

Park Hill Industrial Corridor  
**SHORT-TERM TRANSPORTATION  
PLANNING STUDY**  
PHASE I SUMMARY REPORT

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**Louisville/Jefferson County Metro Government**

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## 1.0 Introduction

Louisville/Jefferson County Metro Government is conducting a Short-term Transportation Planning Study for the Park Hill Industrial Corridor. The study analyzes existing transportation patterns in the Park Hill Industrial Corridor in order to define alternative scenarios for addressing the corridor's transportation needs.

The study has 3 objectives. The first objective is to conduct Phase I of the short-term transportation study, which this Phase I Summary Report accomplishes. The Phase I study deals primarily with the industrial freight traffic patterns, the Phase II study will address private and public transit issues: accessibility of places of employment to workers, parking, area's public transportation level of service, pedestrian and bicycle mobility needs, and similar topics. The second objective is to prepare a draft of the Master Plan's Transportation/Mobility Element. The draft will integrate the findings of the Phase I and Phase II of the study and present them in the format suitable for the master planning process and conforming to the Louisville Metro Code of Ordinances. The third objective of this study is to conduct a public participation process. Under this task, the stakeholders (area residents, businesses, property owners, public and non-profit sector representatives, etc.) will be engaged in the planning process and their feedback integrated into the draft Transportation/Mobility Element. The public participation process should conform to the requirements of the Louisville Metro Code of Ordinances.

This Phase I Summary Report provides the following: purpose and need for transportation improvements in the Park Hill Industrial Corridor; documents the existing conditions in the study area; discusses other relevant studies that impact the study area transportation network; presents public and business outreach efforts; identifies and analyzes both the current transportation patterns and future No-Build (2030) transportation patterns in the study area; and, formulates draft recommendations and next steps for the transportation plan development.

### 1.1 Purpose of Study

Essentially, the purpose of the study is to inform an expected future master-planning process in the Park Hill Industrial Corridor and serve as a basis for a transportation component of the comprehensive plan for the area. Louisville /Jefferson County Metro Government views the Park Hill Industrial Corridor as an area with unique opportunities for economic development. The most important of these opportunities are based on Park Hill's size and its strategic location. The study should address the transportation needs of modern industries in the area and at the same time ensure sustainability of neighborhoods and mixed uses. The study will examine industrial freight traffic patterns, accessibility of places of employment for residents of the surrounding neighborhoods, and the compatibility of current transportation patterns with viable commercial uses along the major thoroughfares and on the main intersections.

The study area is the only large infill industrial area in Louisville. Due to the recent expansion of the UPS Worldport international air freight hub, Louisville's entrepreneurs are capitalizing on new export-oriented business opportunities. Proximity of the Park Hill Corridor to the UPS Worldport and the study area's rail and highway connections to the Louisville International Airport area and surrounding industrial parks



makes the Corridor a unique place to grow a permanent employment base working to serve Louisville's new global trade opportunities.

The study area is immediately adjacent to the University of Louisville campus. Redevelopment of the Park Hill Industrial Corridor will provide university-linked startups and research-and-development centers with attractively priced, convenient and promising locations for business creation and expansion. This proximity is a critical factor in the area's redevelopment strategy, and the study should address transportation needs arising from it.

Above all, this Short-term Transportation Study must be designed to advance the Louisville Metro's economic development agenda in the Park Hill Industrial Corridor and Louisville's West End. One of the goals of the future Master Plan is to ensure that the area's infrastructure meets the demands of today's businesses as well as provides for contemporary quality-of-life standards for residents of the surrounding neighborhoods. To achieve this balance, understanding of the existing and alternative transportation patterns is critical. Also, the area's need for better access to a wider regional and national transportation network needs study. By examining and addressing these needs, the Short-term Transportation Study will serve as one of the first building blocks of the Master Plan for the Park Hill Industrial Corridor.

## 1.2 Study Area

The Park Hill Industrial Corridor Short-term Transportation Planning study area is a 2,100-acre urban area south of I-64, between I-264 and I-65 in northwestern Louisville, Jefferson County. More specifically the study area, shown in **Figure 1-1**, is defined by Broadway (US 150) to the north, 22<sup>nd</sup> Street (US 31W) on the west, Algonquin Parkway (KY 2054) to Winkler Avenue on the south and 8<sup>th</sup>, 6<sup>th</sup>, and 3<sup>rd</sup> Streets on the east. The study area is in an urban setting consisting of predominantly industrial and residential development. About one-half of the area is in residential use, encompassing several residential neighborhoods. **Figure 1-1** shows the major neighborhoods that make up the study area. Much of the existing industrial area is in non-active use, storage or limited use.

The Park Hill Industrial Corridor was once an important manufacturing center in west Louisville, but over the years plant closures or relocations have resulted in losses of jobs and a general decline in population and employment. This area was once home to factories such as Philip Morris, Fawcett Printing Company and Corhart Refractories. Over the past three decades, this area's distressed conditions characterized by vacant or underutilized industrial sites and high unemployment and poverty rates have limited its ability to attract new investment<sup>1</sup>.

Transportation within the corridor is defined by an urban street grid, with bus transit routes, and three rail lines. The Park Hill Industrial Corridor Short-term Transportation Planning Study is being undertaken to identify solutions to make transportation within the area more conducive to redevelopment and revitalization.

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<sup>1</sup> The Kentucky Brownfield Program, Kentucky Brownfield Update, Volume 1, Issue 3, Winter 2007.

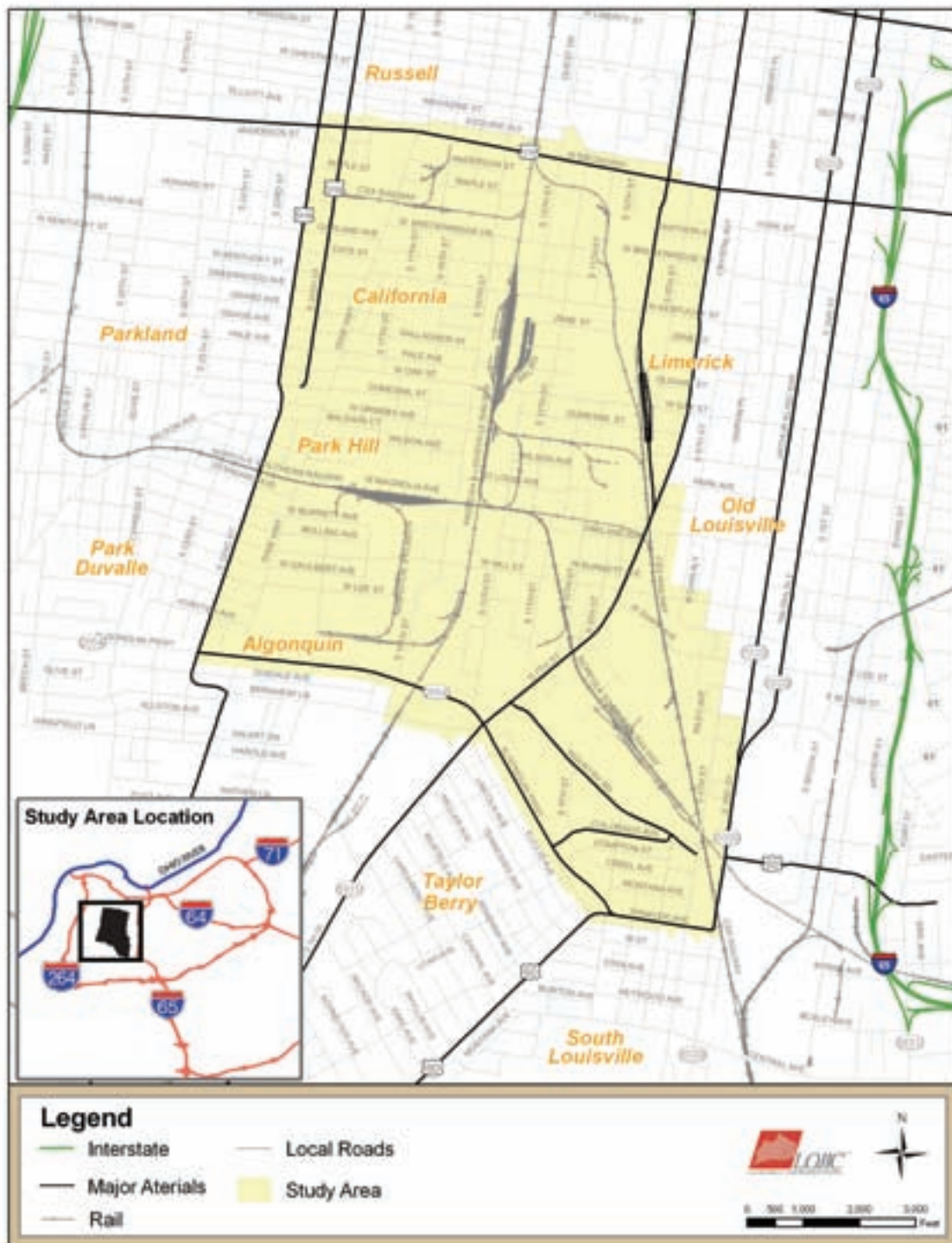


Figure 1-1: Park Hill Industrial Corridor Study Area



### 1.3 Purpose and Need

According to the EPA Grant application by the Louisville Jefferson County Metro Government<sup>2</sup>, this area has experienced a decline in population as a result of economic restructuring and plant closures. The unemployment rate in the corridor is 16%. More than 80% of the area's residents are African-American, and 47.6% live below the poverty level. The industrial corridor contains abandoned, vacant, or underused brownfield sites. The threat of contamination, whether perceived or real, stifles redevelopment of the area. Assessment of brownfields will promote eventual cleanup and redevelopment, and stimulate private investment in the Park Hill Industrial Corridor. Redevelopment of these sites will help reverse the negative perceptions of the corridor, stimulate employment opportunities, and increase property values and local revenues in the area.

The Park Hill Industrial Corridor presents a unique challenge. This once thriving residential, commercial and industrial area has been in a state of decline, but recent efforts have sought to bring about much needed change. Transportation within the corridor is one area that is in particular need of improvement. The Park Hill Industrial Corridor Short-term Transportation Planning Study is being undertaken to identify solutions to make transportation within the area more conducive to redevelopment and revitalization.

The needs for this study are numerous. Each of the following areas will be considered during the course of study:

Freeway Access: Direct freeway access to the study area is limited. Magnolia Avenue, St. Catherine, and Broadway provide ingress into the study area, and Oak Street provides egress from the study area to I-65 to the east. 9<sup>th</sup> Street (Roy Wilkins Avenue), 22<sup>nd</sup> Street and 21<sup>st</sup> Street provide study area ingress and egress to I-64 to the north. Virginia Avenue and Oak Street provide ingress and egress to I-264 (Shawnee Expressway) to the west. Each of these routes requires travel through residential areas, a less than desirable condition for truck traffic accessing the study area.

Street System: The east-west streets through the study area are disconnected due to the reconstructed 9<sup>th</sup> Street and the rail network. The same can be said for the north-south streets through the study area. North-south travel through the area is limited to the 7<sup>th</sup> Street / 9<sup>th</sup> Street corridor, 12<sup>th</sup>, and 15<sup>th</sup> Streets. In the east-west direction, Kentucky, Oak, and Hill Street traverse the study area. Kentucky Street has two at-grade rail crossings.

Rail and Freight Movement: The existing rail network in the study area serves as both a benefit and an obstacle. The benefit is obvious- rail access can help attract industry to the area. However, as it currently exists, the system serves as an obstacle to traffic flow.

Land Use: Incompatible land uses exist in the study area. As redevelopment opportunities are explored, the relationship between transportation and land use must be considered. In particular, locating compatible land uses in proximity to not only the necessary transportation facilities, but also compatible uses only.

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<sup>2</sup> EPA Brownfields Grant Fact Sheet 2007 ([http://earth1.epa.gov/swerosps/bf/07arc/r04\\_ky\\_louisvillejefferson.htm](http://earth1.epa.gov/swerosps/bf/07arc/r04_ky_louisvillejefferson.htm)).





Pedestrians & Bicycles: Some area streets have bicycle lanes, but the bikeway system is not continuous. East-west connectivity is limited (Kentucky Street and Garland Avenue), but there are no north-south facilities that pass completely through the study area.

Transit: The Transit Authority of River City (TARC) currently operates a number of bus routes that serve portions of the study area. However, as the area redevelops, there will be a need to re-evaluate the service provided. In particular, accessibility to current and future jobs and homes should be considered.

Wayfinding: For those unfamiliar with the area, travel can be somewhat confusing due to the discontinuities that exist within the street system. Directional signage is limited, and existing land use and the rail network sever the majority of the streets in the area.



## 2.0 Existing Conditions

The following sections of this report describe the existing conditions of the Park Hill Industrial Corridor study area and its transportation network of roadways, rail lines, transit service, pedestrian and bicycle facilities. As redevelopment opportunities are explored, understanding the relationship between transportation and land use is the key to determining the corridor's transportation problems and needs. Much of the data in the following sections was provided by the Louisville/Jefferson County Information Consortium (LOJIC.)

### 2.1 Demographics

The following tables and maps are based on the 2000 US Bureau of Census data to describe the study area demographics. The study area is composed of two census tracts in their entirety and parts of 16 other census tracts. Estimates for the study area were derived from all 18 census tracts by extrapolation, assuming percent geographic coverage being proportional to demographic data.

**Table 2-1** includes a summary of the 2000 population data for Jefferson County and the Park Hill study area.

**Table 2-1: Population Data Summary**

	Population Data				
	Total Population	Minority Population		Poverty	
<b>Jefferson County</b>	693,604	157,142	22.7%	84,143	12.1%
<b>Park Hill Study Area</b>	12,469	9,408	75.5%	4,825	38.7%

The Park Hill study area had a 2000 population of approximately 12,469 persons, with over 75% minority and over 38% in poverty. (For purposes of this evaluation, minority is defined as the non-white population.) Both the minority percentage and the poverty percentage for the study area are well above the Jefferson County population percentages. In the case of minority population, the Park Hill study area minority percentage is over three times that of Jefferson County. The percentage of the population living in poverty within Park Hill is also over three times the percentage for Jefferson County as a whole.

Figure 2-1 depicts the 2000 population by census tract. The majority of the study area's population is found in the western half of the study area.

