from Manslick Road going west able to access Dixie Highway and I-264 westbound. The construction, design, right-of-way, and utility cost estimates for this alternative is $40,300,000. See Exhibit 6.

- **Alternative 3** – construct a half interchange with Manslick Road, with traffic allowed only to and from the east on I-264. The construction, design, right-of-way, and utility cost estimates for this alternative is $4,600,000. See Exhibit 7.

- **Alternative 4** – construct a full interchange with Manslick Road, with traffic coming from Manslick going west only able to access I-264 westbound, not Dixie Highway. This alternative was developed for traffic analysis comparisons, only. No designs were created for it; therefore, the costs estimates for this alternative will be estimated if it is advanced for further consideration, but are expected to be similar to those of Alternative 1.

4.3 Alternative Comparison

The alternative comparison is focused on the relative issues and differences between these options, which include construction, right-of-way, utility, and design cost estimates; residential and commercial relocations and property impacts; impacts to Mills Creek; project goals (Table 6); and LOS operations (Table 7). (LOS is described in Section 2.4, above.)

The cost estimate worksheets are included in Appendix J. The construction and utility costs were based on recently completed projects; the right-of-way costs were based on Property Valuation Administration (PVA) records available from LOJIC mapping and include relocation expenses; and the design costs were determined to be 10 percent of the construction costs.

Table 6 Comparative Matrix of Alternatives

Alternative	Meets Project Goals	Total Costs (Millions)	Residential Relocations	Impacts to Mill Creek (Linear Feet)
Do-Nothing	○	$0	0	0
TSM improvements	○	$0.5	0	0
Alternative 1	◒	$32.5	15	500
Alternative 2	◒	$40.3	17	600
Alternative 3	◒	$4.6	1	0
Alternative 4	◒	$32.5	15	500

○ = does not meet project goals ◒ = partially meets project goals

Table 7 Level of Service Comparison

Route	Begin Point	End Point	2009 LOS	2030 No-Build LOS	2030 Alt.1 LOS	2030 Alt.2 LOS	2030 Alt.3 LOS	2030 Alt.4 LOS
I-264	Cane Run Rd.	US 31 W	C	D	D	D	D	D
	US 31 W	Manslick Rd.	E	**F**	E	D	E	D
	Manslick Rd.	Taylor Blvd.	E	**F**	**F**	**F**	**F**	**F**
	Taylor Blvd.	KY 1020	D	E	E	E	E	E
US 31 W	Brick Kiln Ln	Gagel Ln.	D	D	D	D	D	D
	Gagel Ln.	Kendall Ln.	D	D	D	D	D	D
	Kendall Ln.	I-264	D	D	D	D	D	D
	I-264	Garrs Ln.	C	C	C	C	C	C
	Garrs Ln.	Crums Ln.	C	C	C	C	C	C
	Crums Ln.	Luken Dr.	B	B	B	B	B	B
Manslick Rd.	Tunisian Way	Gagel Ave.	E	D	D	D	D	D
	Gagel Ave.	Knight Rd.	D	D	D	D	D	D
	Knight Rd.	Bluegrass Ave.	E	E	E	E	E	E
	Bluegrass Ave.	Lance Dr.	D	C	C	C	C	C
	Lance Dr.	I-264	B	D	D	D	D	D
	I-264	Crums Ln.	B	C	C	C	C	C
	Crums Ln.	March Blvd.	B	C	B	B	B	B
	March Blvd.	Berry Blvd.	A	B	A	A	A	A
Taylor Blvd.	Southern Pkwy.	Bluegrass Ave.	C	C	C	C	C	C
	Bluegrass Ave.	Bicknell Ave.	C	C	C	C	C	C
	Bicknell Ave.	I-264 EB Ramp	D	D	D	D	D	D
	I-264 EB Ramp	I-264 WB Ramp	C	C	D	C	D	C
	I-264 WB Ramp	Camden Ave.	C	C	D	C	D	C
	Camden Ave.	Berry Blvd.	B	C	C	C	C	C
	Berry Blvd.	Clara Ave.	B	B	B	B	B	B

Route	Begin Point	End Point	2009 LOS	2030 No-Build LOS	2030 Alt.1 LOS	2030 Alt.2 LOS	2030 Alt.3 LOS	2030 Alt.4 LOS
7th St.	US 31 W	Leroy Ave.	B	A	B	B	B	B
	Leroy Ave.	Manslick Rd.	B	A	B	B	B	B
	Manslick Rd.	Powell Ave.	B	C	B	B	C	B
Berry Blvd.	Manslick Rd.	Powell Ave.	A	B	A	A	A	A
	Powell Ave.	Taylor Blvd.	A	B	A	A	A	A
Crums Ln.	North Ln.	US 31 W	D	D	D	D	D	D
	US 31 W	???	D	D	D	D	D	D
	???	Manslick Rd.	B	B	B	B	B	B
Bluegrass Ave.	Manslick Rd.	Hazelwood Ave.	D	D	C	D	C	D
	Hazelwood Ave.	Taylor Blvd.	E	E	E	E	E	E
	Taylor Blvd.	Henry Ave.	D	E	E	E	E	E
Gagel Ave.	US 31 W	Sanders Ln.	C	C	C	C	C	C
	Sanders Ln.	Manslick Rd.	C	C	C	D	D	D

After a careful review and consideration of the existing conditions, the cost and benefits, and constraints of constructing either a full or partial interchange, the Project Team recognizes that none of the alternatives completely fulfill the project goals. **The Project Team recommends that Alternative 3, a partial interchange, that would allow access to and from the east be advanced only after widening Manslick Road (KY 1931) to the south**. At this time, the Do-Nothing alternative is prudent. The reasons to advance Alternative 3 rather than Alternatives 1, 2, and 4, are as follows:

- Between 70 and 80 percent of existing and future traffic travels to/from the east on I-264 from the Dixie Highway, Taylor Boulevard, and the proposed Manslick Road interchanges
- The full interchange options, as compared to the partial interchange option, would have no appreciable benefit to traffic operations on the interstate and surface streets. The partial interchange would provide congestion relief to the same level as the full interchange options.
- The cost of constructing a full interchange are 7 to 9 times more than the partial interchange ($32.5 and $40.3, versus $4.6 million)
- The partial interchange would have only one right-of-way relocation and no anticipated environmental impacts
- A partial interchange has long been recognized and included in plans prepared by the City of Louisville

Should Alternative 3 be advanced it will require further detailed design and analysis, including a full Interchange Justification Study (IJS) and National Environmental Policy Act (NEPA) analysis and documentation, in addition to detail engineering and design and coordination and approval by FHWA.

In the following section, Alternative 3 is analyzed in comparison to FHWA eight policy points for an IJS.

5.0 INTERCHANGE JUSTIFICATION STUDY ANALYSIS

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) contains requirements for planning a proposed interchange to the existing Interstate Highway system. These requirements are implemented in FHWA policy and through Federal regulation located in 23 CFR part 450. The policy for *Additional Interchanges to the Interstate System* contains eight points that must be taken into consideration. This section discusses each policy point in detail.

Policy Statement No. 1: Existing Facilities Capability

"It is demonstrated that the existing interchanges and/or local roads and streets in the corridor can neither provide the necessary access, nor be improved to satisfactorily accommodate the design-year traffic demands while at the same time providing the access intended by the proposal. "

The existing interchanges in the area, I-264/US 31W and I-264/Taylor Boulevard could most likely be improved to handle more capacity; they could not, however, provide the access intended by the proposal. Specifically, one of the goals of the project is to improve access to stakeholders that are heavily dependent on traffic circulation and interstate connectivity, including: St. Mary and Elizabeth Hospital, Jacob Elementary School and the Jefferson County Public Schools' Bus Compound, Louisville Metro Fire Station Engine #12, Park Hill Industrial area, and residential areas including Hazelwood, Cloverleaf, and Iroquois neighborhoods. Access to and from the interstate network is currently through a complex routing through heavily congested commercial and residential areas. Only a new interchange at Manslick Road, including a partial interchange, would provide an improved and more direct access to the interstate network.

Policy Statement No. 2: Transportation System Management

"All reasonable alternatives for design options, location and transportation system management type improvements (such as ramp metering, mass transit, and HOV facilities) have been assessed and provided for, if currently justified, or provisions are included for accommodating such facilities if a future need is identified."

In Section 4.0, above, the various design options, including TSM and Spot Improvements, are described. Mass transit is provided for in the study area, and improved access to I-264 with a full or partial interchange would improve the transit service routes and options, including school bus routes. HOV lanes are not provided in any Louisville area interstates, but the inside lane of I-264 when reconstructed in the 1990s did provide extra spacing on the inside travel lane and shoulder in case HOV lanes were implemented in the future. The proposed interchange at Manslick Road would not affect that condition.

Policy Statement No. 3: Operational Analysis

"The proposed access point does not have a significant adverse impact on the safety and operation of the Interstate facility based on an analysis of current and future traffic. The operational analysis for existing conditions shall, particularly in urbanized areas, include an analysis of sections of Interstate to and including at least the first interchange on either side. Crossroads and other roads and streets shall be included in the analysis to the extent necessary to assure their ability to collect and distribute traffic to and from the interchange with new or revised access point."

The traffic operational analysis has been performed for the proposed full or partial interchange, and it included the interchange to the east (Taylor Boulevard), to the west (Dixie Highway) and the surface

within the study area. The operational analysis illustrates that the proposed half interchange Alternative 3 would not have an adverse effect on the safety and operation of the interstate facility for current or future traffic. The merge, diverge, and weave analysis is illustrated on Exhibit 13 in Appendix A.

The KIPDA long-range plan includes the widening of Manslick Road from two lanes to four, from I-264 south approximately two miles to St. Andrews Church Road as Item #446, and as Item #447, the continued widening of Manslick Road another two miles to US 31W. The estimated open date for both projects is 2020. Because of the amount of traffic volume that is projected to use Manslick Road after it is widened, with and without a full or partial interchange, it is recommended that these two long-range plan projects be realized before an interchange is constructed. (2009 traffic volumes on Manslick Road range from 14,900 to 20,600 ADT; 2030 Do-Nothing volumes range from 38,200 to 50,500 ADT, respectively)

The operational analysis shows that other surface streets would be able to effectively collect and distribute traffic to and from the interchange.

Policy Statement No. 4: Access Connections and Design

"The proposed access connects to a public road only and will provide for all traffic movements. Less than "full interchanges" for special purposes access for transit vehicles, for HOVs or into park and ride lots may be considered on a case-by-case basis. The proposed access will be designed to meet or exceed standards for Federal-aid projects on the Interstate system."

The proposed interchange will connect to a public road, KY 1931, (Manslick Road).

The recommended Build Alternative 3 is "a less than full interchange" as it will allow traffic movements to and from I-264 to the east, only. A partial interchange is recommend for this connection rather than a full interchange because the traffic analysis illustrates that a partial interchange provides the same relief to the currently congested interchanges as does the full interchanges. Between 70 and 80 percent of existing and future traffic travels to/from the east on I-264 from the Dixie Highway, Taylor Boulevard, and the proposed Manslick Road interchanges. Further, because of the proximity of the US 31W interchange and the proximity of the Cloverleaf Neighborhood to the south and Mill Creek to the north, the cost and impacts of the full interchange as significantly more than the partial interchange, as illustrated in Table 6, above.

The design of the recommended partial interchange would meet or exceed current design standards for Federal-aid projects on the Interstate System.

Policy Statement No. 5: Transportation and Land Use Plans

"The proposal considers and is consistent with local and regional land use and transportation plans."

In 1973, The Kentucky Department of Transportation published an EIS for I-264. A part of the planned improvements was the construction of a partial interchange at Manslick Road, providing access from Manslick Road to and from the east via frontage roads. When the improvements were built, however, this interchange was not included in the design. In 2001, the Louisville Development Authority published a report entitled *Seventh Street Road and Manslick Road Redevelopment Land Use Study*, focusing on the area of Manslick Road and Seventh Street. One of the study's recommendations was the construction of a partial interchange between I-264 and Manslick Road. The goal of the study, an one of the key initiatives of Louisville Metro is to provide infrastructure improvements to aged

industrial facilities located in southwest Louisville, where there are no direct interstate access points but numerous railroad tracks and brownfields; namely, the Park Hill area. Selected pages from the 2001 *Redevelopment Land Use Study* are included as Appendix B. (It should be noted that the alignment in the 2001 study would not be feasible because of Section 4(f) impacts to the Watterson Park and Manslick Cemetery.)

Policy Statement No. 6: Comprehensive Interstate Network Study

"In areas where the potential exists for future multiple interchange additions, all request for new or revised access are supported by a comprehensive Interstate network study with recommendations that address all proposed and desired access within the context of a long-term plan."

The only proposed new interchange with I-264 on the local, regional, or state plans is the Manslick Road Interchange proposed herein. Other planned or proposed interchanges in Jefferson County are on different interstates in the eastern portion of the county.

Policy Statement No. 7: Coordination with Transportation System Improvements

"The request for a new or revised access generated by new or expanded development demonstrates appropriate coordination between the development and related or otherwise required transportation system improvements."

As stated in Policy Statement No. 3, the widening of Manslick Road south of I-264 is recommended before a partial interchange is constructed.

As stated in Policy Statement No. 5, the proposed project would provide benefit to redevelopment and reinvestment plans for aged industrial facilities in Louisville north of the study area, but serving this these initiatives are not the only goals of the proposed project.

Policy Statement No. 8: Status of Planning and NEPA

"The request for new or revised access contains information relative to the planning requirements and the status of the environmental processing of the proposal."

The planning process and planning objectives, herein, were implemented to advance the National Environmental Policy Act (NEPA) and Interchange Justification Study (IJS) requirements, should a build alternative be advanced. The planning level analysis herein concludes the interchange beneficial to area traffic and not harmful to the interstate network. A design exception for a partial interchange would, however, need to be considered. Regarding the NEPA process, no significant impacts are anticipated with the recommended partial interchange.

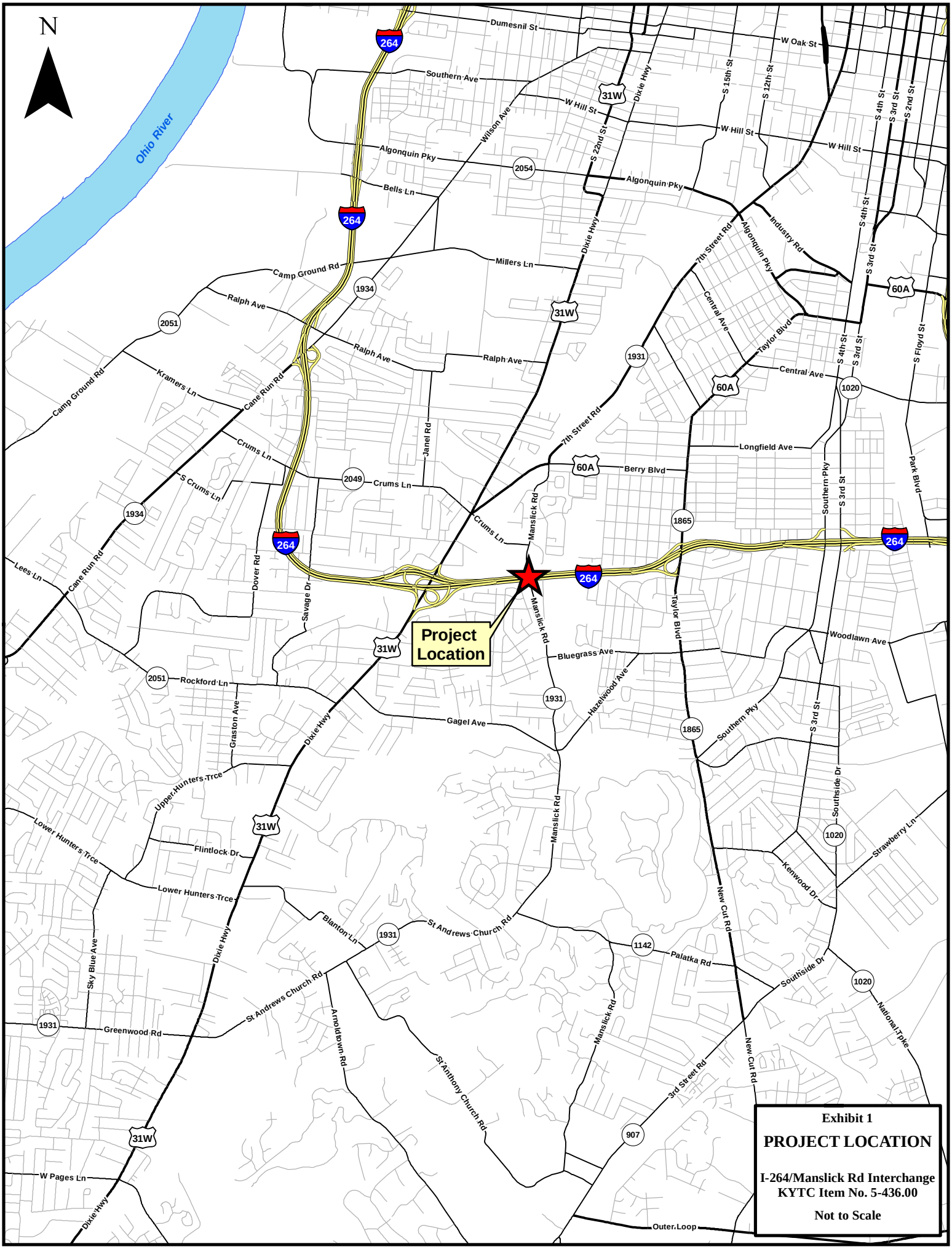
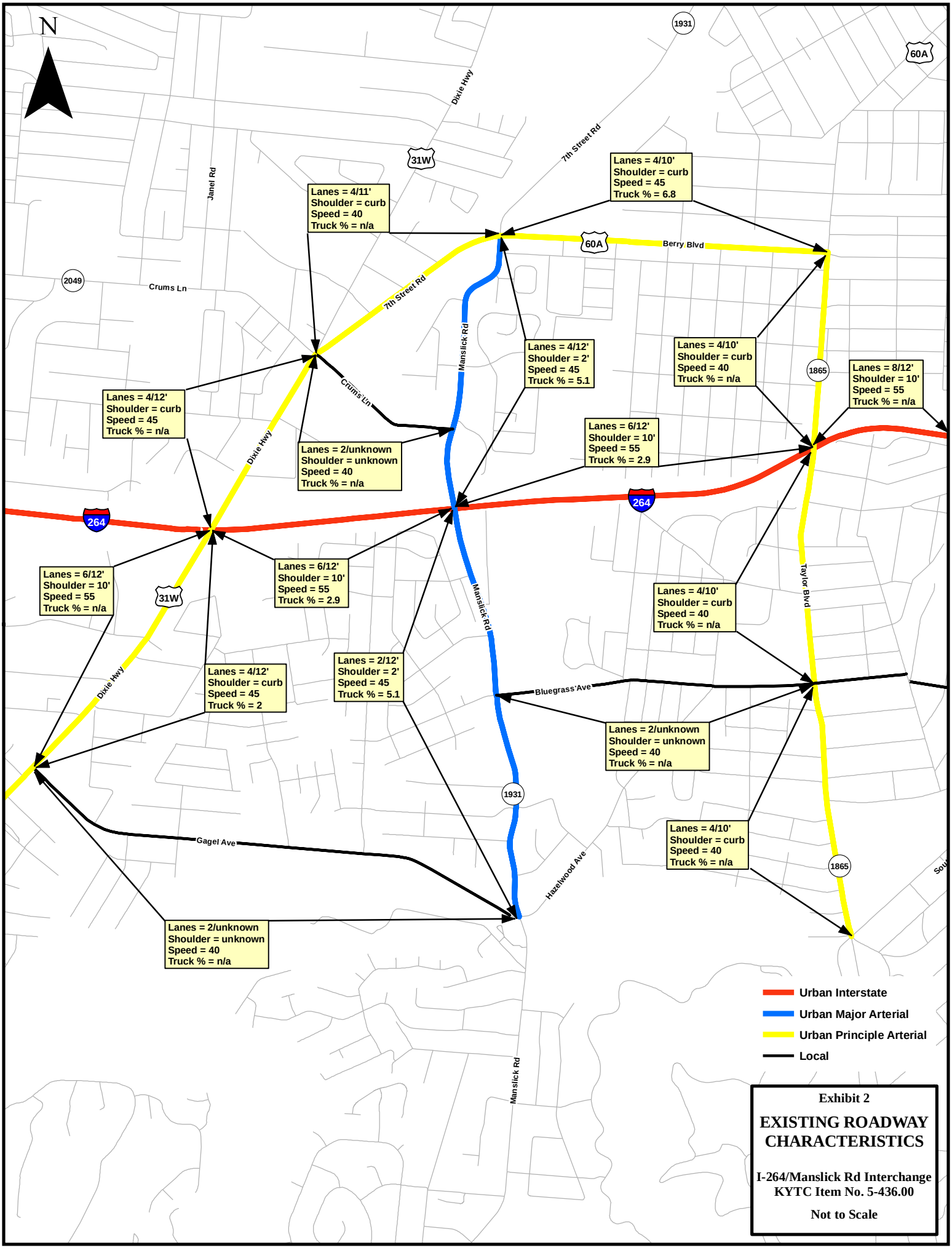


Exhibit 1

PROJECT LOCATION

I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00

Not to Scale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Dixie Hwy
7th Street Rd
Janel Rd
Crums Ln
Manslick Rd
Berry Blvd
Taylor Blvd
Bluegrass Ave
Gagel Ave
Hazelwood Ave
31W
60A
1931
1865
2049
264
Urban Interstate
Urban Major Arterial
Urban Principle Arterial
Local
Exhibit 2
EXISTING ROADWAY CHARACTERISTICS
I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00
Not to Scale


Jacob Elementary
Shively City Limits
31W
Jacobs Neighborhood
Jacob Bus Compound
Manslick Cemetery
Manslick Cemetery
Paducah-Louisville Railroad
Metro Animal Clinic
Watterson Lake Park
Mill Creek
264
264
Pedestrian Overpass
Existing Noise Barrier
Church
Dumeyer Park
Clover Leaf Neighborhood
Hazelwood Neighborhood
Fire Station #12
Hazelwood Facility
Mill Creek
Cemetery
Metro Animal Clinic
Louisville Metro Park
1997 Flood Reach
N
Exhibit 3
ENVIRONMENTAL OVERVIEW
I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00
Not to Scale


Crashes
Injury
PDO
Fatal
High Crash Section
Exhibit 4
2001-05 CRASH LOCATIONS
I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00
Not to Scale

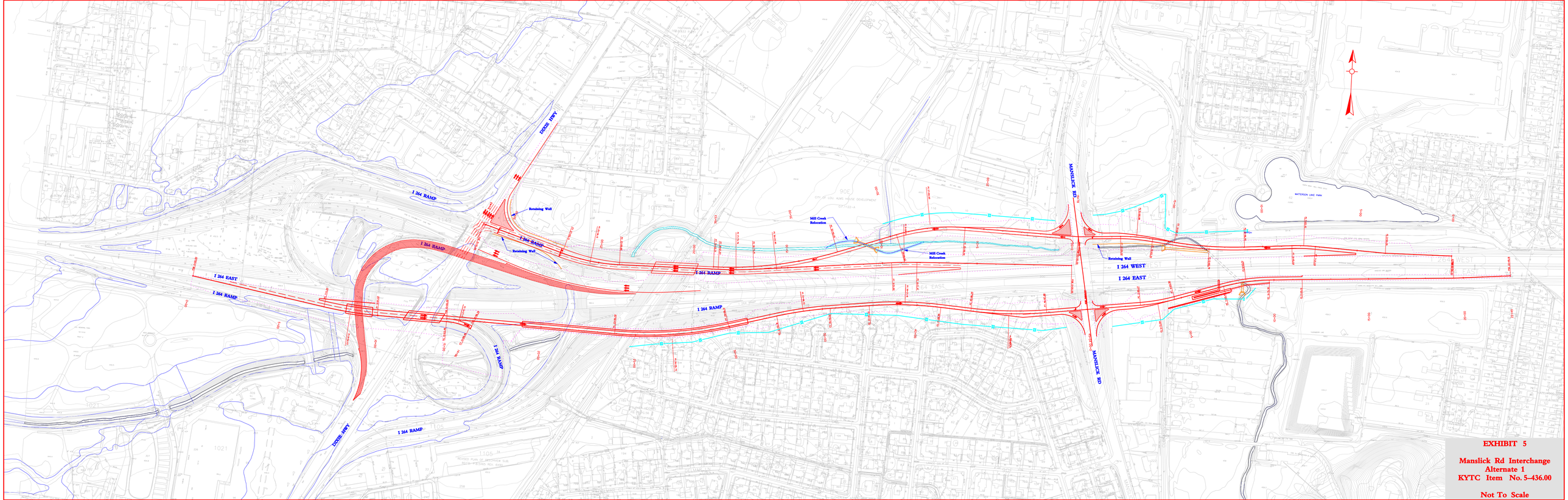


EXHIBIT 5

Manslick Rd Interchange
Alternate 1
KYTC Item No. 5–436.00

Not To Scale

EXHIBIT 6

Manslick Rd Interchange
Alternate 2
KYTC Item No. 5-436.00

Not To Scale

MANSLICK RD

WATTERSON LAKE PARK

CLOVERBROOK SUB

WHEATMORE ON THE LAKE SEC 1

CITY OF LOU. ALMS HOUSE DEVELOPMENT

O.P.1122-A

Retaining Wall

I 264 WEST

I 264 EAST

MARSH

EXHIBIT 7

Manslick Rd Interchange
Alternate 3
KYTC Item No. 5-436.00

Not To Scale

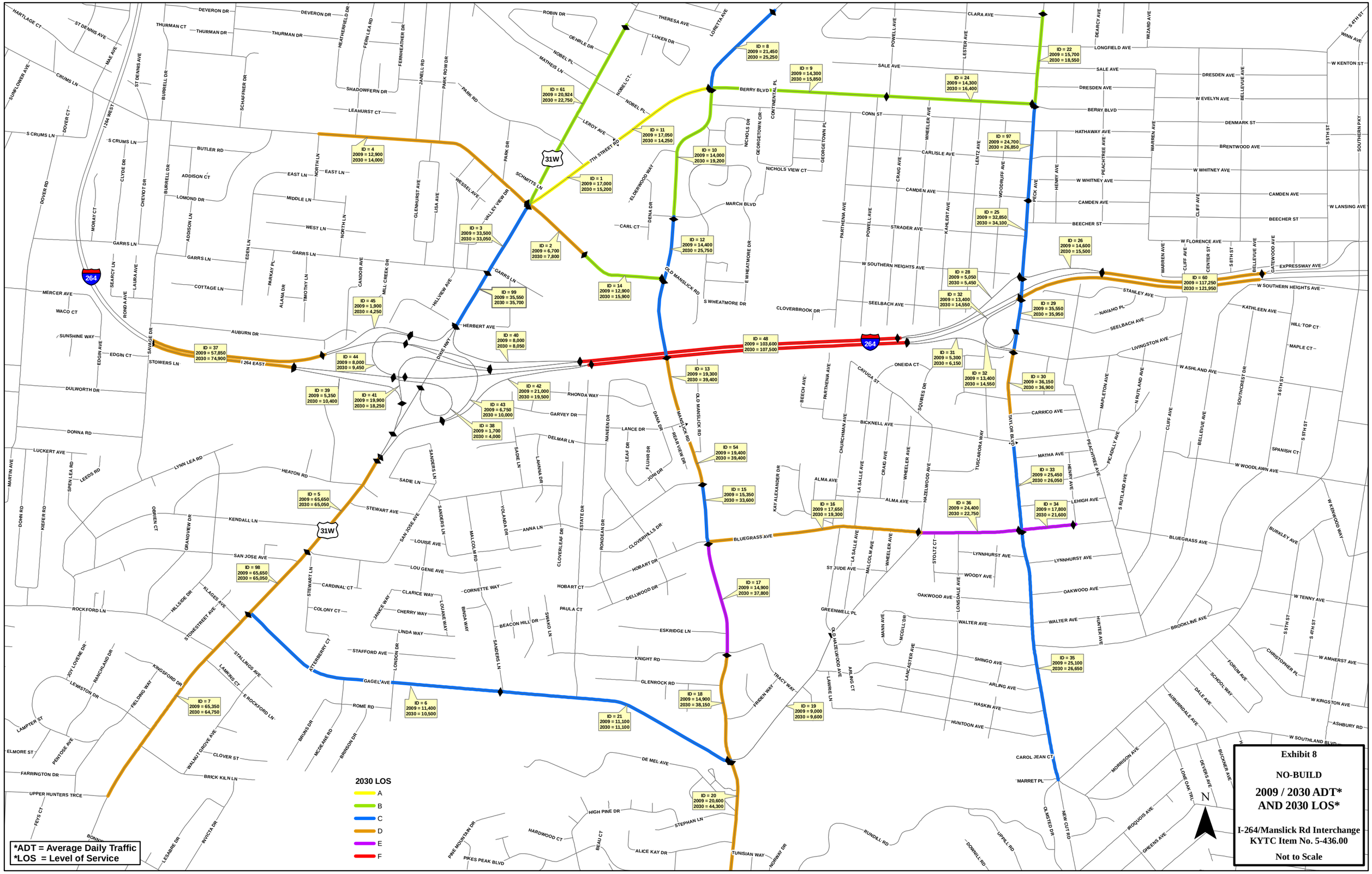


Exhibit 8

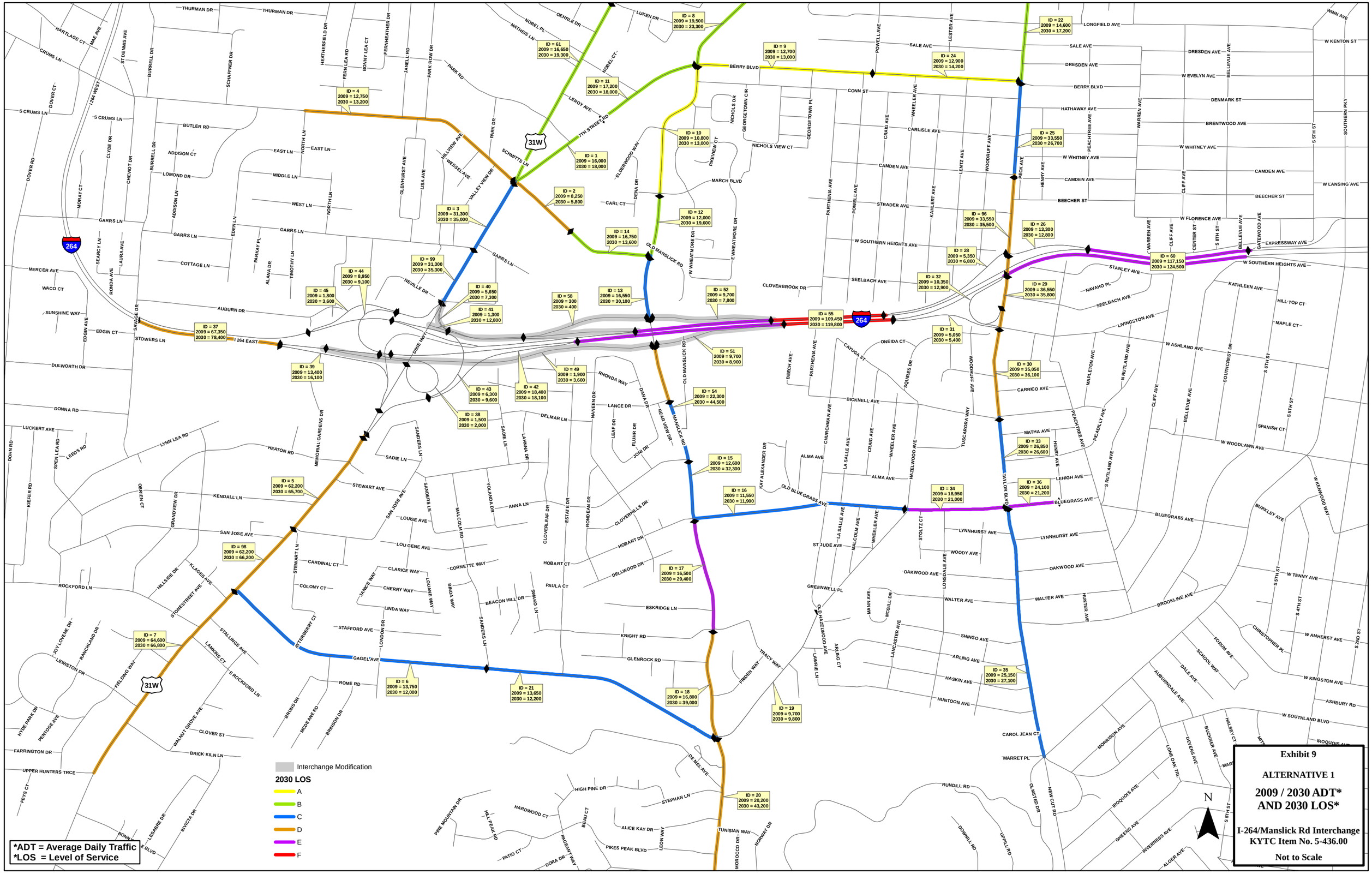
NO-BUILD

2009 / 2030 ADT*
AND 2030 LOS*

I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00

Not to Scale

***ADT = Average Daily Traffic**
***LOS = Level of Service**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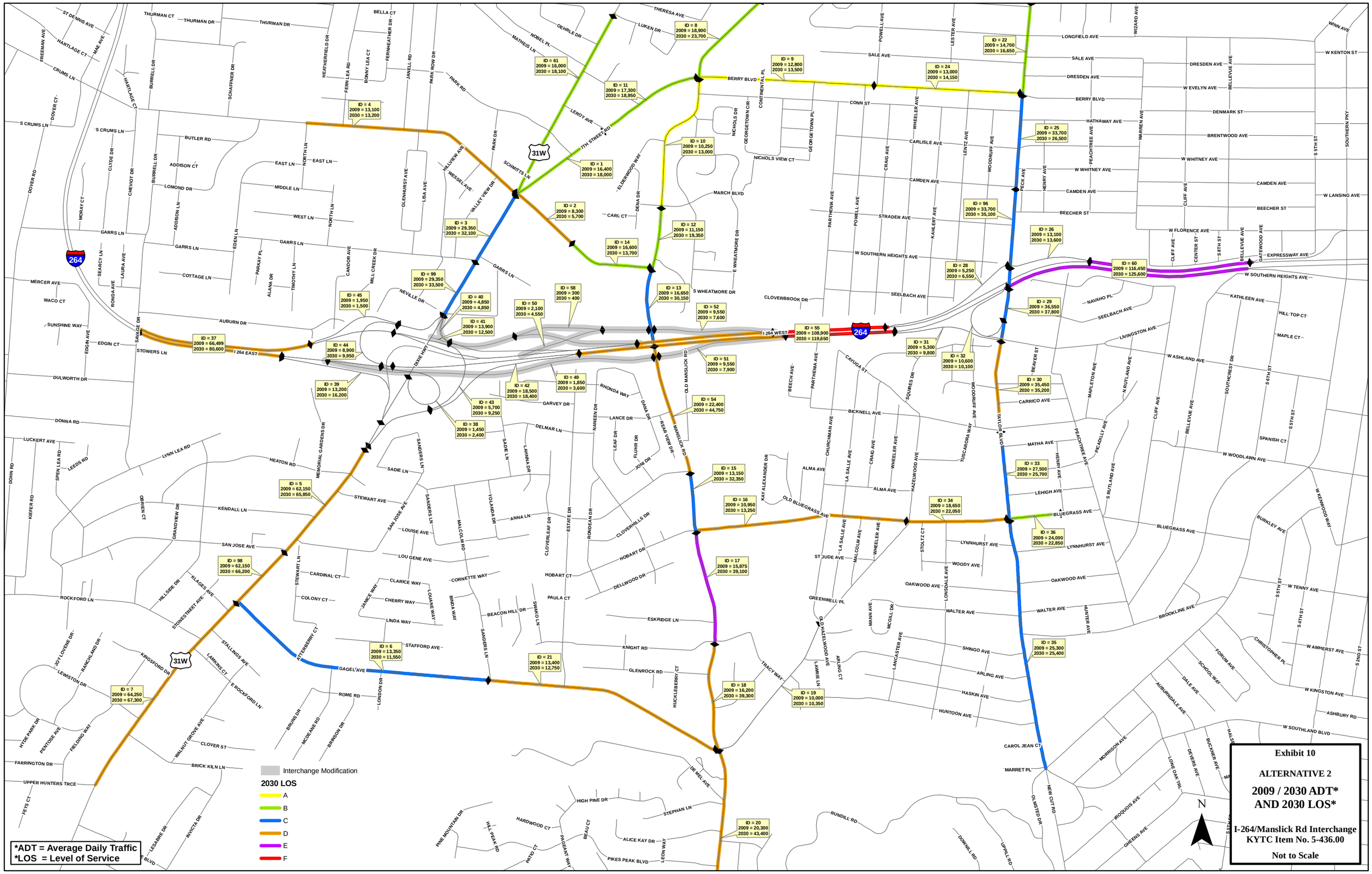
264
I 264 EAST
Interchange Modification
2030 LOS
A
B
C
D
E
F
*ADT = Average Daily Traffic
*LOS = Level of Service
N
Exhibit 9
ALTERNATIVE 1
2009 / 2030 ADT*
AND 2030 LOS*
I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00
Not to Scale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Interchange Modification
2030 LOS
A
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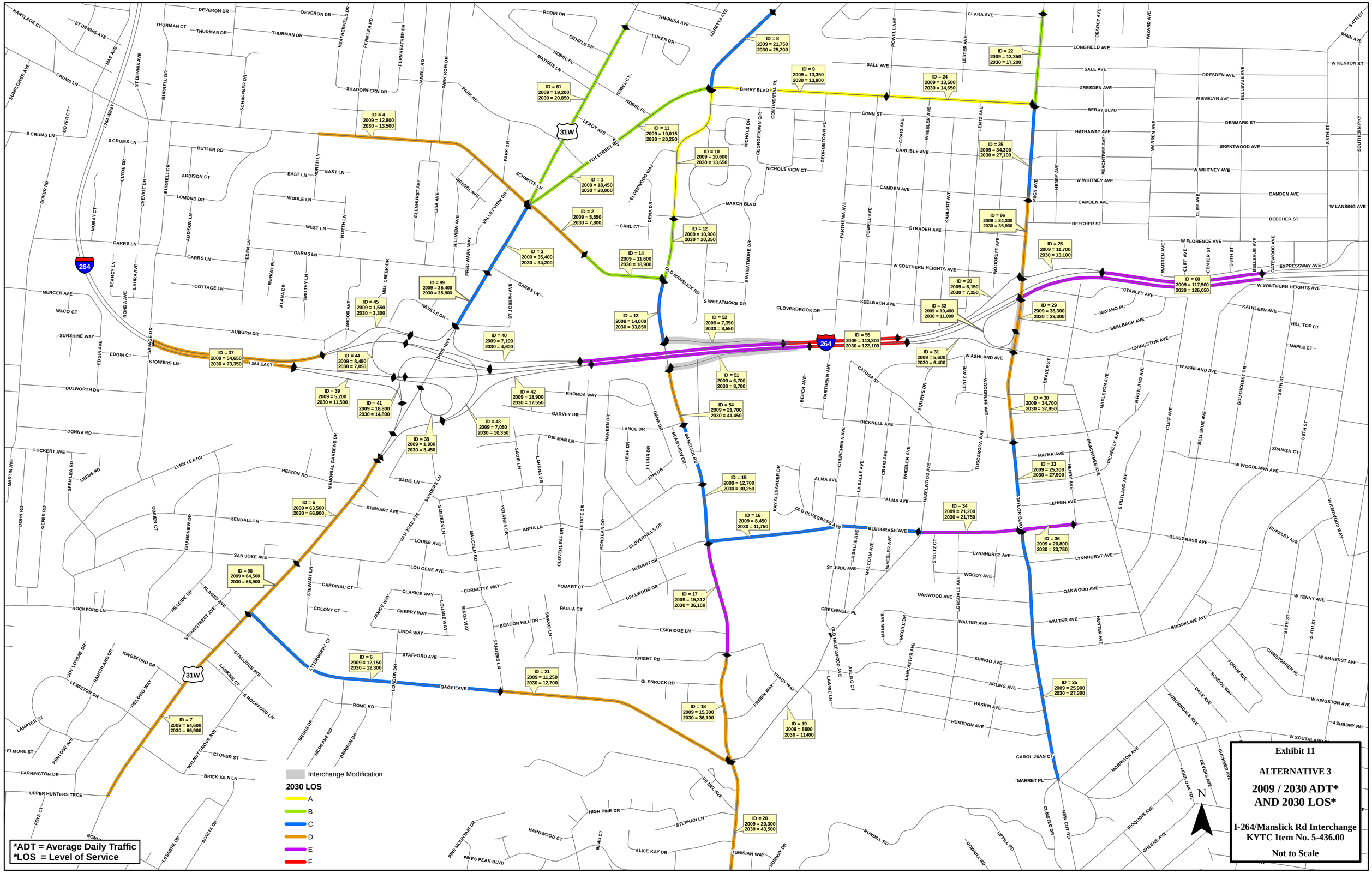
*ADT = Average Daily Traffic
*LOS = Level of Service
N
Exhibit 10
ALTERNATIVE 2
2009 / 2030 ADT*
AND 2030 LOS*
I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00
Not to Scale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Interchange Modification
2030 LOS
A
B
C
D
E
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*ADT = Average Daily Traffic
*LOS = Level of Service
Exhibit 11
ALTERNATIVE 3
2009 / 2030 ADT*
AND 2030 LOS*
I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00
Not to Scale
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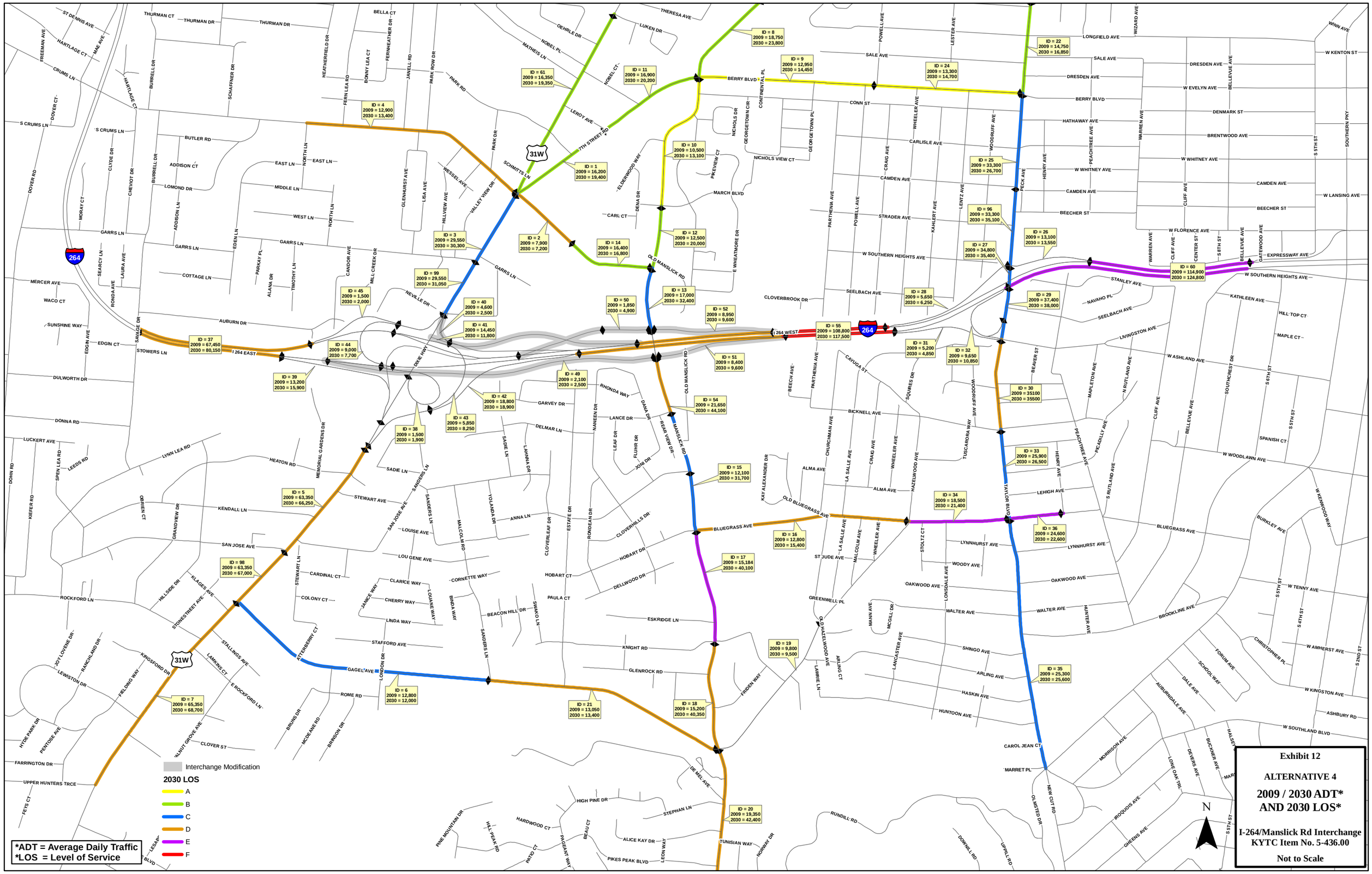
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I 264 EAST
I 264 WEST
31W
264
Interchange Modification
2030 LOS
A
B
C
D
E
F
*ADT = Average Daily Traffic
*LOS = Level of Service
N
Exhibit 12
ALTERNATIVE 4
2009 / 2030 ADT*
AND 2030 LOS*
I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00
Not to Scale