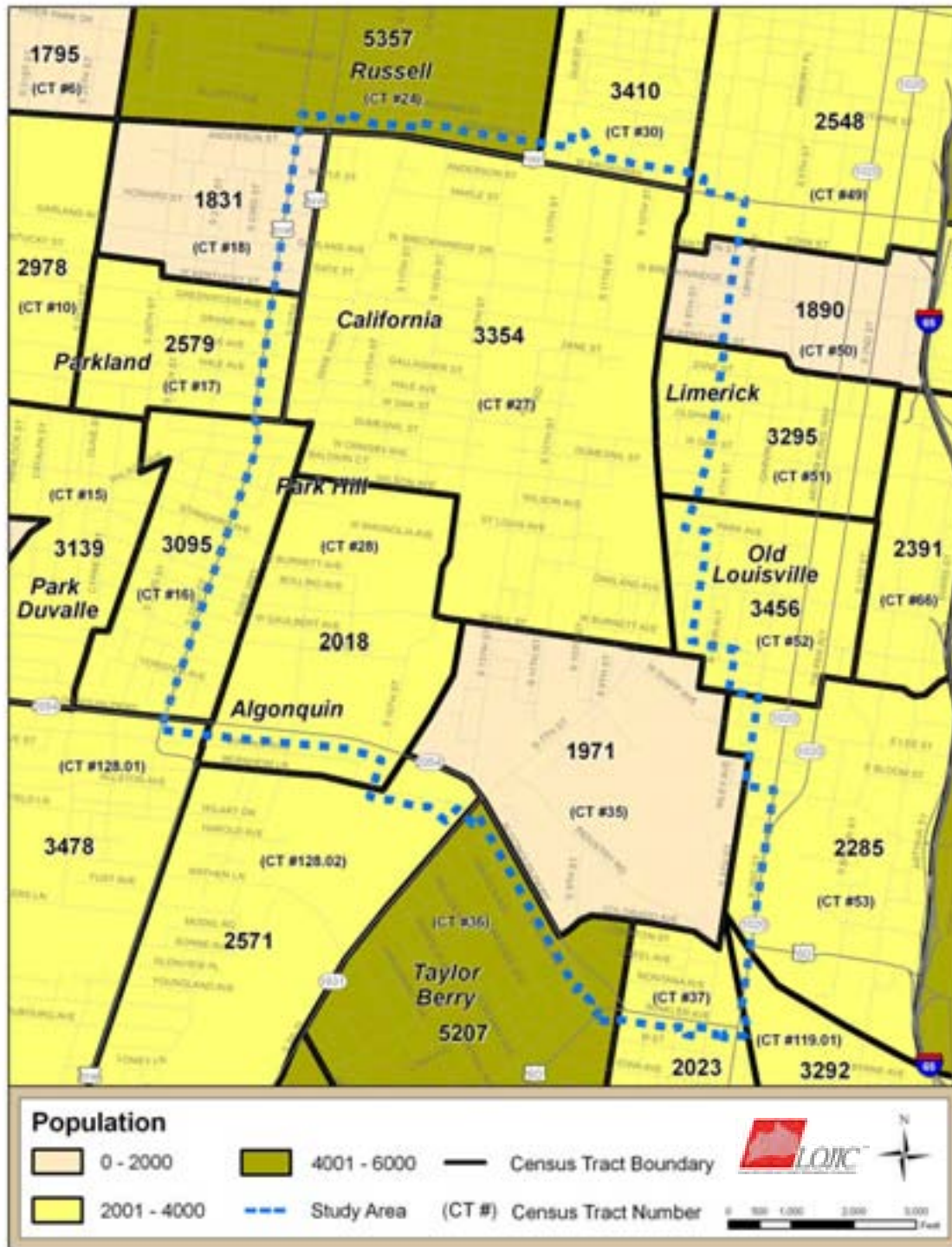
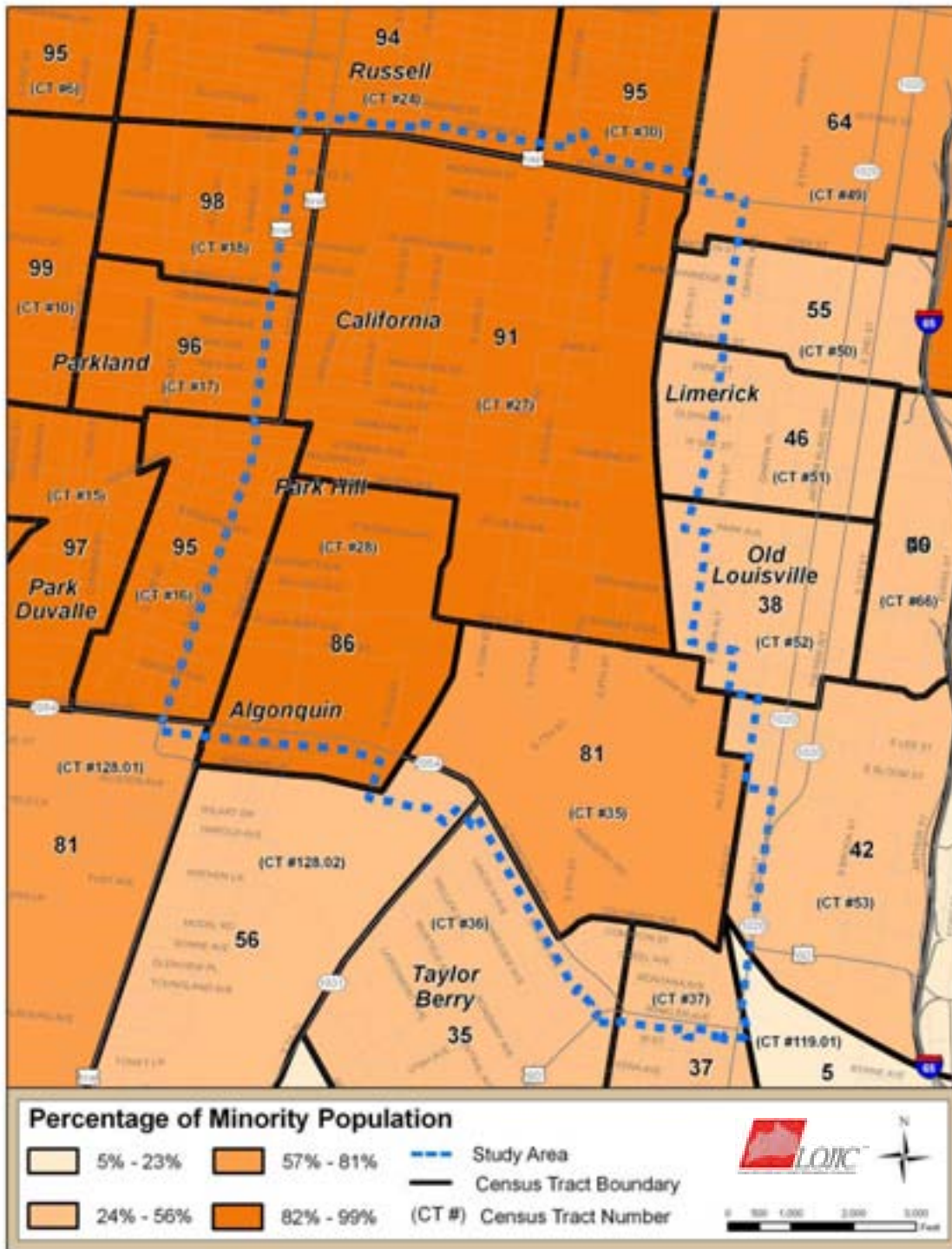


Figure 2-1: Population by Census Tract

**Figure 2-2** illustrates the percentage of the minority population in 2000 by census tract. The overall minority percentage for the study area is just over 75%, but as **Figure 2-2** shows, the three primary census tracts that make up the study area are all in the 81 to 91% range.



**Figure 2-2: Percentage of Minority Population by Census Tract**

Figure 2-3 shows that the three primary census tracts are also well above the overall study area's percentage for population below the poverty level, which is about 39%. Two of the three tracts are well above, with percentages of 45% and 75%.

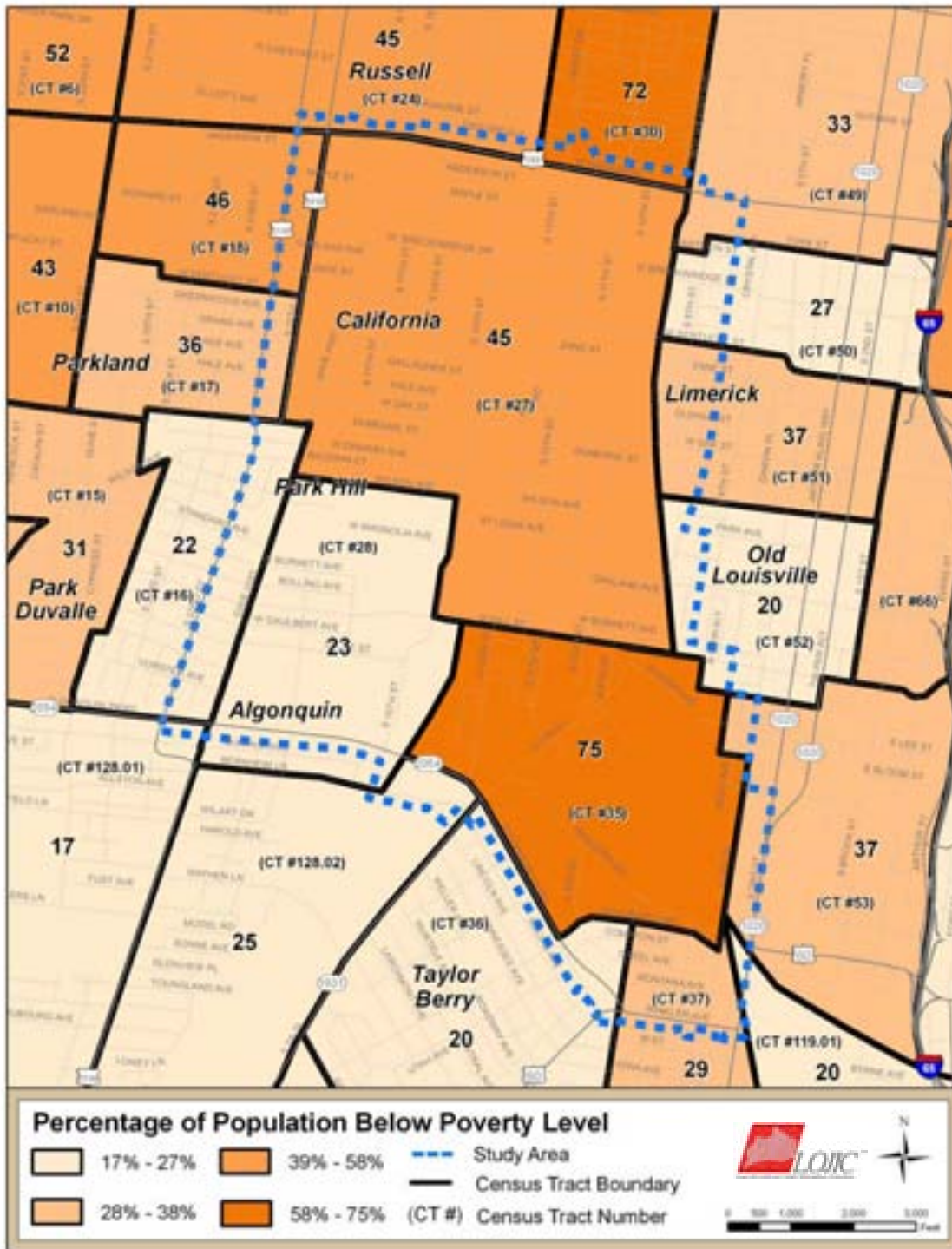


Figure 2-3: Percentage of Population Below Poverty Level by Census Tract

**Table 2-2** provides a summary of the housing data within Jefferson County and the Park Hill study area.

**Table 2-2: Housing Data Summary**

	Housing Data				
	Total Housing Units	Occupied Housing Units		Unoccupied Housing Units	
<b>Jefferson County</b>	305,835	287,012	93.8%	18,823	6.2%
<b>Park Hill Study Area</b>	6,125	5348	87.3%	777	12.7%

The occupancy rate within the Park Hill corridor is less than Jefferson County as a whole. Within the Park Hill study area, over 87% of the existing housing is occupied. However, occupancy in Jefferson County is nearly 94%. This suggests that there is an abundance of available housing in the study area.

## 2.2 Roadway Network

The existing roadway network within the Park Hill corridor is an extension of the urban grid network of downtown Louisville. It consists of over 56 miles of roadway, controlled by 52 signalized intersections and numerous stop controlled intersections. A breakdown of the study area street system by ownership is shown in **Table 2-3**.

**Table 2-3: Park Hill Streets by Ownership**

*Source: LOJIC street centerline data*

Owner	Length (Miles)
Metro Louisville	46.1
KYTC	4.9
Private	1.5

Metro Louisville owns and maintains the majority of the streets system within the Park Hill study area with 46.1 miles (88%.) Approximately 1.5 miles (2.9%) of the street system is owned and maintained by private parties. The remaining 4.9 miles (9.3%) are maintained by the Kentucky Transportation Cabinet (KYTC.)



Major routes in the study area include the following:

- East – West orientation:
  - Broadway (US 150)
  - Algonquin Parkway (KY 2054)
  - Kentucky, Oak and Hill Streets
- North – South orientation:
  - Dr. W. J. Hodge Street and 22nd Street (US 31W)
  - Dixie Highway
  - 2<sup>nd</sup> and 3<sup>rd</sup> Streets (KY 1020)
  - 7<sup>th</sup> Street (KY 1931)
  - 9<sup>th</sup>, 12<sup>th</sup>, 15<sup>th</sup>, 17<sup>th</sup> Streets

**Table 2-4** provides a summary of the average daily traffic (ADT) data (in vehicles per day, VPD) on the major routes in the study area.

**Table 2-4: Average Daily Traffic (ADT) Volumes**

Existing Traffic Volumes in Park Hill Industrial Corridor Study Area		
Roadway	Average Daily Traffic (vehicles per day, 2006, KYTC)	Count Location
<b>Major East-West Routes</b>		
US 150, Broadway	15,900	West of 22 <sup>nd</sup> Street
	22,500	East of 9 <sup>th</sup> Street
W. Kentucky	5,030	West of 9 <sup>th</sup> Street
W. Oak	3,530	West of 9 <sup>th</sup> Street
	8,840	East of 9 <sup>th</sup> Street
W. Hill	12,400	East & west of 7 <sup>th</sup> Street
Algonquin Parkway (KY 2054)	10,500	East of 7 <sup>th</sup> Street
	12,900	West of 7 <sup>th</sup> Street
<b>Major North – South Routes</b>		
S. 22 <sup>nd</sup> Street (US 31W)	5,980	North of Virginia Ave
	6,810	South of Virginia Ave
Dixie Highway	9,520	North of Virginia Ave
	14,500	South of Virginia Ave
4 <sup>th</sup> Street	8,860	South of Oak Street
7 <sup>th</sup> Street (KY 1931)	2,970	North of 9 <sup>th</sup> Street
	16,900	South of 9 <sup>th</sup> Street
9 <sup>th</sup> Street	16,300	North of 7 <sup>th</sup> Street

For the most part, major traffic flow skirts the area primarily due to connectivity issues, such as non-continuous routes, on street parking, railroad crossings, and the limited active non-residential uses (vacant or underutilized industrial sites) in the corridor. **Figure 2-4** depicts the ADT volumes by location within and surrounding the study area.