MERGE

2009 LOS (C/20)
2030 NB LOS (C/26)
2030 B LOS (C/27)

MERGE

2009 LOS (B/19)
2030 NB LOS (C/24)
2030 B LOS (C/25)

DIVERGE

2009 LOS (C/26)
2030 NB LOS (D/31)
2030 B LOS (C/28)

DIVERGE

2009 LOS (D/34)
2030 NB LOS (E/36)
2030 B LOS (D/33)

DIVERGE

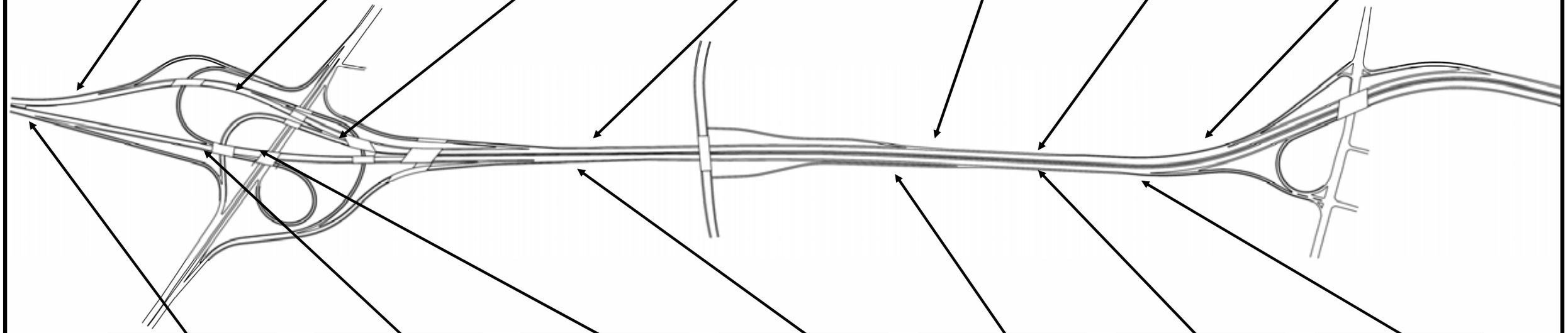
2030 B LOS (E/39)

WEAVING

2030 B LOS (E/65)

MERGE

2009 LOS (D/32)
2030 NB LOS (E/39)
2030 B LOS (E/39)



DIVERGE

2009 LOS (C/24)
2030 NB LOS (D/28)
2030 B LOS (C/27)

DIVERGE

2009 LOS (B/16)
2030 NB LOS (C/21)
2030 B LOS (B/20)

MERGE

2009 LOS (C/23)
2030 NB LOS (C/27)
2030 B LOS (C/25)

MERGE

2009 LOS (C/27)
2030 NB LOS (D/30)
2030 B LOS (C/27)

MERGE

2030 B LOS (E/36)

WEAVING

2030 B LOS (E/45)

DIVERGE

2009 LOS (E/36)
2030 NB LOS (E/39)
2030 B LOS (E/45)

LOS (A/#) = Level of Service / Density of Vehicles

Exhibit 13

PEAK HOUR OPERATIONAL ANALYSIS ALTERNATIVE 3

I-264/Manslick Rd Interchange
KYTC Item No. 5-436.00

City of Louisville

Seventh Street Road and Manslick Road Redevelopment Land Use Study

October 4, 2001

Prepared By:

David L. Armstrong, Mayor
Board of Alderman
601 West Jefferson Street
Louisville, Kentucky 40202

George Melton, 7th Ward Alderman
Board of Alderman
601 West Jefferson Street
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Louisville Development Authority
600 West Main Street
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Daily and Associates Engineers, Inc.
2300 Greene Way
Suite 300
Louisville, Kentucky 40220

Architectural Investments
222 S. First Street
Suite 206
Louisville, Kentucky 40202

D. Transportation:

Several transportation elements were reviewed in this section. The majority of this corridor has existing sidewalks or hard surfaces that can be utilized by pedestrians. The **sidewalk system** along Seventh Street Road was constructed as part of the recent road improvements and appears to be accessible for people in wheelchairs. Manslick Road, an older section of roadway, has a few locations where gaps exist between walks. There are several bus shelters and bus stops along the corridor.

The study area has another unique feature. A large portion of the study has direct railway access to an active **rail system**.

The **existing road system** appears to be adequate to serve the current as well as expected future vehicular needs for this area except for that there is currently no direct access to the Watterson Expressway from Manslick Road. A traffic study to determine level of service has not been performed as a part of this study. The roads are of sufficient width to accommodate large truck traffic. All existing major intersections are signalized.

The nearest opportunities for access are at Dixie Highway or at Taylor Boulevard. Physically, an interchange could be constructed at the intersection of the Watterson Expressway with Manslick Road. However, several **issues** would need to be addressed.

- Due to the proximity of existing ramps and/or acceleration or deceleration lanes the Federal Highway Administration may not approve the construction of a new interchange.
- The Watterson Lake Park would have to be entirely or at a minimum partially removed or relocated. This would be a potential 4F issue.
- Public and private properties would have to be purchased for use as right-of – way.
- Impact to neighboring uses such as noise or air quality would have to be evaluated.
- Both of the existing cemetery(s) would have to be relocated.
- At least one additional traffic signal would have to be installed, and a second modified.
- The animal shelter would have to be relocated.

Benefits of the ramp construction are:

- Increased access to this area for general vehicular traffic, but also **emergency medical vehicles**. A ramp would provide an almost direct route to a local hospital and a public school bus compound. It would also serve to promote the development of the under-utilized properties in the area.
- The Northbound exit ramp at Dixie Highway does not comply with current design standards resulting in safety problems and **frequent accidents**. The installation of this proposed ramp would remove a substantial portion of traffic from the Dixie Highway ramp.

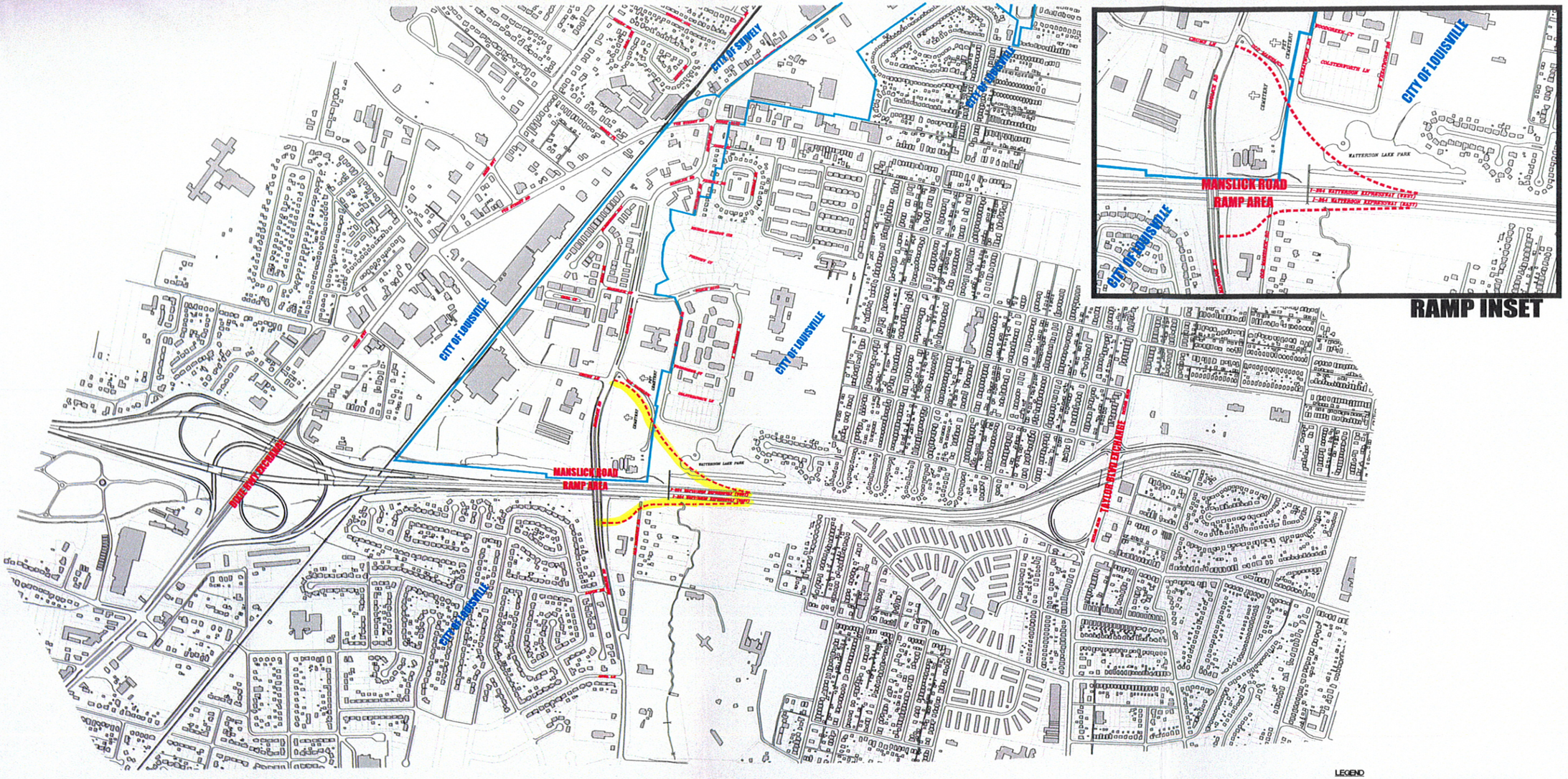
Refer to the Proposed Interchange Map for interchange Schematic.

E. Recommendations:

The following recommendations are based upon direct observation, public records, public input, discussion with the committee and public agencies.

- **Interchange:** The newly reconstructed Seventh Street Road and the amount of under utilized property (approximately 75 acres) in the study area accompanied with recent development providing or requiring airport service make the Seventh Street Road and Manslick Road Corridor attractive for development. Unfortunately, a large portion of the most probable

development market requires easy access to the interstate system or the airport. We recommend that the City consider limited access to the Watterson Expressway (I-264) at Manslick Road. Refer to the Transportation Section of this report for detailed discussion regarding the ramp appropriateness as well as the Proposed Interchange Map.



CITY OF LOUISVILLE, KENTUCKY

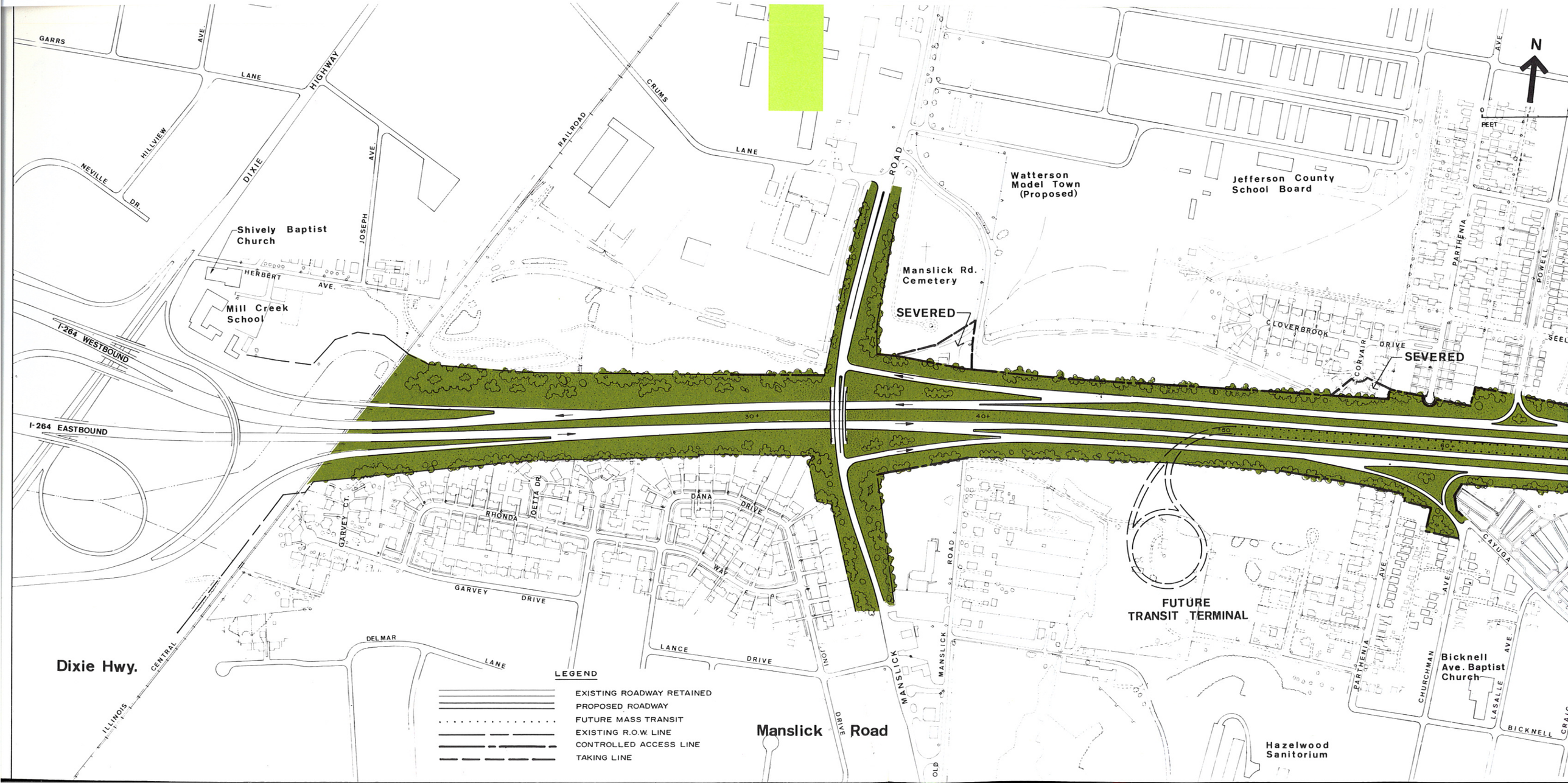
7th STREET / MANSLICK ROAD CORRIDOR STUDY

TRANSPORTATION / RAMP MAP

DAILY & ASSOCIATES, ENGINEERS, INC.
2300 Greene Way, Suite 300
Louisville, Kentucky 40220
T: (502) 495-6660
F: (502) 495-2929

APPENDIX 6
TRANSPORTATION / RAMP MAP

1973
I-264 EIS
Figure 5-1



Manslick Rd Interchange Project										
				I-264 WB &		I-264 WB &		Manslick to		I-264 WB to
2009 Number of lanes				Manslick to		Manslick to Dixie		I-264 EB &		Dixie &
				Dixie		& Manslick to		I-264 WB to		Manslick to
						I-264 WB		Manslick		I-264 WB
		Base		Alt1		Alt2		Alt3		Alt 4
I-264 EB west of Dixie Hwy interchange		3		3		3		3		3
I-264 WB west of Dixie Hwy interchange		3		3		3		3		3
Ramp from I-264 EB to US 31W NB		1		1		1		1		1
Ramp from I-264 EB to US 31W SB		1		1		1		1		1
Ramp from I-264 WB to US 31W NB		1		3		3		1		2
Ramp from I-264 WB to US 31W SB		2						2		
Ramp from US 31W NB to I-264 EB		1		1		1		1		1
Ramp from US 31W NB to I-264 WB		1		1		1		1		1
Ramp from US 31W SB to I-264 EB		1		1		1		1		1
Ramp from US 31W SB to I-264 WB		1		1		1		1		1
US 31W NB north of I-264 interchange		2		3		3		3		3
US 31W SB north of I-264 interchange		2		2		2		2		2
US 31W NB south of I-264 interchange		3		3		3		3		3
US 31W SB south of I-264 interchange		3		3		3		3		3
I-264 EB east of Dixie Hwy interchange / west of Manslick Rd interchange		3		3		3		3		3
I-264 WB east of Dixie Hwy interchange / west of Manslick Rd interchange		3		3		3		3		3
Ramp from I-264 EB to Manslick Rd		N/A		1		1		N/A		1
Ramp from Manslick Rd to I-264 WB		N/A		N/A		1		N/A		1
Ramp from Manslick Rd to I-264 EB		N/A		1		1		1		1

Manslick Rd Interchange Project										
				I-264 WB &		I-264 WB &		Manslick to		I-264 WB to
2009 Number of lanes				Manslick to		Manslick to Dixie		I-264 EB &		Dixie &
				Dixie		& Manslick to		I-264 WB to		Manslick to
						I-264 WB		Manslick		I-264 WB
		Base		Alt1		Alt2		Alt3		Alt 4
Ramp from I-264 WB to Manslick Rd		N/A		1		1		1		1
Manslick Rd NB north of I-264 interchange		1		1		1		1		1
Manslick Rd SB north of I-264 interchange		1		1		1		1		1
Manslick Rd NB south of I-264 interchange		1		1		1		1		1
Manslick Rd SB south of I-264 interchange		1		1		1		1		1
I-264 EB east of Manslick Rd interchange / west of Taylor Blvd interchange		3		3		3		3		3
I-264 WB east of Manslick Rd interchange / west of Taylor Blvd		3		3		3		3		3
Ramp from I-264 EB to Taylor Blvd		1		1		1		1		1
Ramp from Taylor Blvd to I-264 WB		1		1		1		1		1
Ramp from Taylor Blvd to I-264 EB		1		1		1		1		1
Ramp from I-264 WB to Taylor Blvd		2		2		2		2		2
I-264 EB east of Taylor Blvd interchange		3		3		3		3		3
I-264 WB east of Taylor Blvd interchange		3		3		3		3		3

Manslick Rd Interchange Project										
				I-264 WB &		I-264 WB &		Manslick to		I-264 WB to
2009 Free Flow Speed				Manslick to		Manslick to Dixie		I-264 EB &		Dixie &
(Note: Not speed limits)				Dixie		& Manslick to		I-264 WB to		Manslick to
						I-264 WB		Manslick		I-264 WB
		Base		Alt1		Alt2		Alt3		Alt 4
I-264 EB west of Dixie Hwy interchange		55		55		55		55		55
I-264 WB west of Dixie Hwy interchange		55		55		55		55		55
Ramp from I-264 EB to US 31W NB		25		25		25		25		25
Ramp from I-264 EB to US 31W SB		40		40		40		40		40
Ramp from I-264 WB to US 31W NB		35		35		35		35		35
Ramp from I-264 WB to US 31W SB		30						30		
Ramp from US 31W NB to I-264 EB		35		35		35		35		35
Ramp from US 31W NB to I-264 WB		25		25		25		25		25
Ramp from US 31W SB to I-264 EB		30		30		30		30		30
Ramp from US 31W SB to I-264 WB		30		30		30		30		30
US 31W NB north of I-264 interchange		45		45		45		45		45
US 31W SB north of I-264 interchange		45		45		45		45		45
US 31W NB south of I-264 interchange		45		45		45		45		45
US 31W SB south of I-264 interchange		45		45		45		45		45
I-264 EB east of Dixie Hwy interchange / west of Manslick Rd interchange		55		55		55		55		55
I-264 WB east of Dixie Hwy interchange / west of Manslick Rd interchange		55		55		55		55		55
Ramp from I-264 EB to Manslick Rd		N/A		40		40		N/A		40
Ramp from Manslick Rd to I-264 WB		N/A		N/A		40		N/A		40
Ramp from Manslick Rd to I-264 EB		N/A		40		40		40		40

Manslick Rd Interchange Project										
				I-264 WB &		I-264 WB &		Manslick to		I-264 WB to
2009 Free Flow Speed				Manslick to		Manslick to Dixie		I-264 EB &		Dixie &
(Note: Not speed limits)				Dixie		& Manslick to		I-264 WB to		Manslick to
						I-264 WB		Manslick		I-264 WB
		Base		Alt1		Alt2		Alt3		Alt 4
Ramp from I-264 WB to Manslick Rd		N/A		40		40		40		40
Manslick Rd NB north of I-264 interchange		40		40		40		40		40
Manslick Rd SB north of I-264 interchange		40		40		40		40		40
Manslick Rd NB south of I-264 interchange		40		40		40		40		40
Manslick Rd SB south of I-264 interchange		40		40		40		40		40
I-264 EB east of Manslick Rd interchange / west of Taylor Blvd interchange		55		55		55		55		55
I-264 WB east of Manslick Rd interchange / west of Taylor Blvd		55		55		55		55		55
Ramp from I-264 EB to Taylor Blvd		40		40		40		40		40
Ramp from Taylor Blvd to I-264 WB		40		40		40		40		40
Ramp from Taylor Blvd to I-264 EB		30		30		30		30		30
Ramp from I-264 WB to Taylor Blvd		40		40		40		40		40
I-264 EB east of Taylor Blvd interchange		55		55		55		55		55
I-264 WB east of Taylor Blvd interchange		55		55		55		55		55

Manslick Rd Interchange Project						
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2009 Per Lane Capacity		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
		Dixie	& Manslick to	I-264 WB to	Manslick to
			I-264 WB	Manslick	I-264 WB
	Base	Alt1	Alt2	Alt3	Alt 4
I-264 EB west of Dixie Hwy interchange	15,000	15,000	15,000	15,000	15,000
I-264 WB west of Dixie Hwy interchange	15,000	15,000	15,000	15,000	15,000
Ramp from I-264 EB to US 31W NB	13,000	13,000	13,000	13,000	13,000
Ramp from I-264 EB to US 31W SB	14,000	14,000	14,000	14,000	14,000
Ramp from I-264 WB to US 31W NB	14,000	14,000	14,000	14,000	14,000
Ramp from I-264 WB to US 31W SB	13,000			13,000	
Ramp from US 31W NB to I-264 EB	14,000	14,000	14,000	14,000	14,000
Ramp from US 31W NB to I-264 WB	13,000	13,000	13,000	13,000	13,000
Ramp from US 31W SB to I-264 EB	13,000	13,000	13,000	13,000	13,000
Ramp from US 31W SB to I-264 WB	13,000	13,000	13,000	13,000	13,000
US 31W NB north of I-264 interchange	7,500	7,500	7,500	7,500	7,500
US 31W SB north of I-264 interchange	7,500	7,500	7,500	7,500	7,500
US 31W NB south of I-264 interchange	7,500	7,500	7,500	7,500	7,500
US 31W SB south of I-264 interchange	7,500	7,500	7,500	7,500	7,500
I-264 EB east of Dixie Hwy interchange / west of Manslick Rd interchange	15,000	15,000	15,000	15,000	15,000
I-264 WB east of Dixie Hwy interchange / west of Manslick Rd interchange	15,000	15,000	15,000	15,000	15,000
Ramp from I-264 EB to Manslick Rd	N/A	14,000	14,000	N/A	14,000
Ramp from Manslick Rd to I-264 WB	N/A	N/A	14,000	N/A	14,000
Ramp from Manslick Rd to I-264 EB	N/A	14,000	14,000	14,000	14,000
Ramp from I-264 WB to Manslick Rd	N/A	14,000	14,000	14,000	14,000
Manslick Rd NB north of I-264 interchange	6,000	6,000	6,000	6,000	6,000
Manslick Rd SB north of I-264 interchange	6,000	6,000	6,000	6,000	6,000
Manslick Rd NB south of I-264 interchange	6,000	6,000	6,000	6,000	6,000
Manslick Rd SB south of I-264 interchange	6,000	6,000	6,000	6,000	6,000

Manslick Rd Interchange Project									
				I-264 WB &		I-264 WB &		Manslick to	I-264 WB to
2009 Per Lane Capacity				Manslick to		Manslick to Dixie		I-264 EB &	Dixie &
				Dixie		& Manslick to		I-264 WB to	Manslick to
						I-264 WB		Manslick	I-264 WB
		Base		Alt1		Alt2		Alt3	Alt 4
I-264 EB east of Manslick Rd interchange / west of Taylor Blvd interchange		15,000		15,000		15,000		15,000	15,000
I-264 WB east of Manslick Rd interchange / west of Taylor Blvd interchange		15,000		15,000		15,000		15,000	15,000
Ramp from I-264 EB to Taylor Blvd		14,000		14,000		14,000		14,000	14,000
Ramp from Taylor Blvd to I-264 WB		14,000		14,000		14,000		14,000	14,000
Ramp from Taylor Blvd to I-264 EB		13,000		13,000		13,000		13,000	13,000
Ramp from I-264 WB to Taylor Blvd		14,000		14,000		14,000		14,000	14,000
I-264 EB east of Taylor Blvd interchange		15,000		15,000		15,000		15,000	15,000
I-264 WB east of Taylor Blvd interchange		15,000		15,000		15,000		15,000	15,000
Bluegrass Ave. EB east of Manslick Rd.		4,500		4,500		4,500		4,500	4,500
Bluegrass Ave. WB east of Manslick Rd.		4,500		4,500		4,500		4,500	4,500
Gagel Ave. EB west of Manslick Rd.		6,000		6,000		6,000		6,000	6,000
Gagel Ave. WB west of Manslick Rd.		6,000		6,000		6,000		6,000	6,000
Crums Ln. EB west of Manslick Rd.		4,500		4,500		4,500		4,500	4,500
Crums Ln. WB west of Manslick Rd.		4,500		4,500		4,500		4,500	4,500
Berry Blvd. EB east of Manslick Rd.		6,000		6,000		6,000		6,000	6,000
Berry Blvd. WB east of Manslick Rd.		6,000		6,000		6,000		6,000	6,000

Manslick Rd Interchange Project					
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2009 Volume/Capacity Ratio		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
(Note: Modeled volumes, not projected volumes)		Dixie	& Manslick to	I-264 WB to	Manslick to
			I-264 WB	Manslick	I-264 WB
	Base	Alt1	Alt2	Alt3	Alt 4
I-264 EB west of Dixie Hwy interchange	0.5207	0.5574	0.6536	0.4925	0.6672
I-264 WB west of Dixie Hwy interchange	0.5261	0.6614	0.5497	0.4964	0.5531
Ramp from I-264 EB to US 31W NB	0.0093	0.0081	0.0080	0.0104	0.0083
Ramp from I-264 EB to US 31W SB	0.3881	0.9697	0.9582	0.3774	0.9595
Ramp from I-264 WB to US 31W NB	0.4771	0.4464	0.4463	0.4232	0.6796
Ramp from I-264 WB to US 31W SB	0.8094			0.7640	
Ramp from US 31W NB to I-264 EB	1.1525	1.0107	1.0154	1.0373	1.0314
Ramp from US 31W NB to I-264 WB	0.3284	0.3063	0.2780	0.3418	0.2843
Ramp from US 31W SB to I-264 EB	0.5274	0.5906	0.5878	0.5582	0.5926
Ramp from US 31W SB to I-264 WB	0.1052	0.1006	0.0312	0.0863	0.0469
US 31W NB north of I-264 interchange	1.3318	0.8598	0.8541	1.3322	0.8401
US 31W SB north of I-264 interchange	1.1790	0.9725	0.8714	1.2486	0.9024
US 31W NB south of I-264 interchange	1.4925	1.4524	1.4627	1.4617	1.4698
US 31W SB south of I-264 interchange	1.5972	1.4770	1.4734	1.5777	1.5033
I-264 EB east of Dixie Hwy interchange / west of Manslick Rd interchange	0.9081	0.8042	0.8025	0.8561	0.8154
I-264 WB east of Dixie Hwy interchange / west of Manslick Rd interchange	1.0169	0.8501	0.8225	0.9459	0.8371
Ramp from I-264 EB to Manslick Rd	N/A	0.1227	0.1171	N/A	0.1381
Ramp from Manslick Rd to I-264 WB	N/A	N/A	0.1572	N/A	0.1389
Ramp from Manslick Rd to I-264 EB	N/A	0.6238	0.6126	0.5096	0.5834
Ramp from I-264 WB to Manslick Rd	N/A	0.5954	0.6684	0.4649	0.6040
Manslick Rd NB north of I-264 interchange	1.3694	1.2061	1.2408	0.9911	1.2437
Manslick Rd SB north of I-264 interchange	1.4218	1.1830	1.1648	1.0326	1.2125
Manslick Rd NB south of I-264 interchange	1.3694	1.5287	1.6499	1.5901	1.5483
Manslick Rd SB south of I-264 interchange	1.4218	1.6778	1.5697	1.5275	1.5631

Manslick Rd Interchange Project								
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2009 Volume/Capacity Ratio		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
(Note: Modeled volumes, not projected volumes)		Dixie	& Manslick to	I-264 WB to	Manslick to
			I-264 WB	Manslick	I-264 WB
	Base	Alt1	Alt2	Alt3	Alt 4
I-264 EB east of Manslick Rd interchange / west of Taylor Blvd interchange	0.9081	0.9983	0.9931	1.0146	0.9970
I-264 WB east of Manslick Rd interchange / west of Taylor Blvd interchange	1.0169	1.0353	1.0305	1.0905	1.0250
Ramp from I-264 EB to Taylor Blvd	0.3830	0.3636	0.3829	0.4057	0.3752
Ramp from Taylor Blvd to I-264 WB	0.3333	0.3537	0.3471	0.4064	0.3726
Ramp from Taylor Blvd to I-264 EB	1.2595	0.9732	0.9930	0.9749	0.9053
Ramp from I-264 WB to Taylor Blvd	0.5093	0.4641	0.4565	0.4073	0.4574
I-264 EB east of Taylor Blvd interchange	1.1529	1.1664	1.1608	1.1700	1.1418
I-264 WB east of Taylor Blvd interchange	1.2302	1.2140	1.2065	1.2358	1.1937
Bluegrass Ave. EB east of Manslick Rd.	0.7386	0.4175	0.3944	0.3415	0.4454
Bluegrass Ave. WB east of Manslick Rd.	0.6972	0.5218	0.4959	0.3454	0.5954
Gagel Ave. EB west of Manslick Rd.	0.9414	0.7525	0.7722	0.7777	0.7336
Gagel Ave. WB west of Manslick Rd.	0.8231	0.8840	0.8351	0.5670	0.8273
Crums Ln. EB west of Manslick Rd.	0.8848	1.1108	1.0451	0.7008	1.0789
Crums Ln. WB west of Manslick Rd.	0.8107	1.0898	1.1386	0.8225	1.0792
Berry Blvd. EB east of Manslick Rd.	0.8112	0.7025	0.7310	0.7513	0.7149
Berry Blvd. WB east of Manslick Rd.	0.7808	0.7071	0.6957	0.7340	0.7249

Manslick Rd Interchange Project										
				I-264 WB &		I-264 WB &		Manslick to		I-264 WB to
2030 Number of lanes				Manslick to		Manslick to Dixie		I-264 EB &		Dixie &
				Dixie		& Manslick to		I-264 WB to		Manslick to
						I-264 WB		Manslick		I-264 WB
		Base		Alt1		Alt2		Alt3		Alt 4
I-264 EB west of Dixie Hwy interchange		3		3		3		3		3
I-264 WB west of Dixie Hwy interchange		3		3		3		3		3
Ramp from I-264 EB to US 31W NB		1		1		1		1		1
Ramp from I-264 EB to US 31W SB		1		1		1		1		1
Ramp from I-264 WB to US 31W NB		1		3		3		1		1
Ramp from I-264 WB to US 31W SB		2						2		
Ramp from US 31W NB to I-264 EB		1		1		1		1		1
Ramp from US 31W NB to I-264 WB		1		1		1		1		1
Ramp from US 31W SB to I-264 EB		1		1		1		1		1
Ramp from US 31W SB to I-264 WB		1		1		1		1		1
US 31W NB north of I-264 interchange		2		3		3		2		3
US 31W SB north of I-264 interchange		2		2		2		2		2
US 31W NB south of I-264 interchange		3		3		3		3		3
US 31W SB south of I-264 interchange		3		3		3		3		3
I-264 EB east of Dixie Hwy interchange / west of Manslick Rd interchange		3		3		3		3		3
I-264 WB east of Dixie Hwy interchange / west of Manslick Rd interchange		3		3		3		3		3
Ramp from I-264 EB to Manslick Rd		N/A		1		1		N/A		1
Ramp from Manslick Rd to I-264 WB		N/A		N/A		1		N/A		1
Ramp from Manslick Rd to I-264 EB		N/A		1		1		1		1

Manslick Rd Interchange Project										
				I-264 WB &		I-264 WB &		Manslick to		I-264 WB to
2030 Number of lanes				Manslick to		Manslick to Dixie		I-264 EB &		Dixie &
				Dixie		& Manslick to		I-264 WB to		Manslick to
						I-264 WB		Manslick		I-264 WB
		Base		Alt1		Alt2		Alt3		Alt 4
Ramp from I-264 WB to Manslick Rd		N/A		1		1		1		1
Manslick Rd NB north of I-264 interchange		2		2		2		2		2
Manslick Rd SB north of I-264 interchange		2		2		2		2		2
Manslick Rd NB south of I-264 interchange		2		2		2		2		2
Manslick Rd SB south of I-264 interchange		2		2		2		2		2
I-264 EB east of Manslick Rd interchange / west of Taylor Blvd interchange		3		3		3		3		3
I-264 WB east of Manslick Rd interchange / west of Taylor Blvd		3		3		3		3		3
Ramp from I-264 EB to Taylor Blvd		1		1		1		1		1
Ramp from Taylor Blvd to I-264 WB		1		1		1		1		1
Ramp from Taylor Blvd to I-264 EB		1		1		1		1		1
Ramp from I-264 WB to Taylor Blvd		2		2		2		2		2
I-264 EB east of Taylor Blvd interchange		3		3		3		3		3
I-264 WB east of Taylor Blvd interchange		3		3		3		3		3

Manslick Rd Interchange Project										
				I-264 WB &		I-264 WB &		Manslick to		I-264 WB to
2030 Free Flow Speed				Manslick to		Manslick to Dixie		I-264 EB &		Dixie &
(Note: Not speed limits)				Dixie		& Manslick to		I-264 WB to		Manslick to
						I-264 WB		Manslick		I-264 WB
		Base		Alt1		Alt2		Alt3		Alt 4
I-264 EB west of Dixie Hwy interchange		55		55		55		55		55
I-264 WB west of Dixie Hwy interchange		55		55		55		55		55
Ramp from I-264 EB to US 31W NB		25		25		25		25		25
Ramp from I-264 EB to US 31W SB		40		40		40		40		40
Ramp from I-264 WB to US 31W NB		35		35		35		35		35
Ramp from I-264 WB to US 31W SB		30						30		
Ramp from US 31W NB to I-264 EB		35		35		35		35		35
Ramp from US 31W NB to I-264 WB		25		25		25		25		25
Ramp from US 31W SB to I-264 EB		30		30		30		30		30
Ramp from US 31W SB to I-264 WB		30		30		30		30		30
US 31W NB north of I-264 interchange		45		45		45		45		45
US 31W SB north of I-264 interchange		45		45		45		45		45
US 31W NB south of I-264 interchange		45		45		45		45		45
US 31W SB south of I-264 interchange		45		45		45		45		45
I-264 EB east of Dixie Hwy interchange / west of Manslick Rd interchange		55		55		55		55		55
I-264 WB east of Dixie Hwy interchange / west of Manslick Rd interchange		55		55		55		55		55
Ramp from I-264 EB to Manslick Rd		N/A		40		40		N/A		40
Ramp from Manslick Rd to I-264 WB		N/A		N/A		35		N/A		40
Ramp from Manslick Rd to I-264 EB		N/A		40		40		40		40

Manslick Rd Interchange Project										
				I-264 WB &		I-264 WB &		Manslick to		I-264 WB to
2030 Free Flow Speed				Manslick to		Manslick to Dixie		I-264 EB &		Dixie &
(Note: Not speed limits)				Dixie		& Manslick to		I-264 WB to		Manslick to
						I-264 WB		Manslick		I-264 WB
		Base		Alt1		Alt2		Alt3		Alt 4
Ramp from I-264 WB to Manslick Rd		N/A		40		40		40		40
Manslick Rd NB north of I-264 interchange		45		45		45		45		45
Manslick Rd SB north of I-264 interchange		45		45		45		45		45
Manslick Rd NB south of I-264 interchange		45		40		45		45		45
Manslick Rd SB south of I-264 interchange		45		40		45		45		45
I-264 EB east of Manslick Rd interchange / west of Taylor Blvd interchange		55		55		55		55		55
I-264 WB east of Manslick Rd interchange / west of Taylor Blvd		55		55		55		55		55
Ramp from I-264 EB to Taylor Blvd		40		40		40		40		40
Ramp from Taylor Blvd to I-264 WB		40		40		40		40		40
Ramp from Taylor Blvd to I-264 EB		30		30		30		30		30
Ramp from I-264 WB to Taylor Blvd		40		40		40		40		40
I-264 EB east of Taylor Blvd interchange		55		55		55		55		55
I-264 WB east of Taylor Blvd interchange		55		55		55		55		55

Manslick Rd Interchange Project					
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2030 Per Lane Capacity		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
		Dixie	& Manslick to	I-264 WB to	Manslick to
			I-264 WB	Manslick	I-264 WB
	Base	Alt1	Alt2	Alt3	Alt 4
I-264 EB west of Dixie Hwy interchange	15,000	15,000	15,000	15,000	15,000
I-264 WB west of Dixie Hwy interchange	15,000	15,000	15,000	15,000	15,000
Ramp from I-264 EB to US 31W NB	13,000	13,000	13,000	13,000	13,000
Ramp from I-264 EB to US 31W SB	14,000	14,000	14,000	14,000	14,000
Ramp from I-264 WB to US 31W NB	14,000	14,000	14,000	14,000	14,000
Ramp from I-264 WB to US 31W SB	13,000			13,000	
Ramp from US 31W NB to I-264 EB	14,000	14,000	14,000	14,000	14,000
Ramp from US 31W NB to I-264 WB	13,000	13,000	13,000	13,000	13,000
Ramp from US 31W SB to I-264 EB	13,000	13,000	13,000	13,000	13,000
Ramp from US 31W SB to I-264 WB	13,000	13,000	13,000	13,000	13,000
US 31W NB north of I-264 interchange	7,500	7,500	7,500	7,500	7,500
US 31W SB north of I-264 interchange	7,500	7,500	7,500	7,500	7,500
US 31W NB south of I-264 interchange	7,500	7,500	7,500	7,500	7,500
US 31W SB south of I-264 interchange	7,500	7,500	7,500	7,500	7,500
I-264 EB east of Dixie Hwy interchange / west of Manslick Rd interchange	15,000	15,000	15,000	15,000	15,000
I-264 WB east of Dixie Hwy interchange / west of Manslick Rd interchange	15,000	15,000	15,000	15,000	15,000
Ramp from I-264 EB to Manslick Rd	N/A	14,000	14,000	N/A	14,000
Ramp from Manslick Rd to I-264 WB	N/A	N/A	14,000	N/A	14,000
Ramp from Manslick Rd to I-264 EB	N/A	14,000	14,000	14,000	14,000
Ramp from I-264 WB to Manslick Rd	N/A	14,000	14,000	14,000	14,000
Manslick Rd NB north of I-264 interchange	6,000	6,000	6,000	6,000	6,000
Manslick Rd SB north of I-264 interchange	6,000	6,000	6,000	6,000	6,000
Manslick Rd NB south of I-264 interchange	6,000	6,000	6,000	6,000	6,000

Manslick Rd Interchange Project										
				I-264 WB &		I-264 WB &		Manslick to		I-264 WB to
2030 Per Lane Capacity				Manslick to		Manslick to Dixie		I-264 EB &		Dixie &
				Dixie		& Manslick to		I-264 WB to		Manslick to
						I-264 WB		Manslick		I-264 WB
		Base		Alt1		Alt2		Alt3		Alt 4
Manslick Rd SB south of I-264 interchange		6,000		6,000		6,000		6,000		6,000
I-264 EB east of Manslick Rd interchange / west of Taylor Blvd interchange		15,000		15,000		15,000		15,000		15,000
I-264 WB east of Manslick Rd interchange / west of Taylor Blvd interchange		15,000		15,000		15,000		15,000		15,000
Ramp from I-264 EB to Taylor Blvd		14,000		14,000		14,000		14,000		14,000
Ramp from Taylor Blvd to I-264 WB		14,000		14,000		14,000		14,000		14,000
Ramp from Taylor Blvd to I-264 EB		13,000		13,000		13,000		13,000		13,000
Ramp from I-264 WB to Taylor Blvd		14,000		14,000		14,000		14,000		14,000
I-264 EB east of Taylor Blvd interchange		15,000		15,000		15,000		15,000		15,000
I-264 WB east of Taylor Blvd interchange		15,000		15,000		15,000		15,000		15,000
Bluegrass Ave. EB east of Manslick Rd.		4,500		4,500		4,500		4,500		4,500
Bluegrass Ave. WB east of Manslick Rd.		4,500		4,500		4,500		4,500		4,500
Gagel Ave. EB west of Manslick Rd.		6,000		6,000		6,000		6,000		6,000
Gagel Ave. WB west of Manslick Rd.		6,000		6,000		6,000		6,000		6,000
Crums Ln. EB west of Manslick Rd.		4,500		4,500		4,500		4,500		4,500
Crums Ln. WB west of Manslick Rd.		4,500		4,500		4,500		4,500		4,500
Berry Blvd. EB east of Manslick Rd.		6,000		6,000		6,000		6,000		6,000
Berry Blvd. WB east of Manslick Rd.		6,000		6,000		6,000		6,000		6,000

Manslick Rd Interchange Project					
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2030 Volume/Capacity Ratio		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
(Note: Modeled volumes, not projected volumes)		Dixie	& Manslick to	I-264 WB to	Manslick to
			I-264 WB	Manslick	I-264 WB
	Base	Alt1	Alt2	Alt3	Alt 4
I-264 EB west of Dixie Hwy interchange	0.6842	0.7511	0.7506	0.6612	0.7284
I-264 WB west of Dixie Hwy interchange	0.6713	0.6820	0.7083	0.6658	0.7218
Ramp from I-264 EB to US 31W NB	0.0219	0.0095	0.0131	0.0189	0.0104
Ramp from I-264 EB to US 31W SB	0.7533	1.2018	1.1748	0.8341	1.1486
Ramp from I-264 WB to US 31W NB	0.4793	0.4696	0.4103	0.2752	1.0375
Ramp from I-264 WB to US 31W SB	0.7426			0.6031	
Ramp from US 31W NB to I-264 EB	1.0708	1.0363	1.0096	0.9636	1.0371
Ramp from US 31W NB to I-264 WB	0.1215	0.4656	0.4496	0.5024	0.4005
Ramp from US 31W SB to I-264 EB	0.6219	0.7207	0.6532	0.4635	0.5046
Ramp from US 31W SB to I-264 WB	0.2348	0.1209	0.0539	0.1827	0.0308
US 31W NB north of I-264 interchange	1.3155	0.9439	0.8926	1.2997	0.7964
US 31W SB north of I-264 interchange	1.1337	1.0574	0.9581	1.1640	0.9358
US 31W NB south of I-264 interchange	1.5133	1.6256	1.5933	1.5740	1.5759
US 31W SB south of I-264 interchange	1.5876	1.6165	1.5473	1.6185	1.5836
I-264 EB east of Dixie Hwy interchange / west of Manslick Rd interchange	0.9563	0.8388	0.8113	0.8299	0.7660
I-264 WB east of Dixie Hwy interchange / west of Manslick Rd interchange	1.0412	0.9427	0.8461	0.9020	0.8211
Ramp from I-264 EB to Manslick Rd	N/A	0.2133	0.2338	N/A	0.2263
Ramp from Manslick Rd to I-264 WB	N/A	N/A	0.2941	N/A	0.3178
Ramp from Manslick Rd to I-264 EB	N/A	0.5441	0.8477	0.8556	0.9415
Ramp from I-264 WB to Manslick Rd	N/A	0.5886	0.9700	0.8690	0.9755
Manslick Rd NB north of I-264 interchange	1.3766	1.0178	1.0519	1.2394	1.1473
Manslick Rd SB north of I-264 interchange	1.4586	0.8014	1.1165	1.1957	1.1967
Manslick Rd NB south of I-264 interchange	1.3766	1.7916	1.5566	1.5048	1.5964

Manslick Rd Interchange Project					
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2030 Volume/Capacity Ratio		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
(Note: Modeled volumes, not projected volumes)		Dixie	& Manslick to	I-264 WB to	Manslick to
			I-264 WB	Manslick	I-264 WB
	Base	Alt1	Alt2	Alt3	Alt 4
Manslick Rd SB south of I-264 interchange	1.4586	1.8986	1.6627	1.4767	1.5788
I-264 EB east of Manslick Rd interchange / west of Taylor Blvd interchange	0.9563	1.0081	1.0751	1.0961	1.0590
I-264 WB east of Manslick Rd interchange / west of Taylor Blvd interchange	1.0412	1.1258	1.1479	1.1723	1.1246
Ramp from I-264 EB to Taylor Blvd	0.4444	0.3379	0.3426	0.4566	0.3471
Ramp from Taylor Blvd to I-264 WB	0.3586	0.4399	0.4300	0.4766	0.4097
Ramp from Taylor Blvd to I-264 EB	1.3669	1.0408	0.9480	1.0346	1.0180
Ramp from I-264 WB to Taylor Blvd	0.5398	0.4657	0.4750	0.4566	0.4725
I-264 EB east of Taylor Blvd interchange	1.2129	1.2036	1.2423	1.2530	1.2451
I-264 WB east of Taylor Blvd interchange	1.2655	1.2787	1.3096	1.3082	1.2912
Bluegrass Ave. EB east of Manslick Rd.	0.7796	0.7865	0.4740	0.3922	0.5398
Bluegrass Ave. WB east of Manslick Rd.	0.7913	0.9014	0.6029	0.5642	0.7111
Gagel Ave. EB west of Manslick Rd.	0.6635	0.7120	0.6906	0.7662	0.7498
Gagel Ave. WB west of Manslick Rd.	0.6649	0.8449	0.8361	0.7559	0.8522
Crums Ln. EB west of Manslick Rd.	0.9851	0.6297	0.7097	0.9471	0.9106
Crums Ln. WB west of Manslick Rd.	1.1071	1.0611	1.0906	1.5401	1.3028
Berry Blvd. EB east of Manslick Rd.	0.8698	0.7361	0.7265	0.7316	0.7646
Berry Blvd. WB east of Manslick Rd.	0.8951	0.6515	0.7731	0.8023	0.8441

I-264/Manslick Rd Interchange Feasibility Study		2009	2009	2009	2009		2030	2030	2030	2030
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2009 and 2030 Modeled Traffic Volume Estimates		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
		Dixie	& Manslick to	I-264 WB to	Manslick to		Dixie	& Manslick to	I-264 WB to	Manslick to
	2009		I-264 WB	Manslick	I-264 WB	2030		I-264 WB	Manslick	I-264 WB
	Base					Base				
	Volumes	Alt 1	Alt 2	Alt 3	Alt 4	Volumes	Alt 1	Alt 2	Alt 3	Alt 4
I-264 west of Dixie Hwy interchange	57,850	67,350	66,500	54,650	67,450	74,900	79,200	80,600	73,350	80,150
Ramp from I-264 EB to US 31W NB	1,700	1,500	1,450	1,900	1,500	4,000	1,750	2,400	3,450	1,900
Ramp from I-264 EB to US 31W SB	5,350	13,400	13,200	5,200	13,200	10,400	16,600	16,200	11,500	15,900
Ramp from I-264 WB to US 31W NB	8,000	5,650	4,850	7,100	4,600	8,050	6,100	4,850	4,600	2,500
Ramp from I-264 WB to US 31W SB	19,900	13,300	13,900	18,800	14,450	18,250	13,500	12,500	14,800	11,800
Ramp from US 31W NB to I-264 EB	21,000	18,400	18,500	18,900	18,800	19,500	18,900	18,400	17,550	18,900
Ramp from US 31W NB to I-264 WB	6,750	6,300	5,700	7,050	5,850	10,000	9,600	9,250	10,350	8,250
Ramp from US 31W SB to I-264 EB	8,000	8,950	8,900	8,450	9,000	9,450	11,000	9,950	7,050	7,700
Ramp from US 31W SB to I-264 WB	1,900	1,800	1,950	1,550	1,500	4,250	2,200	1,500	3,300	2,000
US 31W north of I-264 interchange	35,550	32,050	30,500	36,550	30,600	35,700	36,050	33,500	35,900	31,050
US 31W south of I-264 interchange	64,650	61,300	61,450	63,600	62,200	65,000	68,000	65,850	66,900	66,250
I-264 east of Dixie Hwy interchange / west of Manslick Rd	103,600	89,050	87,450	97,000	89,000	107,500	95,900	89,200	93,200	85,400
Ramp from I-264 EB to Manslick Rd		1,900	1,850		2,100		3,300	3,600		3,500
Ramp from Manslick Rd to I-264 WB			2,100		1,850			4,550		4,900
Ramp from Manslick Rd to I-264 EB		9,700	9,550	7,350	8,400		7,850	7,900	8,700	9,600
Ramp from I-264 WB to Manslick Rd		9,700	9,550	6,700	8,950		8,500	7,600	8,550	9,600
Manslick Rd north of I-264 interchange	19,400	16,600	16,700	14,100	17,100	39,400	25,300	30,150	33,850	32,600
Manslick Rd south of I-264 interchange	19,400	22,300	22,400	21,700	21,650	39,400	25,650	44,750	41,450	44,100
I-264 east of Manslick Rd interchange / west of Taylor Blvd	103,600	109,450	108,900	113,300	108,800	107,500	114,850	119,650	122,100	117,500
Ramp from I-264 EB to Taylor Blvd	5,350	5,100	5,350	5,700	5,250	6,200	4,700	4,800	6,400	4,850
Ramp from Taylor Blvd to I-264 WB	5,050	5,350	5,250	6,150	5,650	5,450	6,700	6,550	7,250	6,250
Ramp from Taylor Blvd to I-264 EB	13,400	10,350	10,550	10,400	9,650	14,550	11,100	10,100	11,000	10,850
Ramp from I-264 WB to Taylor Blvd	14,550	12,550	13,050	11,650	13,100	15,450	13,350	13,600	13,100	13,550
I-264 east of Taylor Blvd interchange	117,250	117,150	116,450	117,500	114,900	121,950	122,150	125,600	126,050	124,800
Dixie Hwy north of Crums Ln	20,924	16,650	16,000	19,200	16,350	22,750	16,700	18,100	20,850	19,350

I-264/Manslick Rd Interchange Feasibility Study		2009	2009	2009	2009		2030	2030	2030	2030
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2009 and 2030 Modeled Traffic Volume Estimates		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
		Dixie	& Manslick to	I-264 WB to	Manslick to		Dixie	& Manslick to	I-264 WB to	Manslick to
	2009		I-264 WB	Manslick	I-264 WB	2030		I-264 WB	Manslick	I-264 WB
	Base					Base				
	Volumes	Alt 1	Alt 2	Alt 3	Alt 4	Volumes	Alt 1	Alt 2	Alt 3	Alt 4
Seventh Street Rd north of Crums Ln	17,000	16,000	16,400	18,450	16,200	15,200	18,500	18,000	20,000	19,400
Crums Ln east of US 31W	6,700	8,250	8,300	5,550	7,900	7,800	5,750	5,700	7,800	7,200
US 31W south of Crums Ln	33,500	31,300	29,350	35,400	29,550	33,050	34,350	32,100	34,200	30,300
Crums Ln west of US 31W	12,900	12,750	13,100	12,800	12,900	14,000	13,650	13,200	13,500	13,400
US 31W north of Gagel Ave	65,650	62,200	62,150	64,500	63,350	65,050	68,800	66,200	67,350	67,000
Gagel Ave east of US 31W	11,400	13,750	13,350	12,150	12,800	10,500	13,450	11,550	12,300	12,000
US 31W south of Gagel Ave	65,350	64,600	64,250	64,600	65,350	64,750	67,400	67,300	66,900	68,700
Seventh Street Rd north of Berry Blvd	21,450	19,500	18,900	21,750	18,750	25,250	23,050	23,700	25,200	23,800
Berry Blvd east of Manslick Rd	14,300	12,700	12,800	13,350	12,950	15,850	12,450	13,500	13,800	14,450
Manslick Rd south of Berry Blvd	14,000	10,800	10,250	10,600	10,500	19,200	11,500	13,000	13,650	13,100
Seventh Street Rd west of Manslick Rd	17,050	17,200	17,300	19,900	16,900	14,250	18,700	18,950	20,250	20,200
Manslick Rd north of Crums Ln	14,400	12,000	11,150	10,900	12,500	25,750	18,350	19,350	20,350	20,000
Manslick Rd south of Crums Ln	19,300	16,550	16,650	14,000	17,000	39,200	25,150	30,000	33,700	32,400
Crums Ln west of Manslick Rd	12,900	16,750	16,600	11,600	16,400	15,900	12,850	13,700	18,900	16,800
Manslick Rd north of Bluegrass Ave	15,350	12,600	13,150	12,700	12,100	33,600	20,050	32,350	30,250	13,700
Bluegrass Ave east of Manslick Rd	17,650	11,550	10,950	8,450	12,800	19,300	20,750	13,250	11,750	15,400

I-264/Manslick Rd Interchange Feasibility Study		2009	2009	2009	2009		2030	2030	2030	2030
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2009 and 2030 Modeled Traffic Volume Estimates		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
		Dixie	& Manslick to	I-264 WB to	Manslick to		Dixie	& Manslick to	I-264 WB to	Manslick to
	2009		I-264 WB	Manslick	I-264 WB	2030		I-264 WB	Manslick	I-264 WB
	Base					Base				
	Volumes	Alt 1	Alt 2	Alt 3	Alt 4	Volumes	Alt 1	Alt 2	Alt 3	Alt 4
Manslick Rd south of Bluegrass Ave	19,900	22,050	21,200	20,450	20,300	50,450	52,000	52,300	48,250	53,600
Manslick Rd north of Gagel Ave	14,900	16,800	16,200	15,300	15,200	38,150	30,600	39,300	36,100	40,350
Hazelwood Ave east of Manslick Rd	9,000	9,700	10,000	8,800	9,800	9,600	10,400	10,350	11,400	9,500
Manslick Rd south of Gagel Ave	20,600	20,200	20,300	20,300	19,350	44,300	40,200	43,400	43,500	42,400
Gagel Ave west of Manslick Rd	11,100	13,650	13,400	11,250	13,050	11,100	13,000	12,750	12,700	13,400
Taylor Blvd north of Berry Blvd	15,700	14,600	14,700	13,350	14,750	18,550	16,700	16,650	17,200	16,850
Taylor Blvd south of Berry Blvd	24,700	25,150	25,350	25,850	25,250	26,850	26,150	26,500	27,100	26,700
Berry Blvd west of Taylor Blvd	14,300	12,900	13,000	13,500	13,300	16,400	13,400	14,150	14,650	14,700
Taylor Blvd north of I-264 WB ramps	32,850	33,550	33,700	34,300	33,300	34,100	34,600	35,100	35,900	35,100
Ramp from I-264 WB to Taylor Blvd	14,600	13,300	13,100	11,700	13,100	15,500	13,400	13,650	13,100	13,600
Taylor Blvd south of I-264 WB ramps	33,100	34,000	34,000	34,000	34,800	33,450	39,700	35,150	36,550	35,400
Ramp from Taylor Blvd to I-264 WB	5,050	5,350	5,250	6,150	5,650	5,450	6,700	6,550	7,250	6,250
Taylor Blvd north of I-264 EB ramps	35,550	36,550	36,550	36,300	37,400	35,950	42,700	37,800	39,300	38,000
Taylor Blvd south of I-264 EB ramps	36,150	35,050	35,450	34,700	35,100	36,900	39,150	35,200	37,950	35,500
Ramp from I-264 EB to Taylor Blvd	5,300	5,050	5,300	5,600	5,200	6,150	4,700	4,750	6,300	4,800
Ramp from Taylor Blvd to I-264 EB	13,400	10,350	10,600	10,400	9,650	14,550	11,100	10,100	13,400	10,850
Taylor Blvd north of Bluegrass Ave	25,450	26,850	27,500	25,300	25,900	26,050	30,100	25,700	27,900	26,500
Bluegrass Ave east of Taylor Blvd	17,800	18,950	18,650	21,200	18,500	21,600	23,450	22,050	21,750	21,400
Taylor Blvd south of Bluegrass Ave	25,100	25,150	25,300	25,900	25,300	26,650	25,500	25,400	27,300	25,600

I-264/Manslick Rd Interchange Feasibility Study		2009	2009	2009	2009		2030	2030	2030	2030
		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to		I-264 WB &	I-264 WB &	Manslick to	I-264 WB to
2009 and 2030 Modeled Traffic Volume Estimates		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &		Manslick to	Manslick to Dixie	I-264 EB &	Dixie &
		Dixie	& Manslick to	I-264 WB to	Manslick to		Dixie	& Manslick to	I-264 WB to	Manslick to
	2009		I-264 WB	Manslick	I-264 WB	2030		I-264 WB	Manslick	I-264 WB
	Base					Base				
	Volumes	Alt 1	Alt 2	Alt 3	Alt 4	Volumes	Alt 1	Alt 2	Alt 3	Alt 4
Bluegrass Ave west of Taylor Blvd	24,400	24,100	24,000	20,800	24,600	22,750	31,300	22,850	23,750	22,600
Vehicle Miles Travelled VMT	32,664,105	32,676,991	32,667,090	32,625,492	32,666,978	42,839,874	42,794,834	42,863,544	42,855,349	42,817,748
Vehicle Hours Travelled VHT	1,319,766	1,317,343	1,318,418	1,317,574	1,316,912	2,848,994	2,844,359	2,844,883	2,843,163	2,844,004

KIPDA ID # 128 — KY 1931 (Greenwood Road)

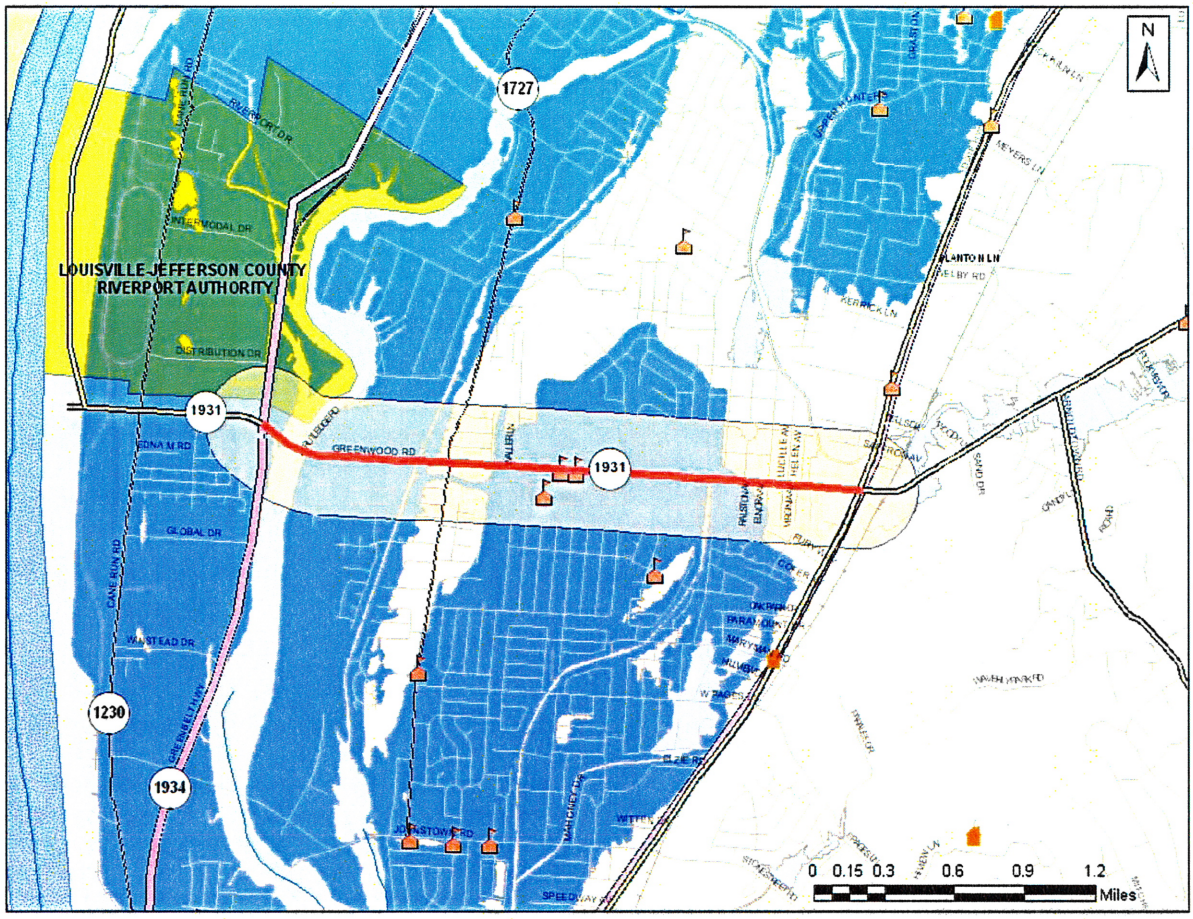
Project Type: ROADWAY CAPACITY

Description: Widen KY 1931 (Greenwood Road) from 2 to 5 lanes (5th lane will be a center turn lane) from KY 1934 (Greenbelt Highway) to US 31W (Dixie Highway), a total of 2.6 miles.

Purpose: Provide improved access between Dixie and Greenbelt highways.

Primary Contact Agency: Kentucky Transportation Cabinet
County: Jefferson **State ID #:** 323.01
Project Cost: $23,600,000
Estimated Open to Public Year: 2012

Regional Priority: NO
Included in AQ Analysis/Regionally Significant: YES
Subject to CMS Review: NO
Within 1/4 Mile or on a Freight Corridor: YES
Within 1/4 Mile or on a Bicycle & Pedestrian Priority Corridor: YES
Includes Bicycle Facilities: NO **Includes Pedestrian Facilities:** YES



KY 1931 (Manslick Road) KIPDA ID # 446

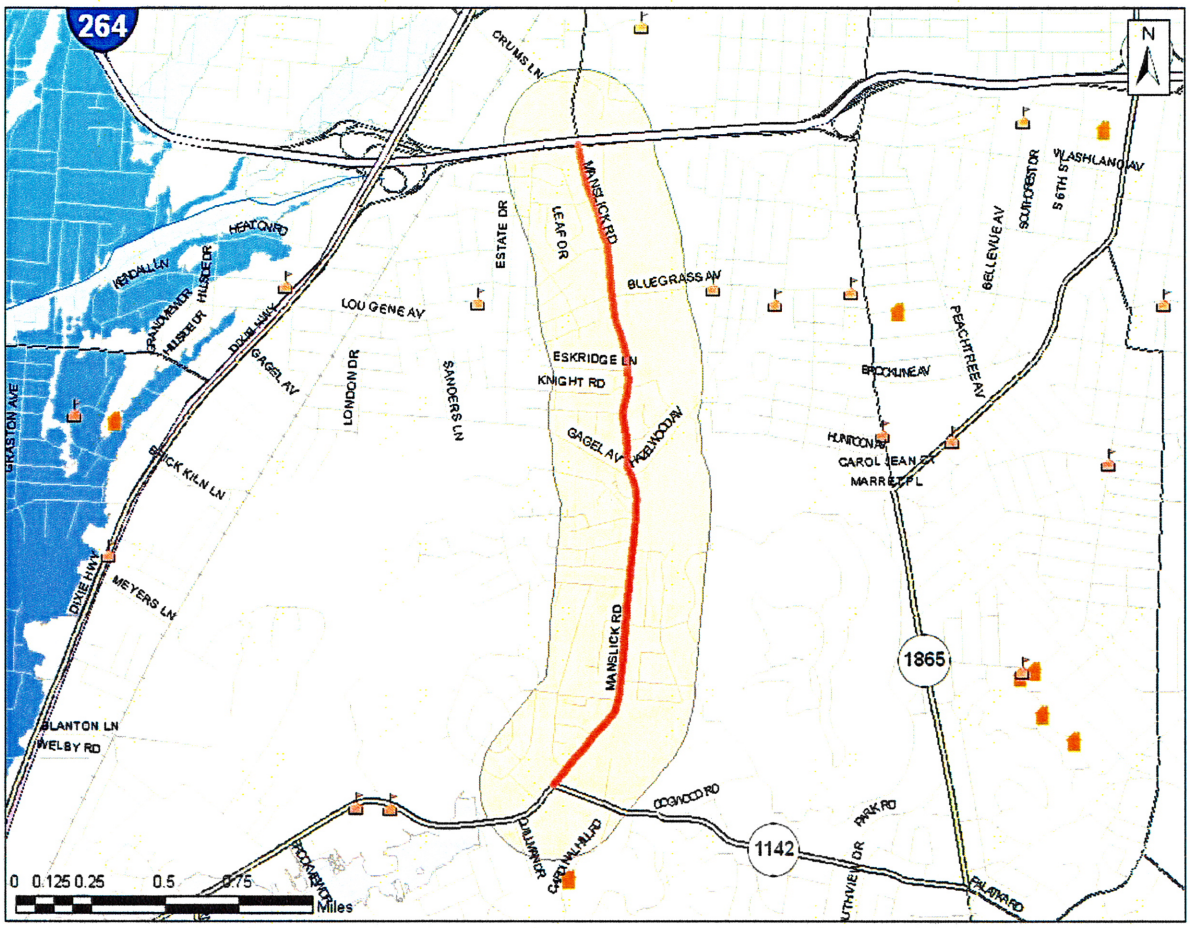
Project Type: ROADWAY CAPACITY

Description: Widen KY 1931 (Manslick Road) from 2 to 4 lanes from KY 1931 (St. Andrews Church Road) to I-264.

Purpose: This project will reduce traffic congestion.

Primary Contact Agency: Kentucky Transportation Cabinet
County: Jefferson **State ID #:**
Project Cost: $20,000,000
Estimated Open to Public Year: 2020

Regional Priority: YES
Included in AQ Analysis/Regionally Significant: YES
Subject to CMS Review: YES
Within 1/4 Mile or on a Freight Corridor: YES
Within 1/4 Mile or on a Bicycle & Pedestrian Priority Corridor: YES
Includes Bicycle Facilities: NO **Includes Pedestrian Facilities:** YES



KIPDA ID # 467 KY 1931 (St. Andrews Church Road)

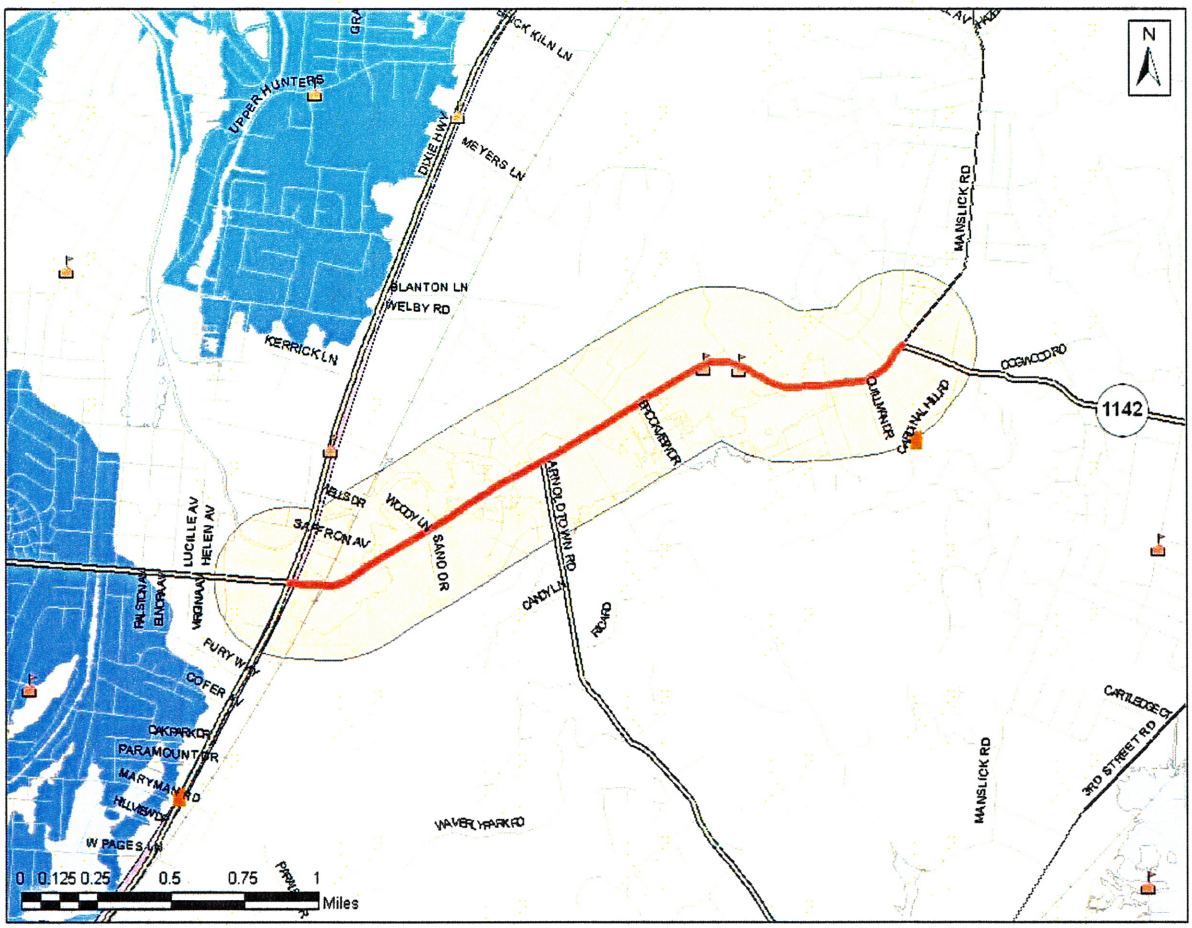
Project Type: ROADWAY CAPACITY

Description: Widen KY 1931 (St. Andrews Church Road) from 2 to 4 lanes from US 31W (Dixie Highway) to KY 1142 (Palatka Road).

Purpose: This project will reduce congestion and improve safety.

Primary Contact Agency: Kentucky Transportation Cabinet
County: Jefferson **State ID #:**
Project Cost: $20,000,000
Estimated Open to Public Year: 2020

Regional Priority: NO
Included in AQ Analysis/Regionally Significant: YES
Subject to CMS Review: YES
Within 1/4 Mile or on a Freight Corridor: YES
Within 1/4 Mile or on a Bicycle & Pedestrian Priority Corridor: YES
Includes Bicycle Facilities: YES **Includes Pedestrian Facilities:** NO



Appendix F

Manslick Road/I-264 Interchange Crash Analysis

Methodology

Safety along the study area roads was analyzed using crash analysis. Crash analysis is an analysis tool for finding roadway sections with abnormally high crash rates and, therefore, sections with potentially correctable hazards to traffic safety. Historical crash data from the five-year period January 2001 – December 2005 was used to identify study area roadway sections with abnormally high crash rates, thus indicating a possible need for safety improvements. Only crashes with a valid mile-point listing were considered in the analysis.

Crash analysis procedures involve assigning reported crashes to roadway locations by mile-point. Crashes are normally classified by severity into one of three categories: fatal, injury, or property damage only (PDO). Then, the average crash rate for roadway sections of various lengths is determined. Generally, the analysis procedure includes analyzing the entire roadway length under study, followed by analyzing successively smaller roadway sections, especially those containing higher concentrations of crashes. Roadway sections are classified as either spots or segments depending on their length — sections less than 0.30 miles are classified as a spot location, and sections over 0.30 miles are classified as a segment. Roadway section crash rates were normalized for comparison by either hundred-million-vehicle-miles traveled (HMVM) for segments, or millions-of-vehicles (MV) for spots. Using the average crash rate, the critical crash rate is obtained from Kentucky Transportation Research Center's (KTRC) *Analysis of Traffic Crash Data in Kentucky (2000-2004)*. The critical crash rate is the maximum crash rate expected to occur on a roadway section, given the statewide average crash rate for that functional road class, the average daily traffic (ADT) volume, and the roadway section length. The ratio of these two rates (*i.e.*, the actual annual crash rate to the critical crash rate) produces a critical rate factor (CRF), or a measure of crash frequency for each segment or spot location. If the roadway section's actual crash rate exceeds the critical rate (*i.e.*, the CRF is greater than 1.0), then that section is classified as a high crash location. In other words, if the CRF exceeds 1.0, then that highway section has more crashes than is statistically probable based on random occurrence. If the CRF is between 0.90 and 1.0, then that section is considered a potentially high crash location, with the potential increasing as 1.0 is approached.

Exhibit 4 in Appendix A provides a graphic presentation of the crashes and high crash areas.