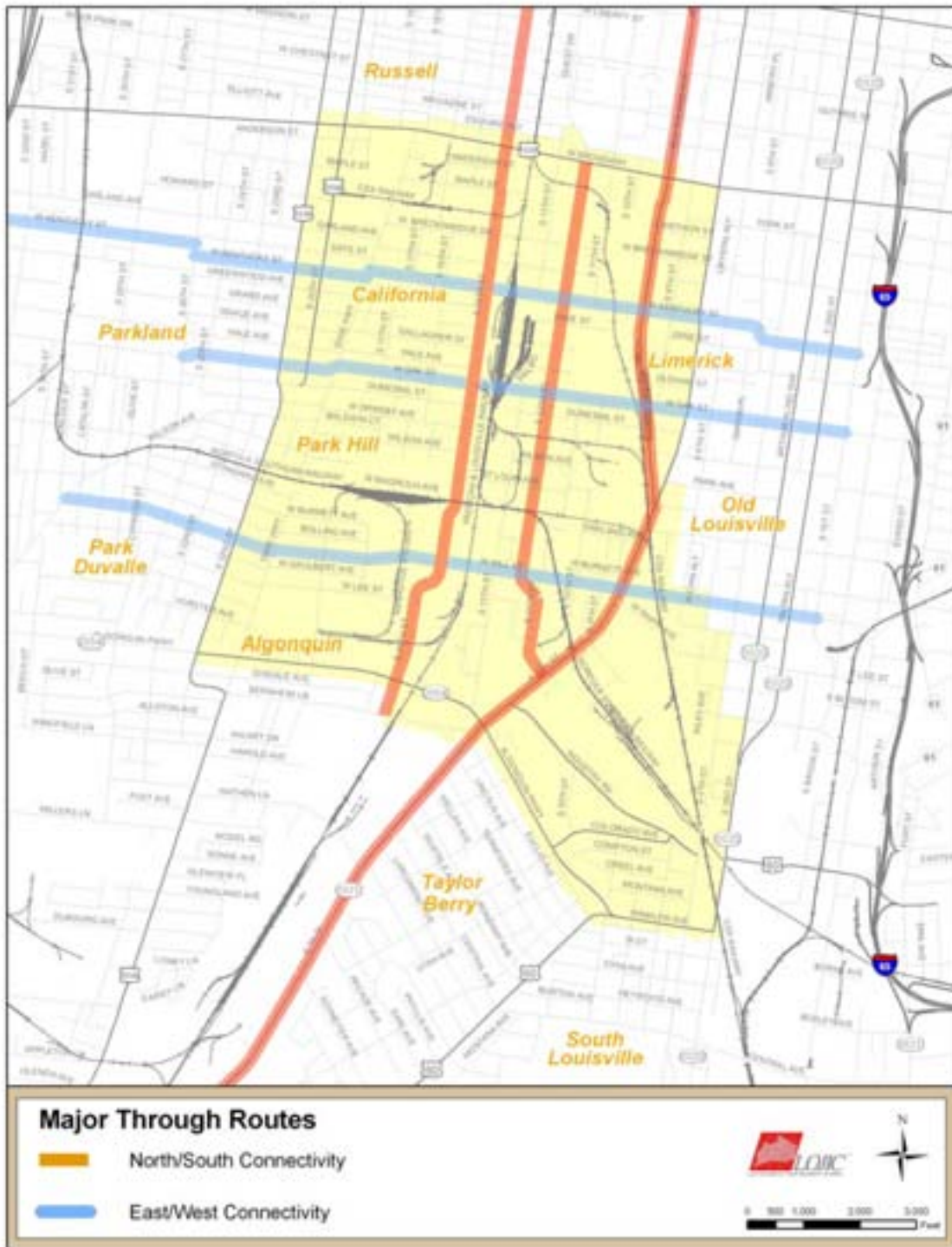


**Figure 2-4 Average Daily Traffic Volumes**

Source: KYTC, 2006



Connectivity both within and through the corridor is an important issue to the re-development potential for the area. **Figure 2-5** depicts the routes that are currently connected through the study area.



**Figure 2-5: Connectivity**

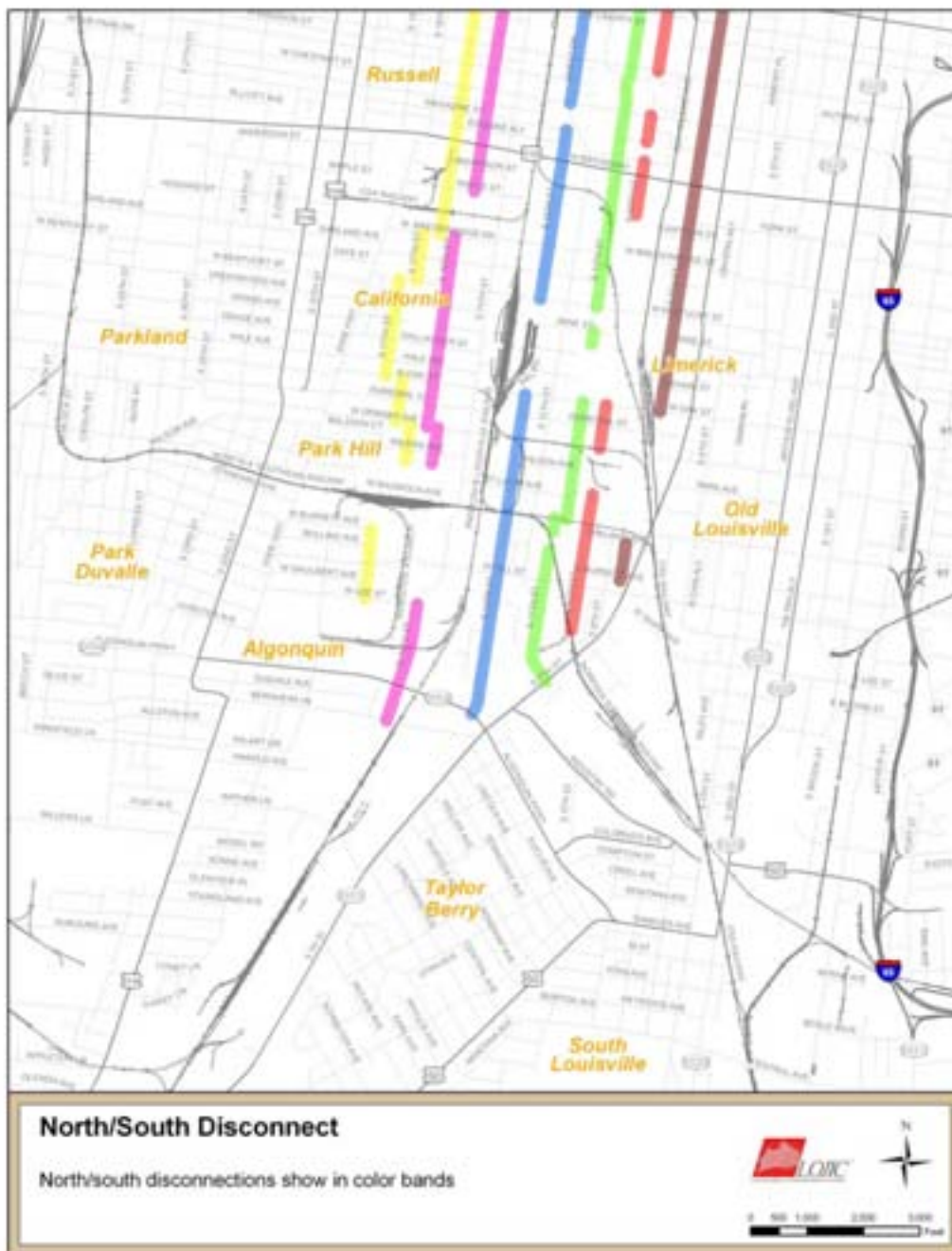
Currently, the east-west streets through the study area are disconnected due to the reconstructed Ninth Street and the rail network. **Figure 2-6** shows the streets that enter the study area from the east or west but are severed at one or more locations.



**Figure 2-6: East – West Disconnected Streets**

In the east-west direction, Kentucky, Oak, and Hill Street traverse the study area. However, Kentucky Street has two at-grade rail crossings.

Additionally, the north-south streets through the study area are disconnected due to the rail network and existing land use, as shown in **Figure 2-7**.



**Figure 2-7: North – South Disconnected Streets**



Currently, north-south travel through the area is limited to 7<sup>th</sup>, 12<sup>th</sup>, and 15<sup>th</sup> Streets. 7<sup>th</sup> Street provides a continuous route in the northbound direction only as the recent reconstruction of 9<sup>th</sup> Street included reconfiguration of the 7<sup>th</sup> Street intersection with 9<sup>th</sup> Street. As shown in **Figure 2-8**, southbound 7<sup>th</sup> Street does not have an opportunity to turn south onto existing 9<sup>th</sup> Street. In order to continue south, traffic on 7<sup>th</sup> Street is required to connect to 9<sup>th</sup> Street at Kentucky Street or via the single point urban interchange (SPUI) at Oak Street.



**Figure 2-8: 7<sup>th</sup> Street at 9<sup>th</sup> Street**

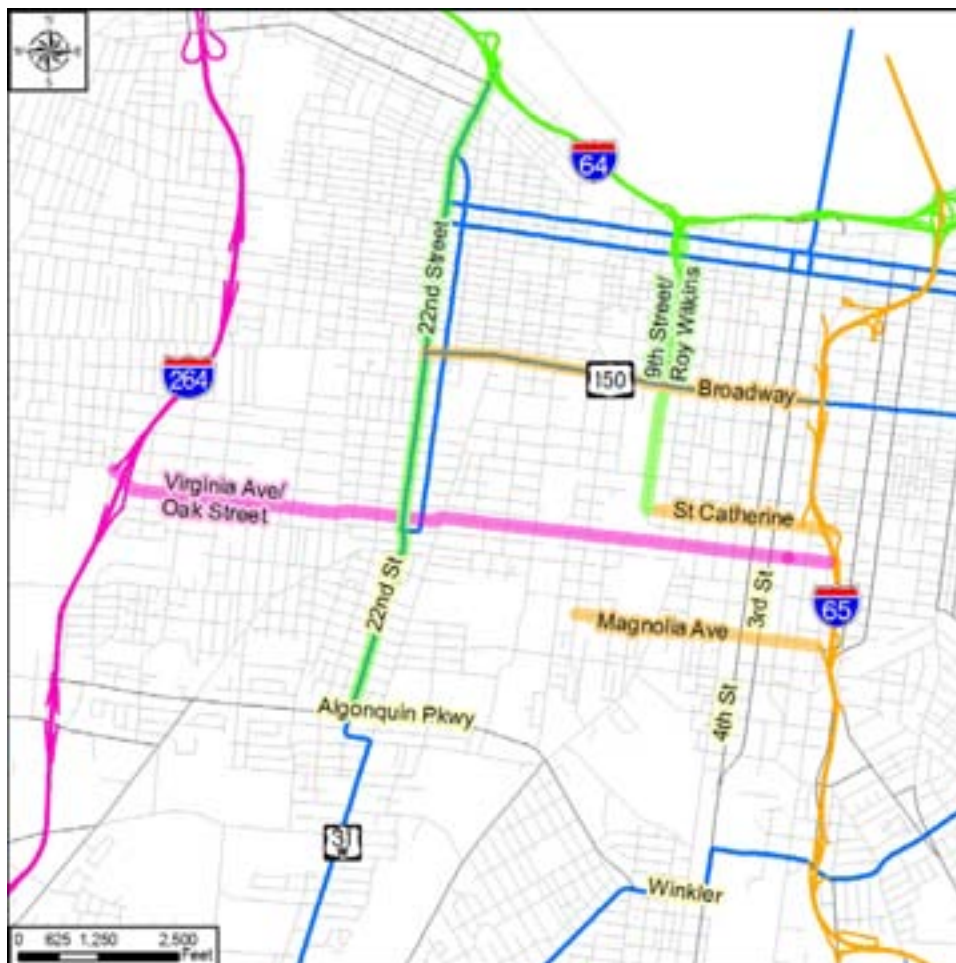
Additionally, 12<sup>th</sup> and 15<sup>th</sup> Street rely on 11<sup>th</sup> and 16<sup>th</sup> Streets respectively to connect to Algonquin on the south. 17<sup>th</sup> Street is severed at Burnett Avenue, picks up again north of the railroad at Wilson Avenue, and then travels through four different corridors as it passes through residential areas to Broadway.

Directly related to the connectivity issues are travel disruptions or limitations caused by rail movement in the corridor. More discussion of rail operations in the corridor is included in **Section 2.6.2**.

Dense residential neighborhoods, particularly on the west side of the study area, generate traffic and transit ridership demand. Of note is the lack of residential driveways or off-street parking facilities. As a result, many streets are lined with on street parking on both sides. While street widths are generally adequate to handle through movement and the parallel parking, vehicle maneuvers, access and visual perception tends to slow traffic flow along these roads.

## 2.3 Freeway Access

Being surrounded by interstate facilities, I-264 (Shawnee Expressway) to the west, I-64 to the north and I-65 to the east, access to the interstate system is potentially an asset to this corridor. However, direct freeway access to the study area is limited and where available, hindered by substandard or split configurations of some interchanges. **Figure 2-9** depicts routes that cross into the study area and have direct freeway access.



**Figure 2-9: Routes with Direct Freeway Access**

Magnolia Avenue, St. Catherine, and Broadway provide ingress into the study area, and Oak Street provides egress from the study area to I-65 to the east. 9<sup>th</sup> Street (Roy Wilkins Avenue), 22<sup>nd</sup> Street and 21<sup>st</sup> Street provide study area ingress and egress to I-64 to the north. Virginia Avenue and Oak Street provide study area ingress and egress to I-264 to the west. Due to the urban setting and one-way surface road network, most of these interstate interchange access points are either partial or split over several locations to provide for all movements. Signing thus becomes a very important feature for facilitating access to the interstate system. In addition, each of these routes requires travel through residential areas, a less than desirable condition for truck traffic moving within and through the study area.



## 2.4 Transit

Since 1974 the Transit Authority of River City (TARC) has provided bus service in the Louisville metropolitan area. The current TARC bus system serves the entire Greater Louisville urbanized area with express services extending beyond the existing urban limits. TARC's service area includes a five-county area consisting of Clark and Floyd counties in Indiana and Jefferson, Oldham, and Bullitt counties in Kentucky. TARC currently operates over 50 routes in its five-county service area, with the majority of routes operating exclusively within Jefferson County. Services in adjacent counties feed into Jefferson County. Average weekday ridership on the TARC bus system is approximately 52,000.

TARC's bus system operates seven days a week, including holidays. The hours of revenue service operation for the majority of bus routes is from 5:30 A.M. to 9:00 P.M. on weekdays, with minimal service on a few routes from as early as 4:00 A.M. to as late as 12:30 A.M. Weekend and holidays service for the majority of routes is from 6:00 A.M. to 9:00 P.M. However, a few routes start as early as 5:00 A.M. and run as late as 12:00 A.M. Headways for bus operations range from 5 to 30 minutes during the A.M. and P.M. peak periods, and from 20 to 60 minutes during off-peak periods.

TARC currently operates a number of bus routes that serve portions of the study area. However, as the area redevelops, there will be a need to re-evaluate the service provided. In particular, accessibility to current and future jobs and homes should be considered.

Twelve TARC bus routes serve the study area. Currently, bus stops are areas on sidewalks marked by bus stop signs. Shelters or benches do not exist at these locations in the study area. The route service types include: radial, cross-town, circulator, and shuttle bus service. These service types are defined as follows:

- **Radial Service:** Local or express service designed primarily to connect the Central Business District with outlying areas.
- **Cross-town Service:** Non-radial bus or rail service which does not enter the central business district.
- **Circulator Service:** A bus serving an area confined to a specific locale, such as a downtown area or suburban neighborhood, with connections to major traffic corridors.
- **Shuttle Service:** A public or private vehicle that travels back and forth over a particular route, especially a short route or one that provides connections between transportation systems, employment centers, etc. Bus service that typically does not operate on a fixed schedule.

TARC routes operating in the study area are shown in **Figure 2-10**.