Manslick Road Interchange
Crash Analysis
January 2001 – December 2005

	Begin MP	End MP	Length (Miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	ACCIDENTS				MV	HMV M	Rates per HMVM				Critical Rate	Critical Rate Factor
								Fatal	Injury	PDO	Total			Fatal Rate	Injury Rate	PDO Rate	Total Rate		
I-264	**5.000**	**11**	**6.000**	**88,300**	**6**	**U**	**92.00**	**1**	**414**	**922**	**1337**	**161**	**9.669**	**0.10**	**42.82**	**95.36**	**138.28**	**100.00**	**1.38**
	5.000	5.300	0.300	61,000	6	U	0.28	0	31	65	96	111	0.334	0.00	0.28	0.58	0.86	0.41	2.08
	5.100	5.400	0.300	50,500	6	U	0.28	0	27	53	80	92.2	0.276	0.00	0.29	0.58	0.87	0.43	2.03
	5.200	5.500	0.300	50,500	6	U	0.28	0	21	44	65	92.2	0.276	0.00	0.23	0.48	0.71	0.43	1.65
	5.300	5.600	0.300	50,500	6	U	0.28	0	11	32	43	92.2	0.276	0.00	0.12	0.35	0.47	0.43	1.09
	5.400	5.700	0.300	50,500	6	U	0.28	0	8	22	30	92.2	0.276	0.00	0.09	0.24	0.33	0.43	0.76
	5.500	5.800	0.300	50,500	6	U	0.28	0	9	24	33	92.2	0.276	0.00	0.10	0.26	0.36	0.43	0.84
	5.600	5.900	0.300	50,500	6	U	0.28	0	4	11	15	92.2	0.276	0.00	0.04	0.12	0.16	0.43	0.38
	5.700	6.000	0.300	50,500	6	U	0.28	0	4	13	17	92.2	0.276	0.00	0.04	0.14	0.18	0.43	0.43
	5.800	6.100	0.300	50,500	6	U	0.28	0	3	10	13	92.2	0.276	0.00	0.03	0.11	0.14	0.43	0.33
	5.900	6.200	0.300	50,500	6	U	0.28	0	3	11	14	92.2	0.276	0.00	0.03	0.12	0.15	0.43	0.36
	6.000	6.300	0.300	50,500	6	U	0.28	0	7	15	22	92.2	0.276	0.00	0.08	0.16	0.24	0.43	0.56
	6.100	6.400	0.300	50,500	6	U	0.28	0	13	13	26	92.2	0.276	0.00	0.14	0.14	0.28	0.43	0.66
	6.200	6.500	0.300	50,500	6	U	0.28	0	13	21	34	92.2	0.276	0.00	0.14	0.23	0.37	0.43	0.86
	6.300	6.600	0.300	50,500	6	U	0.28	0	10	15	25	92.2	0.276	0.00	0.11	0.16	0.27	0.43	0.63
	6.400	6.700	0.300	50,500	6	U	0.28	0	7	17	24	92.2	0.276	0.00	0.08	0.18	0.26	0.43	0.61
	6.500	6.800	0.300	50,500	6	U	0.28	0	16	14	30	92.2	0.276	0.00	0.17	0.15	0.33	0.43	0.76
	6.600	6.900	0.300	50,500	6	U	0.28	0	15	17	32	92.2	0.276	0.00	0.16	0.18	0.35	0.43	0.81
	6.700	7.000	0.300	50,500	6	U	0.28	0	12	20	32	92.2	0.276	0.00	0.13	0.22	0.35	0.43	0.81
	6.800	7.100	0.300	50,500	6	U	0.28	0	10	24	34	92.2	0.276	0.00	0.11	0.26	0.37	0.43	0.86
	6.900	7.200	0.300	50,500	6	U	0.28	0	11	25	36	92.2	0.276	0.00	0.12	0.27	0.39	0.43	0.91
	7.000	7.300	0.300	50,500	6	U	0.28	0	17	33	50	92.2	0.276	0.00	0.18	0.36	0.54	0.43	1.27
	7.100	7.400	0.300	50,500	6	U	0.28	0	31	76	107	92.2	0.276	0.00	0.34	0.82	1.16	0.43	2.72
	7.200	7.500	0.300	50,500	6	U	0.28	0	75	160	235	92.2	0.276	0.00	0.81	1.74	2.55	0.43	5.97
	7.300	7.600	0.300	87,300	6	U	0.28	0	92	211	303	159	0.478	0.00	0.58	1.32	1.90	0.39	4.86
	7.400	7.700	0.300	87,300	6	U	0.28	0	81	180	261	159	0.478	0.00	0.51	1.13	1.64	0.39	4.19
	7.500	7.800	0.300	87,300	6	U	0.28	0	41	103	144	159	0.478	0.00	0.26	0.65	0.90	0.39	2.31
	7.600	7.900	0.300	87,300	6	U	0.28	0	18	42	60	159	0.478	0.00	0.11	0.26	0.38	0.39	0.96
	7.700	8.000	0.300	87,300	6	U	0.28	0	8	23	31	159	0.478	0.00	0.05	0.14	0.19	0.39	0.50
	7.800	8.100	0.300	87,300	6	U	0.28	0	9	28	37	159	0.478	0.00	0.06	0.18	0.23	0.39	0.59
	7.900	8.200	0.300	87,300	6	U	0.28	0	8	28	36	159	0.478	0.00	0.05	0.18	0.23	0.39	0.58
	8.000	8.300	0.300	87,300	6	U	0.28	0	15	38	53	159	0.478	0.00	0.09	0.24	0.33	0.39	0.85
	8.100	8.400	0.300	87,300	6	U	0.28	0	10	23	33	159	0.478	0.00	0.06	0.14	0.21	0.39	0.53
	8.200	8.500	0.300	87,300	6	U	0.28	0	8	21	29	159	0.478	0.00	0.05	0.13	0.18	0.39	0.47
	8.300	8.600	0.300	87,300	6	U	0.28	0	2	11	13	159	0.478	0.00	0.01	0.07	0.08	0.39	0.21
	8.400	8.700	0.300	87,300	6	U	0.28	0	1	11	12	159	0.478	0.00	0.01	0.07	0.08	0.39	0.19
	8.500	8.800	0.300	87,300	6	U	0.28	0	1	8	9	159	0.478	0.00	0.01	0.05	0.06	0.39	0.14
	8.600	8.900	0.300	87,300	6	U	0.28	0	1	8	9	159	0.478	0.00	0.01	0.05	0.06	0.39	0.14
	8.700	9.000	0.300	87,300	6	U	0.28	0	3	12	15	159	0.478	0.00	0.02	0.08	0.09	0.39	0.24
	8.800	9.100	0.300	87,300	6	U	0.28	1	23	42	66	159	0.478	0.01	0.14	0.26	0.41	0.39	1.06
	8.900	9.200	0.300	87,300	6	U	0.28	1	35	60	96	159	0.478	0.01	0.22	0.38	0.60	0.39	1.54
	9.000	9.300	0.300	136,200	6	U	0.28	1	40	81	122	249	0.746	0.00	0.16	0.33	0.49	0.37	1.33
	9.100	9.400	0.300	136,200	6	U	0.28	0	22	55	77	249	0.746	0.00	0.09	0.22	0.31	0.37	0.84
	9.200	9.500	0.300	136,200	6	U	0.28	0	9	36	45	249	0.746	0.00	0.04	0.14	0.18	0.37	0.49
	9.300	9.600	0.300	136,200	6	U	0.28	0	2	18	20	249	0.746	0.00	0.01	0.07	0.08	0.37	0.22
	9.400	9.700	0.300	136,200	6	U	0.28	0	2	18	20	249	0.746	0.00	0.01	0.07	0.08	0.37	0.22

Yellow Shading - High Crash Location

Manslick Road Interchange
Crash Analysis
January 2001 – December 2005

	Begin MP	End MP	Length (Miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	ACCIDENTS				MV	HMV M	Rates per HMVM				Critical Rate	Critical Rate Factor
								Fatal	Injury	PDO	Total			Fatal Rate	Injury Rate	PDO Rate	Total Rate		
	9.500	9.800	0.300	136,200	6	U	0.28	0	4	17	21	249	0.746	0.00	0.02	0.07	0.08	0.37	0.23
	9.600	9.900	0.300	136,200	6	U	0.28	0	4	12	16	249	0.746	0.00	0.02	0.05	0.06	0.37	0.17
	9.700	10.000	0.300	136,200	6	U	0.28	0	8	20	28	249	0.746	0.00	0.03	0.08	0.11	0.37	0.31
	9.800	10.100	0.300	136,200	6	U	0.28	0	60	102	162	249	0.746	0.00	0.24	0.41	0.65	0.37	1.77
	9.900	10.200	0.300	136,200	6	U	0.28	0	67	129	196	249	0.746	0.00	0.27	0.52	0.79	0.37	2.14
	10.000	10.300	0.300	146,500	6	U	0.28	0	73	159	232	267	0.802	0.00	0.27	0.59	0.87	0.37	2.38
	10.100	10.400	0.300	146,500	6	U	0.28	0	25	82	107	267	0.802	0.00	0.09	0.31	0.40	0.37	1.10
	10.200	10.500	0.300	146,500	6	U	0.28	0	28	64	92	267	0.802	0.00	0.10	0.24	0.34	0.37	0.94
	10.300	10.600	0.300	146,500	6	U	0.28	0	34	45	79	267	0.802	0.00	0.13	0.17	0.30	0.37	0.81
	10.400	10.700	0.300	146,500	6	U	0.28	0	36	63	99	267	0.802	0.00	0.13	0.24	0.37	0.37	1.01
	10.500	10.800	0.300	146,500	6	U	0.28	0	27	56	83	267	0.802	0.00	0.10	0.21	0.31	0.37	0.85
	10.600	10.900	0.300	146,500	6	U	0.28	0	15	41	56	267	0.802	0.00	0.06	0.15	0.21	0.37	0.57
	10.700	11.000	0.300	146,500	6	U	0.28	0	12	30	42	267	0.802	0.00	0.04	0.11	0.16	0.37	0.43

Yellow Shading - High Crash Location

Manslick Road Interchange
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	Begin MP	End MP	Length (Miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	ACCIDENTS				MV	HMVM	Rates per HMVM				Critical Rate	Critical Rate Factor
								Fatal	Injury	PDO	Total			Fatal Rate	Injury Rate	PDO Rate	Total Rate		
US 31 W	**13.000**	**17.000**	**4.000**	**38,400**	**4**	**U**	**278.00**	**2**	**603**	**1492**	**2097**	**70.1**	**2.803**	**0.71**	**215.11**	**532.25**	**748.07**	**283.14**	**2.64**
	13.000	13.300	0.300	53,200	6	U	0.84	0	23	84	107	97.1	0.291	0.00	0.24	0.87	1.10	1.08	1.02
	13.100	13.400	0.300	53,200	6	U	0.84	0	29	101	130	97.1	0.291	0.00	0.30	1.04	1.34	1.08	1.23
	13.200	13.500	0.300	53,200	6	U	0.84	0	18	43	61	97.1	0.291	0.00	0.19	0.44	0.63	1.08	0.58
	13.300	13.600	0.300	53,200	6	U	0.84	0	20	33	53	97.1	0.291	0.00	0.21	0.34	0.55	1.08	0.50
	13.400	13.700	0.300	53,200	6	U	0.84	0	9	15	24	97.1	0.291	0.00	0.09	0.15	0.25	1.08	0.23
	13.500	13.800	0.300	53,200	6	U	0.84	0	11	15	26	97.1	0.291	0.00	0.11	0.15	0.27	1.08	0.25
	13.600	13.900	0.300	62,300	6	U	0.84	0	37	106	143	114	0.341	0.00	0.33	0.93	1.26	1.07	1.18
	13.700	14.000	0.300	62,300	6	U	0.84	0	70	228	298	114	0.341	0.00	0.62	2.01	2.62	1.07	2.46
	13.800	14.100	0.300	62,300	6	U	0.84	0	83	255	338	114	0.341	0.00	0.73	2.24	2.97	1.07	2.79
	13.900	14.200	0.300	62,300	6	U	0.84	0	70	189	259	114	0.341	0.00	0.62	1.66	2.28	1.07	2.14
	14.000	14.300	0.300	62,300	6	U	0.84	1	51	98	150	114	0.341	0.01	0.45	0.86	1.32	1.07	1.24
	14.100	14.400	0.300	62,300	6	U	0.84	1	70	124	195	114	0.341	0.01	0.62	1.09	1.72	1.07	1.61
	14.200	14.500	0.300	62,300	6	U	0.84	1	104	274	379	114	0.341	0.01	0.91	2.41	3.33	1.07	3.13
	14.300	14.600	0.300	62,300	4	U	0.84	0	95	288	383	114	0.341	0.00	0.84	2.53	3.37	1.07	3.16
	14.400	14.700	0.300	62,300	4	U	0.84	0	61	248	309	114	0.341	0.00	0.54	2.18	2.72	1.07	2.55
	14.500	14.800	0.300	62,300	4	U	0.84	0	27	110	137	114	0.341	0.00	0.24	0.97	1.20	1.07	1.13
	14.600	14.900	0.300	62,300	4	U	0.84	0	32	97	129	114	0.341	0.00	0.28	0.85	1.13	1.07	1.06
	14.700	15.000	0.300	62,300	4	U	0.84	0	35	105	140	114	0.341	0.00	0.31	0.92	1.23	1.07	1.16
	14.800	15.100	0.300	62,300	4	U	0.84	0	24	102	126	114	0.341	0.00	0.21	0.90	1.11	1.07	1.04
	14.900	15.200	0.300	33,300	4	U	0.84	0	70	177	247	60.8	0.182	0.00	1.15	2.91	4.06	1.15	3.53
	15.000	15.300	0.300	33,300	4	U	0.84	0	88	193	281	60.8	0.182	0.00	1.45	3.18	4.62	1.15	4.02
	15.100	15.400	0.300	33,300	4	U	0.84	1	129	261	391	60.8	0.182	0.02	2.12	4.29	6.43	1.15	5.59
	15.200	15.500	0.300	33,300	4	U	0.84	1	75	178	254	60.8	0.182	0.02	1.23	2.93	4.18	1.15	3.63
	15.300	15.600	0.300	33,300	4	U	0.84	1	75	174	250	60.8	0.182	0.02	1.23	2.86	4.11	1.15	3.57
	15.400	15.700	0.300	19,100	4	U	0.84	0	38	79	117	34.9	0.105	0.00	1.09	2.27	3.36	1.25	2.68
	15.500	15.800	0.300	19,100	4	U	0.84	0	61	105	166	34.9	0.105	0.00	1.75	3.01	4.76	1.25	3.80
	15.600	15.900	0.300	19,100	4	U	0.84	0	44	70	114	34.9	0.105	0.00	1.26	2.01	3.27	1.25	2.61
	15.700	16.000	0.300	19,100	4	U	0.84	0	49	79	128	34.9	0.105	0.00	1.41	2.27	3.67	1.25	2.93
	15.800	16.100	0.300	19,100	4	U	0.84	0	38	71	109	34.9	0.105	0.00	1.09	2.04	3.13	1.25	2.49
	15.900	16.200	0.300	19,100	4	U	0.84	0	41	88	129	34.9	0.105	0.00	1.18	2.52	3.70	1.25	2.95
	16.000	16.300	0.300	19,100	4	U	0.84	0	35	83	118	34.9	0.105	0.00	1.00	2.38	3.39	1.25	2.70
	16.100	16.400	0.300	19,100	4	U	0.84	0	17	56	73	34.9	0.105	0.00	0.49	1.61	2.09	1.25	1.67
	16.200	16.500	0.300	19,100	4	U	0.84	0	22	56	78	34.9	0.105	0.00	0.63	1.61	2.24	1.25	1.78
	16.300	16.600	0.300	19,100	4	U	0.84	0	19	49	68	34.9	0.105	0.00	0.55	1.41	1.95	1.25	1.56
	16.400	16.700	0.300	19,100	4	U	0.84	0	25	36	61	34.9	0.105	0.00	0.72	1.03	1.75	1.25	1.40
	16.500	16.800	0.300	19,100	4	U	0.84	0	18	21	39	34.9	0.105	0.00	0.52	0.60	1.12	1.25	0.89
	16.600	16.900	0.300	19,100	4	U	0.84	0	18	24	42	34.9	0.105	0.00	0.52	0.69	1.20	1.25	0.96
	16.700	17.000	0.300	19,100	4	U	0.84	0	22	38	60	34.9	0.105	0.00	0.63	1.09	1.72	1.25	1.37

Yellow Shading - High Crash Location

Manslick Road Interchange
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	Begin MP	End MP	Length (Miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	ACCIDENTS				MV	HMV M	Rates per HMVM				Critical Rate	Critical Rate Factor
								Fatal	Injury	PDO	Total			Fatal Rate	Injury Rate	PDO Rate	Total Rate		
US 60 A	**0.000**	**3.000**	**3.000**	**15,300**	**4**	**U**	**438.00**	**0**	**122**	**101**	**223**	**27.9**	**0.838**	**0.00**	**145.64**	**120.57**	**266.21**	**448.22**	**0.59**
	0.000	0.300	0.300	15,700	4	U	1.31	0	51	44	95	28.7	0.086	0.00	1.78	1.54	3.32	1.88	1.77
	0.100	0.400	0.300	15,700	4	U	1.31	0	59	61	120	28.7	0.086	0.00	2.06	2.13	4.19	1.88	2.23
	0.200	0.500	0.300	15,700	4	U	1.31	0	51	46	97	28.7	0.086	0.00	1.78	1.61	3.39	1.88	1.80
	0.300	0.600	0.300	15,700	4	U	1.31	0	41	40	81	28.7	0.086	0.00	1.43	1.40	2.83	1.88	1.51
	0.400	0.700	0.300	13,300	4	U	1.31	0	17	12	29	24.3	0.073	0.00	0.70	0.49	1.19	1.93	0.62
	0.500	0.800	0.300	13,300	4	U	1.31	0	0	3	3	24.3	0.073	0.00	0.00	0.12	0.12	1.93	0.06
	0.600	0.900	0.300	13,300	4	U	1.31	0	5	0	5	24.3	0.073	0.00	0.21	0.00	0.21	1.93	0.11
	0.700	1.000	0.300	13,300	4	U	1.31	0	5	0	5	24.3	0.073	0.00	0.21	0.00	0.21	1.93	0.11
	0.800	1.100	0.300	13,300	4	U	1.31	0	5	2	7	24.3	0.073	0.00	0.21	0.08	0.29	1.93	0.15
	0.900	1.200	0.300	13,300	4	U	1.31	0	7	2	9	24.3	0.073	0.00	0.29	0.08	0.37	1.93	0.19
	1.000	1.300	0.300	13,300	4	U	1.31	0	7	2	9	24.3	0.073	0.00	0.29	0.08	0.37	1.93	0.19
	1.100	1.400	0.300	13,300	4	U	1.31	0	7	0	7	24.3	0.073	0.00	0.29	0.00	0.29	1.93	0.15
	1.200	1.500	0.300	13,300	4	U	1.31	0	6	3	9	24.3	0.073	0.00	0.25	0.12	0.37	1.93	0.19
	1.300	1.600	0.300	19,400	4	U	1.31	0	6	4	10	35.4	0.106	0.00	0.17	0.11	0.28	1.82	0.16
	1.400	1.700	0.300	19,400	4	U	1.31	0	8	5	13	35.4	0.106	0.00	0.23	0.14	0.37	1.82	0.20
	1.500	1.800	0.300	19,400	4	U	1.31	0	2	4	6	35.4	0.106	0.00	0.06	0.11	0.17	1.82	0.09
	1.600	1.900	0.300	19,400	4	U	1.31	0	6	4	10	35.4	0.106	0.00	0.17	0.11	0.28	1.82	0.16
	1.700	2.000	0.300	19,400	4	U	1.31	0	5	3	8	35.4	0.106	0.00	0.14	0.08	0.23	1.82	0.12
	1.800	2.100	0.300	19,400	4	U	1.31	0	5	2	7	35.4	0.106	0.00	0.14	0.06	0.20	1.82	0.11
	1.900	2.200	0.300	19,400	4	U	1.31	0	2	2	4	35.4	0.106	0.00	0.06	0.06	0.11	1.82	0.06
	2.000	2.300	0.300	19,400	4	U	1.31	0	2	5	7	35.4	0.106	0.00	0.06	0.14	0.20	1.82	0.11
	2.100	2.400	0.300	11,900	4	U	1.31	0	3	4	7	21.7	0.065	0.00	0.14	0.18	0.32	1.97	0.16
	2.200	2.500	0.300	11,900	4	U	1.31	0	4	3	7	21.7	0.065	0.00	0.18	0.14	0.32	1.97	0.16
	2.300	2.600	0.300	11,900	4	U	1.31	0	3	0	3	21.7	0.065	0.00	0.14	0.00	0.14	1.97	0.07
	2.400	2.700	0.300	11,900	4	U	1.31	0	2	0	2	21.7	0.065	0.00	0.09	0.00	0.09	1.97	0.05
	2.500	2.800	0.300	11,900	4	U	1.31	0	0	2	2	21.7	0.065	0.00	0.00	0.09	0.09	1.97	0.05
	2.600	2.900	0.300	14,100	4	U	1.31	0	0	2	2	25.7	0.077	0.00	0.00	0.08	0.08	1.91	0.04
	2.700	3.000	0.300	14,100	4	U	1.31	0	0	2	2	25.7	0.077	0.00	0.00	0.08	0.08	1.91	0.04

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	Begin MP	End MP	Length (Miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	ACCIDENTS				MV	HMV M	Rates per HMVM				Critical Rate	Critical Rate Factor
								Fatal	Injury	PDO	Total			Fatal Rate	Injury Rate	PDO Rate	Total Rate		
KY 1865	**4.000**	**6.200**	**2.200**	**28,000**	**4**	**U**	**438.00**	**0**	**95**	**148**	**243**	**51.1**	**1.124**	**0.00**	**84.50**	**131.65**	**216.15**	**445.55**	**0.49**
	4.000	4.300	0.300	21,600	4	U	1.31	0	7	4	11	39.4	0.118	0.00	0.18	0.10	0.28	1.79	0.16
	4.100	4.400	0.300	29,100	4	U	1.31	0	10	13	23	53.1	0.159	0.00	0.19	0.24	0.43	1.72	0.25
	4.200	4.500	0.300	29,100	4	U	1.31	0	11	14	25	53.1	0.159	0.00	0.21	0.26	0.47	1.72	0.27
	4.300	4.600	0.300	29,100	4	U	1.31	0	10	13	23	53.1	0.159	0.00	0.19	0.24	0.43	1.72	0.25
	4.400	4.700	0.300	29,100	4	U	1.31	0	2	5	7	53.1	0.159	0.00	0.04	0.09	0.13	1.72	0.08
	4.500	4.800	0.300	29,100	4	U	1.31	0	6	3	9	53.1	0.159	0.00	0.11	0.06	0.17	1.72	0.10
	4.600	4.900	0.300	29,100	4	U	1.31	0	7	5	12	53.1	0.159	0.00	0.13	0.09	0.23	1.72	0.13
	4.700	5.000	0.300	29,100	4	U	1.31	0	10	7	17	53.1	0.159	0.00	0.19	0.13	0.32	1.72	0.19
	4.800	5.100	0.300	29,100	4	U	1.31	0	28	16	44	53.1	0.159	0.00	0.53	0.30	0.83	1.72	0.48
	4.900	5.200	0.300	29,100	4	U	1.31	0	28	16	44	53.1	0.159	0.00	0.53	0.30	0.83	1.72	0.48
	5.000	5.300	0.300	29,100	4	U	1.31	0	31	29	60	53.1	0.159	0.00	0.58	0.55	1.13	1.72	0.66
	5.100	5.400	0.300	29,100	4	U	1.31	0	9	23	32	53.1	0.159	0.00	0.17	0.43	0.60	1.72	0.35
	5.200	5.500	0.300	29,100	4	U	1.31	0	8	20	28	53.1	0.159	0.00	0.15	0.38	0.53	1.72	0.31
	5.300	5.600	0.300	29,100	4	U	1.31	0	10	23	33	53.1	0.159	0.00	0.19	0.43	0.62	1.72	0.36
	5.400	5.700	0.300	29,100	4	U	1.31	0	9	24	33	53.1	0.159	0.00	0.17	0.45	0.62	1.72	0.36
	5.500	5.800	0.300	29,100	4	U	1.31	0	14	39	53	53.1	0.159	0.00	0.26	0.73	1.00	1.72	0.58
	5.600	5.900	0.300	29,100	4	U	1.31	0	13	33	46	53.1	0.159	0.00	0.24	0.62	0.87	1.72	0.50
	5.700	6.000	0.300	29,100	4	U	1.31	0	21	32	53	53.1	0.159	0.00	0.40	0.60	1.00	1.72	0.58
	5.800	6.100	0.300	29,100	4	U	1.31	0	19	33	52	53.1	0.159	0.00	0.36	0.62	0.98	1.72	0.57
	5.900	6.200	0.300	29,100	4	U	1.31	0	14	38	52	53.1	0.159	0.00	0.26	0.72	0.98	1.72	0.57

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	Begin MP	End MP	Length (Miles)	Average ADT	Number Lanes	Rural / Urban	Functional Class Rate	ACCIDENTS				MV	HMV M	Rates per HMVM				Critical Rate	Critical Rate Factor
								Fatal	Injury	PDO	Total			Fatal Rate	Injury Rate	PDO Rate	Total Rate		
KY 1931	**6.000**	**10.000**	**4.000**	**17,100**	**2**	**U**	**438.00**	**4**	**134**	**171**	**309**	**31.2**	**1.248**	**3.20**	**107.35**	**136.99**	**247.54**	**447.67**	**0.55**
	6.000	6.300	0.300	20,000	2	R	1.31	0	6	2	8	36.5	0.110	0.00	0.16	0.05	0.22	1.81	0.12
	6.100	6.400	0.300	13,300	2	R	1.31	0	4	2	6	24.3	0.073	0.00	0.16	0.08	0.25	1.93	0.13
	6.200	6.500	0.300	13,300	2	R	1.31	0	9	18	27	24.3	0.073	0.00	0.37	0.74	1.11	1.93	0.58
	6.300	6.600	0.300	13,300	2	R	1.31	0	12	33	45	24.3	0.073	0.00	0.49	1.36	1.85	1.93	0.96
	6.400	6.700	0.300	13,300	2	R	1.31	0	10	34	44	24.3	0.073	0.00	0.41	1.40	1.81	1.93	0.94
	6.500	6.800	0.300	13,300	2	R	1.31	0	6	18	24	24.3	0.073	0.00	0.25	0.74	0.99	1.93	0.51
	6.600	6.900	0.300	13,300	2	R	1.31	0	2	6	8	24.3	0.073	0.00	0.08	0.25	0.33	1.93	0.17
	6.700	7.000	0.300	13,300	2	R	1.31	0	2	3	5	24.3	0.073	0.00	0.08	0.12	0.21	1.93	0.11
	6.800	7.100	0.300	13,300	2	R	1.31	0	2	3	5	24.3	0.073	0.00	0.08	0.12	0.21	1.93	0.11
	6.900	7.200	0.300	13,300	2	U	1.31	0	4	4	8	24.3	0.073	0.00	0.16	0.16	0.33	1.93	0.17
	7.000	7.300	0.300	13,300	2	U	1.31	0	4	7	11	24.3	0.073	0.00	0.16	0.29	0.45	1.93	0.23
	7.100	7.400	0.300	13,300	2	U	1.31	0	4	8	12	24.3	0.073	0.00	0.16	0.33	0.49	1.93	0.26
	7.200	7.500	0.300	13,300	2	U	1.31	0	2	5	7	24.3	0.073	0.00	0.08	0.21	0.29	1.93	0.15
	7.300	7.600	0.300	13,300	4	U	1.31	0	2	2	4	24.3	0.073	0.00	0.08	0.08	0.16	1.93	0.09
	7.400	7.700	0.300	13,300	4	U	1.31	0	0	3	3	24.3	0.073	0.00	0.00	0.12	0.12	1.93	0.06
	7.500	7.800	0.300	13,300	4	U	1.31	0	0	3	3	24.3	0.073	0.00	0.00	0.12	0.12	1.93	0.06
	7.600	7.900	0.300	13,300	4	U	1.31	0	0	3	3	24.3	0.073	0.00	0.00	0.12	0.12	1.93	0.06
	7.700	8.000	0.300	13,300	4	U	1.31	1	9	11	21	24.3	0.073	0.04	0.37	0.45	0.87	1.93	0.45
	7.800	8.100	0.300	13,300	4	U	1.31	1	9	13	23	24.3	0.073	0.04	0.37	0.54	0.95	1.93	0.49
	7.900	8.200	0.300	13,300	4	U	1.31	1	9	16	26	24.3	0.073	0.04	0.37	0.66	1.07	1.93	0.56
	8.000	8.300	0.300	13,300	4	U	1.31	0	1	6	7	24.3	0.073	0.00	0.04	0.25	0.29	1.93	0.15
	8.100	8.400	0.300	13,300	4	U	1.31	0	6	6	12	24.3	0.073	0.00	0.25	0.25	0.49	1.93	0.26
	8.200	8.500	0.300	13,300	4	U	1.31	0	11	10	21	24.3	0.073	0.00	0.45	0.41	0.87	1.93	0.45
	8.300	8.600	0.300	20,000	4	U	1.31	1	19	27	47	36.5	0.110	0.03	0.52	0.74	1.29	1.81	0.71
	8.400	8.700	0.300	20,000	4	U	1.31	2	19	28	49	36.5	0.110	0.05	0.52	0.77	1.34	1.81	0.74
	8.500	8.800	0.300	20,000	4	U	1.31	2	17	28	47	36.5	0.110	0.05	0.47	0.77	1.29	1.81	0.71
	8.600	8.900	0.300	20,000	4	U	1.31	1	9	12	22	36.5	0.110	0.03	0.25	0.33	0.60	1.81	0.33
	8.700	9.000	0.300	20,000	4	U	1.31	0	7	8	15	36.5	0.110	0.00	0.19	0.22	0.41	1.81	0.23
	8.800	9.100	0.300	20,000	4	U	1.31	0	5	2	7	36.5	0.110	0.00	0.14	0.05	0.19	1.81	0.11
	8.900	9.200	0.300	20,000	4	U	1.31	1	6	3	10	36.5	0.110	0.03	0.16	0.08	0.27	1.81	0.15
	9.000	9.300	0.300	20,000	4	U	1.31	1	3	4	8	36.5	0.110	0.03	0.08	0.11	0.22	1.81	0.12
	9.100	9.400	0.300	20,000	4	U	1.31	1	3	5	9	36.5	0.110	0.03	0.08	0.14	0.25	1.81	0.14
	9.200	9.500	0.300	20,000	4	U	1.31	0	1	6	7	36.5	0.110	0.00	0.03	0.16	0.19	1.81	0.11
	9.300	9.600	0.300	20,000	4	U	1.31	0	6	15	21	36.5	0.110	0.00	0.16	0.41	0.58	1.81	0.32
	9.400	9.700	0.300	20,000	4	U	1.31	0	30	35	65	36.5	0.110	0.00	0.82	0.96	1.78	1.81	0.98
	9.500	9.800	0.300	20,000	4	U	1.31	0	36	39	75	36.5	0.110	0.00	0.99	1.07	2.05	1.81	1.13
	9.600	9.900	0.300	20,000	4	U	1.31	0	51	41	92	36.5	0.110	0.00	1.40	1.12	2.52	1.81	1.39
	9.700	10.000	0.300	20,000	4	U	1.31	0	33	22	55	36.5	0.110	0.00	0.90	0.60	1.51	1.81	0.83

Yellow Shading - High Crash Location

Photo 1

Bluegrass looking east from Manslick Road

Photo 2

Bluegrass looking west toward Manslick Road

Photo 3

Cloverleaaf Subdivision Sign

Photo 4

Crums Lane

Photo 5

Dixie at I-264 ramp looking bound at northbound traffic

Photo 6

Dixie looking north, north of I-264

Photo 7

Dixie NB Ramp to I-264

Photo 8

Dixie SB south of I-264 looking north at merging lanes

Photo 9

Dixie SB south of I-264 looking south

Photo 10

Dixie SB south of I-264,
looking north

Photo 11

Dixie SB south of I-264, looking north
at merging lanes

Photo 12

Fire Dept No 12 on Manslick

Photo 13

Gagle Road

Photo 14

I-264 looking west at Manslick Rd Bridge

Photo 15

I-264 looking west at Manslick Rd Bridge

Photo 16

I-264 looking east from Manslick Road Bridge

Photo 17

I-264 looking east, between Taylor and Manslick

Photo 18

I-264 looking east, between Taylor Blvd. and Manslick Road

Photo 19

I-264 looking west from Manslick Road Bridge

Photo 20

I-264 looking west toward pedestrian bridge

Photo 21

I-264 looking west at pedestrian bridge

Photo 22

I-264 looking west, toward Manslick

Photo 23

I-264 ramp to NB Dixie

Photo 24

End of I-264 ramp to NB Dixie

Photo 25
End of I-264 ramp to NB Dixie

Photo 26
Jacobs Bus Compound

Photo 27
Jacobs Bus Compound

Photo 28

Manslick looking north toward bridge over I-264

Photo 29

Manslick looking north toward bridge over I-264

Photo 30

Manslick Rd looking south toward bridge over I-264

Photo 31

Manslick Road Bridge and I-264 looking east

Photo 32

Manslick Road looking north, north of I-264

Photo 33

Manslick Road bridge over I-264, looking north

Photo 34

Manslick Road on Bridge over I-264, looking south

Photo 35

Metro Animal Services Complex

Photo 36

Noise Wall from Cloverleaf Subdivision

Photo 37
Noise wall from Manslick Rd Bridge

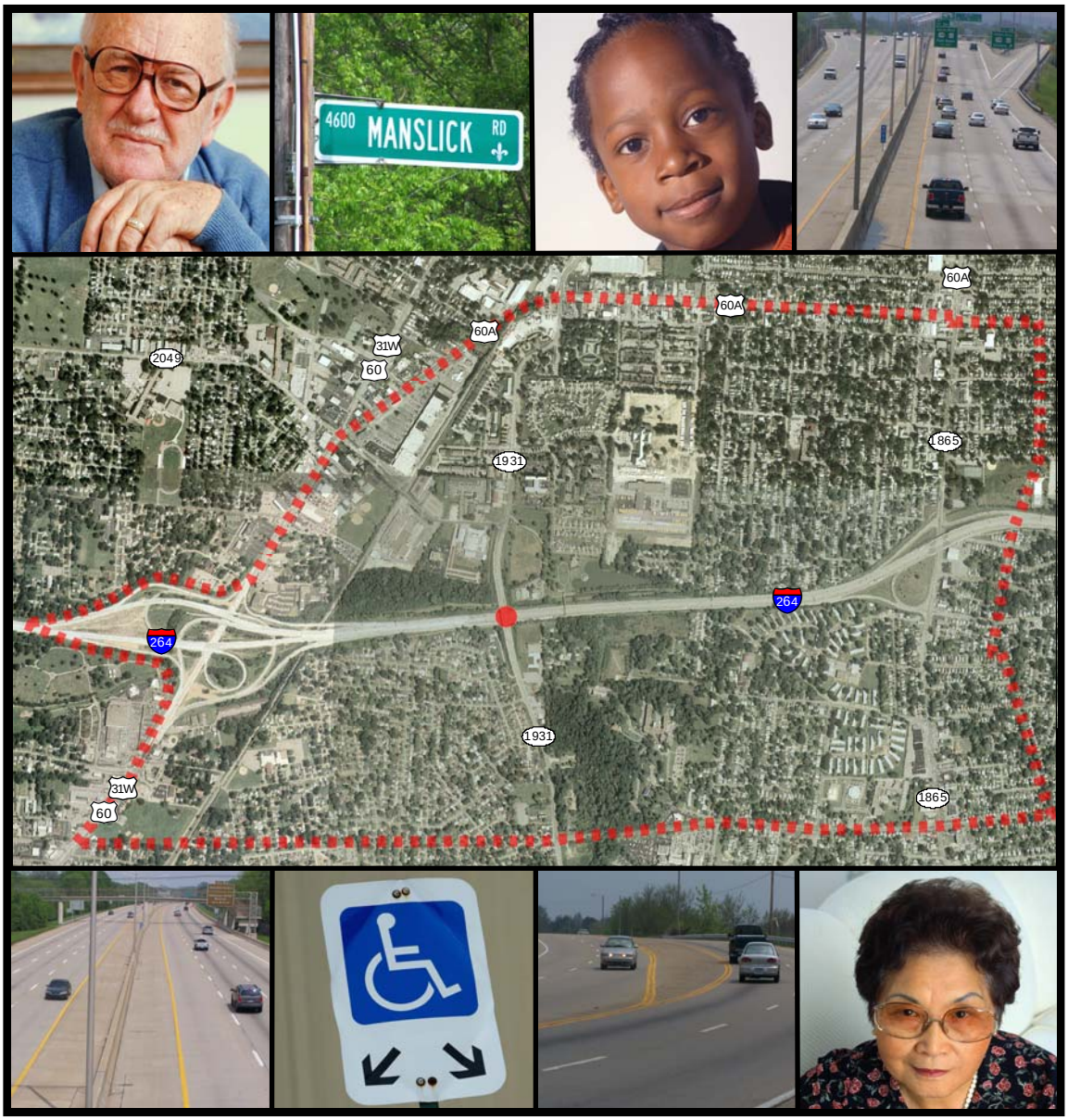
Photo 38
St Mary & Elizabeth Hospital

Photo 39
Manslick Cemetery

Photo 40
Watterson Lake Park

Photo 41
Pedestrian Crossing

Environmental Justice Community Impact Assessment



Scoping Study for a Proposed Interchange on I-264

at Manslick Road (KY 1931)

Jefferson County, Kentucky

KYTC Project #05-436.00
KIPDA Project #516

May 2007

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KENTUCKY TRANSPORTATION CABINET

Environmental Justice Community Impact Assessment

Scoping Study for a Proposed Interchange on I-264
at Manslick Road (KY 1931)

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May 2007

Kentuckiana Regional Planning and Development Agency
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This document is available in accessible formats when requested in advance.

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INTRODUCTION

This report documents an assessment of potential community impacts on Environmental Justice populations and other selected groups within the defined study area for a proposed interchange on I-264 at Manslick Road (KY 1931) in Jefferson County, Kentucky (Figure 1). The assessment has been prepared by the Kentuckiana Regional Planning and Development Agency in support of a Kentucky Transportation Cabinet planning study (Kentucky Six Year Highway Plan project #05-436.00) conducted to investigate the feasibility of constructing a new I-264 interchange at Manslick Road in order to:

- improve access to I-264 for Manslick-area residents and businesses,
- alleviate congestion on major thoroughfares in the area—particularly I-264, Dixie Highway, and Manslick Road, and
- reduce the amount of commercial traffic on areas residential streets.

PURPOSE

The purpose of this assessment is to:

- assist the Kentucky Transportation Cabinet in carrying out the Division of Planning's mission "… to collect, maintain, analyze and report accurate data for making sound fiscally responsible recommendations regarding the maintenance, operation and improvement of our transportation network";
- fulfill applicable federal Environmental Justice commitments; and
- further the goals and objectives and cooperative nature of the metropolitan transportation planning process.

The assessment is focused on identifying, through a demographic analysis, the extent to which Environmental Justice populations and other groups of concern reside in or near the study area and may be impacted by the proposed project. Subsequent actions (determination of disproportionately high and adverse effects; proposing measures to avoid, minimize, and/or mitigate such effects; and providing specific opportunities for public involvement) may be undertaken, as appropriate, contingent upon the results of the demographic analysis.

BACKGROUND

Environmental Justice is based on the principles of Title VI of the *Civil Rights Act of 1964*, wherein each Federal agency is required to ensure that no person on the grounds of race, color, or national origin, is excluded from participation in, denied the benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance. In the context of transportation planning, Environmental Justice broadly refers to the goal of identifying and avoiding disproportionate adverse impacts on minority and low-income

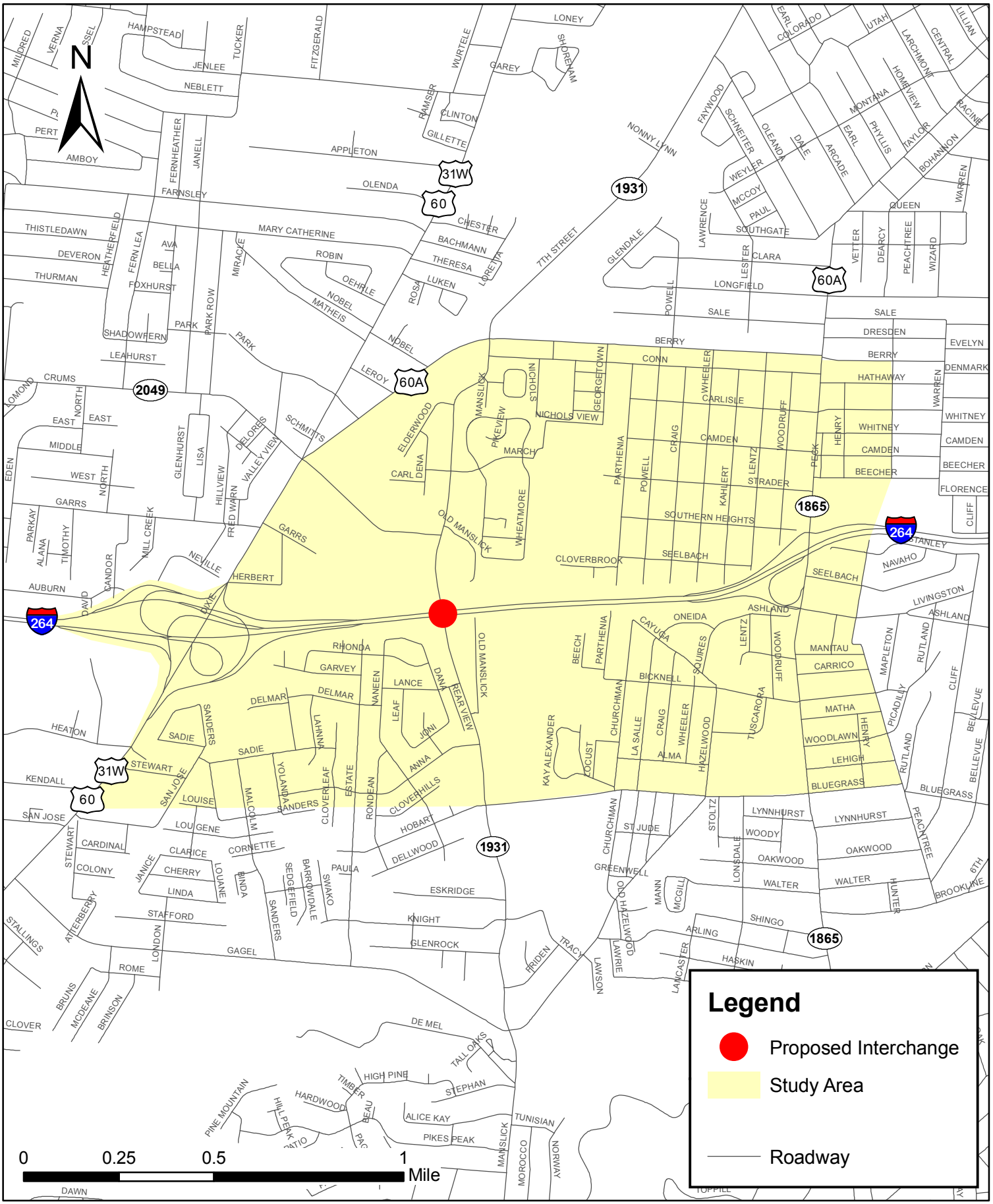

Figure 1

STUDY AREA BOUNDARY

SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

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individuals and communities. For the purposes of this assessment, Environmental Justice has been addressed through the following:

- ***Executive Order 12898:*** *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994)

  The order reads, in part: *"Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."*

- ***U.S. Department of Transportation Order 5610.2:*** *Department of Transportation Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (April 15, 1997)

  The order reads, in part: *"Planning and programming activities that have the potential to have a disproportionately high and adverse effect on human health or the environment shall include explicit consideration of the effects on minority populations and low-income populations."*

- ***Federal Highway Administration Order 6640.23:*** *FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (December 2, 1998)

  The order reads, in part: *"…it is FHWA's continuing policy to identify and prevent discriminatory effects by actively administering its programs, policies and activities to ensure that social impacts to communities and people are recognized early and continually throughout the transportation decision making process—from early planning through implementation."*

In the absence of a single Environmental Justice statute or regulation, planners must make use of the numerous orders, policies, and guidance documents that have been developed since the issuance of Executive Order 12898. This assessment attempts to apply current state of the practice procedures to provide the information needed to "… *ensure that the interests and well being of minority populations and low-income populations are considered and addressed during the transportation decision making process."*

Two additional groups included in this assessment are the elderly and persons with disabilities. The above Environmental Justice orders do not address these additional populations, so they are included in this analysis per the Kentucky Transportation Cabinet document, *Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies*, as a matter of good planning practice.