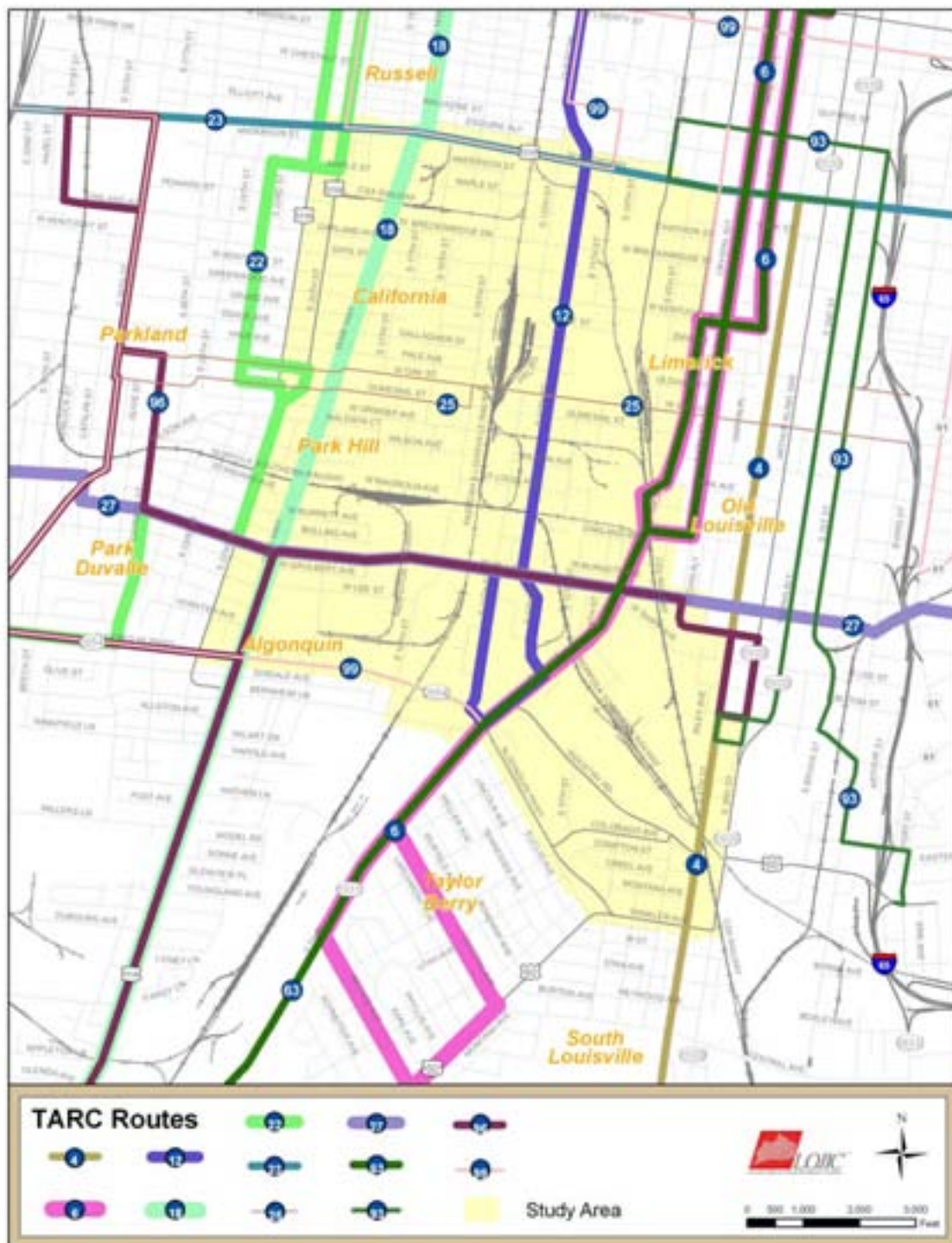


Figure 2-10: TARC Routes Serving the Park Hill Study Area



A brief description of each of the TARC routes serving the study area is presented below. The source for these route descriptions is <http://www.ridetarc.org>.

- **Fourth Street:** This route operates from 4th & Main in downtown Louisville to the Iroquois Park and Southside Drive areas of south Louisville. Areas served include Old Louisville, the University of Louisville Belknap Campus and Churchill Downs. Selected weekday and Saturday trips continue to Louisville Industrial Park on National Turnpike. Routes #37 and #48 provide express service over portions of this route.
- **6 Taylor-Sixth Street:** This route operates from 4th & Main in downtown Louisville to the Auburndale area at New Cut Road and 3rd Street Road. Some trips serve Caritas St. Mary Hospital on Bluegrass Avenue. Selected trips also serve New Cut Market Center, Wal-Mart and K-Mart at Outer Loop and New Cut Road. Route #38 provides express service over portions of this route.
- **12 Twelfth Street:** This route operates from 30th & Alford in the Russell/Portland area to Parkhill along 12th Street. Selected trips will operate via 30th to Market, to 34th, to Bank, to 29th and return to regular route at 30th & Alford.
- **18 Preston - 18th Street:** This route has two main parts: 18th Street--Dixie Highway service operates from downtown Louisville to Valley Station via 18th Street and Dixie Highway, continuing to JCC Southwest and serving Park Place Mall. Selected trips on weekdays only continue to Watson Lane in the Valley Village area. Route #50 provides express service over portions of this route. Selected trips on weekdays only serve JCC Southwest Campus, Caritas Southwest Hospital and the Deering Road area of Valley Station. Preston Street service operates from downtown Louisville to Okolona and the Jefferson Mall area. Weekdays only Okolona trips also serve Friendly Acres and Smyrna Road. Selected trips serve Camp Taylor on weekdays only. Route #45 provides express service over portions of this route.
- **22 Twenty-Second Street:** This route operates from 41st & Bells Lane in the Park DuValle area to New Albany, Indiana serving Floyd Memorial Hospital, Indiana University Southeast and the New Albany Industrial Park. This route does not operate on Sundays and Holidays.
- **23 Broadway:** This route runs from Shawnee Park through downtown Louisville then over Bardstown Road through the Highlands area. Alternating trips use Taylorsville Road to Jeffersontown or continue on Bardstown Road to Goldsmith Lane then through the upper Highlands to Breckenridge Plaza at Six Mile Lane. There is limited service to and from Atherton High School and from St. Xavier High School. Select trips continue from Jeffersontown down Billtown Road to Fairground Road. Route #40 provides express service during peak hours via I-64 between downtown and Jeffersontown. Route #44





provides local and express service over portions of Bardstown Road and Hikes Lane in this area.

- **25 Oak Street:** This cross-town route operates from Shawnee Park at Southwestern Parkway through Old Louisville and the Cherokee Park area to St. Matthews. This route also serves the Nia Travel and Jobs Center and Cave Hill Cemetery. Service does not operate east of Everett Avenue on weekends or holidays. Route 25 does not go to downtown Louisville.
- **27 Hill Street:** This cross-town route runs from 32nd and Portland through west Louisville and across Hill Street through Old Louisville to the Germantown area, terminating at Norton Audubon Regional Medical Center. Route 27 does not serve downtown Louisville.
- **63 Crums Lane:** This route runs from Pleasure Ridge Park to downtown via Terry Road, Cane Run road, Crums Lane and Seventh Street Road. There is no service on Sundays and Holidays. TARC routes 6 and 19 also provide service over portions of this route.
- **93 UPS-UL-JCTC:** This route operates from 8th & Chestnut to the United Parcel Service Hub on Grade Lane, Monday night - Saturday morning only. This route serves Kentucky Vocational College, Jefferson Community College and University of Louisville dormitories. Additional service to and from the UPS Hub is provided by TARC route 2 and 99.
- **96 Parkhill West:** Circulator service runs from the University of Louisville throughout west Louisville via Hill Street, 28th, Wilson Avenue, Algonquin, 18th and Dixie Highway during midday hours. Service is provided to the Nia Center, Park Duvalle, Commerce Center and Southland Terrace Shopping Center. There is no service on weekends and holidays. Alternate service is provided by TARC routes 18, 19, 25 and 27.
- **99 UPS-west Louisville:** West Louisville/UPS Shuttle operates from west Louisville and downtown locations direct to the UPS Hub. Service operates Monday night through Saturday morning only for overnight shift between 11:00 p.m.- 4:30 am. Additional service to the UPS Hub is provided by TARC routes 2 and 93.

Current ridership figures for the routes serving the Park Hill study area are shown in **Table 2-5**, categorized by route type and weekday ridership rank. Collectively, these routes serve approximately 25,000 weekday riders, which represents 48% of TARC's total daily ridership. The top three utilized routes in the TARC system (Routes 18, 23 and 4) serve portions of the study area.

**Table 2-5: TARC Ridership Figures**

Route #	Route Name	May 2007 Avg. Weekday Ridership
<b>Radial Routes</b>		
18	PRESTON - 18TH STREET	7,022
23	BROADWAY	6,408
4	FOURTH STREET	4,370
6	TAYLOR-SIXTH STREET	2,333
63	CRUMS LANE	1,111
<b>Cross-town Routes</b>		
25	OAK STREET	1,514
27	HILL STREET	1,242
63	CRUMS LANE	1,111
22	TWENTY-SECOND STREET	400
12	TWELFTH STREET	331
<b>Circulator Routes</b>		
96	WEST LOUISVILLE SHUTTLE	72
<b>Shuttle Routes</b>		
93	UPS-UL-JCTC	46
99	UPS-WEST LOUISVILLE	45

Source: Transit Authority of River City (TARC)

The strong transit ridership within the Park Hill study area is attributable to the corridor's relatively high transit dependent population, shown in **Table 2-6**.

**Table 2-6: Transit Dependent Populations**

	Transit Dependent Populations								
	Total Households	Zero Vehicle Households		Population 5-17 Years of Age		Population 65 Years of Age or Older		Disabled Population	
<b>Jefferson County</b>	287,012	32,402	11.3%	121,633	17.5%	93,539	13.5%	92,592	13.3%
<b>Park Hill Study Area</b>	5,409	2,282	42.2%	2,554	20.5%	1,453	11.7%	2,375	19.0%



Comparison of the study area population with Jefferson County as a whole, reveals significant differences:

- Almost four times the percentage of zero vehicle households (with the 42.7% of the study area households without a vehicle)
- 3% higher percentage of population 5-17 years of age in the study area (over 20%) compared to the county (17.5%)
- Almost 2% lower percentage of population 65 years of age or older in the study area (11.7%) compared to the county (13.5%.)
- Almost 6% greater percentage of population with one or more disabilities in the study area (almost 20%) compared to the county (13.3%).

**Table 2-7** presents mode of transportation to work for commuters in the study area and Jefferson County.

**Table 2-7: Mode Characteristics for Work Commutes**

	Mode of Transportation for Work Commute									
	Total Workers (16 years or older)		Automobile		Public Transportation		Bicycle		Walk	
Jefferson County	329,091	47.4%	302,309	91.9%	10,096	3.3%	0	0.0%	6,556	2.0%
Park Hill Study Area	3,926	31.5%	2,851	72.6%	671	23.5%	25	0.6%	333	8.5%

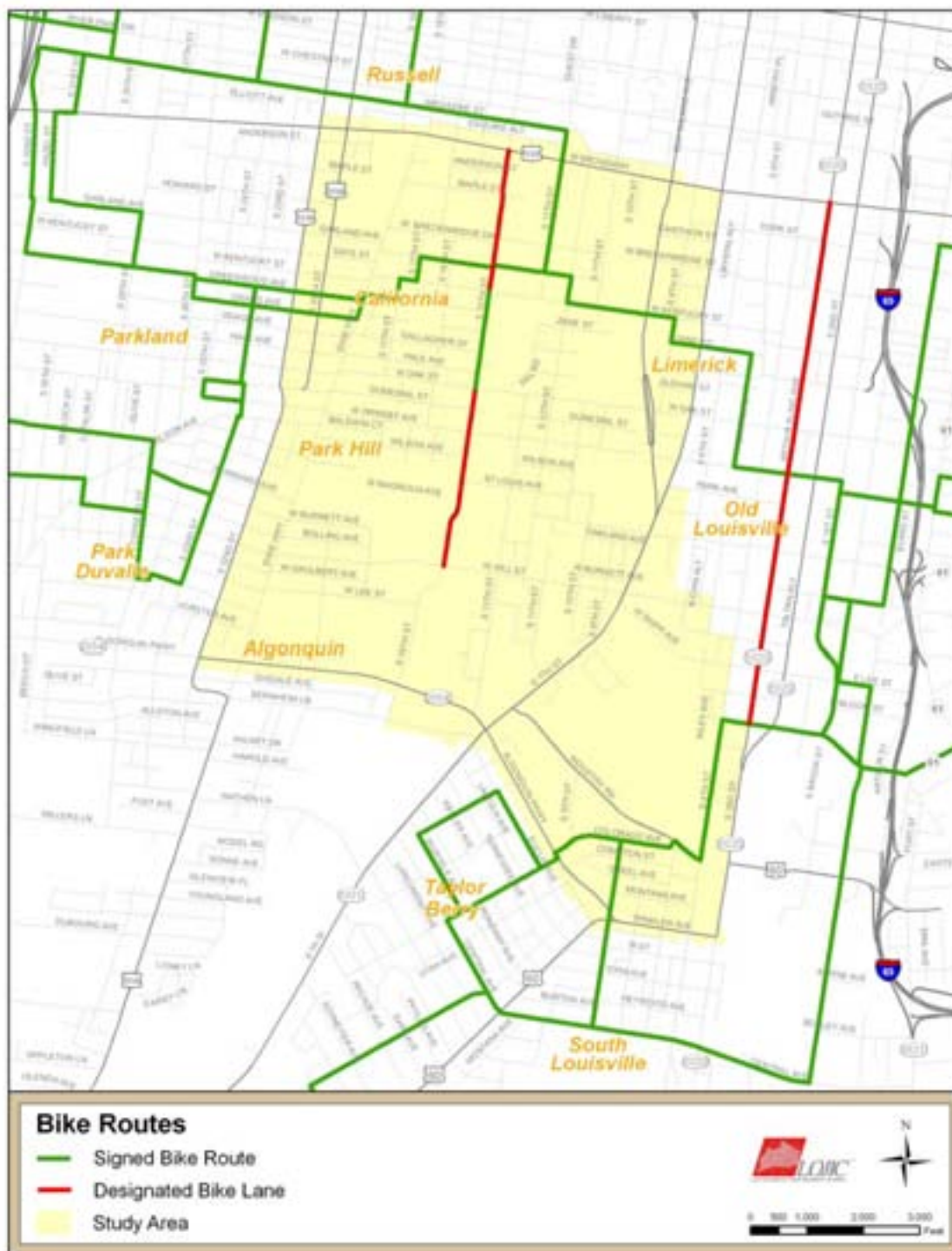
The study area has a very high transit mode share of approximately 24% for work commuters compared to 3% for Jefferson County. Compared to Jefferson County, the study area population's work commute is significantly different with almost 20% less by car, over five times greater percentage by public transportation, and over four times higher percentage by walking.

TARC also provides paratransit services in the Park Hill study area, which are known as TARC 3, and a Night Owl service for third shift employees living in the Empowerment Zone. Empowerment Zones are distressed urban and rural areas that are eligible to receive federal grants, tax incentives, and partnerships. For-profit and non-profit entities use these incentives to attract new business and create jobs, housing, and new educational and healthcare opportunities in the Empowerment Zone.

## 2.5 Pedestrian and Bicycle Facilities

Sidewalks line most of the streets in the corridor. With limited neighborhood shopping opportunities, pedestrian activity is generally related to jobs, social activities, or access to transit routes. There are many land use features within the study area that are accessible by pedestrians and bicyclists, including parks, schools, clinics, community centers, churches, historic sites, the public library and the post office (see Section 2.7 Land Use for more discussion.) There are many schools located in and near the corridor. Access is primarily via TARC bus, public school bus or car or biking or walking.

Some area streets have bicycle lanes and some are signed for bike route use, as shown in **Figure 2-11**.



**Figure 2-11: Existing Bicycle Routes in the Park Hill Study Area**



A comprehensive bikeway system does not exist within the Park Hill study area and the signed routes are not continuous. East-west connectivity is limited (Kentucky Street and Garland Avenue), but there are no north-south facilities that pass completely through the study area. There are no off-street bike paths or trails within the corridor.

The study area has two designated bike lanes, areas within the existing roadway pavement designated by signs and painted lines along the both curbs delineating a bike lane in each direction. In addition, special drainage grates along these designated bike routes have been installed, which have cross bars perpendicular to the travel way to prevent bike tires falling into the grate. Both of the area's designated bike lanes are located on South 15<sup>th</sup> Street, one between West Broadway and West Kentucky Streets and the second between West Oak and West Hill Streets. The bicycle lanes along 15<sup>th</sup> Street are shown in **Figure 2-12**.



**Figure 2-12: Bicycle Lanes on 15<sup>th</sup> Street**

One signed bike route traverses east to west using Zane, Kentucky, Garland and Grand Streets. 13<sup>th</sup> Street is a signed bike route connecting the east/west route through the corridor to another east/west route on Magazine Street. Additionally, in the southeastern corner of the study area, near the University of Louisville, signed bike routes also exist.





## 2.6.2 Freight Railroad Operations

The Greater Louisville area is traversed by five national and regional railroad operators, which either own and operate their own rail lines or have operating rights, including the following:

- Norfolk Southern Rail (NS)
- CSX Transportation (CSXT)
- Paducah and Louisville Railway, Inc. (PAL)
- Canadian Pacific (CP)
- Louisville & Indiana Railroad Company (LIRC)

Major rail structures include three bridges across the Ohio River, two of which remain active. The Kentucky and Indiana Terminal (K&IT) Bridge over the Ohio River, near 33<sup>rd</sup> Street in West Louisville, was originally constructed in 1885 by the Kentucky and Indiana Bridge Company and is approximately 0.4 miles long. The bridge was reconstructed from 1911 to 1913 to accommodate heavier traffic. The bridges, along with other assets of the K&IT, were sold to NS in 1981. The bridge is the more active of the two still in operation, with as many as 40 train movements per day. The bridge is double tracked, with recent upgrades. The bridge carries NS, CSX, and CP train traffic from Kentucky across the Ohio River into New Albany, Indiana, eventually connecting to other branches and mainlines.

The second active bridge is the former Pennsylvania Railroad Bridge over the Ohio River, also known as the 14<sup>th</sup> Street Bridge. The bridge is approximately one mile in length and is currently owned by the LIRC. The bridge is a double-tracked lift span bridge, with the lift span being near the Kentucky side, to accommodate river traffic that passes through the lock just south of the bridge. One side remains active, while the other is used to balance the lift span when it is raised or lowered. Traffic on this bridge is light, at approximately 4 train movements per day across the bridge.

### Current Corridor Railroad Operators

Four of these rail companies provide service within the Park Hill Industrial Corridor. A brief description of each rail provider is found below:

**Paducah and Louisville Railway:** The Paducah and Louisville Railway (PAL) is a "scheduled" railroad. Trains are coordinated to best accommodate on-line customers and facilitate movement to/from connecting carriers. Switching service to on-line customers is generally performed when the customer needs it. Scheduled switch engine crews work around the clock at Calvert City, KY, and Sunday through Friday at Paducah and Louisville.

The Canadian National (CN) interchanges with the PAL every afternoon at Paducah; the Burlington Northern Santa Fe (BNSF) arrives in Paducah on Monday, Wednesday, and Friday nights and departs Paducah Tuesday, Thursday, and Saturday mornings. Interchange is regularly made with the CSXT at Louisville and Madisonville Monday through Saturday. The PAL receives cars from and delivers cars to the NS daily at two locations in Louisville. (The NS also handles interchange of the CPRS traffic at Louisville.) Connection with the LIRC in Louisville and the FVRR at Princeton is on an "as needed" basis. (Source: [www.palrr.com](http://www.palrr.com))



The PAL is a regional short-line operator, carrying bulk and mixed freight. The PAL operates three routes in the state, only one of which connects to Louisville, that being the route from Louisville to Paducah in the southwest.

**Norfolk Southern:** Norfolk Southern Corporation is a Norfolk, Va.-based company that controls a major freight railroad, Norfolk Southern Railway Company. The railway operates approximately 21,000 route miles in 22 eastern states, the District of Columbia and Ontario, Canada, serves all major eastern ports and connects with rail partners in the West and Canada, linking customers to markets around the world. Norfolk Southern provides comprehensive logistics services and offers the most extensive intermodal network in the East. (Source: [www.nscorp.com](http://www.nscorp.com))

NS is a national operator carrying mixed freight from Louisville to other areas of its operation, including St. Louis, Cincinnati, Lexington, Chattanooga, Memphis, Birmingham, and Atlanta. NS owns track from the east and connects to CSX north of the airport at 4<sup>th</sup> and Colorado, and to the PAL near 12<sup>th</sup> and Magnolia.

**CSX Transportation:** CSX Corporation, based in Jacksonville, Fla., owns companies providing rail, intermodal and rail-to-truck transload services that are among the nation's leading transportation companies, connecting more than 70 river, ocean and lake ports, as well as more than 200 short line railroads.

Its principal operating company, CSX Transportation Inc. (CSXT), operates the largest railroad in the eastern United States with a 21,000-mile rail network linking commercial markets in 23 states, the District of Columbia, and two Canadian provinces. CSXT headquarters are in Jacksonville, Florida. (Source: [www.csx.com](http://www.csx.com))

CSX is a national freight rail operator carrying mixed-freight, intermodal transshipments, chemicals and automobiles. CSX operates from the interior midwest/southeast, through Louisville, to the deep South (Atlanta) and the Gulf Coast (New Orleans). CSX operates in the east, south, southwest and west corridors and utilizes the Kentucky & Indiana Terminal Railroad (K&IT) bridge. CSX is also the largest railroad operator in the Louisville area.

**Louisville & Indiana Railroad:** The Louisville & Indiana Railroad (LIRC) was formed in March 1994 to acquire 106 miles of rail line between Indianapolis and Louisville. The line serves numerous major companies and an efficient inland port facility. Since formation, L&I has located a number of new industries to its lines. L&I has been designated a future high-speed rail corridor by the U.S. Department of Transportation. (Source: <http://www.anacostia.com/lir/lir.html>)

LIRC is a regional rail operator serving localized customers in the Greater Louisville/Southern Indiana area. The L&I also operates from Indianapolis at the Avon Yard to Louisville, and makes connections to NS and CSX.



Figure 2-14 depicts the rail lines (by owner) within the Park Hill study area.

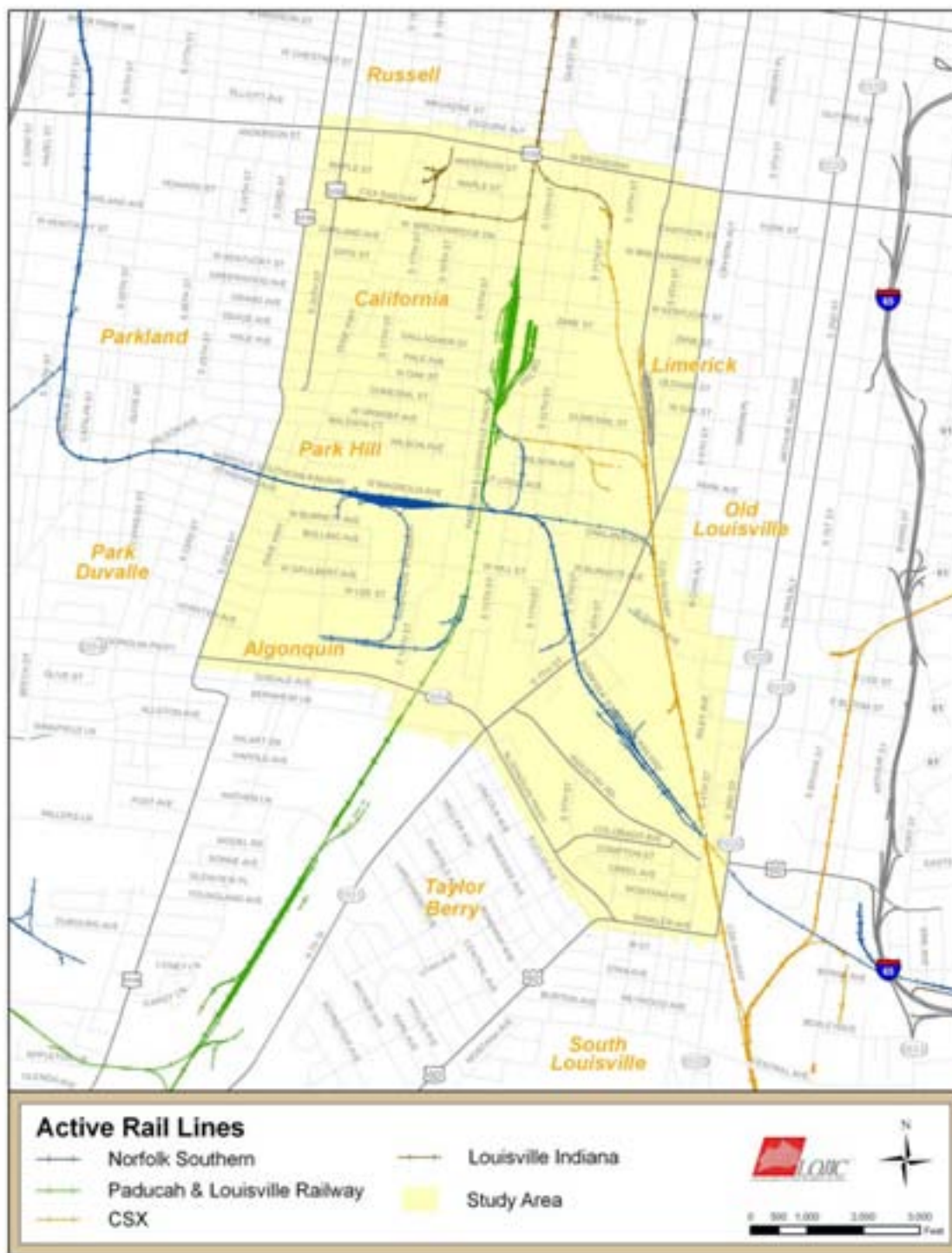


Figure 2-14: Rail Lines (by Ownership) in the Park Hill Study Area



**Table 2-8** provides a summary of the total miles of track maintained by each rail provider within the Park Hill study area.

**Table 2-8: Total Miles of Rail by Owner within the Park Hill Study Area**

Railroad Operator	Trackage Length (Miles)
Norfolk Southern	12.3
Paducah & Louisville Railway	9.3
CSX Transportation	6.1
Louisville-Indiana	2.5
Railroad Bridges	0.8
Abandoned	0.1

There is a total of 31.1 miles of track within the Park Hill corridor. Norfolk Southern owns the majority of the track, with 12.3 miles (40%). There is approximately 0.1 miles of abandoned track within the study area. With 31.1 miles of track, a number of rail crossings are required to provide street access through the study area.

**Table 2-9** provides a summary of the rail crossings in the study area.

**Table 2-9: Summary of Rail Crossings within the Park Hill Study Area**

Crossing Type	Count	Flashing Lights	Gates
At-Grade	27	13	5
Grade-Separated	17	--	--

There are a total of 44 crossings in the study area, 27 of which are at-grade crossings. Of those 27, only 13 have flashing lights and five have active protection in the form of crossing gates. A detailed railroad crossing inventory, including photographs, is found in **Appendix A**.

### **Railroad Coordination**

Coordination with the railroad companies operating in the Park Hill Industrial Corridor is ongoing. The Study Team has communicated the project's goals to three of the four railroad operators in the corridor by meetings, email, and/or telephone conversation.

The Study Team has met twice with representatives from CSX to discuss the CSX current operations in the corridor, as well as future expansion plans, industrial development access needs, and intermodal facilities issues and needs. CSX currently operates five schedule trains a day (three to Cincinnati and 2 locals) in the study area, as well as other non-scheduled trains. These trains operate at restricted



speeds because of the lack of signals. At times, these trains may block roadways in the study area for up to five minutes and on rare occasions, as long as 20 minutes. In the future, the volume of trains would likely increase, as CSX plans to run additional trains to Indianapolis.

Future development desires of CSX operations in the corridor include an improved interchange track with the PAL Yard, signal tracks, and a reduction of passing sidings and grade crossings. CSX does offer a rebate program for new industry that they could provide service to.

Coordination efforts with NS and PAL are still in process. Some of the anticipated information forthcoming from these operators will include the following:

- Freight movements in the corridor (daily trains & time of day)
- Expansion plans
- Wish list of improvements regarding freight operations
- Industrial development access improvement needs
- Freight terminal and intermodal issues and needs
- Industrial and commercial customers

NS has informed the Study Team that they would like to see sites/parcels in the range of 20 acres or larger made available for rail access in the study area.

As additional information is obtained from the railroad operators in the corridor, it will be used in the development of future alternatives for consideration and testing as part of the transportation element of the corridor's Master Plan.

## 2.7 Land Use

**Figure 2-15** depicts the general land use (by zoning) present within the Park Hill study area. Incompatible land uses exist in the study area. A description of the land uses included is as follows:

- Brownfields / Hazmat: industrial areas predominant in east side of study area, and in southwestern corner
- Residential (west half of study area and southeast corner primarily); small single family homes, no driveways or off street parking.
- Commercial – not much local neighborhood service oriented business

As redevelopment opportunities are explored, the relationship between transportation and land use must be considered. In particular, locating compatible land uses in proximity to not only the necessary transportation facilities, but also compatible uses only.