RESOURCES/REFERENCES

The following federal, state, and local resources have been consulted for information and guidance in conducting this assessment:

- *Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies* – Kentucky Transportation Cabinet, February 2002.
- *Community Assessment and Outreach Program for the Louisville (KY-IN) Metropolitan Planning Area for Title VI/Environmental Justice and Other Communities of Concern* – Kentuckiana Regional Planning and Development Agency, July 2006.
- *Environmental Justice/Title VI Plan* – Kentuckiana Regional Planning and Development Agency, October 2004.
- *Effective Methods for Environmental Justice Assessment* – National Cooperative Highway Research Program Report 532, September 2004.
- *Technical Methods to Support Analysis of Environmental Justice Issues* – National Cooperative Highway Research Program Project 8-36 (11), April 2002.
- US Census Bureau, 2000 Census, Summary Files 1 and 3

TERMINOLOGY

This assessment makes use of several terms, some of which may be unique to the Environmental Justice process. Their definitions may similarly have specific application limited to these procedures. For example, according to the Federal Highway Administration, the following terms and definitions shall be used:

Minority Persons include persons whose race can be identified as any one or more of the following categories:

- Black—persons having origins in any of the black racial groups of Africa;
- Asian—persons having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent;
- American Indian and Alaskan Native—persons having origins in any of the original people of North America and who maintain cultural identification through tribal affiliation or community recognition; and
- Native Hawaiian or Other Pacific Islander—persons having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Minority populations also include persons of any race or combination of races who identify their ethnicity, culture, or origin as Hispanic. Hispanics are persons

of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin.

Low-Income Persons include persons whose household income is below the US Department of Health and Human Services poverty guidelines (Table 1). For the 2000 census, poverty status was determined for all persons except the institutionalized, military group quarters, persons in college dormitories, and unrelated individuals under 15 years old.

TABLE 1
Poverty Threshold in 1999, by Size of Family and Number of Related Children Under 18 Years Old

Size of Family Unit	Weighted Average Threshold	Related Children Under 18 Years Old								
		None	One	Two	Three	Four	Five	Six	Seven	Eight or More
One person (unrelated individual)	$8,501									
Under 65 years old	$8,667	$7,990								
65 years old and over	$7,990	$7,990								
Two persons	$10,869									
Householder under 65 years old	$11,214	$11,156	$11,483							
Householder 65 years old and over	$10,075	$10,070	$11,440							
Three persons	$13,290	$13,032	$13,410	$13,423						
Four persons	$17,029	$17,184	$17,465	$16,895	$16,954					
Five persons	$20,127	$20,723	$21,024	$20,380	$19,882	$19,578				
Six persons	$22,727	$23,835	$23,930	$23,436	$22,964	$22,261	$21,845			
Seven persons	$25,912	$27,425	$27,596	$27,006	$26,595	$25,828	$24,934	$23,953		
Eight persons	$28,967	$30,673	$30,944	$30,387	$29,899	$29,206	$28,327	$27,412	$27,180	
Nine or more persons	$34,417	$36,897	$37,076	$36,583	$36,169	$35,489	$34,554	$33,708	$33,499	$32,208

Low-Income Population means any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed FHWA program, policy, or activity.

Minority Population means any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed FHWA program, policy, or activity.

Adverse Effects are the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of, benefits of FHWA programs, policies, or activities.

Disproportionately High and Adverse Effect on Minority and Low-Income Populations means an adverse effect that:

- is predominately borne by a minority population and/or a low-income population; or
- will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the nonminority population and/or nonlow-income population.

Programs, Policies, and/or Activities means all projects, programs, policies, and activities that affect human health or the environment, and that are undertaken, funded, or approved by FHWA. These include, but are not limited to, permits, licenses, and financial assistance provided by FHWA. Interrelated projects within a system may be considered to be a single project, program, policy, or activity.

The following terms are defined using US Census Bureau terminology and data:

Elderly Persons include persons age 65 and older as of April 1, 2000 (Census Day).

Persons with Disabilities include persons for which any of the 3 following conditions were true as of April 1, 2000 (Census Day):

- they were 5 years old and over and had a sensory, physical, mental, or self-care disability;
- they were 16 years old and over and had a going outside the home disability; or
- they were 16 to 64 years old and had an employment disability.

Census Tracts are small, relatively permanent statistical subdivisions of a county or statistically equivalent entity that are used to provide a stable set of geographic units for the presentation of census data. While tracts generally contain between 1,500 and 8,000 people, with an optimum size of 4,000 people, their spatial size can vary widely depending on the density of settlement. Figure 2 shows the census tracts in and around the study area.

Census Block Groups (BGs) are intermediate-level statistical subdivisions of census tracts that are used for the presentation of census data. Within each tract, they are aggregations of census blocks that have the same first digit of each four-digit identifying block number. Block groups generally contain between 600 and 3,000 persons, with an optimum size of 1,500 persons. Figure 3 shows the census block groups in and around the study area.

Census Blocks are the smallest statistical subdivisions of census tracts that are used for the presentation of census data. They are bounded on all sides by visible features, such as streets, roads, streams, and railroad tracks, and by invisible boundaries, such as city, town, township, and county limits, property lines, and short, imaginary extensions of streets and roads. Blocks are generally small in area, especially in densely settled areas, but may contain many square miles of territory in more sparsely settled areas. Figure 4 shows the census blocks in and around the study area.

ANALYSIS METHODOLOGY

The procedures involved in conducting the community impact assessment for this project centered on the identification of potentially impacted populations. Data from the 2000 census were used to develop demographic profile tables and maps of the locations of the groups of concern. Other community information was used, as available, to identify potentially impacted populations and future points of contact within the study area.

Tables and maps depicting race, ethnicity, minorities, and persons with low-income are used to indicate the locations and magnitudes of potentially impacted Environmental Justice populations. Elderly and disabled distributions are also represented in tabular and graphic form as part of the Kentucky Transportation Cabinet's standard planning study methodology. This project level assessment utilizes many of the same resources and methodologies as were used in the Louisville (KY-IN) Metropolitan Planning Area (MPA) systems level assessment. The MPA community assessment covered not only the populations mentioned above, but other potentially impacted groups as well as a matter of good planning practice.

Profile tables were developed for each population of interest and for several geographic levels in and around the study area. Tables showing the total number of persons by race, ethnicity, minority status, poverty status, elderly status, and

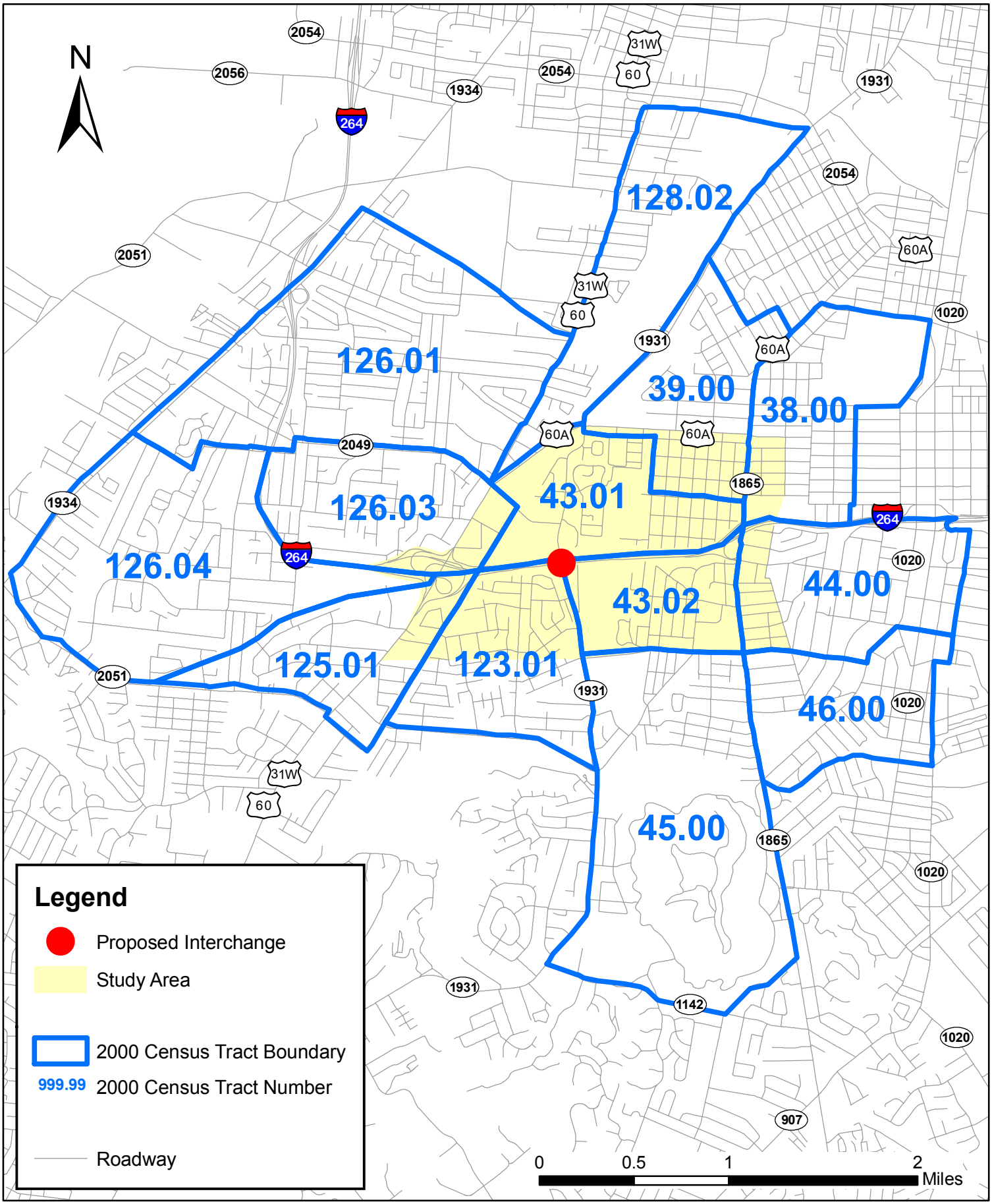

Figure 2

STUDY AREA CENSUS TRACT BOUNDARIES

SCOPING STUDY FOR A PROPOSED INTERCHANGE
ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

Created by KIPDA May 2007 (LAK)

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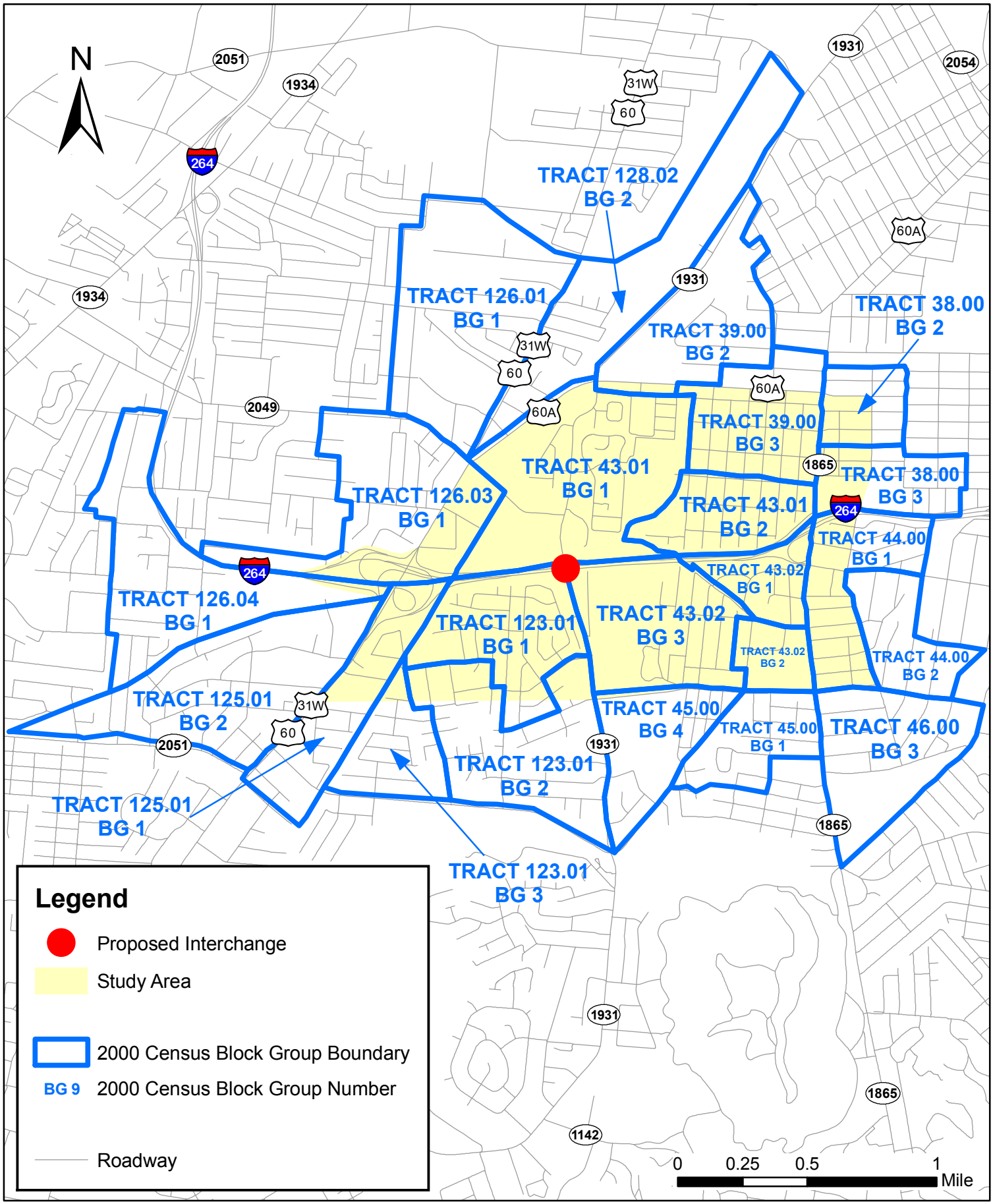

Figure 3

STUDY AREA CENSUS BLOCK GROUP BOUNDARIES

SCOPING STUDY FOR A PROPOSED INTERCHANGE
ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

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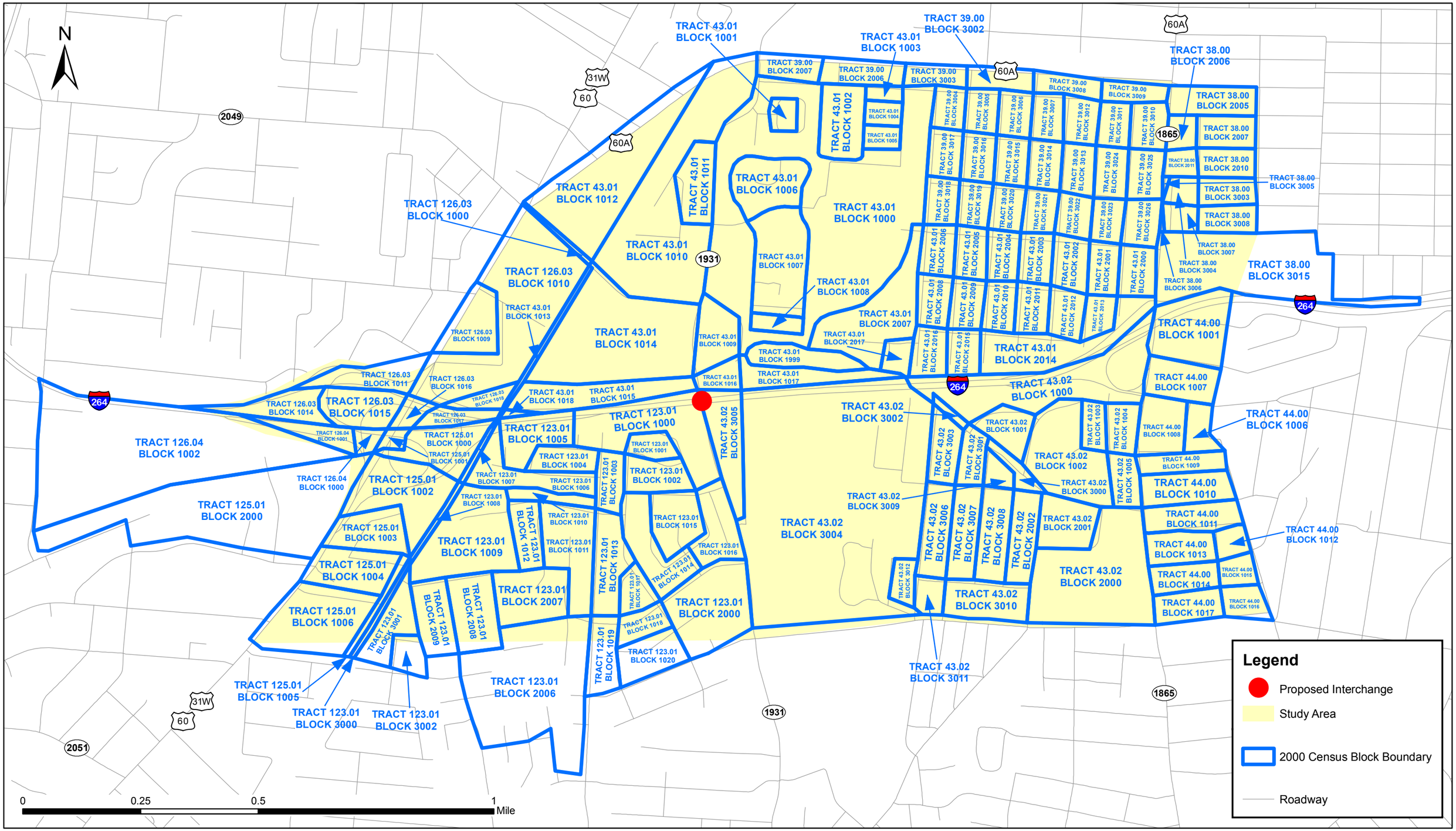

Figure 4

STUDY AREA CENSUS BLOCK BOUNDARIES

SCOPING STUDY FOR A PROPOSED INTERCHANGE
ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

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disability status were created for several geographic areas, including the United States, Kentucky, and Jefferson County, as well as applicable census tracts, block groups, and blocks.

The tables were assembled using year 2000 census data. The decennial census was the most comprehensive information source available in terms of the number of data variables collected and the number of geographic levels available. Decennial census data is derived from two different sets of questionnaires, the short form and the long form. Short form data, or SF1 data, contains basic demographics and represents a 100% sample of the populous of the United States, while long form data, or SF3 data, contains more detailed social and economic characteristics and is gathered from an approximate 17% sample. The smallest level of geography available from SF1 is the census block, while the smallest level available from SF3 is the block group.

Profile maps were produced for each population variable at the tract, block group, and block levels, as available. ESRI ArcMap software was used to combine 2000 census data with TIGER/Line 2000 census tract, block group, and block boundaries in and around the study area to map locations of the populations of interest.

COMMUNITY PROFILES

This section provides an examination of the demographic characteristics of the Environmental Justice populations and other selected groups within and surrounding the project study area. These profiles provide a basis for identifying the number and, where appropriate, the geographic location of potentially impacted persons in the communities of concern.

MINORITY PERSONS

According to year 2000 census data, the highest numbers and concentrations of minority persons existed in the central portion of the study area and to the north and west of the study area. Within the study area boundary, substantial minority populations existed in tract 43.01 in the neighborhoods north of I-264 along Manslick Road and in tract 43.02 in the neighborhoods south of I-264 and west of Taylor Boulevard (Figure 5). Minority populations represented approximately 60% of the total residents of these tracts. Higher minority residential populations and densities also existed adjacent to the study area in tracts 126.01 and 128.02.

Census tract 43.01 had the largest minority population (2,678 persons); and, with 62% minority residents, it also exhibited the highest minority concentration in the area (Table 2). Additional higher minority densities included 59% in tract 43.02 (2,102 persons), 52% in tract 128.02 (1,341 persons), and 39% in tract 126.01 (2,513 persons).

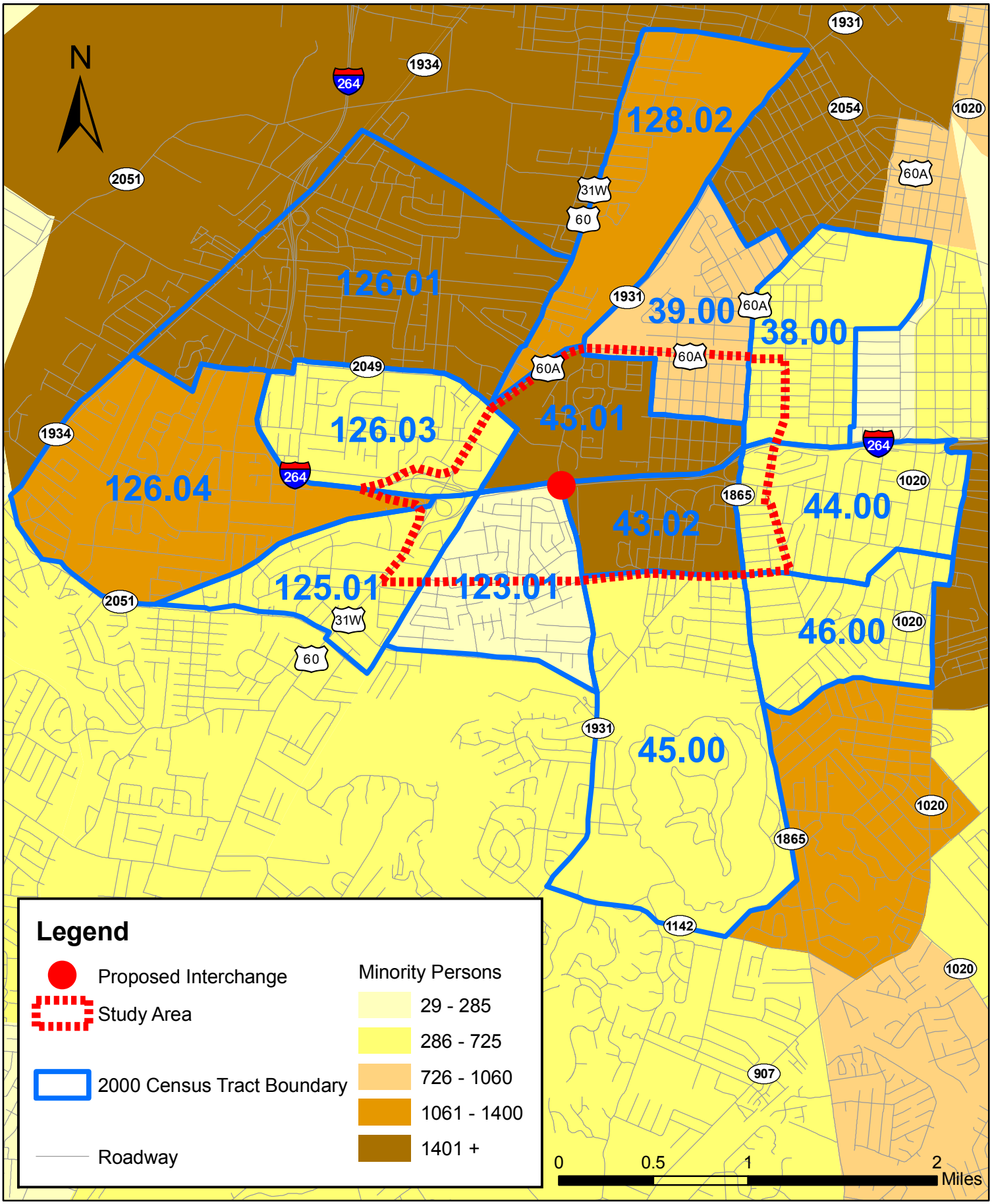

Figure 5

MINORITY PERSONS BY CENSUS TRACT--2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE
ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

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TABLE 2

Minority Persons—2000

Scoping Study for a Proposed Interchange on I-264 at Manslick Road

Area		Total Population	Non-Hispanic		Hispanic		Minority Population	
			White	Non-White	White	Non-White	Total	%
United States		281,421,906	194,552,774	51,563,314	16,907,852	18,397,966	86,869,132	30.87
Kentucky		4,041,769	3,608,013	373,817	32,876	27,063	433,756	10.73
Jefferson County		693,604	530,056	151,178	6,665	5,705	163,548	23.58
Census Areas Intersecting and Surrounding the Study Area	Tract 38.00	4,119	3,551	388	126	54	568	13.79
	Block Group 2	786	736	44	6	0	50	6.36
	Block Group 3	866	770	85	5	6	96	11.09
	Tract 39.00	4,220	3,299	819	20	82	921	21.82
	Block Group 2	1,092	945	133	6	8	147	13.46
	Block Group 3	1,612	1,429	169	2	12	183	11.35
	Tract 43.01	4,338	1,660	2,620	29	29	2,678	61.73
	Block Group 1	3,196	646	2,504	18	28	2,550	79.79
	Block Group 2	1,142	1,014	116	11	1	128	11.21
	Tract 43.02	3,555	1,453	2,032	27	43	2,102	59.13
	Block Group 1	1,605	400	1,178	4	23	1,205	75.08
	Block Group 2	860	210	638	2	10	650	75.58
	Block Group 3	1,090	843	216	21	10	247	22.66
	Tract 44.00	4,330	3,899	382	28	21	431	9.95
	Block Group 1	1,135	999	122	11	3	136	11.98
	Block Group 2	769	728	38	3	0	41	5.33
	Tract 45.00	3,299	2,782	468	33	16	517	15.67
	Block Group 1	1,046	883	142	15	6	163	15.58
	Block Group 4	534	444	86	3	1	90	16.85
	Tract 46.00	3,694	3,098	497	55	44	596	16.13
	Block Group 3	1,334	1,204	105	19	6	130	9.75
	Tract 123.01	3,322	3,066	221	20	15	256	7.71
	Block Group 1	1,176	1,099	66	10	1	77	6.55
	Block Group 2	1,451	1,330	105	6	10	121	8.34
	Block Group 3	695	637	50	4	4	58	8.35
	Tract 125.01	2,543	2,054	454	16	19	489	19.23
	Block Group 1	743	532	193	10	8	211	28.40
	Block Group 2	1,800	1,522	261	6	11	278	15.44
	Tract 126.01	6,392	3,879	2,457	23	33	2,513	39.31
	Block Group 1	1,695	959	728	5	3	736	43.42
	Tract 126.03	2,581	2,105	462	8	6	476	18.44
	Block Group 1	1,032	823	202	4	3	209	20.25
	Tract 126.04	4,953	3,638	1,280	21	14	1,315	26.55
	Block Group 1	860	813	42	3	2	47	5.47
	Tract 128.02	2,571	1,230	1,238	24	79	1,341	52.16
	Block Group 2	669	411	184	7	67	258	38.57

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals.
Data Source: 2000 Census SF1, Tables P1, P8

At the census block group level, the highest minority populations were seen in block group 1 of census tract 43.01, tract 43.02 block groups 1 and 2, and in tract 126.01 block group 1 (Figure 6). Census tract 43.01 block group 1 had the highest minority resident concentration in the study area with 80% of the total population (2,550 persons). Block groups 1 and 2 of tract 43.02 also had notable minority densities, with 75% and 76%, respectively.

At the census block level, the highest minority resident densities were located in the neighborhoods along Manslick Road between I-264 and Berry Boulevard/Seventh Street Road in tract 43.01 blocks 1000 and 1010 and in tract 43.02 block 1002, site of a portion of Iroquois Homes (Figure 7). Almost 800 minority persons resided in tract 43.01 block 1010, while another 600 to 700 minority residents each lived in tract 43.01 block 1000 and tract 43.02 block 1002.

In 2000, 31% of the United States population were minority persons. In Jefferson County, this figure was 24%, while in Kentucky, the average was 11%. The minority resident concentrations of the study area tracts ranged from 8% to 62%—a full 30% of these tracts had minority residential densities much greater than the national average. A similar pattern was also evident at the block group level, where the minority percentages ranged from 5% to 80%. Over 20% of the block group densities were significantly higher than the national average.

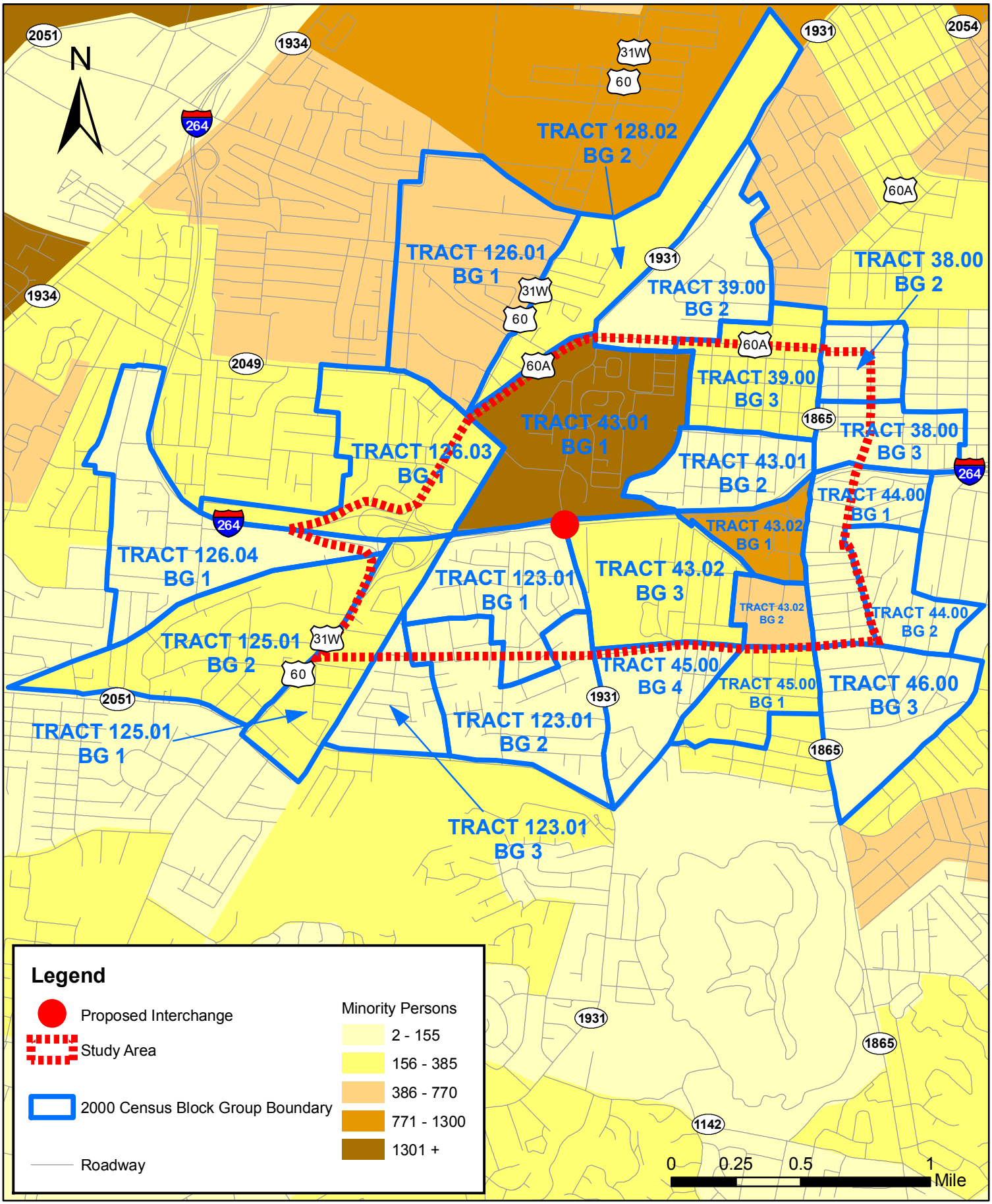

Figure 6

MINORITY PERSONS BY CENSUS BLOCK GROUP
2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE
ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

Created by KIPDA May 2007 (LAK)

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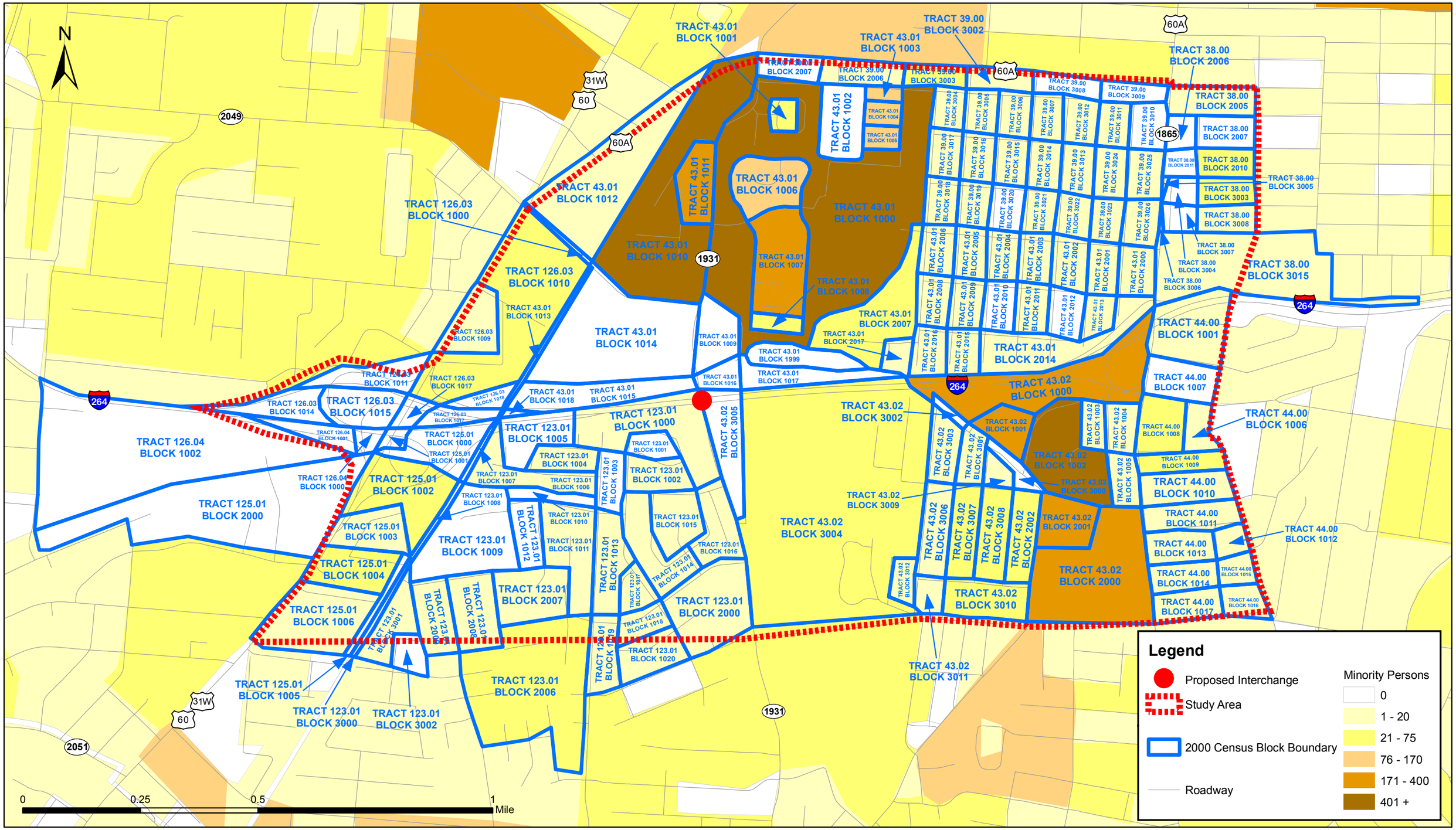

Figure 7

MINORITY PERSONS BY CENSUS BLOCK--2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE
ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

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Ethnicity

Table 3 shows ethnicity in and near the study area based on 2000 census data. The majority of persons in and around the study area were non-Hispanic. Census tracts 38.00 and 128.02 had the highest numbers and densities of Hispanic origin residents, with 180 persons (4%) and 103 persons (4%), respectively. At the block group level, tract 128.02 block group 2 had the highest number (74 persons) and percentage (11%) of Hispanics in the study area. The remaining tracts and block groups ranged from less than 1% to 3% Hispanic residents—approximately 75% of these were in the 1% or less range.

Almost 13% of the United States population were Hispanic in 2000. Tract 128.02 block group 2 came closest to the national average with 11% Hispanic residents. While none of the remaining study area tract or block group Hispanic densities came close to the national figure, nearly half of them were comparable to the state and county averages of 1% to 2%.

TABLE 3

Persons by Ethnicity—2000

Scoping Study for a Proposed Interchange on I-264 at Manslick Road

Area		Total Population	Non-Hispanic		Hispanic	
			Persons	%	Persons	%
United States		281,421,906	246,116,088	87.45	35,305,818	12.55
Kentucky		4,041,769	3,981,830	98.52	59,939	1.48
Jefferson County		693,604	681,234	98.22	12,370	1.78
Census Areas Intersecting and Surrounding the Study Area	Tract 38.00	4,119	3,939	95.63	180	4.37
	Block Group 2	786	780	99.24	6	0.76
	Block Group 3	866	855	98.73	11	1.27
	Tract 39.00	4,220	4,118	97.58	102	2.42
	Block Group 2	1,092	1,078	98.72	14	1.28
	Block Group 3	1,612	1,598	99.13	14	0.87
	Tract 43.01	4,338	4,280	98.66	58	1.34
	Block Group 1	3,196	3,150	98.56	46	1.44
	Block Group 2	1,142	1,130	98.95	12	1.05
	Tract 43.02	3,555	3,485	98.03	70	1.97
	Block Group 1	1,605	1,578	98.32	27	1.68
	Block Group 2	860	848	98.60	12	1.40
	Block Group 3	1,090	1,059	97.16	31	2.84
	Tract 44.00	4,330	4,281	98.87	49	1.13
	Block Group 1	1,135	1,121	98.77	14	1.23
	Block Group 2	769	766	99.61	3	0.39
	Tract 45.00	3,299	3,250	98.51	49	1.49
	Block Group 1	1,046	1,025	97.99	21	2.01
	Block Group 4	534	530	99.25	4	0.75
	Tract 46.00	3,694	3,595	97.32	99	2.68
	Block Group 3	1,334	1,309	98.13	25	1.87
	Tract 123.01	3,322	3,287	98.95	35	1.05
	Block Group 1	1,176	1,165	99.06	11	0.94
	Block Group 2	1,451	1,435	98.90	16	1.10
	Block Group 3	695	687	98.85	8	1.15
	Tract 125.01	2,543	2,508	98.62	35	1.38
	Block Group 1	743	725	97.58	18	2.42
	Block Group 2	1,800	1,783	99.06	17	0.94
	Tract 126.01	6,392	6,336	99.12	56	0.88
	Block Group 1	1,695	1,687	99.53	8	0.47
	Tract 126.03	2,581	2,567	99.46	14	0.54
	Block Group 1	1,032	1,025	99.32	7	0.68
	Tract 126.04	4,953	4,918	99.29	35	0.71
	Block Group 1	860	855	99.42	5	0.58
	Tract 128.02	2,571	2,468	95.99	103	4.01
	Block Group 2	669	595	88.94	74	11.06

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals.
Data Source: 2000 Census SF1, Tables P1, P8

Race

Table 4 shows the racial composition of the study area as of the 2000 census. With the exception of two block groups, black and African American was the minority race most often reported by respondents living in and around the study area. Other races reported in much smaller numbers included other race, Asian, two or more races, American Indian/Alaska Native, and Native Hawaiian/other Pacific Islander.

The highest densities of black/African-American persons were present in tracts 43.01, 43.02, 126.01, and 128.02, with 2,528 persons (58%), 1,920 persons (54%), 2,352 persons (37%), and 1,207 persons (47%), respectively. At the block group level, higher African-American concentrations were found in tract 43.01 block group 1, block groups 1 and 2 of tract 43.02, and in tract 126.01 block group 1. The values for these areas were 2,434 persons (76%), 1,140 persons (71%), 602 persons (70%), and 695 persons (41%). These tract and block group locations corresponded with the minority concentration areas discussed previously, indicating that the largest component of the minority population in and around the study area was African-American.

The year 2000 African-American population proportion was 19% for Jefferson County, 12% for the United States, and 7% for Kentucky. In comparison, 40% of the study area tracts and block groups had African-American resident densities in this range, while almost 31% exhibited much higher proportions.