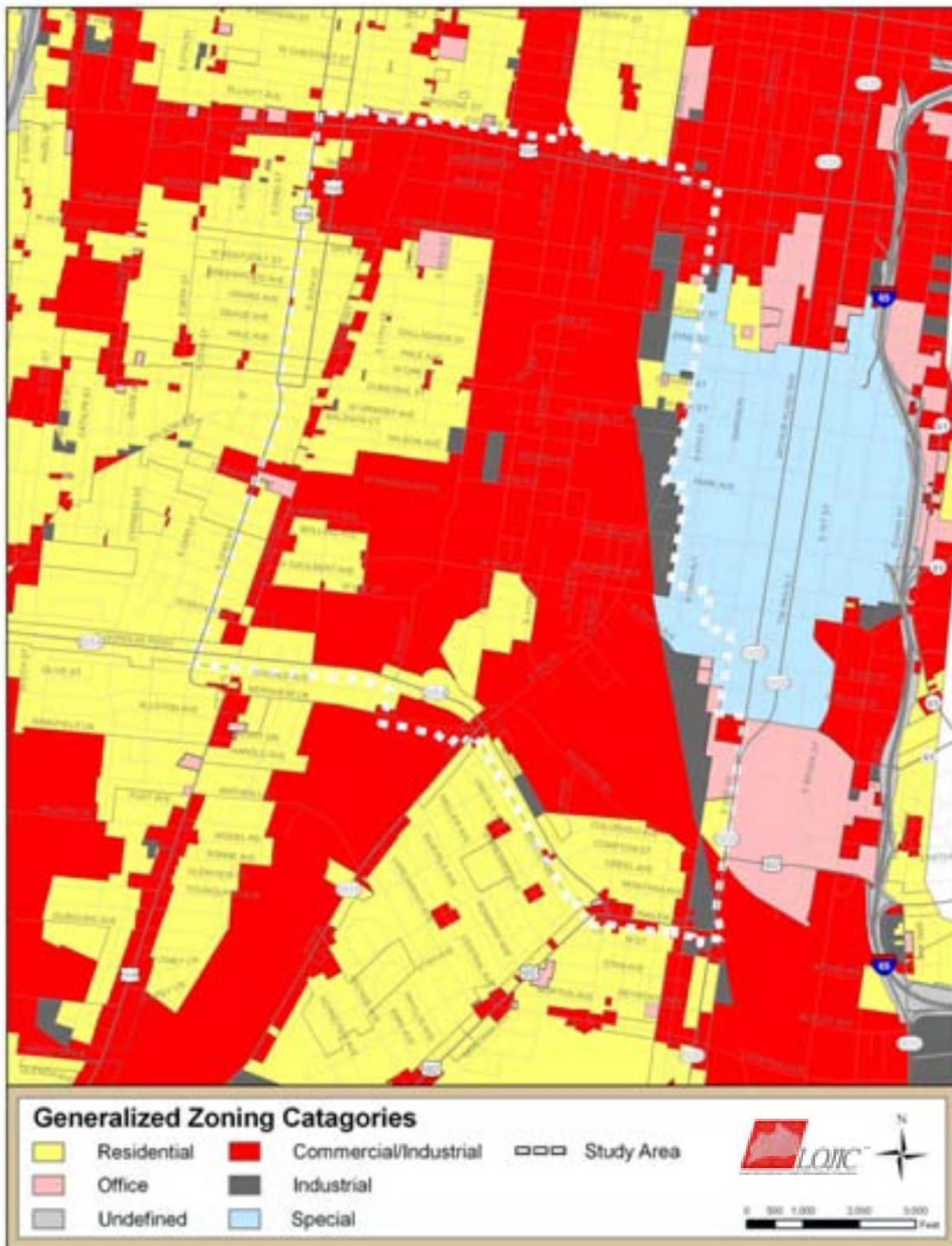


Figure 2-15: Generalized Zoning Map by Major Categories



The overall impression of the study area, at first, is that it is primarily made up of industrial uses and dense areas of single family housing. However, **Table 2-10** lists fifty important land use features within or near the study area illustrating the types of public or private non-residential, commercial or industrial uses presently available in the area and more completely describes the land use character of the Park Hill corridor.

**Table 2-10: Park Hill Industrial Corridor (and vicinity) Land Use Features**

Source: LOJIC , Louisville / Jefferson County GIS Consortium, 2007 ([www.lojic.org](http://www.lojic.org))

<b>Areas of Interest</b>	
Filson Historical Society	1310 S. 3 <sup>rd</sup> Street)
Sons of the American Revolution	1000 S. 4 <sup>th</sup> Street
<b>Colleges</b>	
Spalding University	851 S. 4 <sup>th</sup> Street
University of Louisville/Belknap Campus	2301 S. 3 <sup>rd</sup> Street
Jefferson Community College	109 E. Broadway Street
<b>Schools</b>	
Cochran	500 W. Gaulbert Avenue
Dupont Manual	120 W. Lee Street
McFerran Prep Academy	1900 S. 7 <sup>th</sup> Street
Minnis Emma L.	3148 Taylor Blvd.
More Grace Christian Academy	100 W. Ormsby Avenue
Noe	121 W. Lee Street
Presentation Academy	861 S. 4 <sup>th</sup> Street
Roosevelt-Perry	1606 Magazine Street
St. Francis	233 W. Broadway Street
Wheatley	1107 S. 17 <sup>th</sup> Street
Youth Performing Arts	1517 S. 3 <sup>rd</sup> Street
<b>Government Centers</b>	
Community Center - Better Homes	535 W. Kentucky Street
Community Center - California	1600 W. St. Catherine Street
Community Center - Park Hill	1703 S. 13 <sup>th</sup> Street
Federal Government Bldg.	600 Dr. M.L. King, Jr. (N of US 150)
L&N Building	908 W. Broadway Street
Louisville Metro Archives	970 S. 4 <sup>th</sup> Street

**Table 2-10 (continued): Park Hill Industrial Corridor (and vicinity) Land Use Features**

<b>Post Office</b>	
Downtown	835 S. 7 <sup>th</sup> Street
<b>Metro Health Department Clinics</b>	
Bridges of Hope Neighborhood Place	1411 Algonquin Parkway
L&N Branch	908 W. Broadway Street
<b>Metro Historic Landmarks</b>	
Belknap Playhouse	1911 S. 3 <sup>rd</sup> Street
Central Colored School	542 W. Kentucky Street
Fifth Ward School / Monsarrat	747 S. 5 <sup>th</sup> Street
LFPL Free Public Library (Main)	601 York Street
Louisville War Memorial Auditorium	970 S. 4 <sup>th</sup> Street
Municipal College Campus, Simmons U.	1018 S. 7 <sup>th</sup> Street
Seelbach Parish House	926 S. 6 <sup>th</sup> Street
St. Louis Bertrand Complex	1104 S. 6 <sup>th</sup> Street
Union Station	1000 W. Broadway Street
<b>Metro Parks</b>	
Ben Washer	
California	
Central	
Magnolia	
Memorial	
Park Hill	
St. Louis	
Toonerville Trolley	
William B. Stansbury	
<b>Neighborhood Places</b>	
Bridges of Hope Neighborhood Place	1411 Algonquin Parkway
	908 W. Broadway Street
<b>Police Stations</b>	
4th Division	1340 S. 4 <sup>th</sup> Street
<b>Fire Stations</b>	
Engine 16 / Truck 3	1500 S. 6 <sup>th</sup> Street
Engine 17	1824 Garland Avenue
Engine 7	824 S. 6 <sup>th</sup> Street
<b>Public Library</b>	
Main Branch	301 York Street



Recent news indicates some renewed interest in development in this corridor. In February, The Louisville Business First quoted city officials citing five businesses recently locating, or planning to locate, in the corridor:

*City officials point to Consumers Choice Coffee Inc., Pro-Liquitech International Inc. and Great Northern Manufacturing LLC as shining examples of how taking a chance on west Louisville can pay dividends for a growing company.*

*Also, Hosting.com plans to locate a data center in the corridor, near 12th and West Oak Streets, and Heaven Hill Distilleries Inc., is considering an expansion of its facilities at 17<sup>th</sup> and West Breckinridge streets in the area.*

*Each of the businesses has relocated from other parts of town to the Park Hill Corridor during the past couple of years, and each has brought vibrancy to the corridor's blighted neighborhoods.<sup>1</sup>*

## 2.8 Hazardous Materials

Hazardous materials or wastes are defined as “substances which are regulated as hazardous or toxic by the United States Environmental Protection Agency” (USEPA). Within this definition, most hazardous substances exhibit one or more of the following characteristics: ignitability, corrosivity, reactivity, or toxicity. Suspect properties include (but are not limited to): gas stations, dry cleaners, photo processors, paint stores, auto repair shops, metal fabricators, most industrial manufacturing plants, junkyards, and any other establishments which use or dispose of chemicals or solvents.

An environmental records database search was conducted for the project area on June 21, 2007 (see **Appendix B**). The listings in the regulatory database provide information on registered and identified potential hazardous material/waste sites in the project area. Areas of potential concern in the project area are related to present and past commercial and industrial uses. This database search covered a 2 mile radius centered on the study area (approximate location of center point is 12<sup>th</sup> and St. Louis)<sup>2</sup>. The database review included a search of the federal and state American Society of Testing and Materials (ASTM) and non-ASTM databases and identified a total of 805 records within the two mile radius area encompassing the study area. **Table 2-11** provides a summary of the results from the database search.

**Table 2-11: Hazardous Materials Database Search Listing of Sites Identified**

<sup>1</sup> Park Hill: Businesses find a land of plenty in the Park Hill Corridor, Business First of Louisville, February 23, 2007.

<sup>2</sup> The database search was performed by FirstSearch Technology Corporation of Indianapolis, Indiana (January 2007), and targeted solid waste landfills, registered and/or leaking underground storage tanks, regulated and unregulated hazardous waste sites, and hazardous substances and/or petroleum spills.



Source: FirstSearch Technology Corporation, June 2007 (see Appendix B for additional excerpts from the report, including definitions of the database record acronyms and categories.)

State or Federal Database	Abbreviated Label	Sites Identified within Two Mile Radius of Study Area Center
National Priorities List	NPL	0
National Priorities List Delisted	NPL Delisted	0
Comprehensive Environmental Response Compensation and Liability Information System	CERCLIS	4
Comprehensive Environmental Response Compensation and Liability Information System Archived Sites	NFRAP	13
Resource Conservation and Recovery Information System Sites – Corrective Action	RCRA COR ACT	7
Resource Conservation and Recovery Information System - Treatment, Storage and Disposal Facilities	RCRA TSD	6
Resource Conservation and Recovery Information System - Large and Small Quantity Generators	RCRA GEN	70
Brownfield Management System	Federal IC/EC	17
Emergency Response Notification System	ERNS	71
Indian Lands of the United States	Tribal Lands	0
Division of Emergency and Remedial Response Database	State/Tribal Lands	390
Spill Locations	State Spills 90	0
Waste Facilities	State/Tribal SWL	22
Facilities With Active Releases From Regulated Tanks	State/Tribal LUST	15
List of Active Registered Facilities	State/Tribal UST/AST	190
Division of Emergency and Remedial Response Database Engineering Control	State/Tribal EC	0
Division of Emergency and Remedial Response Database Institutional Control	State/Tribal IC	0
Brownfield Inventory Subset	State/Tribal VCP	0
Brownfield Inventory	State/Tribal Brownfields	0
<b>Total Listings</b>		<b>805</b>

The listings in the database search provide information on registered and identified potential hazardous material and waste sites within the study area. Areas of potential concern are primarily related to present and past commercial and industrial uses. A total of 805 sites were identified within two mile radius of study area center in database search. Of those, 257 sites were geocoded for mapping within the study area, and are shown in **Figure 2-16**. Note there are several additional listings with general addresses in the study area but are not able to be mapped in this figure. For more information, see **Appendix B** for excerpts from the database search report. It should be noted that listing in this database search does not necessarily indicate a hazardous material or waste problem or concern. The listings are records of past and present uses where hazardous materials or wastes either currently exist or once did. Many of the registered listings are actively managed sites, for example gas stations, and sites where past use has been properly addressed.





**Figure 2-16: Hazardous Material Database Listed Sites**  
(First Search Technology Corporation, June 2007)



### 3.0 Related Studies

A number of studies related to the Park Hill Industrial Corridor are planned, have been completed recently, or are currently in progress. A summary of these related studies is included in the following sections.

#### 3.1 I-65 Ramp Modifications Scoping Study

The Kentucky Transportation Cabinet (KYTC) and Louisville Metro Government recently conducted a scoping study seeking improvements to facilitate better traffic flow, safety and access associated with ramps along I-65 from Crittenden Drive to St. Catherine Street. The consultant performing this study focused on the following priority “problem locations”<sup>1</sup>:

- Warnock area at NB I-65 ramps & Sav-A-Step
- Second SB exit to Arthur Street
- Eastern Pkwy NB exit (then left to NB Critt.)
- Ramp to NB I-65 from Preston and weave
- First SB exit to Arthur Street
- Short weave SB between Eastern Pkwy & Critt.
- On-ramp to I-65 SB from Arthur St. near Lee St.
- Lack of access to Crittenden Dr. from NB I-65
- Weave between Floyd/Preston SB on-ramp and exit to Arthur Street
- Brandeis Avenue at Arthur Street

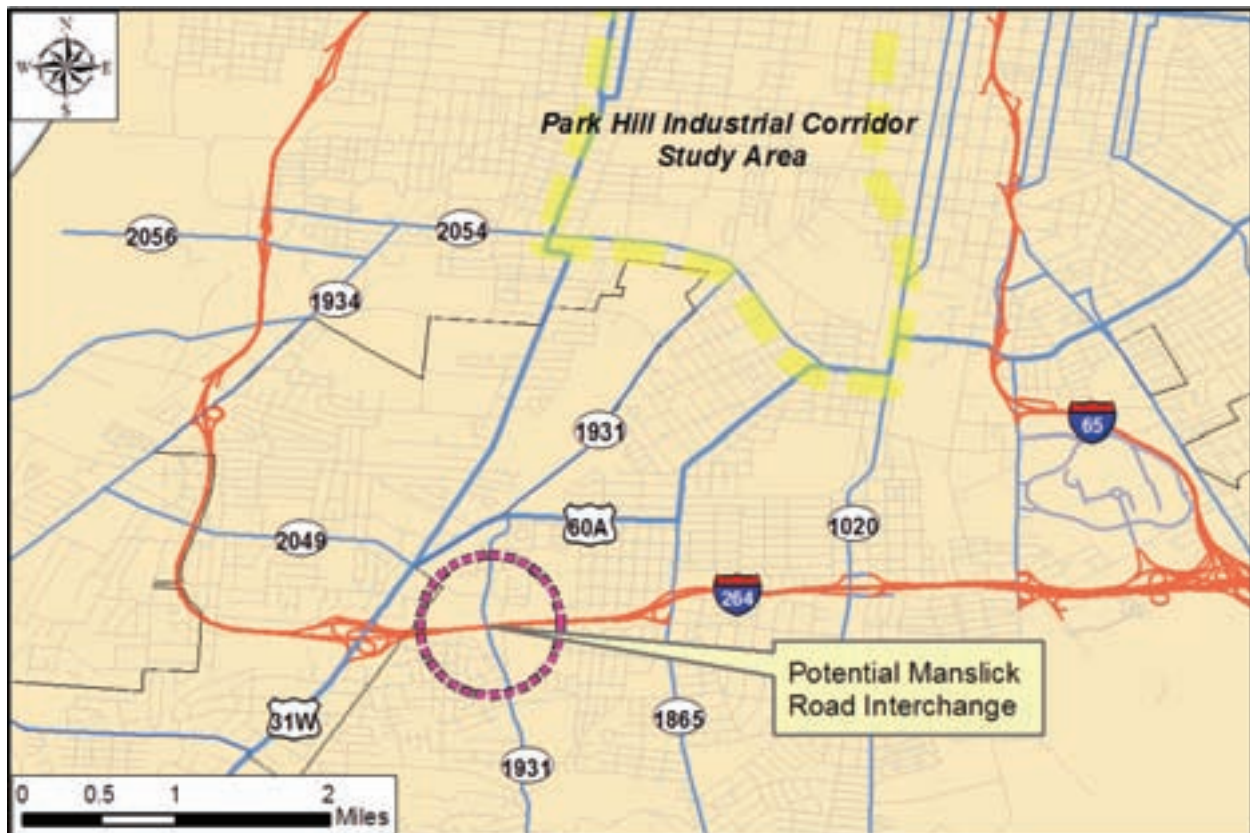
A recommended alternative was developed that included significant improvements to the I-65 corridor, but there are currently no plans to implement these recommendations.