TABLE 4

Persons by Race—2000

Scoping Study for a Proposed Interchange on I-264 at Manslick Road

Area		Total Population	One Race												Two or More Races	
			White		Black or African American		American Indian and Alaska Native		Asian		Native Hawaiian and other Pacific Islander		Other Race			
			Persons	%	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%	Persons	%
United States		281,421,906	211,460,626	75.14	34,658,190	12.32	2,475,956	0.88	10,242,998	3.64	398,835	0.14	15,359,073	5.46	6,826,228	2.43
Kentucky		4,041,769	3,640,889	90.08	295,994	7.32	8,616	0.21	29,744	0.74	1,460	0.04	22,623	0.56	42,443	1.05
Jefferson County		693,604	536,721	77.38	130,928	18.88	1,523	0.22	9,640	1.39	255	0.04	4,695	0.68	9,842	1.42
Census Areas Intersecting and Surrounding the Study Area	Tract 38.00	4,119	3,677	89.27	270	6.55	10	0.24	11	0.27	13	0.32	57	1.38	81	1.97
	Block Group 2	786	742	94.40	33	4.20	5	0.64	0	0.00	0	0.00	1	0.13	5	0.64
	Block Group 3	866	775	89.49	54	6.24	3	0.35	5	0.58	2	0.23	5	0.58	22	2.54
	Tract 39.00	4,220	3,319	78.65	724	17.16	13	0.31	14	0.33	5	0.12	63	1.49	82	1.94
	Block Group 2	1,092	951	87.09	107	9.80	3	0.27	5	0.46	5	0.46	8	0.73	13	1.19
	Block Group 3	1,612	1431	88.77	145	9.00	5	0.31	1	0.06	0	0.00	9	0.56	21	1.30
	Tract 43.01	4,338	1,689	38.93	2,528	58.28	5	0.12	12	0.28	0	0.00	19	0.44	85	1.96
	Block Group 1	3,196	664	20.78	2,434	76.16	5	0.16	9	0.28	0	0.00	19	0.59	65	2.03
	Block Group 2	1,142	1025	89.75	94	8.23	0	0.00	3	0.26	0	0.00	0	0.00	20	1.75
	Tract 43.02	3,555	1,480	41.63	1,920	54.01	15	0.42	8	0.23	0	0.00	62	1.74	70	1.97
	Block Group 1	1,605	404	25.17	1,140	71.03	5	0.31	2	0.12	0	0.00	24	1.50	30	1.87
	Block Group 2	860	212	24.65	602	70.00	3	0.35	1	0.12	0	0.00	22	2.56	20	2.33
	Block Group 3	1,090	864	79.27	178	16.33	7	0.64	5	0.46	0	0.00	16	1.47	20	1.83
	Tract 44.00	4,330	3,927	90.69	183	4.23	11	0.25	103	2.38	1	0.02	29	0.67	76	1.76
	Block Group 1	1,135	1010	88.99	61	5.37	2	0.18	25	2.20	1	0.09	12	1.06	24	2.11
	Block Group 2	769	731	95.06	6	0.78	0	0.00	32	4.16	0	0.00	0	0.00	0	0.00
	Tract 45.00	3,299	2,815	85.33	270	8.18	10	0.30	91	2.76	0	0.00	22	0.67	91	2.76
	Block Group 1	1,046	898	85.85	83	7.93	3	0.29	26	2.49	0	0.00	4	0.38	32	3.06
	Block Group 4	534	447	83.71	63	11.80	2	0.37	4	0.75	0	0.00	9	1.69	9	1.69
	Tract 46.00	3,694	3,153	85.35	191	5.17	6	0.16	242	6.55	0	0.00	32	0.87	70	1.89
	Block Group 3	1,334	1223	91.68	52	3.90	0	0.00	29	2.17	0	0.00	4	0.30	26	1.95
	Tract 123.01	3,322	3,086	92.90	139	4.18	1	0.03	63	1.90	0	0.00	12	0.36	21	0.63
	Block Group 1	1,176	1109	94.30	41	3.49	1	0.09	22	1.87	0	0.00	0	0.00	3	0.26
	Block Group 2	1,451	1336	92.07	56	3.86	0	0.00	38	2.62	0	0.00	8	0.55	13	0.90
	Block Group 3	695	641	92.23	42	6.04	0	0.00	3	0.43	0	0.00	4	0.58	5	0.72
	Tract 125.01	2,543	2,070	81.40	394	15.49	10	0.39	16	0.63	0	0.00	23	0.90	30	1.18
	Block Group 1	743	542	72.95	176	23.69	5	0.67	2	0.27	0	0.00	8	1.08	10	1.35
	Block Group 2	1,800	1528	84.89	218	12.11	5	0.28	14	0.78	0	0.00	15	0.83	20	1.11
	Tract 126.01	6,392	3,902	61.05	2,352	36.80	12	0.19	38	0.59	0	0.00	20	0.31	68	1.06
	Block Group 1	1,695	964	56.87	695	41.00	2	0.12	13	0.77	0	0.00	2	0.12	19	1.12
	Tract 126.03	2,581	2,113	81.87	425	16.47	11	0.43	4	0.15	0	0.00	4	0.15	24	0.93
	Block Group 1	1,032	827	80.14	185	17.93	6	0.58	3	0.29	0	0.00	1	0.10	10	0.97
	Tract 126.04	4,953	3,659	73.87	1,197	24.17	11	0.22	22	0.44	1	0.02	18	0.36	45	0.91
	Block Group 1	860	816	94.88	36	4.19	3	0.35	0	0.00	0	0.00	1	0.12	4	0.47
	Tract 128.02	2,571	1,254	48.77	1,207	46.95	5	0.19	0	0.00	0	0.00	62	2.41	43	1.67
	Block Group 2	669	418	62.48	191	28.55	0	0.00	0	0.00	0	0.00	57	8.52	3	0.45

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals.
Data Source: 2000 Census SF1, Tables P1, P8

LOW-INCOME PERSONS

According to the 2000 census, 12% of persons in the nation were low-income, having incomes below poverty level (Table 5). Jefferson County mirrored this pattern in 2000, while Kentucky's percentage (16%) was higher than the national trend. Tract-level low-income percentages ranged from 2% to 61%, while those of the block groups varied from 1% to 73%. One-third of the tracts and 35% of the block groups had low-income residential population densities that substantially exceeded the national, state, and county averages.

The highest numbers and concentrations of low-income residents were contained in tracts 43.01 and 43.02 near the center of the study area (Figure 8). Tract 43.01 had a low-income density of 35% (1,514 persons), while the density of tract 43.02 was 61% (2,148 persons). At the block group level, the highest numbers and concentrations were in tract 43.01 block group 1 and tract 43.02 block groups 1 and 2 (Figure 9). These tracts and block groups coincide with the highest density minority locations.

Poverty information from the census is not available at the block level, making identification of specific neighborhoods or facilities difficult.

TABLE 5

Low-Income Persons—2000

Scoping Study for a Proposed Interchange on I-264 at Manslick Road

Area		Total Population for Which Poverty Status is Determined	At or Above Poverty Level		Below Poverty Level	
			Total	%	Total	%
United States		273,882,232	239,982,420	87.62	33,899,812	12.38
Kentucky		3,927,047	3,305,951	84.18	621,096	15.82
Jefferson County		680,882	596,739	87.64	84,143	12.36
Census Areas Intersecting and Surrounding the Study Area	Tract 38.00	4,103	3,208	78.19	895	21.81
	Block Group 2	757	567	74.90	190	25.10
	Block Group 3	871	776	89.09	95	10.91
	Tract 39.00	4,197	3,461	82.46	736	17.54
	Block Group 2	1,030	912	88.54	118	11.46
	Block Group 3	1,678	1,318	78.55	360	21.45
	Tract 43.01	4,306	2,792	64.84	1,514	35.16
	Block Group 1	3,154	1,847	58.56	1,307	41.44
	Block Group 2	1,152	945	82.03	207	17.97
	Tract 43.02	3,537	1,389	39.27	2,148	60.73
	Block Group 1	1,613	432	26.78	1,181	73.22
	Block Group 2	871	244	28.01	627	71.99
	Block Group 3	1,053	713	67.71	340	32.29
	Tract 44.00	4,296	3,892	90.60	404	9.40
	Block Group 1	1,124	1,047	93.15	77	6.85
	Block Group 2	764	752	98.43	12	1.57
	Tract 45.00	3,188	2,845	89.24	343	10.76
	Block Group 1	1,038	930	89.60	108	10.40
	Block Group 4	396	332	83.84	64	16.16
	Tract 46.00	3,690	3,389	91.84	301	8.16
	Block Group 3	1,313	1,131	86.14	182	13.86
	Tract 123.01	3,309	3,243	98.01	66	1.99
	Block Group 1	1,182	1,169	98.90	13	1.10
	Block Group 2	1,472	1,456	98.91	16	1.09
	Block Group 3	655	618	94.35	37	5.65
	Tract 125.01	2,320	2,000	86.21	320	13.79
	Block Group 1	714	569	79.69	145	20.31
	Block Group 2	1,606	1,431	89.10	175	10.90
	Tract 126.01	6,229	5,432	87.21	797	12.79
	Block Group 1	1,683	1,440	85.56	243	14.44
	Tract 126.03	2,653	2,448	92.27	205	7.73
	Block Group 1	955	840	87.96	115	12.04
	Tract 126.04	4,953	4,512	91.10	441	8.90
	Block Group 1	884	781	88.35	103	11.65
	Tract 128.02	2,556	1,915	74.92	641	25.08
	Block Group 2	687	560	81.51	127	18.49

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals.
Data Source: 2000 Census SF3, Table P87

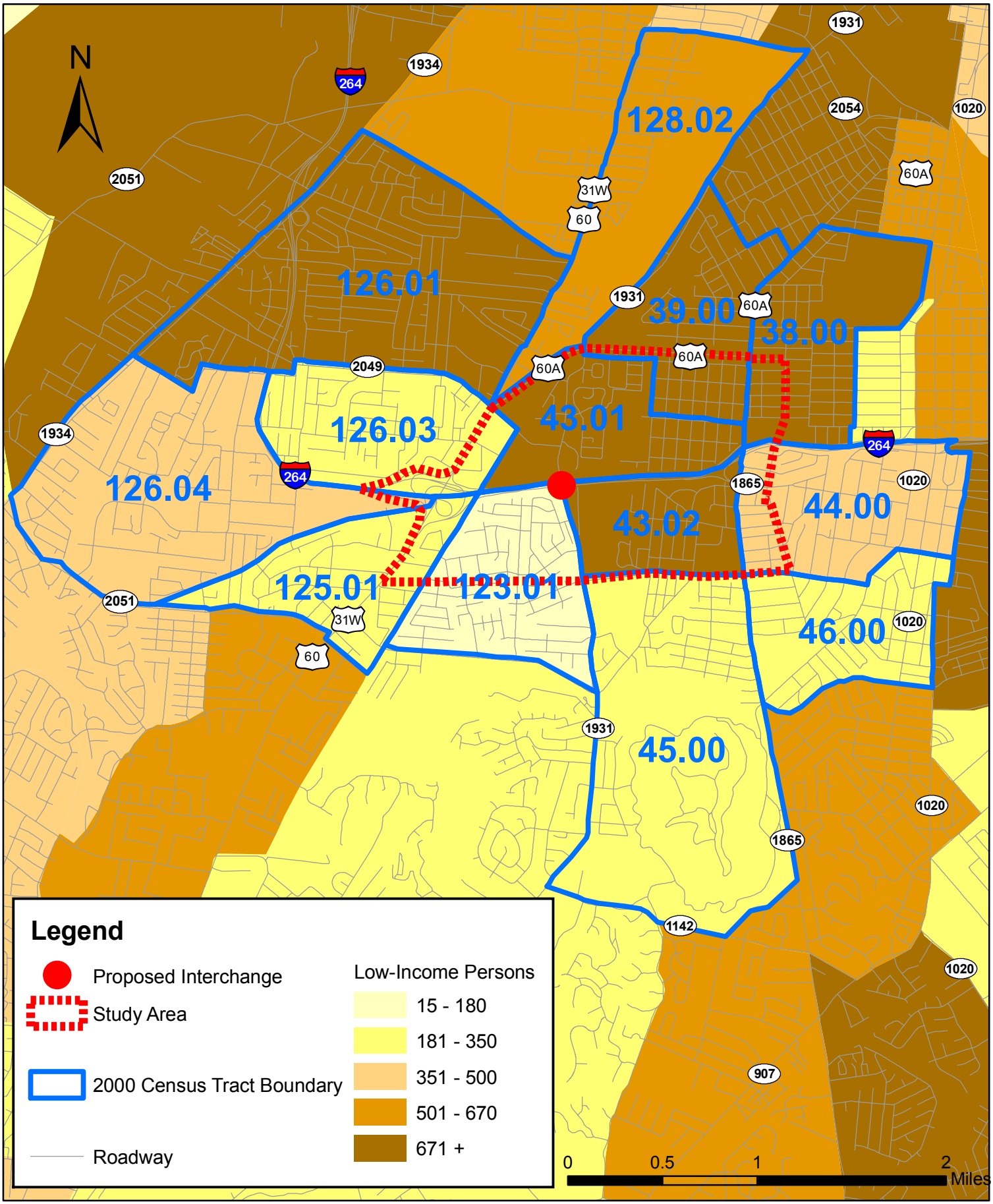

Figure 8

LOW-INCOME PERSONS BY CENSUS TRACT--2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE
ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

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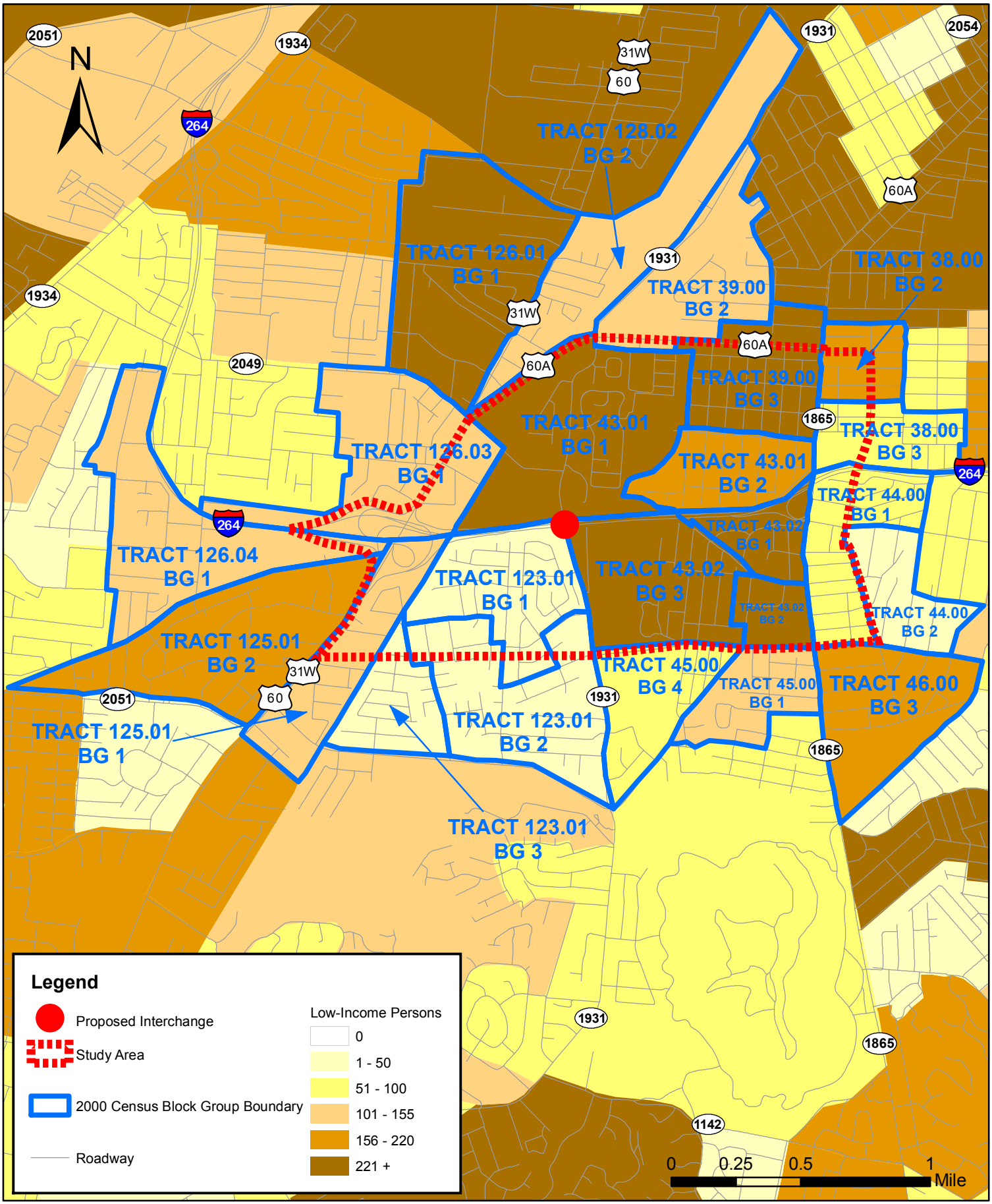

Figure 9

LOW-INCOME PERSONS BY CENSUS BLOCK GROUP 2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

Created by KIPDA May 2007 (LAK)

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ELDERLY PERSONS

Elderly persons, age 65 and older, comprised between 12% and 14% of the year 2000 individual populations of the United States, Kentucky, and Jefferson County (Table 6). At the tract level, this range was 6% to 24%, while at the block group level, it was 4% to 28%. Over 76% of the tracts and 70% of the block groups in and around the study area exhibited elderly densities higher than the national, state, and county averages.

The highest elderly numbers and percentages occurred in tract 126.01 on the edge of the study area between Dixie Highway and Cane Run Road (Figure 10). At the block group level, the highest numbers of elderly residents were in tract 125.01 block group 2 (441 persons) and tract 126.01 block group 1 (448 persons), while the greatest densities were in tract 45.00 block group 4 (28%), tract 123.01 block group 1 (26%), tract 125.01 block group 2 (25%), and tract 126.01 block group 1 (26%) (Figure 11).

At the block level (Figure 12), the highest elderly population, 189 persons, was found in the area immediately north of I-264 and east of Manslick Road.

TABLE 6

Elderly Persons—2000

Scoping Study for a Proposed Interchange on I-264 at Manslick Road

Area		Total Population	Under Age 65		Age 65+	
			Total	%	Total	%
United States		281,421,906	246,430,153	87.57	34,991,753	12.43
Kentucky		4,041,769	3,536,976	87.51	504,793	12.49
Jefferson County		693,604	599,622	86.45	93,982	13.55
Census Areas Intersecting and Surrounding the Study Area	Tract 38.00	4,119	3,496	84.87	623	15.13
	Block Group 2	786	654	83.21	132	16.79
	Block Group 3	866	719	83.03	147	16.97
	Tract 39.00	4,220	3,728	88.34	492	11.66
	Block Group 2	1,092	975	89.29	117	10.71
	Block Group 3	1,612	1,398	86.72	214	13.28
	Tract 43.01	4,338	3,936	90.73	402	9.27
	Block Group 1	3,196	2,958	92.55	238	7.45
	Block Group 2	1,142	978	85.64	164	14.36
	Tract 43.02	3,555	3,340	93.95	215	6.05
	Block Group 1	1,605	1,548	96.45	57	3.55
	Block Group 2	860	815	94.77	45	5.23
	Block Group 3	1,090	977	89.63	113	10.37
	Tract 44.00	4,330	3,582	82.73	748	17.27
	Block Group 1	1,135	947	83.44	188	16.56
	Block Group 2	769	637	82.83	132	17.17
	Tract 45.00	3,299	2,678	81.18	621	18.82
	Block Group 1	1,046	891	85.18	155	14.82
	Block Group 4	534	382	71.54	152	28.46
	Tract 46.00	3,694	3,041	82.32	653	17.68
	Block Group 3	1,334	1,130	84.71	204	15.29
	Tract 123.01	3,322	2,547	76.67	775	23.33
	Block Group 1	1,176	872	74.15	304	25.85
	Block Group 2	1,451	1,123	77.39	328	22.61
	Block Group 3	695	552	79.42	143	20.58
	Tract 125.01	2,543	2,004	78.80	539	21.20
	Block Group 1	743	645	86.81	98	13.19
	Block Group 2	1,800	1,359	75.50	441	24.50
	Tract 126.01	6,392	4,859	76.02	1,533	23.98
	Block Group 1	1,695	1,247	73.57	448	26.43
	Tract 126.03	2,581	2,016	78.11	565	21.89
	Block Group 1	1,032	810	78.49	222	21.51
	Tract 126.04	4,953	4,169	84.17	784	15.83
	Block Group 1	860	687	79.88	173	20.12
	Tract 128.02	2,571	2,126	82.69	445	17.31
	Block Group 2	669	555	82.96	114	17.04

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals.
Data Source: 2000 Census SF1, Table P12

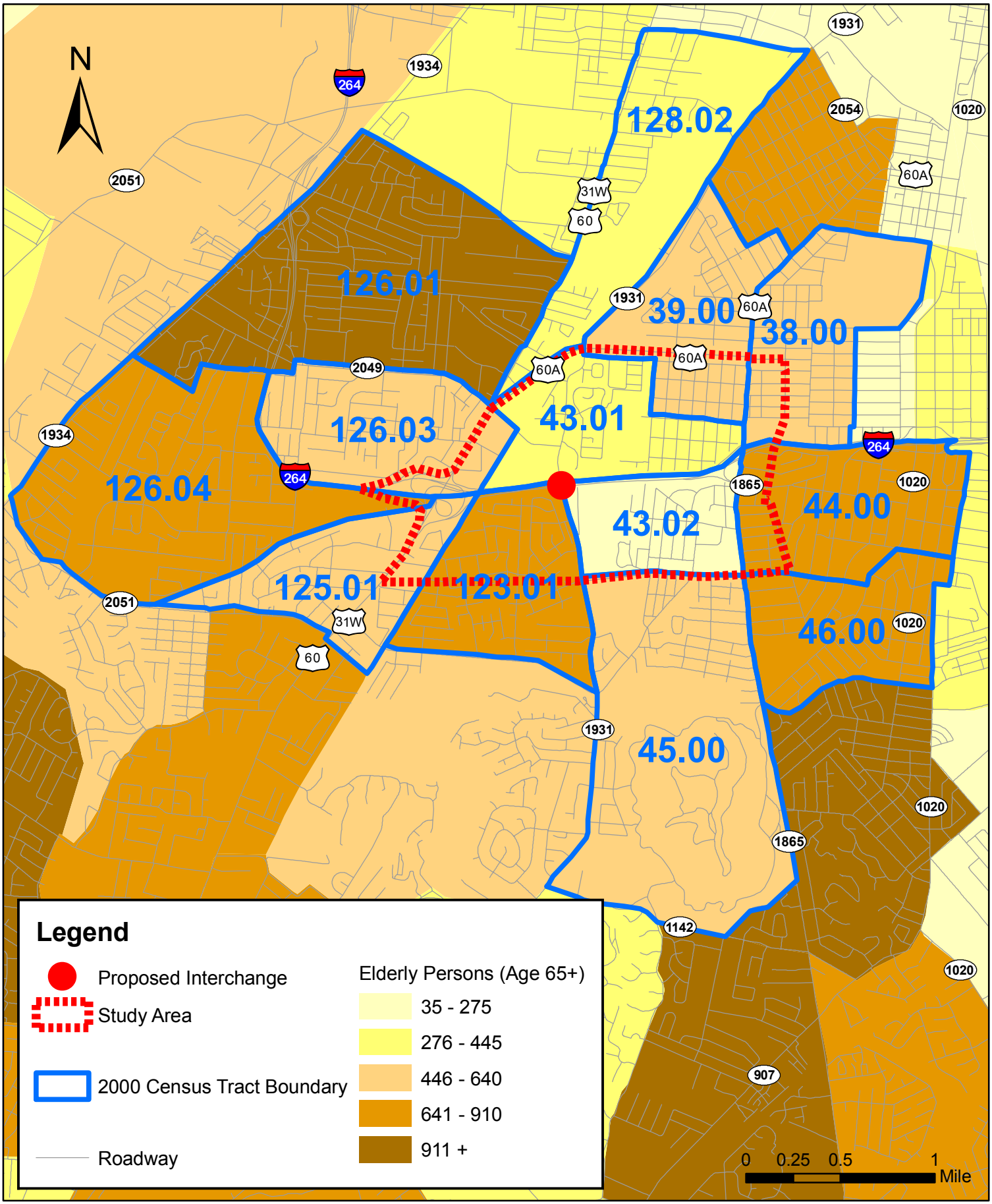


Figure 10

ELDERLY PERSONS BY CENSUS TRACT--2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE
ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

Created by KIPDA May 2007 (LAK)

KIPDA
Kentuckiana Regional Planning and Development Agency

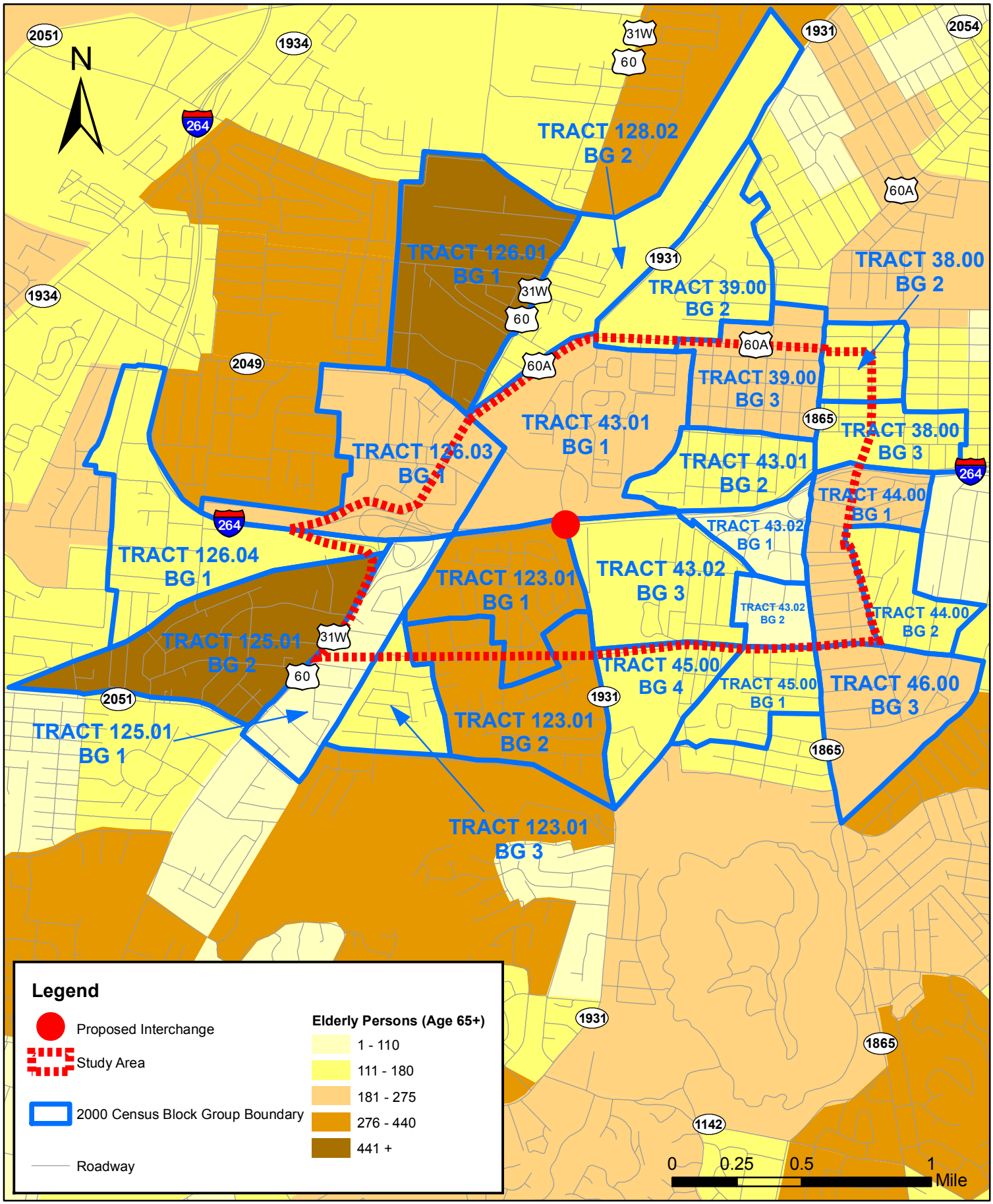


Figure 11

ELDERLY PERSONS BY CENSUS BLOCK GROUP 2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

Created by KIPDA May 2007 (LAK)

KIPDA
Kentuckiana Regional Planning and Development Agency

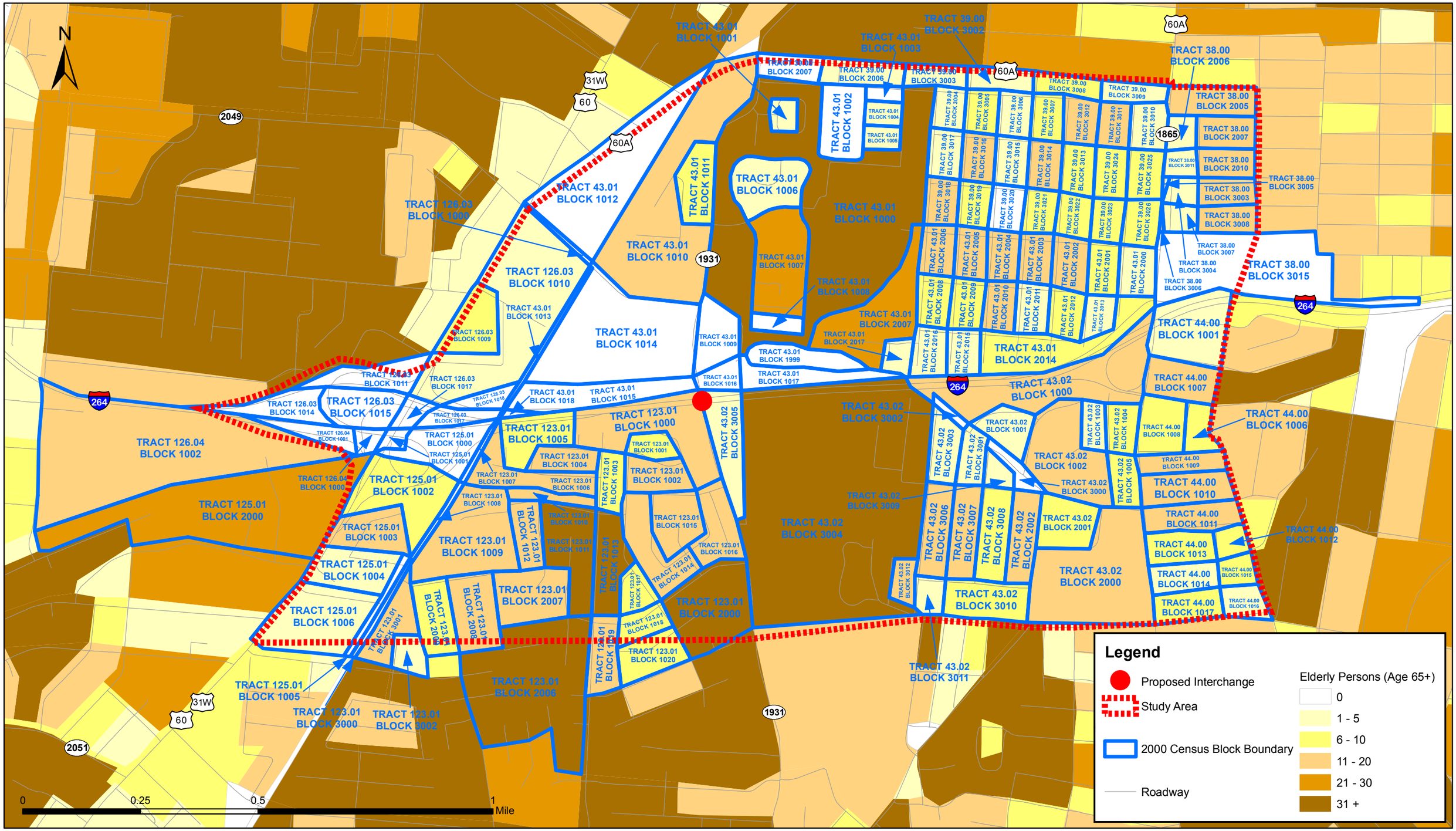


Figure 12

ELDERLY PERSONS BY CENSUS BLOCK--2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE
ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

KIPDA
Kentuckiana Regional Planning and Development Agency

PERSONS WITH DISABILITIES

Persons with disabilities comprised 19% of the civilian noninstitutionalized population over the age of five in the United States in 2000 (Table 7). The percentages for Kentucky (24%) and Jefferson County (20%) were slightly higher than the national average. Approximately two-thirds of the tracts and block groups in and around the study area had disabled population densities higher than the national, state, and county averages.

Tract 126.01, west of Dixie Highway, had the highest number of residents with disabilities (1,555 persons) (Figure 13). Tracts 43.02 and 128.02 had the highest percentages of disabled persons, with 35% and 37%, respectively. At the block group level, the highest number of persons with disabilities (679 persons) was located in tract 43.01 block group 1, along Manslick Road and north of I-264 (Figure 14). The highest percentages of disabled persons at the block group level were located in tract 43.02 block group 3 (39%) and tract 128.02 block group 2 (38%).

Census information about persons with disabilities is not available at the block level, making identification of specific neighborhoods or facilities difficult.

TABLE 7

Persons with Disabilities—2000

Scoping Study for a Proposed Interchange on I-264 at Manslick Road

Area		Total Civilian Noninstitutionalized Population Age 5+	No Disabilities		One or More Disabilities	
			Total	%	Total	%
United States		257,167,527	207,421,279	80.66	49,746,248	19.34
Kentucky		3,695,005	2,820,849	76.34	874,156	23.66
Jefferson County		638,762	508,186	79.56	130,576	20.44
Census Areas Intersecting and Surrounding the Study Area	Tract 38.00	3,862	2,688	69.60	1,174	30.40
	Block Group 2	677	549	81.09	128	18.91
	Block Group 3	834	604	72.42	230	27.58
	Tract 39.00	3,907	2,992	76.58	915	23.42
	Block Group 2	954	706	74.00	248	26.00
	Block Group 3	1,579	1,175	74.41	404	25.59
	Tract 43.01	3,866	2,894	74.86	972	25.14
	Block Group 1	2,743	2,064	75.25	679	24.75
	Block Group 2	1,123	830	73.91	293	26.09
	Tract 43.02	2,996	1,958	65.35	1,038	34.65
	Block Group 1	1,315	864	65.70	451	34.30
	Block Group 2	696	491	70.55	205	29.45
	Block Group 3	985	603	61.22	382	38.78
	Tract 44.00	4,073	3,200	78.57	873	21.43
	Block Group 1	1,023	778	76.05	245	23.95
	Block Group 2	753	612	81.27	141	18.73
	Tract 45.00	3,011	2,235	74.23	776	25.77
	Block Group 1	944	625	66.21	319	33.79
	Block Group 4	381	286	75.07	95	24.93
	Tract 46.00	3,495	2,676	76.57	819	23.43
	Block Group 3	1,255	1,010	80.48	245	19.52
	Tract 123.01	3,172	2,497	78.72	675	21.28
	Block Group 1	1,146	839	73.21	307	26.79
	Block Group 2	1,396	1,149	82.31	247	17.69
	Block Group 3	630	509	80.79	121	19.21
	Tract 125.01	2,195	1,545	70.39	650	29.61
	Block Group 1	653	473	72.43	180	27.57
	Block Group 2	1,542	1,072	69.52	470	30.48
	Tract 126.01	5,916	4,361	73.72	1,555	26.28
	Block Group 1	1,597	1,195	74.83	402	25.17
	Tract 126.03	2,531	1,986	78.47	545	21.53
	Block Group 1	919	623	67.79	296	32.21
	Tract 126.04	4,629	3,497	75.55	1,132	24.45
	Block Group 1	854	585	68.50	269	31.50
	Tract 128.02	2,364	1,488	62.94	876	37.06
	Block Group 2	640	397	62.03	243	37.97

Note: Only selected Block Groups are represented and do not necessarily sum to Tract totals.
Data Source: 2000 Census SF3, Table P42

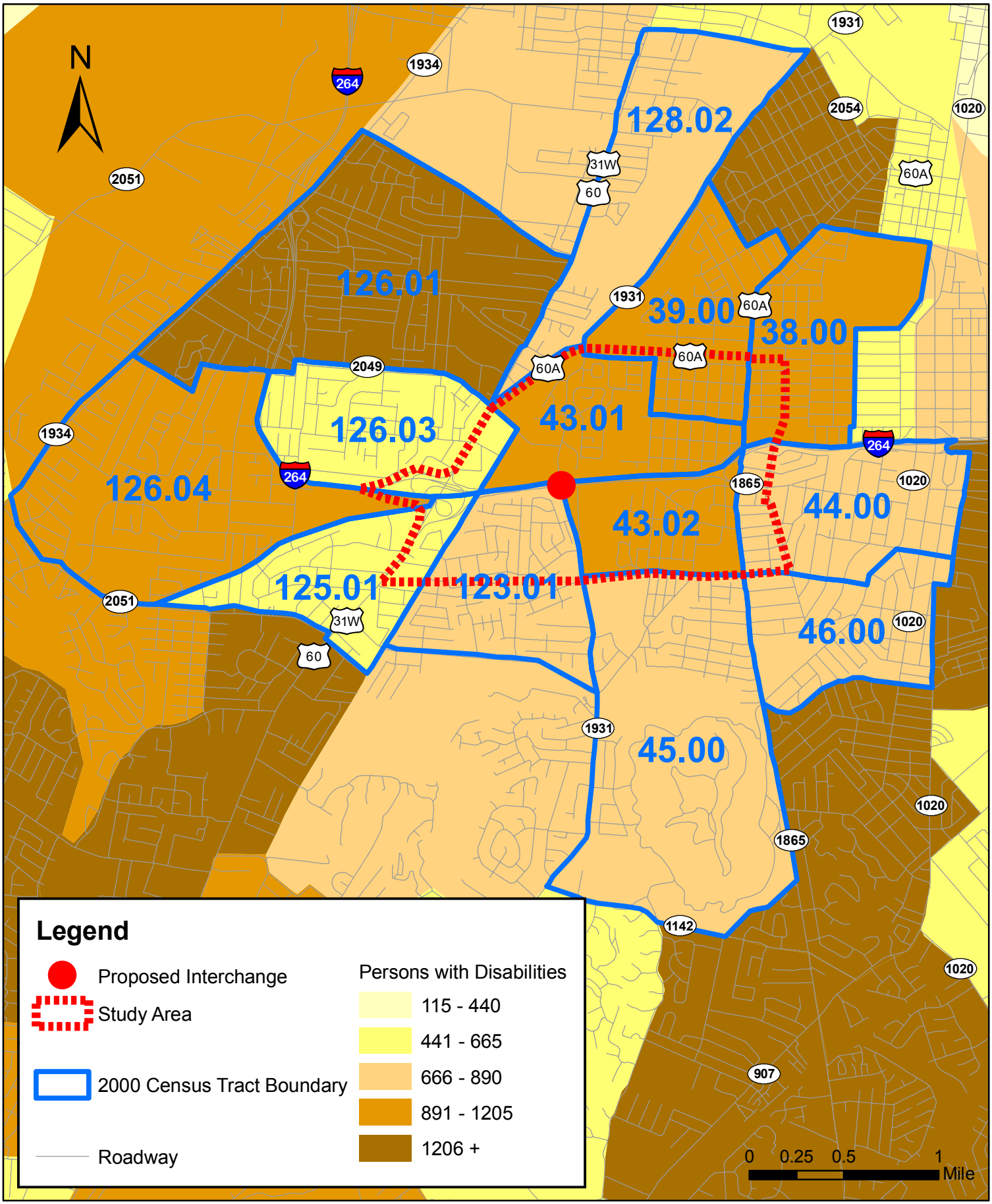


Figure 13

PERSONS WITH DISABILITIES BY CENSUS TRACT 2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

Created by KIPDA May 2007 (LAK)

KIPDA
Kentuckiana Regional Planning and Development Agency

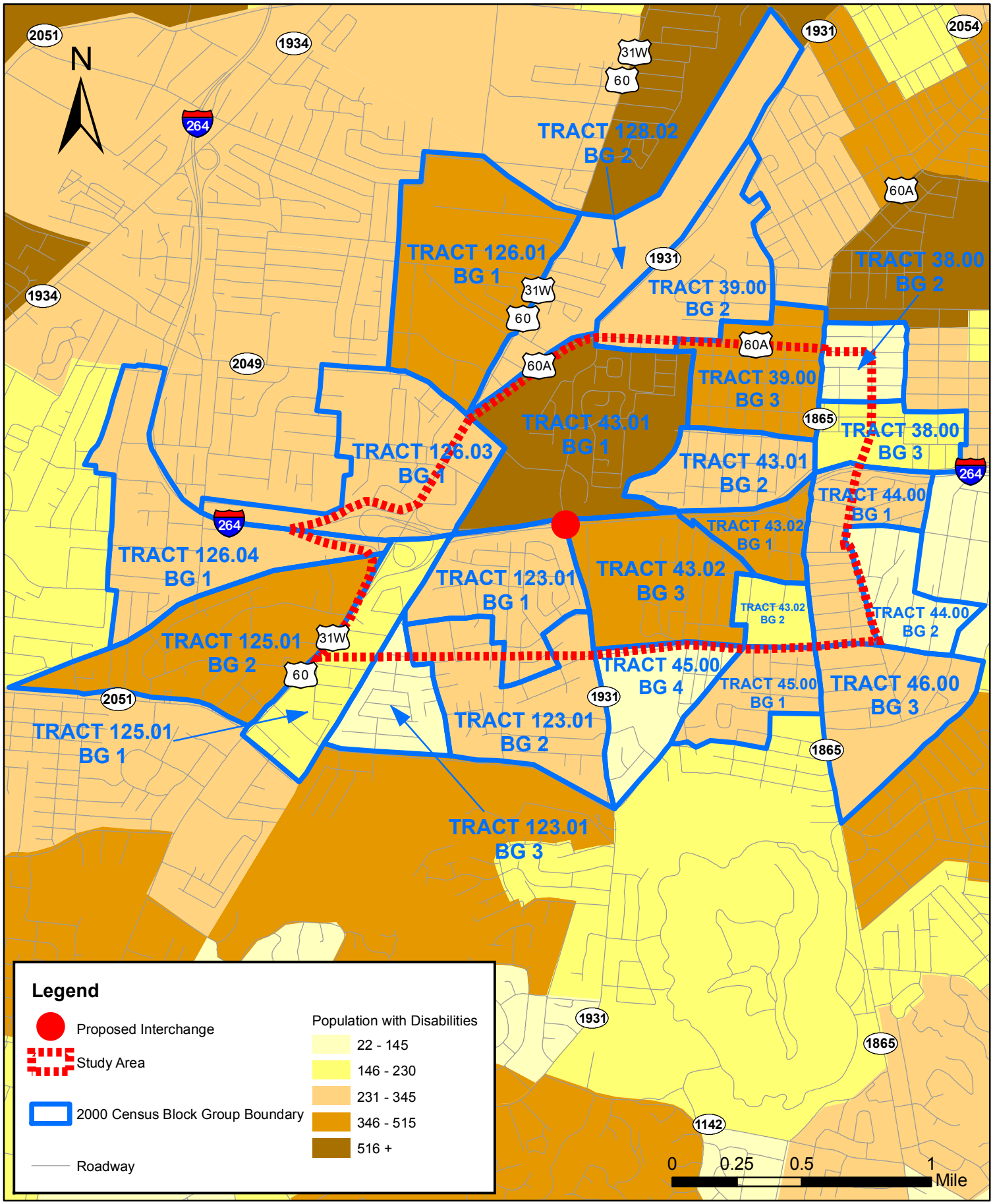


Figure 14

PERSONS WITH DISABILITIES BY CENSUS BLOCK GROUP 2000

SCOPING STUDY FOR A PROPOSED INTERCHANGE ON I-264 AT MANSLICK ROAD

(KYTC #05-436.00 KIPDA #516)

Created by KIPDA May 2007 (LAK)

KIPDA
Kentuckiana Regional Planning and Development Agency

OTHER COMMUNITY INFORMATION

Census profiles provided a great deal of information about the locations and magnitudes of potentially impacted residential populations in and around the study area. Other information was utilized as available to determine the existence of additional residential concentrations or places frequented by the populations of interest. Such groupings included:

- historic enclaves and communities
- post-2000 in- or out-migrations not reflected in the census data
- community gathering places, such as churches, community centers, or congregate meal sites

Several sources were used in the search for this information, including local area agencies and community groups (Figure 15, Appendix), as well as internet resources, such as Reference USA and the US Department of Housing and Urban Development website.