#### 3.2 I-264 - Manslick Road Interchange

The Kentuckiana Regional Planning and Development Agency (KIPDA), the local Metropolitan Planning Organization (MPO) for the Metro Louisville area, included in its recent update to the Unscheduled Projects List (UPL) a study to determine the feasibility of constructing a new interchange along I-264 (Shawnee Expressway) and Manslick Road (KY 1931). The location for this potential interchange, shown in **Figure 3-1**, is southwest of the Park Hill Industrial Corridor and could provide an additional freeway access point to the study area. Discussions with Metro Public Works indicate the KYTC will likely conduct a study in the future to explore options for an interchange at this location.

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<sup>1</sup> [www.accessmanagement.info/AM06pdf/AM0613c\\_Gresham.pdf](http://www.accessmanagement.info/AM06pdf/AM0613c_Gresham.pdf)



**Figure 3-1: Potential Manslick Road (KY 1931) Interchange**

### 3.3 7<sup>th</sup> and 8<sup>th</sup> Street Two-Way Analysis

In 2005, ENTRAN performed planning-level transportation analyses to examine the feasibility of converting some existing one-way streets in Downtown Louisville to two-way operation. This study included 7<sup>th</sup> Street and 8<sup>th</sup> Street from River Road to Kentucky Street. A map of the downtown street network, including the study sections, is shown in **Figure 3-2**.

The majority of 8th Street is one-way providing travel in the southbound direction. However, the segment from River Road to Market Street is currently two-way, and the facility is two-way south of Kentucky Street. Thus, only the segments between Market Street and Kentucky Street were evaluated. 7th Street is currently one-way north of Breckinridge Street, providing travel in the northbound direction. 7<sup>th</sup> Street terminates at River Road, north of Main Street.

Results from the planning-level analyses demonstrated that conversion from one-way operation to two-way flow on 7<sup>th</sup> and 8<sup>th</sup> Street should provide an overall satisfactory level of service (LOS) between Main Street and Kentucky Street. Under an assumption that there would be an approximate 50/50 split of north-south traffic between 7th Street and 8th Street, some of the traffic currently traveling on 7th Street would move over to 8th Street (and vice-versa) as traffic is “balanced” between the two streets.



**Figure 3-2: Downtown Louisville Two-Way Street Analysis Study Area**

The study recommended that additional, more-detailed analyses would be required to fully determine the feasibility for and impacts of a two-way conversion of 7th and 8th Streets. In addition, the Museum Plaza development, a high-rise, mixed used development located north of Main Street between 7<sup>th</sup> and 8<sup>th</sup> Street, was not considered in the original analyses. It is not currently known if Metro Public Works intends to pursue further this conversion.

### **3.4 Olmsted Parkways Study**

A study is currently underway to explore improvement options for the Olmsted Parkway system in Louisville. This study includes Algonquin Parkway, the southern boundary for the Park Hill Industrial Corridor study area. The purpose of the Olmsted Parkways Study is to investigate multimodal enhancements for the parkways to provide on-street bicycle lanes or off-facility multi-use paths. Another goal is to consider potential connections between the parkways.



## 4.0 Stakeholder Outreach

### 4.1 Public Outreach

In October 2005, the University of Louisville's Center for Environmental Policy and Management, in association with Louisville Metro Government's Metro Development Authority and Center for Neighborhoods, received a three year grant from the U.S. Environmental Protection Agency (EPA) to "open paths for community participation in the revitalization of the Park Hill Corridor in terms of addressing brownfields."<sup>1</sup> To that end, the Redefining Brownfields group represents a diverse array of local representatives from the residential, business, and not-for-profit sectors. The primary purpose of the program is to provide training and technical assistance to the community stakeholders and to provide a forum for those stakeholders to develop a vision for the Park Hill Corridor that can be carried forward through future master planning efforts.

The Study Team met with the Redefining Brownfields group on May 21, 2007. The purpose of the meeting was to provide the stakeholders with general information about the Park Hill Industrial Corridor Short-term Transportation Planning Study and to solicit feedback relative to existing transportation issues and potential transportation improvements. A presentation was given before the group, followed by a question and answer period where participants could discuss existing issues and ask questions about the study's purpose and need and intended outcomes. Handouts, including a copy of the study's Draft Purpose and Need Statement, a study area map, and a questionnaire, were provided to participants. These documents and a copy of the meeting presentation are found in **Appendix C**.

The study questionnaire was developed in an effort to provide the stakeholders an opportunity to formally indicate what they perceive to be the most significant transportation issues that exist within the study area. A total of 18 completed surveys were returned. A summary of the findings from the questionnaire follows. Note that these findings have not been tested for statistical significance.

The first set of questions on the survey was included to better understand the makeup of the respondents. **Figure 4-1** depicts the findings from the first three questions, which asked if the respondent lived in or near, worked in or near, or traveled through the study area regularly. Respondents were asked to refer to the study area map for the limits of the study area.

Approximately 41% (seven respondents) indicated they live within or near the Park Hill study area, and approximately 71% (12 respondents) indicated they work within or near the study area. Approximately 88% (15 respondents) indicated they travel through the study area on a regular basis. No definition of what the term "regularly" meant was included on the survey but was left to the interpretation of the respondent. Of the 18 respondents, seven (41%) indicated they live in, work in, and travel through the study area regularly.

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<sup>1</sup> <http://www.redefiningbrownfields.org>

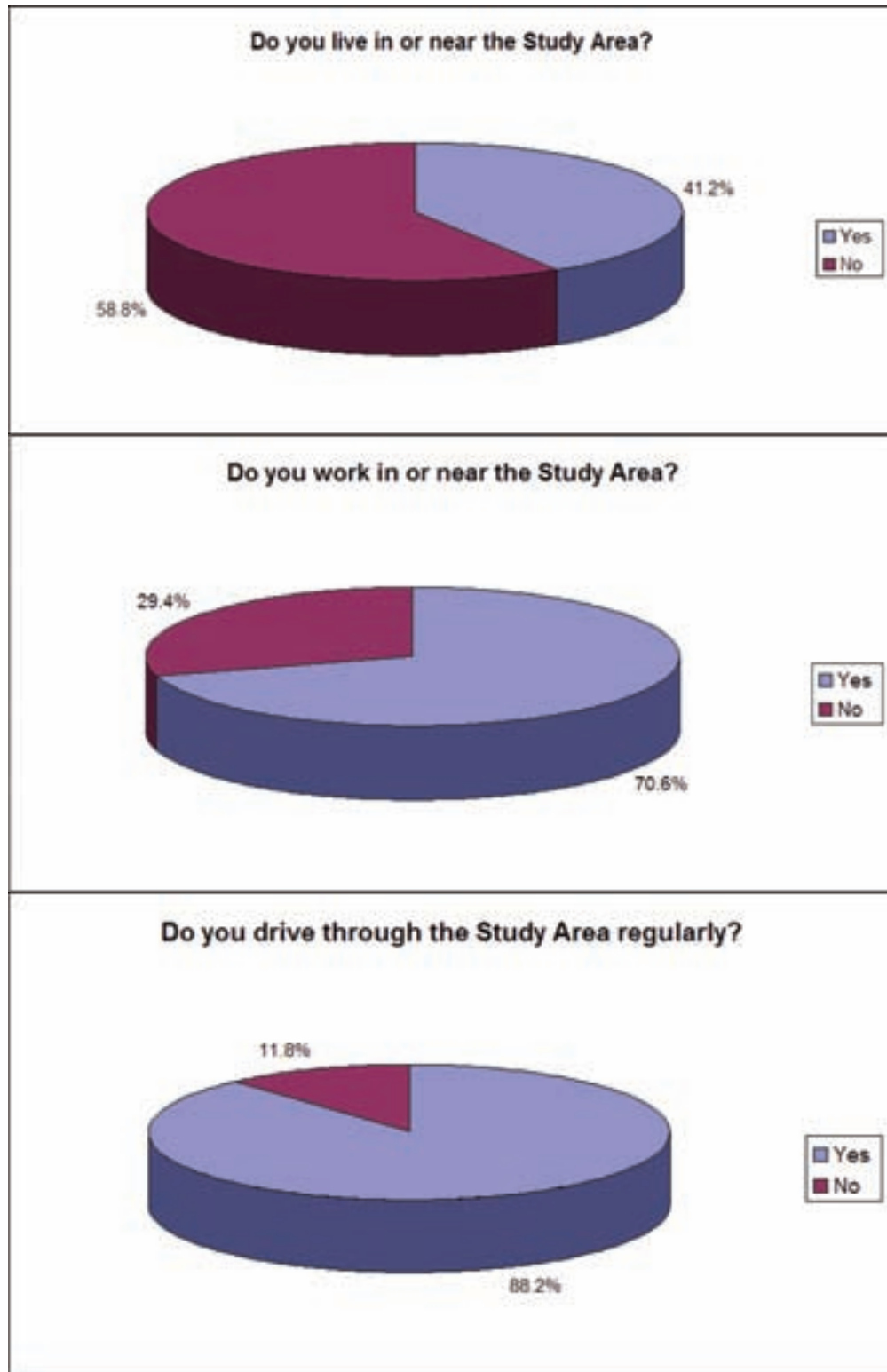
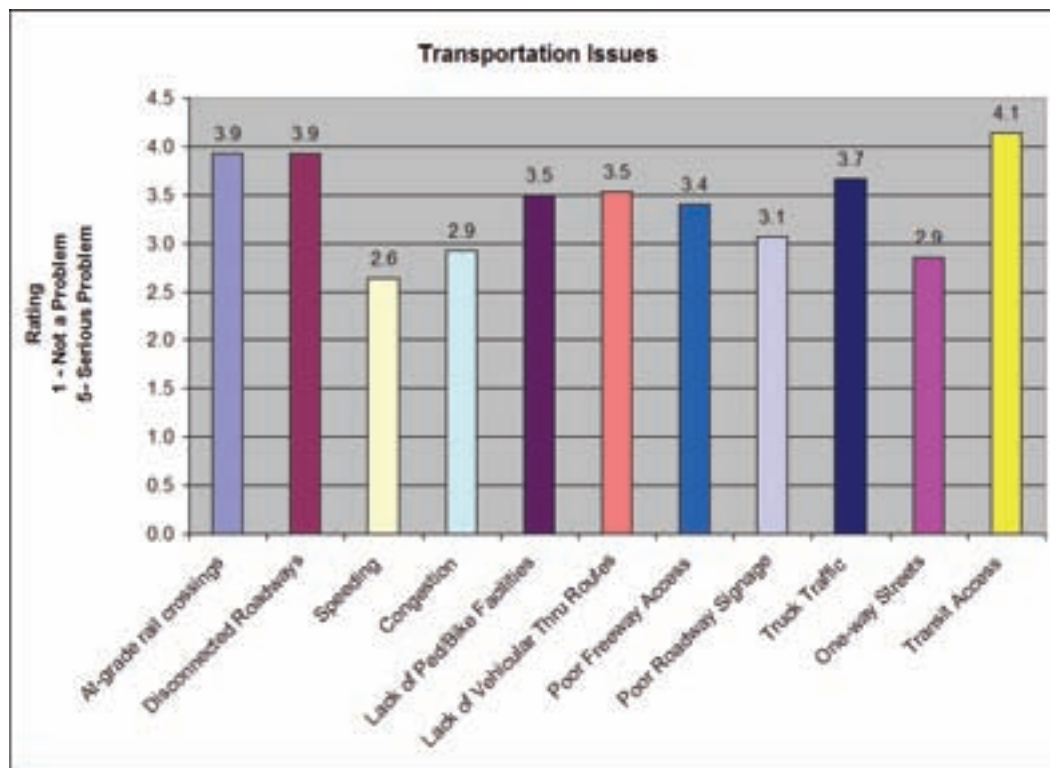


Figure 4-1: Responses to Question 1 from the Redefining Brownfields Questionnaire



**Figure 4-2** includes a summary of the findings from the second set of questions on the survey, which asked the respondents to rate the existing transportation issues present within the study area. The issues were to be rated from 1 to 5, with a rating of 1 suggesting the respondent felt the listed issue is not a significant problem, and a rating of 5 suggesting the issue is a significant problem.



**Figure 4-2: Responses to Question 2 from the Redefining Brownfields Questionnaire**

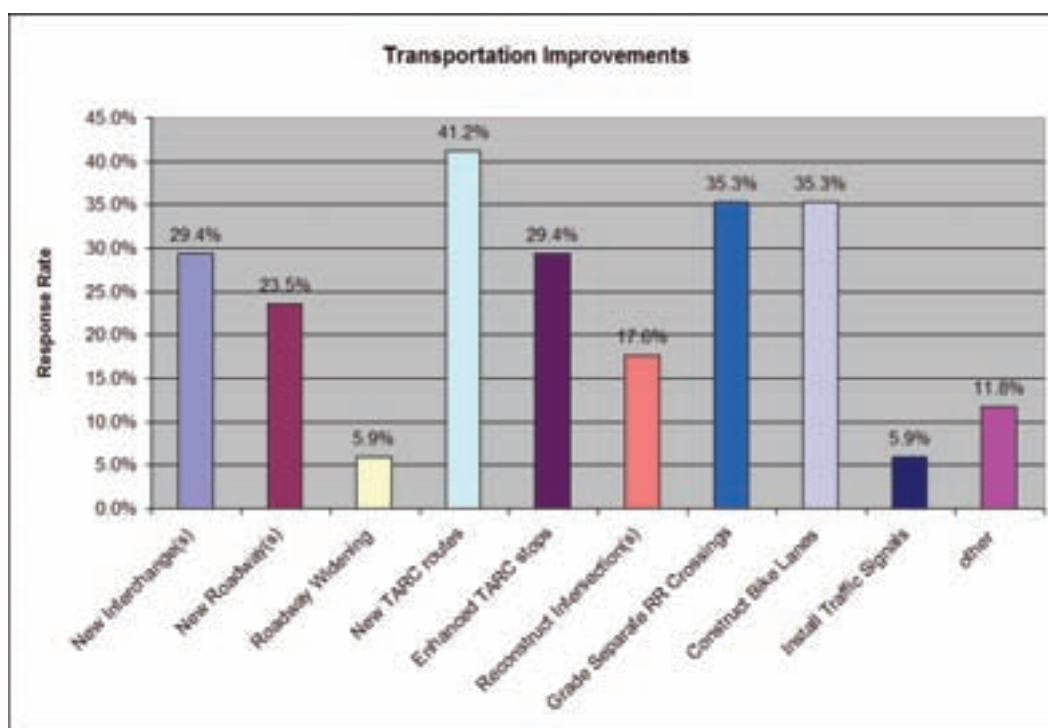
The respondents indicated that transit access is the most significant problem in the Park Hill Corridor, assigning an average rating of 4.1 to the issue. At-grade rail crossings (which were defined during the presentation) and disconnected roadways were listed as the second most significant issue, with each receiving an average rating of 3.9. No definition was given for what was meant by the “truck traffic” issue; rather, the definition was left to the interpretation of the respondent. This issue ranked third in terms of significance with an average rating of 3.7. The least important issues to the respondents include speeding (average rating of 2.6), congestion (average rating of 2.9), and one-way streets (average rating of 2.9.) These ratings suggest the respondents have a relatively good understanding of the traffic conditions within the study area as congestion and travel speeds do not appear to be significant issues in most areas.

Two items were included on the list of transportation issues in an effort to better understand the recipients’ comprehension of the transportation system and its impact on access. “Disconnected roadways” and “lack of vehicular through routes” can be interpreted as having the same meaning. That is, the number of disconnected streets within the transportation network leads to a lack of through routes for motorists. However, the survey results indicate that the respondents interpreted the issues differently, and felt that disconnected roadways is a more significant issue than a lack of through routes.