FIGURE 15
Local Agency/Community Group Contact List
Scoping Study for a Proposed Interchange on I-264 at Manslick Road

AARP (formerly known as the American Association of Retired Persons)
Center for Accessible Living
City of Shively
Dumeyer Community Center
Highland Community Ministries
Jefferson County Public Schools English as a Second Language (ESL) Program
KIPDA Area Agency on Aging
Louisville American Red Cross WHEELS
Louisville Metro Community Action Partnership
Louisville Metro Community Outreach Liaison
Louisville Metro Council District 3
Louisville Metro Council District 6
Louisville Metro Council District 15
Louisville Metro Council District 21
Louisville Metro Housing Authority
Louisville Metro Housing and Community Development
Louisville Metro Human Relations Committee
Louisville Metro Nutrition Program
Louisville Metro Office for Aging and Disabled Citizens
Louisville Metro Office for International Affairs
Louisville Urban League
Metro United Way
National Association for the Advancement of Colored People (NAACP)
TARC Elderly & Disabled Advisory Council
YMCA of Greater Louisville

HISTORIC ENCLAVES AND COMMUNITIES

No historic enclaves of the populations of interest were noted in the analysis or by any of the agencies or community groups contacted.

POST-2000 MIGRATIONS

The Louisville Metro Housing Authority indicated there has been post-2000 activity at the Iroquois Homes which has affected the population of that facility and is expected to have future impacts as well. At the time of the 2000 census, there were 72 buildings containing 850 units in the facility, located west of Taylor Boulevard and south of I-264 in census tract 43.02 block groups 1 and 2. To date, 18 buildings (218 units) have been demolished. Another 10 buildings (148 units) are scheduled for demolition in mid-2007, with the remaining 44 buildings (484 units) to be razed over the next six years. All tenants are being relocated to scattered housing sites throughout Metro Louisville. Due to funding uncertainties, the future use of the properties has yet to be determined.

CHURCHES

In addition to the spiritual functions performed by churches and other places of worship, these facilities also often serve as social centers of the surrounding community—gathering places for persons with similar beliefs and backgrounds. Some churches orient their services toward particular groups because of a common language (such as Hispanic-affiliated churches) or tradition (such as AME, or African Methodist Episcopalian churches) shared among their parishioners. There are two churches in the study area, Temple of Faith Baptist Church, at 1703 Bicknell Avenue, and Zion Hope Baptist Church, at 1401 Bluegrass Avenue, which have predominantly African-American congregations. There are also several other worship places and churches with identified ethnic ministries or minority congregations near the study area:

- Arcade Hispanic Mission, 1524 Arcade Avenue (approximately 1.7 miles from Manslick/I-264)
- Haitian Tabernacle of Louisville, 1122 Longfield Avenue (approximately 1.4 miles from Manslick/I-264)
- Beechmont Baptist Church (Vietnamese ministry), 4574 South Third Street (approximately 1.9 miles from Manslick/I-264)
- Louisville Korean United Methodist Church, 1563 Clara Avenue (approximately 1.2 miles from Manslick/I-264)
- Tu An Buddhist Temple, 4600 South Sixth Street (approximately 1.7 miles from Manslick/I-264)
- New Canaan Baptist Church (predominantly African-American congregation), 3344 Oleanda Avenue (approximately 1.4 miles from Manslick/I-264)
- Antioch Missionary Baptist Church (predominantly African-American congregation), 3315 Dixie Highway (approximately 1.2 miles from Manslick/I-264)

- Greater Gagel Christian Church (predominantly African-American congregation), 4423 LaSalle Avenue (approximately 0.8 mile from Manslick/I-264)
- New Life Seventh-Day Adventist Church (predominantly African-American congregation), 3248 Taylor Boulevard (approximately 1.3 miles from Manslick/I-264)

SENIOR CENTERS AND HOUSING

Additional places where concentrations and gatherings of senior citizens may occur include senior centers, congregate meal sites, adult day care facilities, senior housing, and long term care facilities. Several such facilities are located in or near the study area.

The Salvation Army South Louisville Corps, at 1010 Beecher Street, is near the study area (approximately 1.3 miles from Manslick Road/I-264). This facility offers programs and activities for elderly residents. The elderly nutrition sites and adult day care centers are 2 or more miles away from the study area.

The American Village Apartments, at 3700 West Wheatmore Drive, is within the study area. It has 214 units and preference is given to renters age 62 and above or disabled. The Shively Apartments, outside of the study area at 3105 Clinton Place, has 96 units. The property is located approximately 1.4 miles from Manslick/I-264. Preference is given to renters age 62 and above or disabled.

There are no long term care facilities with predominantly elderly residents within the study area boundary. There are two long term care facilities nearby:

- Georgetown Manor, 900 Gagel Ave (approximately 1.0 mile from Manslick/I-264)—120 beds
- Summerfield Health and Rehabilitation Center, 1877 Farnsley Road approximately 1.2 miles from Manslick/I-264)—168 beds

OTHER FACILITIES

Other facilities likely frequented by the populations of concern in and near the study area include low-income housing units, housing and long term care facilities for persons with disabilities, emergency food distribution centers, and public health and wellness clinics.

Site-Specific Low-Income Housing

The US Department of Housing and Urban Development (HUD) maintains a listing of HUD subsidized, financed, or insured low-income multi-family housing properties. The following properties are located within the study area:

- Carpenter’s Apartments, 3524 Georgetown Circle—160 units
- Watterson Lakeview Apartments, 3701 West Wheatmore Drive—184 units

HUD also maintains a listing of properties that have received Low-Income Housing Tax Credits (LIHTC). LIHTC are tax incentives that may be applied to the costs of new construction or rehabilitation of existing low-income rental housing in HUD-designated Qualified Census Tracts. The intent of the LIHTC is to increase the amount of affordable housing in low-income areas. In the study area, HUD has designated tracts 43.01 and 43.02 as Qualified Census Tracts because they have high proportions of households with lower incomes.

The Bradford Pointe Apartments at 1519 Crums Lane has 74 units and is inside the study area boundary, while the following LIHTC properties are located outside of the study area:

- 1509 Haskin Avenue (distance approximately 1.2 miles from Manslick Road/I-264)—7 units
- Thoroughbred Square Apartments, 1500 Oleanda Avenue (distance approximately 1.6 miles from Manslick Road/I-264)—52 units
- Ramser Project, 3114 Ramser Avenue (distance approximately 1.4 miles from Manslick Road/I-264)—50 units

Site-Specific Housing and Long-Term Care Facilities Serving Persons with Disabilities

There are several properties in and near the study area that give preference to tenants with physical, sensory, or mental disabilities. Woodgreen Apartments, at 3751 Woodgreen Court, is within the study area and has 21 units. Other properties near the study area include the following:

- Hagan-Trabue Apartments, 2600 Edsil Johnson Way (approximately 1.8 miles from Manslick/I-264)—10 units
- Clover Hill Apartments, 3100 Wellspring Way (approximately 1.8 miles from Manslick/I-264)—8 units

There is one long term care facility within the study area that serves younger persons with disabilities, the Hazelwood Center, at 1800 Bluegrass Ave (201 beds).

Emergency Food Distribution Centers

Potential clients of emergency food distribution centers may include low-income persons and the elderly. There is one emergency food distribution center within the study area, Temple of Faith Baptist Church, at 1703 Bicknell Avenue. There are two other distribution centers nearby, but outside of the study area:

- Shively Area Ministries, 1867 Farnsley Road (approximately 1.1 miles from Manslick Road/I-264)
- Sts. Simon and Jude Church, 4335 Hazelwood Avenue (approximately 0.8 mile from Manslick Road/I-264)

Public Health and Wellness Clinics

There are two Louisville Metro Department of Public Health and Wellness clinic sites within the study area:

- South Central Neighborhood Place, 4251 Hazelwood Avenue
- Family Health Center—Iroquois, 4100 Taylor Boulevard

Louisville Metro Health and Wellness clinics offer preventative medical services to members of the community regardless of their ability to pay. Potential clients may include low-income and elderly persons.

CONCLUSION

The KIPDA staff assessment of demographic data from the 2000 Census, consideration of information from other sources, and conversations with individuals familiar with the area indicate the following:

- Higher concentrations of resident minority populations existed primarily in two locations within the study area—along Manslick Road north of I-264 and in the vicinity of Iroquois Homes. The average minority concentrations in these areas were greater than those expected within the general resident population for the United States, Kentucky, or Jefferson County. In fact, many of the average minority concentrations were double that of the national level. Of the various combinations of ethnicity and race that determine individual minority status, African-Americans comprised the largest component group.
- Similar to the minority population findings, high concentrations of low-income persons resided in the neighborhoods along Manslick Road north of I-264 and in the vicinity of Iroquois Homes. These populations were present in proportions higher than those of the nation, state, and county. In fact, two block groups in the Iroquois Homes neighborhood were as much as 450% higher than the Kentucky average.
- Most of the elderly residents in and near the study area were present in concentrations higher than or similar to those of the general population of the county, state, and nation. The highest of these concentrations was almost twice the Jefferson County average. Within the study area itself, the most pronounced area of elderly residents appeared to exist in the vicinity of the American Village Apartments, east of Manslick Road and north of I-264.
- Concentrations of persons with disabilities in and near the study area were higher than or similar to those of the general population of the county, state, and nation. The highest of these was approximately 150% higher than the Kentucky average. Within the study area boundary, the highest number of persons with disabilities was located along Manslick Road north of I-264, while the highest percentage was found in the area of the Hazelwood Center.

Using information from the census and local sources, the community impact assessment confirmed the existence of concentrations of Environmental Justice populations, elderly, and persons with disabilities both within and near the study area. The neighborhoods along Manslick Road north of I-264 appeared to consistently exhibit higher populations and densities of these persons.

Given the existence of the Environmental Justice populations and other groups of interest at levels higher than those in the general population, project-level impact determination, mitigation measures, and public involvement activities should be tailored to be most inclusive of such persons. Information gathered from local sources regarding site-specific concentrations and facilities utilized by the populations of interest may be useful in further analysis and outreach efforts as the study progresses.

APPENDIX

Local Agency/Community Group Contact Letter

KIPDA
Kentuckiana Regional Planning and Development Agency

January 26, 2007

Kentucky Member Counties

Bullitt

Henry

Jefferson

Oldham

Shelby

Spencer

Trimble

Indiana Member Counties

Clark

Floyd

Dear Sir or Madam:

The Kentucky Transportation Cabinet is currently conducting a feasibility study for a proposed interchange on I-264 at Manslick Road. As part of this study, the Kentuckiana Regional Planning and Development Agency (KIPDA) is gathering information about minority, low-income, elderly, and disabled populations located in or near the study area (see attached graphic). This information will be used to identify potential impacts of the proposed improvements and to establish points of contact with these groups in the community.

KIPDA has access to year 2000 census data for the populations of interest, but any additional information that you can provide would be helpful. Examples of such information include:

- Identification of historic enclaves or communities of the populations of interest,
- Post-2000 in- or out-migrations of the populations of interest that would not be reflected in the census data, and
- Identification of community gathering places that are frequented by the populations of interest in or near the study area, such as churches, community centers, and congregate meal sites.

If you can provide any of the above information, please send it to me by February 9, 2007. Feel free to direct this request to the appropriate department(s) within your agency or to your constituents. If you have any questions or concerns about this request, my contact information is as follows:

KIPDA (Attn: Lori Kelsey)
11520 Commonwealth Drive
Louisville, KY 40299
e-mail: Lori.Kelsey@ky.gov
phone: (502) 266-6084 fax: (502) 266-5047

Equal Opportunity Employer

Thank you for your time and attention in this matter.

Sincerely,

Lori A. Kelsey
Transportation Planner

11520 Commonwealth Drive
Louisville, KY 40299
502-266-6084
Fax: 502-266-5047
KY TDD 1-800-648-6056
www.kipda.org

Architecture
Engineering
Construction

MEETING NOTES

Project:	Manslick Road Interchange at I-264, Feasibility Study
Item Number	5-436.00
Purpose:	Stakeholder Meeting #1
Place:	Metro Public Works Metro Development Center 444 South 5th Street, Rom 416 Louisville, Kentucky
Meeting Date:	September 6, 2006
Prepared By:	Tom Springer

In Attendance:

Paul Davis	KYTC, D5, Pre-Construction & Design
Rick Storm	Metro Public Works
Mohammad Nouri	Metro Planning and Design
Aida Copic	Metro Planning and Design
Gregoriy Ardashev	Metro Development Authority
Tom Springer	Qk4

The meeting included an open discussion of the issues surrounding the feasibility of a new interchange, as follows:

- The key objective of the planning study is to determine the feasibility of constructing an interchange at this location based on design constraints, traffic operations, and community and environmental constraints. The end result will include benefits of a proposed interchange, as well as constraints and anticipated impacts.
- An interchange at Manslick (KY-1931) would improve safety, operations and relieve congestion at the Dixie Highway (US-31W)/I-264 interchange. An interchange would also benefit potential industrial development areas to the north, including the Park Hill Area, and the Caritas Medical Center to the south off Bluegrass Avenue. Some benefit could be extended to the Riverport area off Greenbelt Highway.
- Following are some areas outside of what was shown on the Environmental Overview map that should be considered during this feasibility study:
    - Dixie Highway/Crums Lane/7th Street intersection
    - 9th Street connection/extension
    - Park Hill Area (MDA is conducting a traffic pattern study of this area for KIPDA)
    - Greenwood Road, which is programmed in the Six Year Highway Plan to widen to a 3-lane facility with bike lanes

- Manslick Road south of I-264 is a two-lane road. Improvement of this road is included on KIPDA's list for SLO funds, but funding is "future" (i.e., beyond 2011), and this project is not is not in the State Six-Year Highway Plan.
- Project History
    - An interchange with Manslick was included in the 1973 EIS for the widening of the Watterson Expressway as a half interchange allowing travelers to go east and come from the west, only. (As scanned image of that drawing will be distributed with these meeting notes.) It is not known why this interchange was not included in the final design of the widening of this section of I-264 (which occurred in the late 1970s).
    - A few years ago this project was the top priority of the City of Louisville. Now, of the various proposed new interchanges under study through Louisville Metro, an interchange at Manslick and I-264 is less than the top priority.
- Others to Contact
    - It was recommended that Louisville Metro Animal Services' Animal Care Center be contacted since they own a facility adjacent to I-264 and have plans to build a new facility at a different location.
    - Jefferson County Board of Education, Transportation, Mr. Rick Cable, should be contacted regarding the bus facility located north of I-264.
- Rick Storm has agreed to be the Metro representative to the Project Team for this feasibility study.
- An additional meeting may be set up with Metro Development Authority (MDA) to discuss their plans and initiatives that relate to the Project interchange.

End of Meeting Notes

Architecture
Engineering
Construction

MEETING NOTES

Project:	Manslick Road Interchange at I-264, Feasibility Study
Item Number	5-436.00
Purpose:	Stakeholder Meeting #2
Place:	Jefferson County Board of Education C. B. Young, Jr., Building 3001 Crittenden Drive Louisville, Kentucky 40209
Meeting Date:	September 13, 2006
Prepared By:	Tom Springer

In Attendance:

Paul Davis	KYTC, D5, Pre-Construction & Design
Rick Caple	Jefferson County Board of Education, Transportation Director
Chuck Fleischer	JCBOE, Safety and Environmental Services Department, Director
Ike Pinkston	JCBOE, Vehicle Maintenance, Director
Tom Springer	Qk4, Inc.

The meeting included an open discussion of the issues surrounding the school facilities, including Jacob Elementary School and the Nicholas Bus Compound, and the feasibility of a new interchange with I-264 and Manslick Road, as follows:

- Approximately 275 buses park at the compound daily (25 percent of the entire fleet). An additional 100 buses per week, approximately, go to the compound for maintenance. Between those buses and the buses to serve Jacob Elementary, there a total of approximately 1,000 bus trip per day to and from the site. These do not include the trips bus drivers make in their personal vehicles going to and from the compound twice a day. In addition, there are another approximately 500 trips generated to and from the school for teachers, staff, parents, visitors, and others. The total trips to/from the complex are more than 2,000 per day during the school year, making this the single largest traffic generator in the study area.
- Access to and from the school and the bus compound is by way of one of three choices: 1) east on Strader Avenue to Taylor Boulevard, north on Georgetown Place to Berry Boulevard, or west on March Boulevard/ south on Manslick and then continuing west on Crums Lane to Dixie Highway. Each of these are through residential areas. Recently, the number of stop signs on Strader Avenue have been reduced to minimize noise from the buses' diesel engines and brakes. The buses test drive route is as follows: east on Strader Ave. south on Taylor, west on I-264, north on Dixie, and west on Crums back to the compound.
- The biggest traffic/movement problem for the buses is the left turn from Crums Lane to Dixie. The Board would like for an connection to be made across from Crums Lane to the compound, but that would require bisecting the historic cemetery.
- The Air Pollution Control Board commissioned a report in the recent past on the air quality impacts of the bus compound. The report could be obtained from the APCB.

- The Board of Education stated it is in favor of a new interchange with Manslick and I-264 because it would improve their safety by moving buses out of residential areas, and travel time and costs by providing quicker access to I-264.

End of Meeting Notes

Architecture
Engineering
Construction

MEETING MINUTES

Project:	Manslick Road Interchange at I-264, Feasibility Study	
Item Number	5-436.00	
Purpose:	Project Team Meeting	
Place:	KYTC, District-5 977 Phillips Avenue Louisville, Kentucky 40209	
Meeting Date:	October 3, 2006	
Prepared By:	Tom Springer	
In Attendance:	Paul Davis	KYTC, D5, Pre-Construction & Design
	John Callahan	KYTC, D5, Pre-Construction Branch Manager
	Kevin Dant	KYTC, D5, Environmental Coordinator
	Harold Tull	KIPDA, Transportation Planning Director
	David Smith	Qk4, Inc.
	Darrell Renfrow	Qk4, Inc.
	Tom Springer	Qk4, Inc.

The objective of the Project Team meeting was to review the work that has been done for the feasibility study, discuss pertinent issues, and identify the next steps that need to be taken, as follows:

- Stakeholders Meeting Summaries.
    - A meeting was held September 6, 2006 with staff members from Louisville Metro Public Works, Planning and Design Service, and the Metro Development Authority. The minutes from that meeting were distributed to the Project Team, and the following issues from that meeting were noted: 1) MDA is conducting a traffic circulation plan for the Park Hill Area to the north, and 2) of the five new interchanges currently under study within Jefferson County, the Manslick Road interchange project is one of the least priorities of Louisville Metro.
    - A meeting was held on September 13, 2006 with representatives from Jefferson County Public Schools. The draft minutes from that meeting were distributed to the Project Team, and the following issues were noted: The bus compound, together with Jacob Elementary School, are significant traffic generators. The buses make numerous trips on nearby roads through residential areas. JCPS is very much in favor of a proposed interchange between Manslick and I-264.

- Traffic Data. Traffic data was collected in late September and included 24-hour tube counts on the ramps of the Dixie Highway and Taylor Boulevard interchanges, and on select surface streets. Turning movements were also taken at the I-264 ramps to/from Taylor Blvd. This data was distributed to the Project Team and the following points were noted:
    - At both the Dixie Highway and Taylor Blvd interchanges, the significant traffic movements are to and from the south on Dixie and Taylor, and the east on I-264.
    - The ADTs on the mainlines of Taylor Blvd are nearly the same north and south of I-264 (30,000 vs. 33,000), but on Dixie Highway the ADT is significantly higher in the south (59,000) than the north (31,000).
    - On I-264 the ADTs reduce notably from east to west, as follows: 107,000 east of Taylor Blvd., 96,000 west of Taylor Blvd., and 54,000 west of Dixie Highway.
- Environmental Overview. The following elements of the natural and human environments were noted:
    - Watterson Lake Park is located adjacent to the interchange, and efforts should be made to avoid or minimize acquiring land from and adversely impacting the park.
    - The Manslick Cemetery is located north of the Animal Shelter along Old Manslick Road, and efforts should be make to avoid use of this cemetery. The grave markers are very old and scattered. It is highly likely there are numerous unidentified graves on the property. The cemetery is owned and maintained by Metro Parks.
    - The Cloverleaf community is located south of I-264 between Manslick and Dixie Highway. This area is a middle-income neighborhood made up of single-family homes. A noise wall adjacent to I-264 provides a notable reduction of noise from the interstate.
    - The Hazelwood community is located south of I-264 between Manslick and Taylor Blvd. This area is a lower-income neighborhood with a mix of public housing/apartments and single-family homes. A heavily used pedestrian walkway and bridge links this area with Watterson Lake Park, Jacob School, and shopping areas north of I-264.
    - Mill Creek runs parallel along the north side of I-264 from Watterson Lake west through the Dixie Highway interchange.
- Design Concepts.
    - A copy of an exhibit from the 1973 EIS for the I-264 expansion was distributed. This exhibit illustrated a design concept that included a half interchange at Manslick.
    - Darrell Renfrow presented a draft design concept that includes a full tight diamond interchange with Manslick, and braded ramps between Manslick and Dixie. There are weaving problems that would prevent some of the design elements, but other options could be explored, such as a T-intersection with Dixie Highway in lieu of the flyover ramp for the southbound movement, or eliminating the movement from Manslick to Dixie Highway on I-264.
- Next Steps.
    - KIPDA will forecast future traffic and turning movements for the interchange concepts. Qk4 will provide KIPDA a refined full interchange option and a half interchange option with movements to and from the east.

End of Meeting Notes

Architecture
Engineering
Construction

MEETING NOTES

Project:	Manslick Road Interchange at I-264, Feasibility Study
Item Numbers:	5-436.00
Purpose:	Stakeholder Meeting with Metro Parks, Planning and Design, Public Works, and Development Authority
Place:	Metro Parks 1294 Trevillian Way Louisville, Kentucky 40209
Meeting Date:	October 18, 2006
Prepared By:	Tom Springer

In Attendance:

Lisa Hite	Metro Parks
Bruce Traughber	Metro Development Authority
Charles Cash	Metro Planning and Design
Mohammad Nouri	Metro Planning and Design
Rick Storm	Metro Public Works
John Callihan	KYTC, District-5
Tala Quino	KYTC, District-5
Paul Davis	KYTC, District-5
Kevin Dant	KYTC, District-5
Andrea Clifford	KYTC, District-5
David Smith	Qk4, Inc.
Bill Crawford	Qk4, Inc.
Tom Springer	Qk4, Inc.

Manslick Road/I-264 Interchange

Plans for a new interchange with I-264 and Manslick Road in southern Louisville were also discussed. This planning study is a feasibility study with little public involvement. Like the I-64 planning study the KYTC is also managing the project since it will require Federal Highway Administration involvement in the form of an IJS and NEPA environmental document, both of which are required before the project can be constructed.

Watterson Lake Park and the Manslick Cemetery are located in the northeast quadrant of the proposed interchange, and both are owned and managed by Metro Parks. Watterson Lake Park is adjacent to the existing I-264 right-of-way. The current design concepts show that both facilities can be avoided by a proposed new interchange.

MDA noted that a partial interchange (allowing access to/from the east) would provide needed benefit for numerous redevelopment plans and activities in Shively. A new transportation connection would relieve congestion at the Dixie interchange and help with traffic issues in Old Louisville, including removing trucks traffic from Hill Street and 7th Street areas that are going to I-65. A previously completed study of the 7th Street Corridor will be provided to KYTC from Metro Planning and Design.

MDA also noted the City has plans for relocating the Animal Control Facility that is adjacent to Manslick and I-264 in the northeast quadrant. Therefore, a new interchange that would require the acquisition of that property would be welcome.

End of Meeting Notes

Architecture
Engineering
Construction

MEETING MINUTES

Project:	Manslick Road Interchange at I-264, Feasibility Study	
Item Number	5-436.00	
Purpose:	Project Team Meeting	
Place:	KYTC, District-5 977 Phillips Avenue Louisville, Kentucky 40209	
Meeting Date:	April 24, 2007	
Prepared By:	Tom Springer	
In Attendance:	Paul Davis	KYTC, D5, Pre-Construction & Design
	John Callahan	KYTC, D5, Pre-Construction Branch Manager
	Mary Ann Bond	KYTC, D5, Planning
	Randy Simon	KIPDA
	Andy Rush	KIPDA
	Jeremy Lukat	Qk4, Inc.
	Tom Springer	Qk4, Inc.

The objective of the Project Team meeting was to present and discuss project data that will lead to a selection of a preferred alternative.

- Project Status. Since the last meeting Qk4 has been working with KIPDA to refine the traffic data, and then to prepare the LOS analyses, and detailed cost estimates for the alternatives. Each Build Alternative was reviewed, and updated designs were presented:
    - Alt 1: a complete interchange but without access from Manslick to I-264 west
    - Alt 2: a complete interchange
    - Alt 3: a half interchange to and from the east only
    - Alt 4: a complete interchange but without access from Manslick to Dixie
- Cost Estimates. Qk4 prepared construction cost estimates for alternatives 1, 2, and 3 (cost estimates for Alt 4, and right of way and utility estimates will be prepared if it is advanced):
    - Alt 1: $26,962,200 (plus significant right-of-way and utility costs)
    - Alt 2: $33,962,400 (plus significant right-of-way and utility costs)
    - Alt 3: $3,946,200 (plus a minor amount of right-of-way and utility costs)

The high costs for Alts 1 and 2 are mostly attributable to the bridges and retaining walls needed.

- Existing Roadway Characteristics. A map showing the existing functional classifications, number of lanes, lane widths, speed limit and percent trucks was included in the handouts and reviewed.
- Crash data from the years 2001-2005 were presented on an exhibit. High crash corridors include nearly all of Dixie Highway (US 31W), all of 7th Street between Dixie and Manslick, I-264 through the US 31W interchange, and I-264 through the Taylor Boulevard Interchange.
- Other Highway Projects.
    - Within the current KIPDA Long-Range Plan is the widening of Manslick Road from I-264 south to St. Andrews Church Road from 2 to 4 lanes.
    - The Long-Range Plan also includes widening St. Andrews Church Road from Manslick to Dixie from 2 to 4 lanes.
    - Widening Greenwood Road (KY 1931) from Dixie at St. Andrews Church Road west to Greenbelt Highway is included in the current and proposed Long-Range Plan, the TIP, and the Six-Year Highway Plan with construction to occur in 2009.
- Traffic and LOS. The majority of the meeting focused on the details of the traffic forecasts, LOS, and volume/capacity analysis. Qk4 had used the unadjusted and un-rounded traffic volumes and will therefore need to revise the LOS analysis, but no major changes are expected.

  In a very general summary, the traffic volumes of the overall area are at a point of saturation and any new connections to I-264 at Manslick will shift traffic to other roads, but the overall volumes and Levels of Service would change little. If a new interchange is constructed at Manslick, the traffic volumes on US 31W increase slightly and the LOS decreases slightly. The traffic volumes on Manslick would increase with an interchange but the LOS would be acceptable, only because of the planned improvements to Manslick south of I-264.
- Volume/Capacity (V/C) Analysis. KIPDA prepared V/C data for the major roads in the area, based on the assumption of a LOS of C for each leg. That data showed the following:
    - For I-264, any build alternative would provide some relief between Dixie and Manslick, as compared to the No Build, but would provide more traffic/less capacity between Manslick and Taylor and east of Taylor.
    - For Dixie Highway a full interchange at Manslick provided relief north of I-264. South of I-264 is significantly over capacity with any alternative, Build or No-Build. The half interchange was no different than the 2030 No Build.
    - On Manslick the capacity south of I-265 is notably over capacity with every build alternative, and the No-Build Alternative. North of I-265 the capacity would be slightly better than the No-Build.
    - For the I-265/Dixie ramps, the two major movements are to/from I-264 to the east and Dixie to the South. The only alternative that provides any relief to these two movements is Alt 3, the half interchange.
    - For the I-264/Manslick ramps, each would function below capacity for each of the build alternatives.
    - For the I-264/Tylor Blvd ramps the existing and No Build volumes for the ramp from Taylor to I-264 east is notably over capacity but each of the build alternatives would provide relief to that movement.
- Recommendations. The construction costs alone for Alternatives 1, 2 and 4 are between 6 and 9-fold higher than that for Alternative 3, but the benefit to the existing road network is not commensurate. Further, the right-of-way impacts for Alts 1, 2, and 4 would include between 6 and 12 residential relocations along the south side of I-264, and significantly more costs than for Alt 3. Therefore, the Project Team does not feel Alts 1, 2, or 4 are practical or prudent. Before making that decision, however, the Team would like to meet with representatives from Louisville Metro to explain the data and preliminary recommendations. No decisions on the alternatives will be made until that meeting,

- Next Steps.
    - After the meeting with Metro and recommendations are made, Qk4 will perform an operational analysis on the preliminary preferred alternative as part of the preliminary IJS analysis. This analysis will need to be completed before it is decided whether or not to advance the preferred to "recommended" in the planning study.
    - After the meeting with Metro, elected officials will be called to inform them of the recommendations and a letter will be sent to other stakeholders.
    - Coordination with FHWA, Bill Hanson, will occur prior to submission of the final plan.

End of Meeting Notes

Architecture
Engineering
Construction

MEETING MINUTES

Project:	Manslick Road Interchange at I-264, Feasibility Study	
Item Number	5-436.00	
Purpose:	Coordination with Louisville Metro	
Place:	Louisville Metro Public Works 444 South 5th Street Louisville, Kentucky 40202	
Meeting Date:	May 15, 2007	
Prepared By:	Tom Springer	
In Attendance:	Rick Storm	Louisville Metro Public Works
	Charles Cash	Louisville Metro Planning and Design Service
	Bruce Traughber	Louisville Metro Economic Development
	Jim Wilson	KYTC, CO, Planning
	Paul Davis	KYTC, D5, Pre-Construction & Design
	John Callahan	KYTC, D5, Pre-Construction Branch Manager
	David Smith	Qk4, Inc.
	Kirk Reinke	Qk4, Inc.
	Jeremy Lukat	Qk4, Inc.
	Tom Springer	Qk4, Inc.

The objective of the meeting was to update Louisville Metro on the planning study and the proposed recommendations.

- Project Status. Qk4 has completed the preliminary design, cost estimates, and LOS analysis for the proposed build alternatives and coordinated the results with KYTC, District-5.

- Background information. The following information was briefly reviewed:
    - Project location and goals and objectives
    - Existing functional classification, number of lanes, percent trucks, and speed limits
    - Crash data from the years 2001-2005 were presented on an exhibit. High crash corridors include nearly all of Dixie Highway (US 31W), all of 7th Street between Dixie and Manslick, I-264 through the US 31W interchange, and I-264 through the Taylor Boulevard Interchange.

- Other Highway Projects.
    - Within the current KIPDA Long-Range Plan is the widening of Manslick Road from I-264 south to St. Andrews Church Road from 2 to 4 lanes.
    - The Long-Range Plan also includes widening St. Andrews Church Road from Manslick to Dixie from 2 to 4 lanes.
    - Widening Greenwood Road (KY 1931) from Dixie at St. Andrews Church Road west to Greenbelt Highway is included in the current and proposed Long-Range Plan, the TIP, and the Six-Year Highway Plan with construction to occur in 2009.
- Build Alternatives. Each of the design concepts were reviewed:
    - Alt 1: a complete interchange but without access from Manslick to I-264 west
    - Alt 2: a complete interchange
    - Alt 3: a half interchange to and from the east only
    - Alt 4: a complete interchange but without access from Manslick to Dixie
- Cost Estimates. Qk4 prepared construction cost estimates for alternatives 1, 2, and 3 (cost estimates for Alt 4, and right of way and utility estimates will be prepared if it is advanced):
    - Alt 1: $26,962,200 (plus significant right-of-way and utility costs)
    - Alt 2: $33,962,400 (plus significant right-of-way and utility costs)
    - Alt 3: $3,946,200 (plus a minor amount of right-of-way and utility costs)

    The high costs for Alts 1 and 2 are mostly attributable to the bridges and retaining walls needed.
- Traffic and LOS. In a very general summary, the traffic volumes of the overall area are at a point of saturation and any new connections to I-264 at Manslick will shift traffic to other roads, but the overall volumes and Levels of Service would change little. If a new interchange is constructed at Manslick, the traffic volumes and LOS on the existing road networks change only slightly if at all.
- Recommendations. Because there is no appreciable benefit from Alts 1, 2, and 4 as compared to Alt 3, but the cost for 1, 2, and 4 are between 6 and 9-fold higher than that for Alternative 3, neither of those three alternatives are proposed to be recommended. Alternative 3 is the only practical alternative. Furthermore the major traffic movement by a factor of four was to and from the east. Each of the Louisville Metro officials agreed with this conclusion.

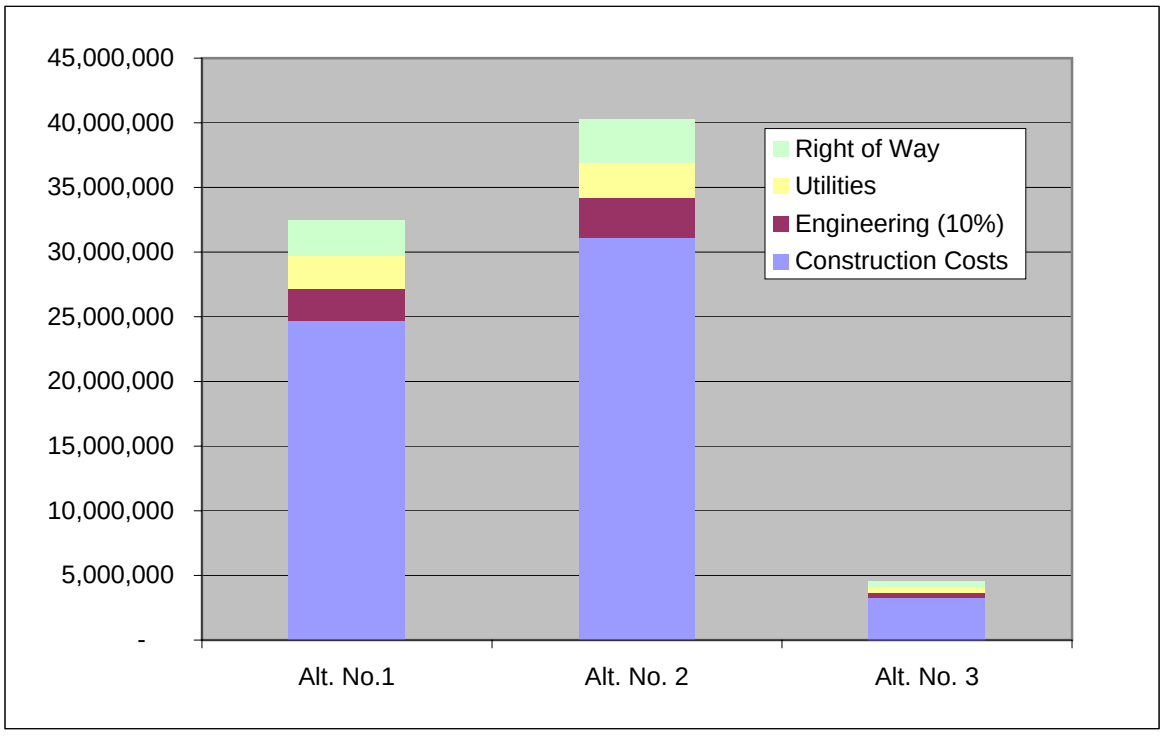
    It was noted that FHWA does not favor for partial interchanges, but the information would be shared with FHWA and the rationale as to why it is the preferred alternatives. Louisville Metro noted they would express their support to FHWA for the half interchange. Louisville Metro also noted that fair market value for the Animal Shelter would be necessary.
- Next Steps.
    - Qk4 will perform an operational analysis on the preliminary preferred alternative as part of the preliminary IJS analysis. This analysis will need to be completed before it is decided whether or not to advance the preferred to "recommended" in the planning study.
    - Qk4 will prepare and include right-of-way and utility relocation cost estimates.

- Metro will provide Qk4 with the 7th Street Corridor plan that identified the need for a partial interchange.
- Coordination with FHWA, Bill Hanson, will occur prior to submission of the final plan.

End of Meeting Notes

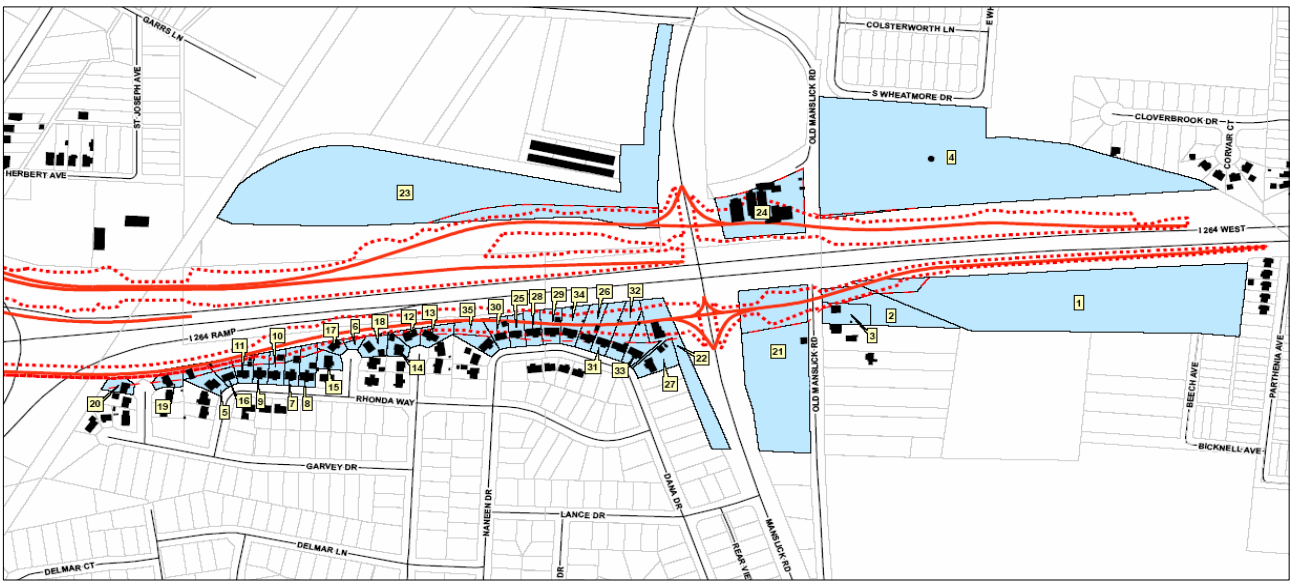
MANSLICK ROAD INTERCHANGE
PRELIMINARY COST ESTIMATES (2007 DOLLARS)

Item	Alt. No.1	Alt. No. 2	Alt. No. 3
Bridges	7,910,000	12,115,000	-
Retaining Walls	1,967,000	1,256,000	322,000
Sound Barrier Walls	1,440,000	1,440,000	-
Pedestrian Bridge	460,000	460,000	460,000
Remove Sructures	450,000	550,000	-
Embankment in Place	2,419,000	3,295,000	453,000
Erosion Protection	170,000	260,000	40,000
Major Drainage	640,000	1,100,000	410,000
Minor Drainage	240,000	410,000	20,000
Guardrail	130,000	220,000	44,000
Paving	2,660,000	3,010,000	740,000
Pavement Markings	32,500	36,000	3,500
Maintain Traffic	650,000	720,000	40,000
Lighting	1,400,000	1,500,000	160,000
Signing	350,000	380,000	70,000
Signals	350,000	350,000	190,000
Dixie Highway Widening	1,200,000	1,200,000	-
Contengencies (10%)	2,246,850	2,830,200	295,250
Construction Costs Subtotal	24,715,350	31,132,200	3,247,750
Rounded:	**Alt. No.1**	**Alt. No. 2**	**Alt. No. 3**
Construction Costs	**24,700,000**	**31,100,000**	**3,250,000**
Engineering (10%)	**2,500,000**	**3,100,000**	**400,000**
Utilities	**2,500,000**	**2,700,000**	**500,000**
Right of Way	**2,750,000**	**3,350,000**	**400,000**
Total	**$32,450,000**	**$40,250,000**	**$4,550,000**



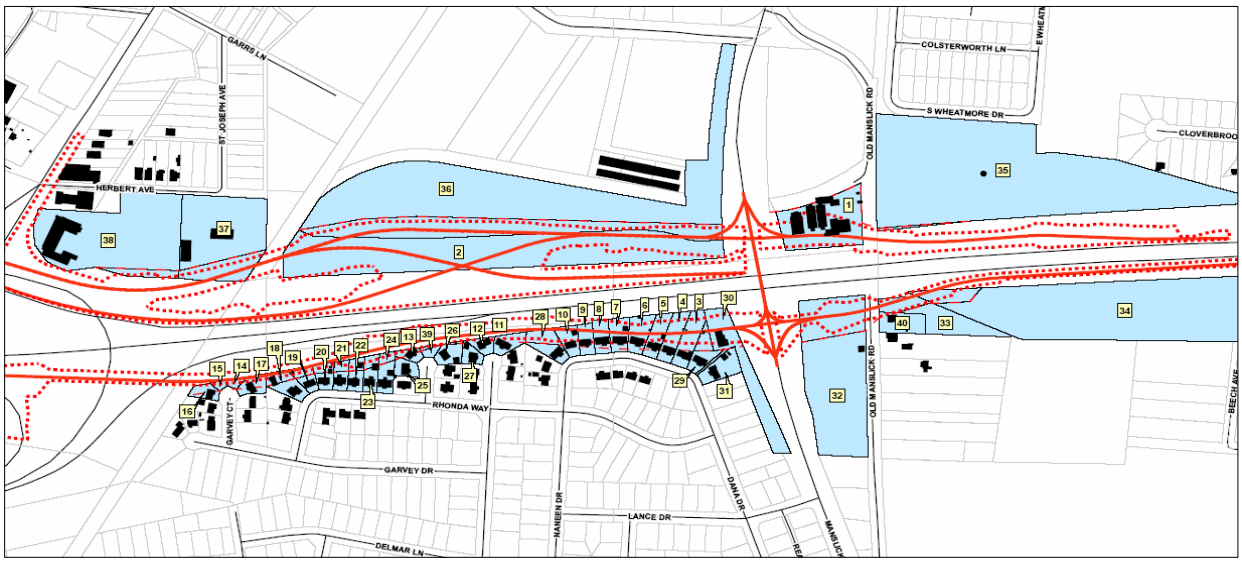
Manslick Road Interchange Study
PRELIMINARY COST ESTIMATES (2007 DOLLARS)
Alternative 1

PARCELID	ID	Original Area (Sq Ft)	Original Value ($)	New ROW (Sq ft)	New ROW (%)	New ROW ($)	Building	Building Type	Relocation Expenses
066J00130000	1	353026	$ 27,400	13870	4%	$ 1,076	N		
066J00140000	2	41668	$ 23,500	11089	27%	$ 6,254	N		
066J00260000	3	17315	$ 54,340	17315	100%	$ 54,340	**Y**	Res	$ 28,000
066J00620000	4	467874	$ 12,871	2409	1%	$ 66	N		
090D00930000	5	14297	$ 116,220	5327	37%	$ 43,302	N		
090D00940000	6	3351	$ -	808	24%	$ -	N		
090D00960000	7	9878	$ 117,190	3333	34%	$ 39,541	N		
090D00970000	8	11948	$ 139,400	2885	24%	$ 33,664	N		
090D00980000	9	8070	$ 95,060	2954	37%	$ 34,794	N		
090D01000000	10	9427	$ 107,410	3581	38%	$ 40,802	N		
090D01170000	11	8557	$ 105,300	3337	39%	$ 41,061	N		
090D01190000	12	6130	$ 91,000	6130	100%	$ 91,000	**Y**	Res	$ 28,000
090D01200000	13	9678	$ 98,520	9678	100%	$ 98,520	**Y**	Res	$ 28,000
090D01330000	14	6777	$ 145,888	252	4%	$ 5,425	N		
090D01350000	15	7387	$ 103,981	200	3%	$ 2,808	N		
090D01400000	16	8617	$ 117,480	3757	44%	$ 51,217	N		
090D01510000	17	5253	$ 129,190	5253	100%	$ 129,190	**Y**	Res	$ 28,000
090D01570000	18	9880	$ 107,292	501	5%	$ 5,441	N		
Construction Cost	171	999133	1592040.67						
Rounded:	19	8889	$ 95,400	8889	100%	$ 95,400	**Y**	Res	$ 28,000
Construction Cost	171	999000	1590000	6829	1%	$ 10,869	**Y**	Res	$ 28,000
Engineering (10%	21	175778	$ 12,500	46824	27%	$ 3,330	N		
090E00760000	22	50696	$ 97,920	50696	100%	$ 97,920	**Y**	Res	$ 28,000
090E01160000	23	466235	$ 122,110	50960	11%	$ 13,347	N		
090E01400000	24	73429	$ 265,540	73429	100%	$ 265,540	**Y**	Com	$ 40,000
090F00450000	25	8762	$ 107,940	8762	100%	$ 107,940	**Y**	Res	$ 28,000
090F00470000	26	13090	$ 107,070	13090	100%	$ 107,070	**Y**	Res	$ 28,000
090F00480000	27	15713	$ 122,345	50	0%	$ 387	N		
090F00500011	28	9943	$ 104,210	9943	100%	$ 104,210	**Y**	Res	$ 28,000
090F00560000	29	11885	$ 149,300	11885	100%	$ 149,300	**Y**	Res	$ 28,000
090F00590000	30	10180	$ 135,550	10180	100%	$ 135,550	**Y**	Res	$ 28,000
090F01940000	31	15338	$ 106,300	15338	100%	$ 106,300	**Y**	Res	$ 28,000
090F01990000	32	18284	$ 106,150	18284	100%	$ 106,150	**Y**	Res	$ 28,000
090F02010000	33	14005	$ 104,210	5805	41%	$ 43,194	N		
090F02020000	34	14306	$ 136,080	14306	100%	$ 136,080	**Y**	Res	$ 28,000
090F02090008	35	16527	$ 107,090	8042	49%	$ 52,109	N		
					New ROW Subtotal	$ 2,213,198		Res: 15	$ 460,000
					Relocation Subtotal	$ 460,000		Com: 1	
					Total	$ 2,673,198			
					Total Rounded	**$ 2,750,000**			



Manslick Road Interchange Study
PRELIMINARY COST ESTIMATES (2007 DOLLARS)
Alternative 2

PARCELID	ID	Original Area (Sq Ft)	Original Value ($)	New ROW (Sq ft)	New ROW (%)	New ROW ($)	Building	Building Type	Relocation Expenses
090E01400000	1	73429	$ 265,540	73429	100%	$ 265,540	**Y**	Com	$ 40,000
090E00880000	2	263957	$ -	263957	100%	$ -	**Y**	Res	$ 28,000
090F01990000	3	18284	$ 106,150	18284	100%	$ 106,150	**Y**	Res	$ 28,000
090F01940000	4	15338	$ 106,300	15338	100%	$ 106,300	**Y**	Res	$ 28,000
090F00470000	5	13090	$ 107,070	13090	100%	$ 107,070	**Y**	Res	$ 28,000
090F02020000	6	14306	$ 136,080	14306	100%	$ 136,080	**Y**	Res	$ 28,000
090F00560000	7	11885	$ 149,300	11885	100%	$ 149,300	**Y**	Res	$ 28,000
090F00500011	8	9943	$ 104,210	9943	100%	$ 104,210	**Y**	Res	$ 28,000
090F00450000	9	8762	$ 107,940	8762	100%	$ 107,940	**Y**	Res	$ 28,000
090F00590000	10	10180	$ 135,550	10180	100%	$ 135,550	**Y**	Res	$ 28,000
090D01200000	11	9678	$ 98,520	9678	100%	$ 98,520	**Y**	Res	$ 28,000
090D01190000	12	6130	$ 91,000	6130	100%	$ 91,000	**Y**	Res	$ 28,000
090D01510000	13	5253	$ 129,190	5253	100%	$ 129,190	**Y**	Res	$ 28,000
090D01520000	14	2413	$ -	2413	100%	$ -	N		
090D01720000	15	2002	$ 800	2002	100%	$ 800	N		
090D01700000	16	6829	$ 93,060	6829	100%	$ 93,060	**Y**	Res	$ 28,000
090D01690000	17	8889	$ 95,400	8889	100%	$ 95,400	**Y**	Res	$ 28,000
090D00930000	18	14297	$ 116,220	5327	37%	$ 43,302	N		
Construction Cost	##	494665.71	1842330						
Rounded:	19	8617	$ 117,480	3757	44%	$ 51,217	N		
Construction Cost	##	495000	1840000	3337	1%	$ 12,403	N		
Engineering (10%	21	8070	$ 95,060	2954	37%	$ 34,794	N		
090D01000000	22	9427	$ 107,410	3581	38%	$ 40,802	N		
090D00960000	23	9878	$ 117,190	3333	34%	$ 39,541	N		
090D00970000	24	11948	$ 139,400	2885	24%	$ 33,664	N		
090D01350000	25	7387	$ 103,980	200	3%	$ 2,808	N		
090D01570000	26	9880	$ 107,290	501	5%	$ 5,441	N		
090D01330000	27	6777	$ 145,890	252	4%	$ 5,425	N		
090F02090008	28	16527	$ 107,090	8042	49%	$ 52,109	N		
090F02010000	29	14005	$ 104,210	5805	41%	$ 43,194	N		
090E00760000	30	50696	$ 97,920	20170	40%	$ 38,959	**Y**	Res	$ 28,000
090F00480000	31	15713	$ 122,350	50	0%	$ 387	N		
090E00110000	32	175778	$ 12,500	46824	27%	$ 3,330	N		
066J00140000	33	41668	$ 23,500	11089	27%	$ 6,254	N		
066J00130000	34	353026	$ 27,400	13870	4%	$ 1,077	N		
066J00620000	35	467874	$ 12,870	2409	1%	$ 66	N		
090E01160000	36	466235	$ 122,110	116418	25%	$ 30,491	N		
101504980000	37	127618	$ 2,173,330	26941	21%	$ 458,800	N		
101504970000	38	182454	$ 2,890,700	9571	5%	$ 151,638	N		
090D00940000	39	3351	$ -	808	24%	$ -	N		
066J00260000	40	17315	$ 54,340	17315	100%	$ 54,340	**Y**	Res	$ 28,000
				New ROW Subtotal		$ 2,836,151	Res:	16	$ 488,000
				Relocation Subtotal		$ 488,000	Com:	1	
				Total		$ 3,324,151			
				Total Rounded		**$ 3,350,000**			



Manslick Road Interchange Study
PRELIMINARY COST ESTIMATES (2007 DOLLARS)
Alternative 3

PARCELID	ID	Original Area (Sq Ft)	Original Value ($)	New ROW (Sq ft)	New ROW (%)	New ROW ($)	Building	BuildingType	Relocation Expenses
066J00130000	1	353025.55	$ 27,400.00	13870	4%	$ 1,077	N		$ -
066J00140000	2	41667.95	$ 23,500.00	11089	27%	$ 6,254	N		$ -
066J00260000	3	17314.77	$ 54,340.00	17315	100%	$ 54,340	**Y**	Res	$ 28,000
066J00620000	4	467874.29	$ 12,870.00	2409	1%	$ 66	N		$ -
090E00110000	5	175777.92	$ 12,500.00	46824	27%	$ 3,330	N		$ -
090E01400000	6	73429.13	$ 265,540.00	73429	100%	$ 265,540	**Y**	Com	$ 40,000
					New ROW Subtotal	$ 330,606	Res:	1	$ 68,000
					Relocation Subtotal	$ 68,000	Com:	1	
					Total	**$ 398,606**			
					Total Rounded	$ 400,000			

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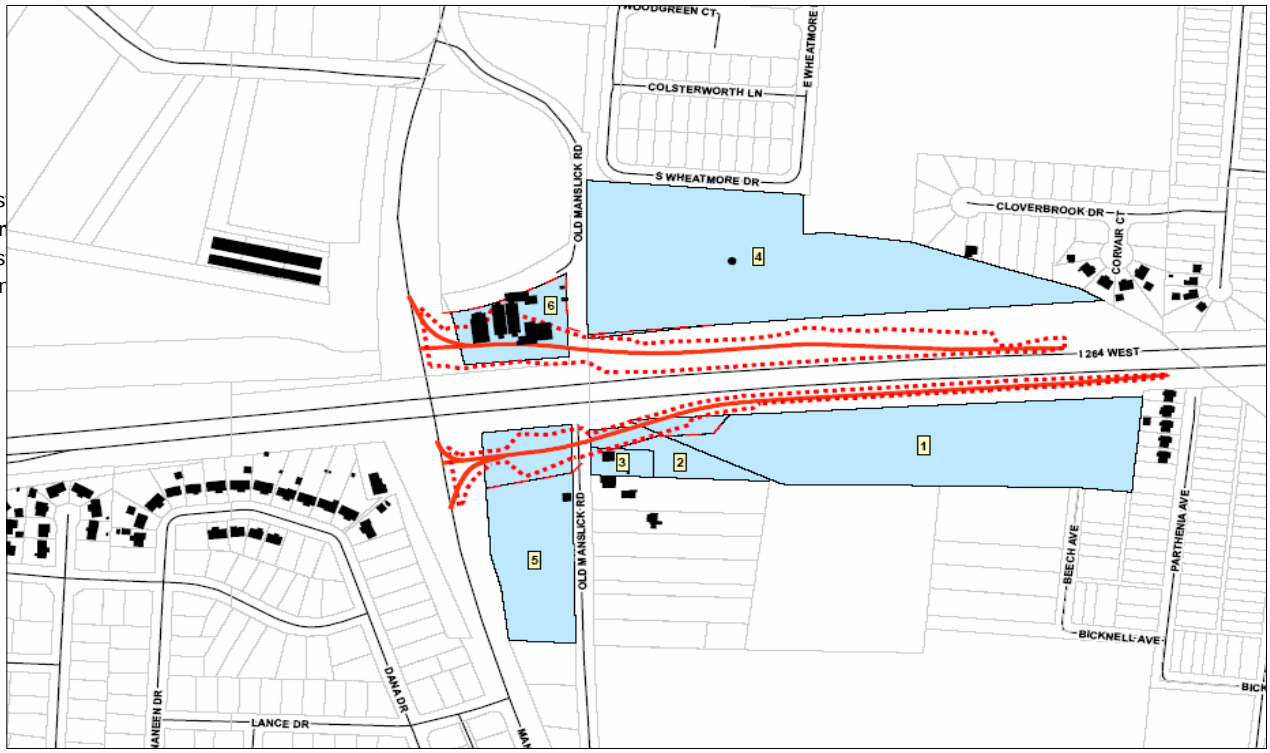
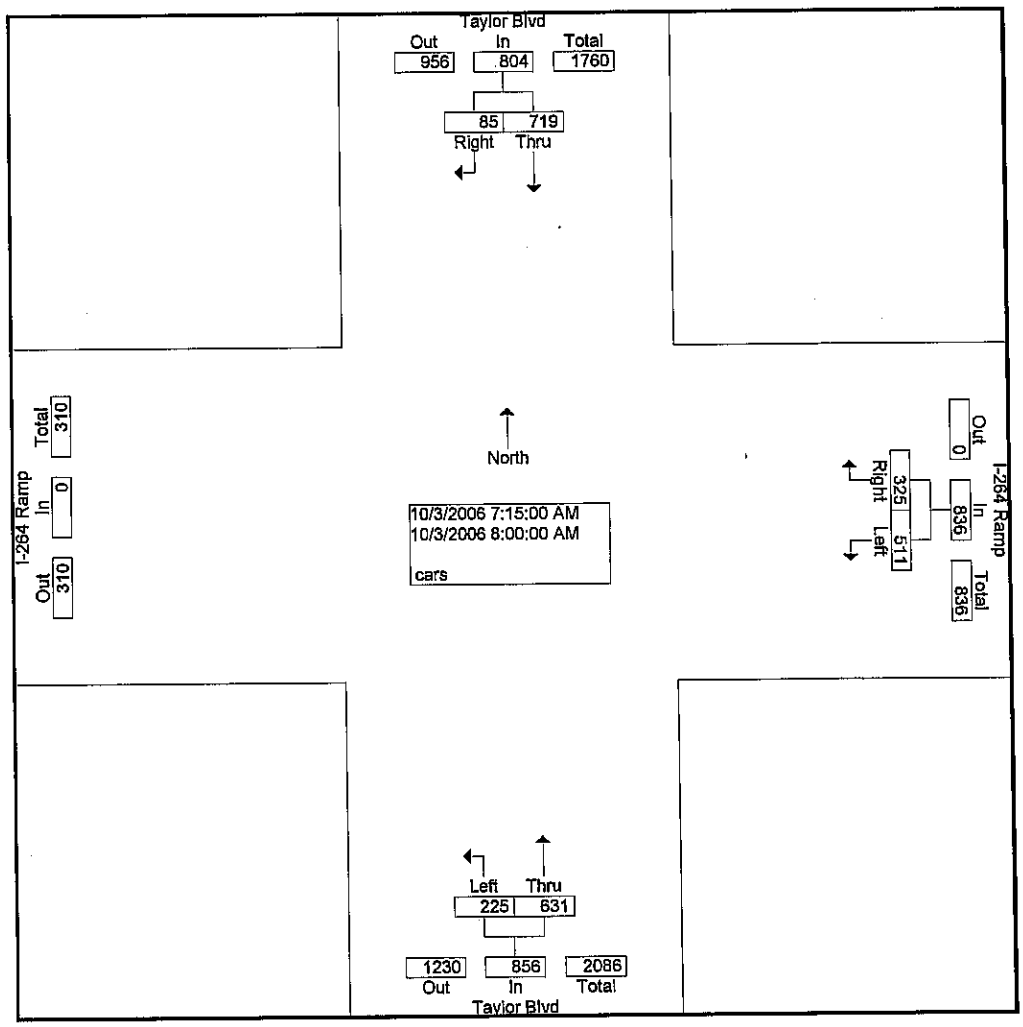


Qk4
815 W Market St
Loiusville, Kentucky 40202

File Name : TAYLOR~1
Site Code : 00000000
Start Date : 10/3/2006
Page No : 1

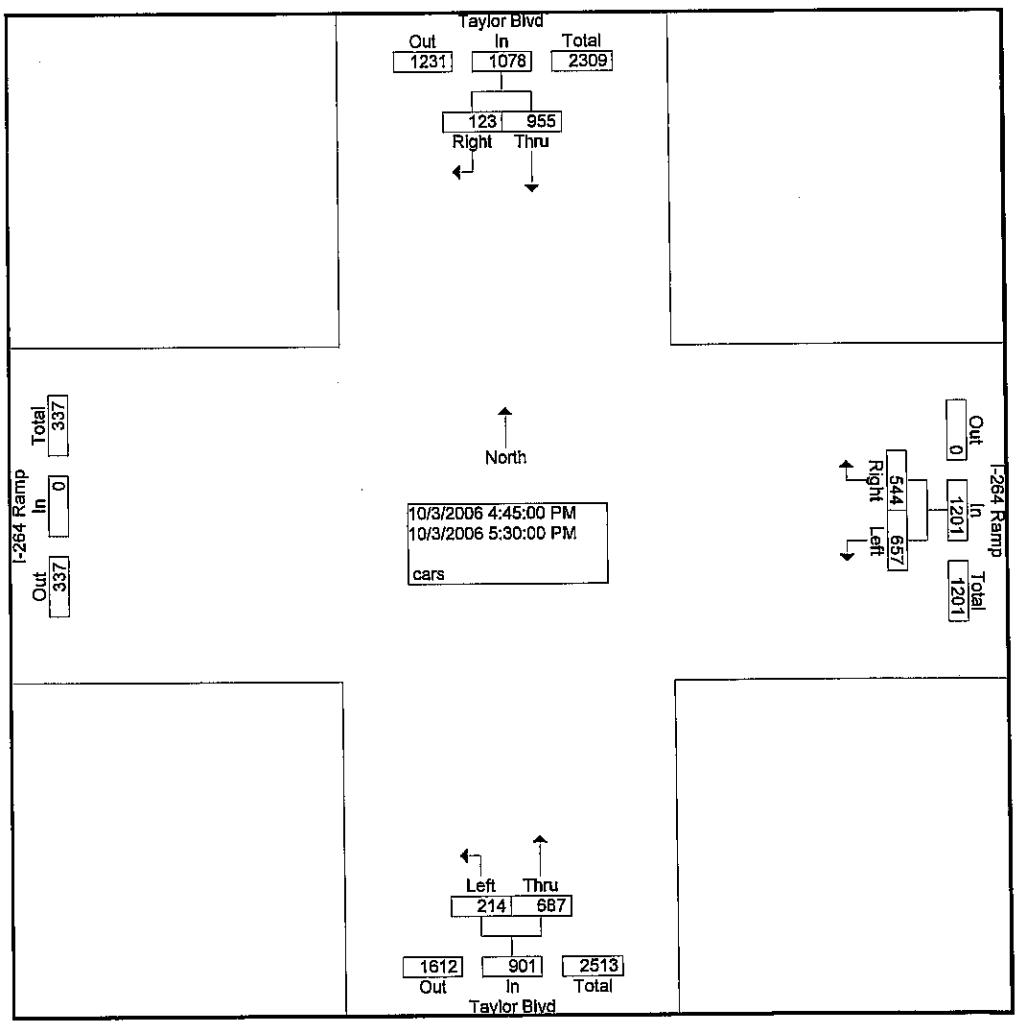
	Taylor Blvd From North			I-264 Ramp From East			Taylor Blvd From South			
Start Time	Right	Thru	App. Total	Right	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1										
Intersection	07:15 AM									
Volume	85	719	804	325	511	836	631	225	856	2496
Percent	10.6	89.4		38.9	61.1		73.7	26.3		
07:45 Volume	25	156	181	100	146	246	176	67	243	670
Peak Factor										0.931
High Int.	07:15 AM			07:45 AM			07:45 AM			
Volume	23	218	241	100	146	246	176	67	243	
Peak Factor			0.834			0.850			0.881	



Qk4
815 W Market St
Loiusville, Kentucky 40202

File Name : TAYLOR~2
Site Code : 00000000
Start Date : 10/3/2006
Page No : 1

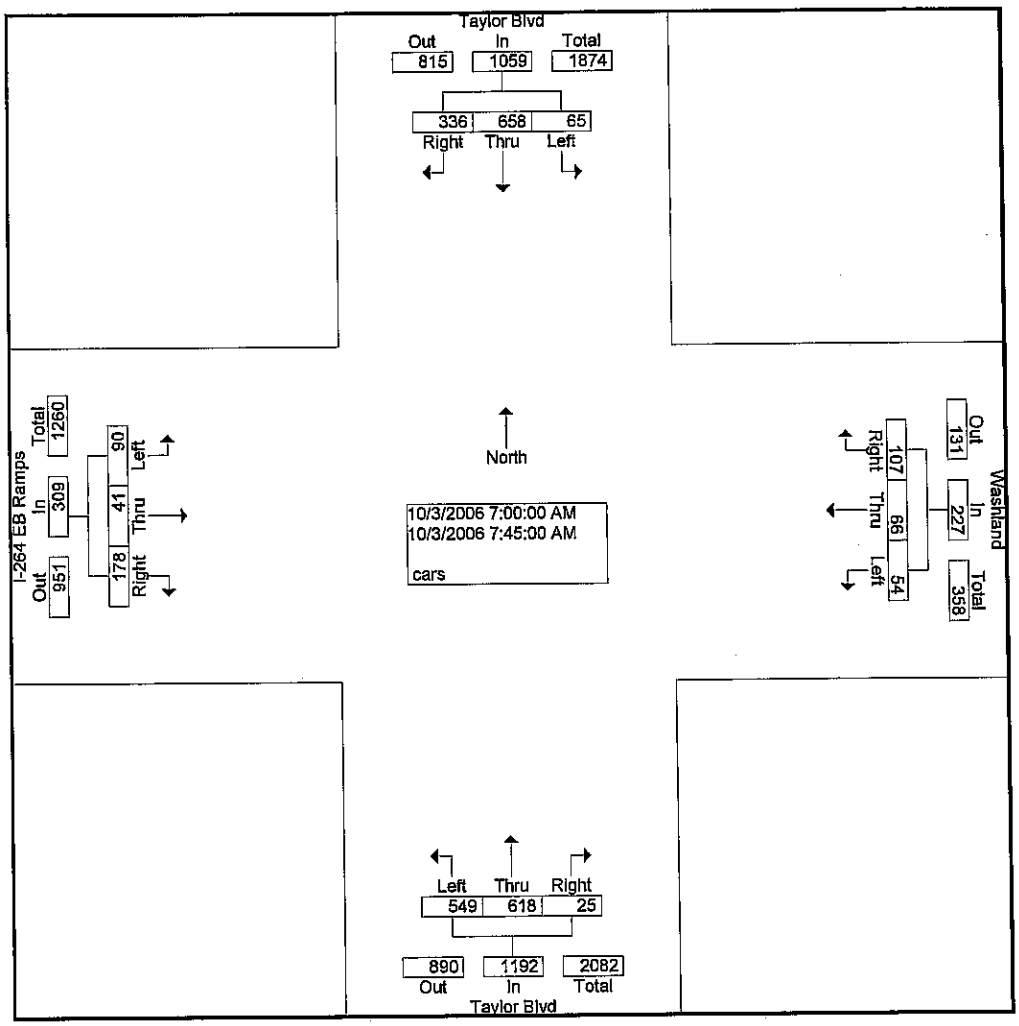
	Taylor Blvd From North			I-264 Ramp From East			Taylor Blvd From South			
Start Time	Right	Thru	App. Total	Right	Left	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1										
Intersection	04:45 PM									
Volume	123	955	1078	544	657	1201	687	214	901	3180
Percent	11.4	88.6		45.3	54.7		76.2	23.8		
05:30 Volume	27	275	302	123	170	293	195	67	262	857
Peak Factor										0.928
High Int.	05:30 PM			04:45 PM			05:30 PM			
Volume	27	275	302	152	159	311	195	67	262	
Peak Factor			0.892			0.965			0.860	



Qk4
815 W Market St
Loiusville, Kentucky 40202

File Name : TAYLOR~3
Site Code : 00000000
Start Date : 10/3/2006
Page No : 1

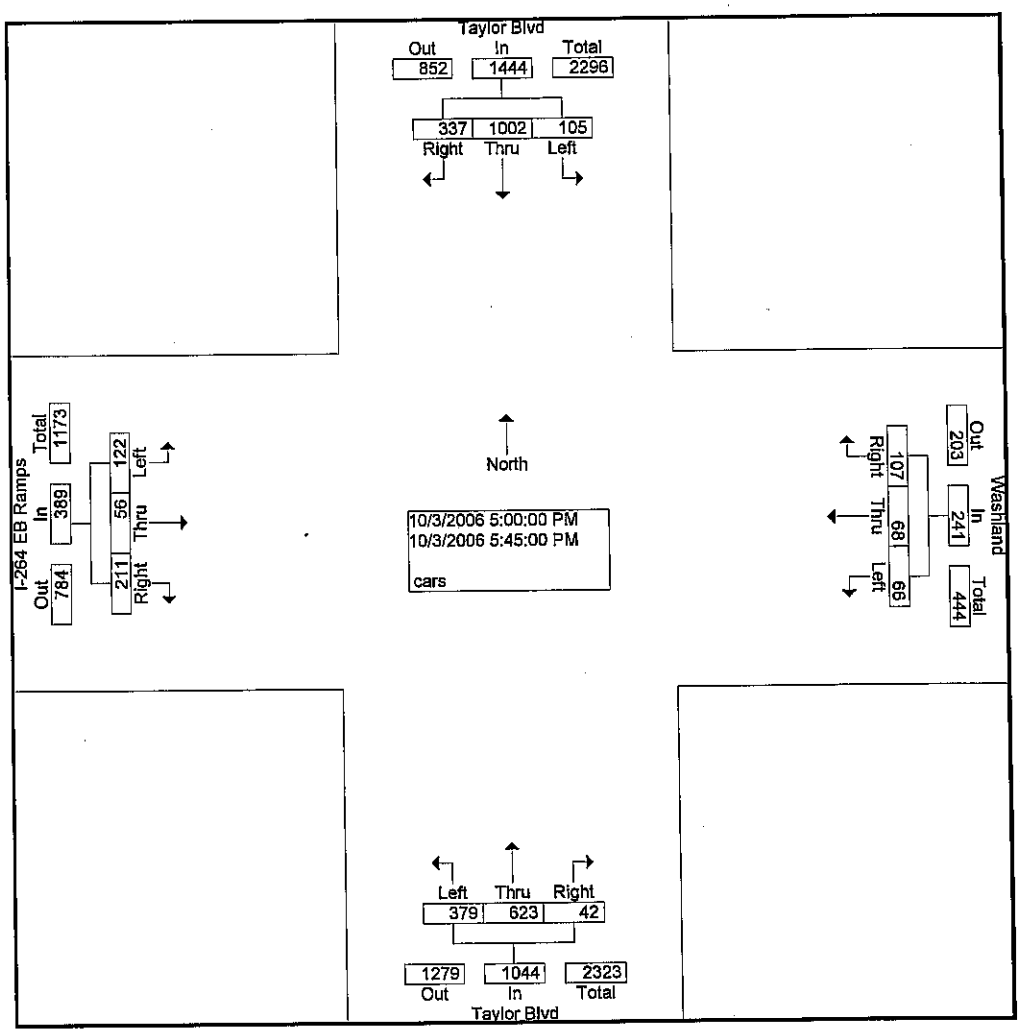
	Taylor Blvd From North				Washland From East				Taylor Blvd From South				I-264 EB Ramps From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	336	658	65	1059	107	66	54	227	25	618	549	1192	178	41	90	309	2787
Percent	31.7	62.1	6.1		47.1	29.1	23.8		2.1	51.8	46.1		57.6	13.3	29.1		
07:15 Volume	101	146	20	267	31	24	12	67	9	185	178	372	42	14	23	79	785
Peak Factor																	0.888
High Int.	07:30 AM				07:30 AM				07:15 AM				07:30 AM				
Volume	101	196	5	302	27	24	18	69	9	185	178	372	51	7	31	89	
Peak Factor				0.877				0.822				0.801				0.868	



Qk4
815 W Market St
Loiusville, Kentucky 40202

File Name : TAYLOR~4
Site Code : 00000000
Start Date : 10/3/2006
Page No : 1

	Taylor Blvd From North				Washland From East				Taylor Blvd From South				I-264 EB Ramps From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection 05:00 PM																	
Volume	337	1002	105	1444	107	68	66	241	42	623	379	1044	211	56	122	389	3118
Percent	23.3	69.4	7.3		44.4	28.2	27.4		4.0	59.7	36.3		54.2	14.4	31.4		
05:30 Volume	94	268	21	383	32	20	18	70	16	169	94	279	54	10	24	88	820
Peak Factor																	0.951
High Int.	05:30 PM				05:30 PM				05:15 PM				05:45 PM				
Volume	94	268	21	383	32	20	18	70	9	182	104	295	54	25	28	107	
Peak Factor				0.943				0.861				0.885				0.909	



								32,850									
						North Leg		Leg Total =			North Leg						
						IN					OUT						
					Total =	**16,325**				Total =	**16,525**						
					Right	Thru	Left			Left	Thru	Right					
					1,800	**14,525**	**0**			**0**	**10,000**	**6,525**					
		5,050	Right	**1,800**				**2009 Base**					**6,525**	Right			
West Leg	OUT		Thru	**0**				**Taylor Blvd.**					**0**	Thru	14,600	IN	West Leg
		Total ^	Left	**3,250**				**and**					**8,075**	Left	Total ^		
Leg Total =								**I-264 WB Ramps**								**14,600**	= Leg Total
			Left	**0**									**0**	Left			
West Leg	IN	0	Thru	**0**									**0**	Thru	0	OUT	West Leg
		Total ^	Right	**0**									**0**	Right	Total ^		
					0	**14,525**	**8,075**			**3,250**	**10,000**	**0**					
					Right	Thru	Left			Left	Thru	Right					
					Total =	22,600				Total =	13,250						
						OUT		35,850			IN						
						South Leg		Leg Total =			South Leg						

								35,550									
						North Leg		Leg Total =			North Leg						
						IN					OUT						
					Total =	22,600				Total =	13,250						
					Right	Thru	Left			Left	Thru	Right					
					5,225	**14,875**	**1,975**			**1,800**	**9,975**	**1,400**					
			Right	**5,225**				**2009 Base**					**1,400**	Right			
West Leg	OUT	**13,400**	Thru	**875**				**Taylor Blvd.**					**875**	Thru	*2,950*	IN	West Leg
		Total ^	Left	**7,300**				**and**					**675**	Left	Total ^		
Leg Total =								**I-264 EB Ramps**								6,150	= Leg Total
			Left	**1,800**									**1,975**	Left			
West Leg	IN	**5,300**	Thru	**700**									**700**	Thru	*3,200*	OUT	West Leg
		Total ^	Right	**2,800**									**525**	Right	Total ^		
					2,800	**14,875**	**675**			**7,300**	**9,975**	**525**					
					Right	Thru	Left			Left	Thru	Right					
					Total =	**18,350**				Total =	**17,800**						
						OUT					IN						
						South Leg		Leg Total =			South Leg						
								36,150									

								34,100								
						North Leg		Leg Total =		North Leg						
						IN				OUT						
					Total =	**16,950**			Total =	**17,150**						
					Right	Thru	Left		Left	Thru	Right					
					2,000	**14,950**	**0**		**0**	**10,500**	**6,650**					
		5,450	Right	**2,000**				**2030 Base**				**6,650**	Right			
West Leg	OUT		Thru	**0**				**Taylor Blvd.**				**0**	Thru	15,450	IN	West Leg
		Total ^	Left	**3,450**				**and**				**8,800**	Left	Total ^		
Leg Total =	**5,450**							**I-264 WB Ramps**							**15,450**	= Leg Total
			Left	**0**								**0**	Left			
West Leg	IN	0	Thru	**0**								**0**	Thru	0	OUT	West Leg
		Total ^	Right	**0**								**0**	Right	Total ^		
					0	**14,950**	**8,800**		**3,450**	**10,500**	**0**					
					Right	Thru	Left		Left	Thru	Right					
					Total =	23,750			Total =	13,950						
						OUT		37,700		IN						
						South Leg		Leg Total =		South Leg						

								37,450								
						North Leg		Leg Total =		North Leg						
						IN				OUT						
					Total =	23,500			Total =	13,950						
					Right	Thru	Left		Left	Thru	Right					
					6,175	**15,100**	**2,225**		**2,125**	**10,000**	**1,825**					
			Right	**6,175**				**2030 Base**				**1,825**	Right			
West Leg	OUT	**14,550**	Thru	**900**				**Taylor Blvd.**				**900**	Thru	3,475	IN	West Leg
		Total ^	Left	**7,475**				**and**				**750**	Left	Total ^		
Leg Total =								**I-264 EB Ramps**							7,300	= Leg Total
			Left	**2,125**								**2,225**	Left			
West Leg	IN	**6,150**	Thru	**1,025**								**1,025**	Thru	3,825	OUT	West Leg
		Total ^	Right	**3,000**								**575**	Right	Total ^		
					3,000	**15,100**	**750**		**7,475**	**10,000**	**575**					
					Right	Thru	Left		Left	Thru	Right					
					Total =	**18,850**			Total =	**18,050**						
						OUT				IN						
						South Leg		Leg Total =		South Leg						
								36,900								

								35,900								
						North Leg		Leg Total =		North Leg						
						IN				OUT						
					Total =	**17,950**			Total =	**17,950**						
					Right	Thru	Left		Left	Thru	Right					
					2,700	**15,250**	**0**		**0**	**12,000**	**5,950**					
		7,200	Right	**2,700**			**2030 Alternative 3**					**5,950**	Right			
West Leg	OUT		Thru	**0**			**Taylor Blvd.**					**0**	Thru	13,100	IN	West Leg
		Total ^	Left	**4,500**				**and**				**7,150**	Left	Total ^		
Leg Total =	**7,200**						**I-264 WB Ramps**								**13,100**	= Leg Total
			Left	**0**								**0**	Left			
West Leg	IN	0	Thru	**0**								**0**	Thru	0	OUT	West Leg
		Total ^	Right	**0**								**0**	Right	Total ^		
					0	**15,250**	**7,150**		**4,500**	**12,000**	**0**					
					Right	Thru	Left		Left	Thru	Right					
					Total =	22,400			Total =	16,500						
						OUT		38,900		IN						
						South Leg		Leg Total =		South Leg						

								38,300								
						North Leg		Leg Total =		North Leg						
						IN				OUT						
					Total =	22,425			Total =	15,875						
					Right	Thru	Left		Left	Thru	Right					
					5,250	**15,050**	**2,125**		**2,425**	**11,400**	**2,050**					
			Right	**5,250**			**2030 Alternative 3**					**2,050**	Right			
West Leg	OUT	**13,400**	Thru	**900**			**Taylor Blvd.**					**900**	Thru	3,725	IN	West Leg
		Total ^	Left	**7,250**				**and**				**775**	Left	Total ^		
Leg Total =							**I-264 EB Ramps**								7,500	= Leg Total
			Left	**2,425**								**2,125**	Left			
West Leg	IN	**6,300**	Thru	**1,075**								**1,025**	Thru	3,775	OUT	West Leg
		Total ^	Right	**2,800**								**625**	Right	Total ^		
					2,800	**15,050**	**775**		**7,250**	**11,400**	**625**					
					Right	Thru	Left		Left	Thru	Right					
					Total =	**18,625**			Total =	**19,275**						
						OUT				IN						
						South Leg		Leg Total =		South Leg						
								37,900								

				33,850							
		North Leg		Leg Total =		North Leg					
		IN				OUT					
	Total =	**17,056**			Total =	**16,794**					
	Right	Thru	Left		Left	Thru	Right				
	0	17,056	0		0	14,488	2,306				
			2030 Alternative 3							**8,534**	= Leg Total
			Manslick Rd.					2,306	Right		
				and				0	Thru	IN	East Leg
			I-264 WB Ramps					6,228	Left		
	0	17,056	6,228		0	14,488	0				
	Right	Thru	Left		Left	Thru	Right				
	Total =	23,284			Total =	14,488					
		OUT		37,772		IN					
		South Leg		Leg Total =		South Leg					
				37,772							
		North Leg		Leg Total =		North Leg					
		IN				OUT					
	Total =	23,284			Total =	14,488					
	Right	Thru	Left		Left	Thru	Right				
	0	20,700	2,584		0	14,488	0				
			2030 Alternative 3					2,584	Left		
			Manslick Rd.					0	Thru	**8,715**	OUT
				and				6,131	Right	Total ^	
			I-264 EB Ramps								
	0	20,700	0		0	14,488	6,131				
	Right	Thru	Left		Left	Thru	Right				
	Total =	**20,700**			Total =	**20,619**					
		OUT				IN					
		South Leg		Leg Total =		South Leg					
				41,319							