Additional space was provided for the respondents to list other issues they feel are important in the study area. Responses included poor conditions of roadways (one respondent rated this a 4), a need for light rail (one respondent rated this a 5), and parking at the University of Louisville (one respondent rated this a 4.)

**Figure 4-3** depicts the findings from the third set of questions included on the survey. These questions asked the respondents to consider a list of potential transportation improvements and to indicate whether they felt such improvements should be considered for implementation within the study area. Note the percentages included in **Figure 4-3** are based on 17 responses as one respondent did not complete this section of the questionnaire.



**Figure 4-3: Responses to Question 3 from the Redefining Brownfields Questionnaire**

Paralleling the findings from the question on transportation issues, respondents indicated transit access should be given the most consideration. Approximately 41% (seven respondents) indicated new TARC bus routes should be considered and approximately 29% (5 respondents) indicated enhanced transit stops should be considered. Grade-separating existing at-grade rail crossings and constructing bicycle lanes were the second most requested improvements, with each receiving approximately 35% (six respondents for each.) Roadway widening and installation of new traffic signals received the fewest responses with approximately 6% (one response for each.)

A space was provided for respondents to include additional improvements they would like to see considered for implementation within the Park Hill Corridor. One respondent listed light rail and one respondent listed repair of existing at-grade rail crossings.





Under “additional comments”, one respondent mentioned the importance of the Old Louisville Historic District. The respondent went on to say that consideration should be given to eliminating truck traffic within the historic district.

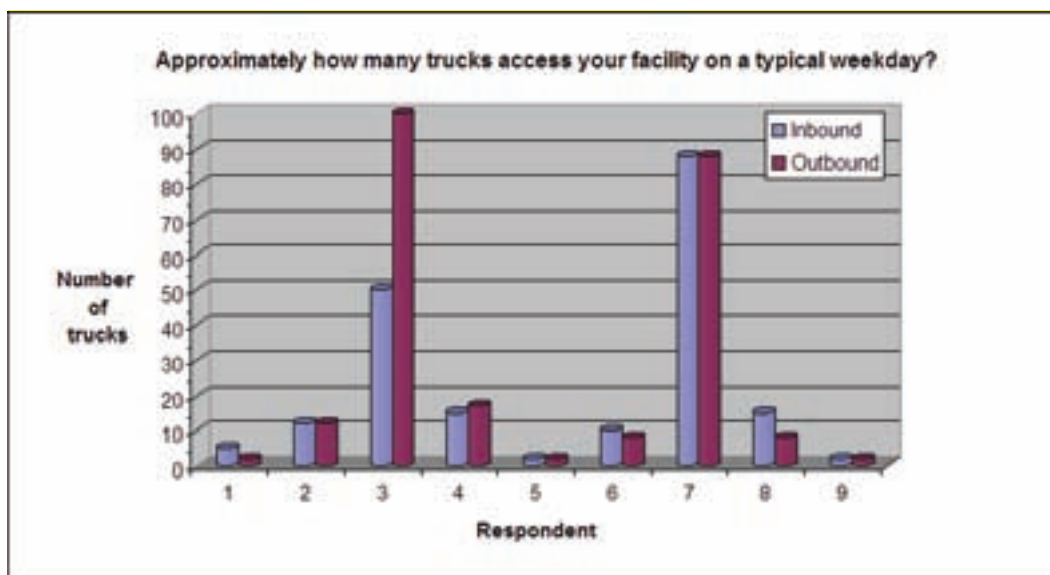
A copy of the meeting documentation and the questionnaire was posted to the Redefining Brownfields website ([www. Redefiningbrownfields.org](http://www.Redefiningbrownfields.org)) for those members not present at the May 21 meeting. No additional responses have been received to date.

## 4.2 Business Outreach

As described in previous sections of the report, the Park Hill Industrial Corridor lacks sufficient, defined truck routes for shipment of goods to and from the area between the interstate systems in Louisville. It was decided to survey industrial companies that have current shipping needs within the Park Hill Industrial Corridor to determine their specific observations of the transportation deficiencies and needs within the area.

The Study Team compiled a list of probable businesses that use the existing roadway network. Initially, a general letter was mailed to several of these business stakeholders by the Economic Development Department to explain the overall purpose of the project and inform of possible future contact for their input on project-related issues. This was followed by a second round of mailings sent out on June 11, 2007 to 50 selected businesses. The mailings included a cover letter, questionnaire, study area map, and a self-addressed envelope. A sample of the materials sent out is shown in **Appendix D**. To date, a total of ten questionnaires have been returned. The following discusses the responses.

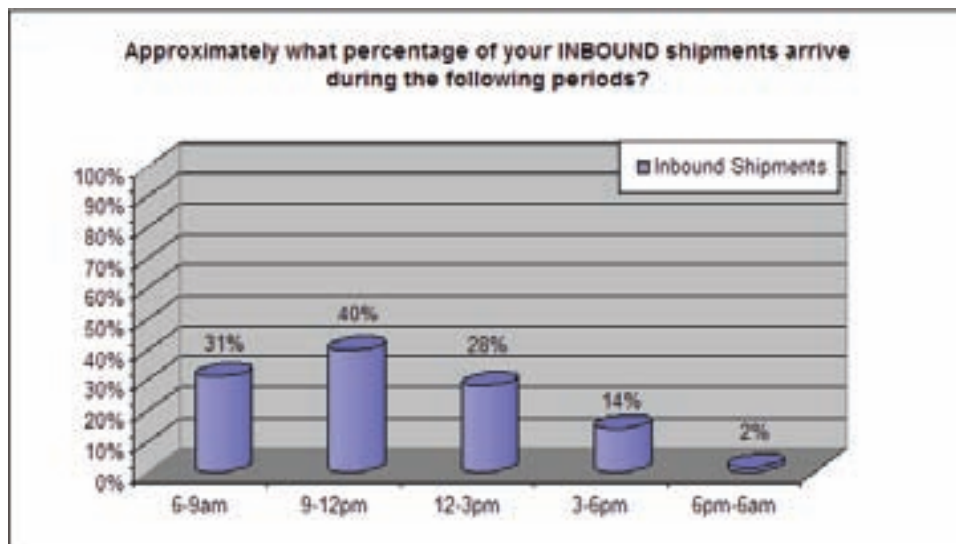
The first section of the questionnaire concerned the current operations of the business. Nine of the ten respondents approximated the number of trucks that access their facilities on a typical weekday. **Figure 4-4** displays the results.



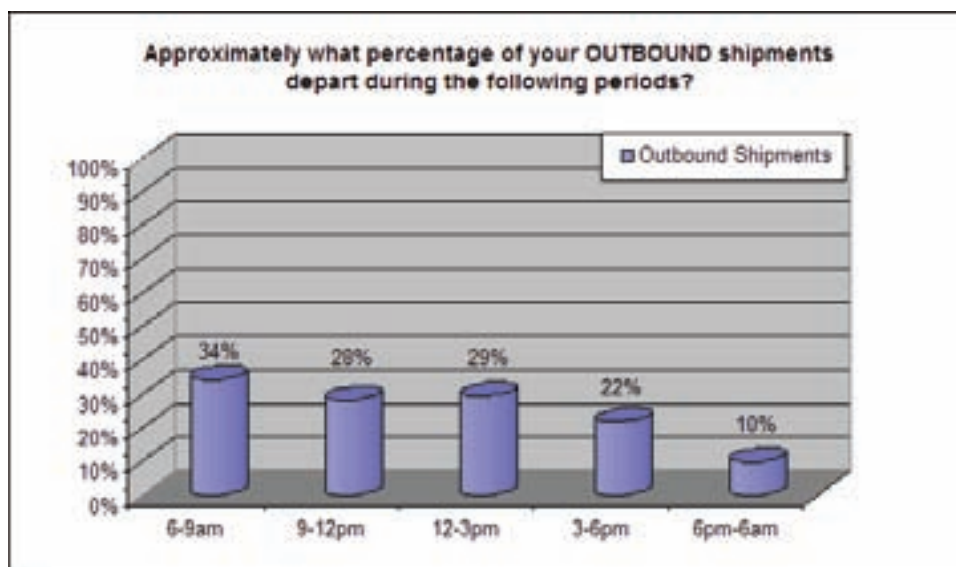
**Figure 4-4: Responses to Question 1 from the Business Survey**

The results varied greatly, as expected, due to the array of businesses that have shipping needs. The average number of inbound trucks that access their facility was 24 trucks, with a minimum number of two trucks and maximum number of 88 trucks. For outbound trucks, the average number was 27 trucks, with a minimum number of two trucks and a maximum number of 100 trucks.

All ten respondents approximated the times of day when their truck shipments arrive to and depart from their business location. The percentages for inbound shipments are shown in **Figures 4-5** and for outbound shipments in **Figure 4-6**.



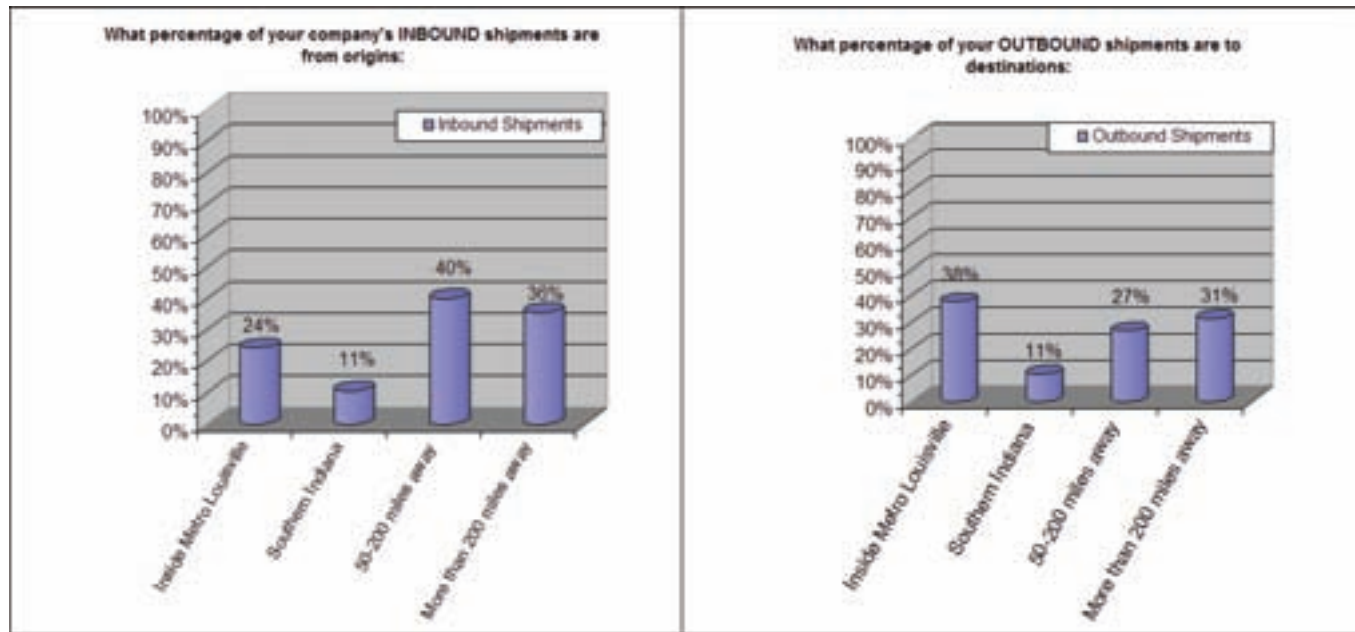
**Figure 4-5: Response to Question 2 from the Business Survey**



**Figure 4-6: Response to Question 3 from the Business Survey**

The majority of inbound shipments arrive between 9am and 12pm, while the majority of outbound shipments depart between 6am and 9am. Of nine responding companies, sixty percent reported that their business operated on weekends. Of those, the average number of trucks that access their facilities on the weekend is eight trucks.

**Figure 4-7** summarizes where the origins and destinations are located for the respondents' truck shipments.



**Figure 4-7: Response to Question 5 and 6 from the Business Survey**

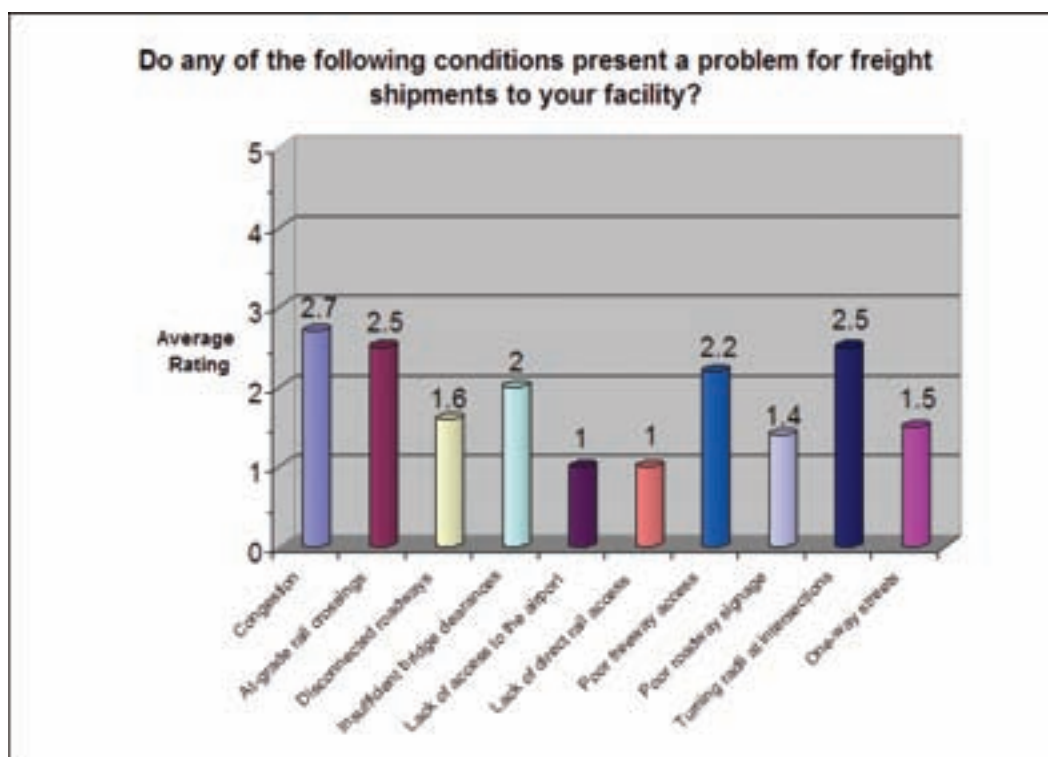
The majority of inbound shipments are from origins at least 50 miles from the business location. A few of the origins listed include Indianapolis, IN, Cincinnati, OH, and St. Louis, MO. The majority of outbound shipments are to destinations within Metro Louisville, followed closely by those destinations at least 50 miles from the business location. These origin and destination responses suggest a heavy need for interstate access to the Park Hill study area.

When asked whether the businesses ship to the Louisville International Airport, only three of the ten respondents ship goods to the airport. Of those that ship to the airport, they reported the percentage of truck shipments going to the airport to be 25% or less. No respondents reported to see a potential need to ship to the airport in the future. When asked whether the businesses ship by rail, one business currently uses rail transportation for shipping needs. It was not disclosed by the respondent the percentage of total shipments that utilized rail. None of the respondents reported a future need to ship by rail. In regard to "time sensitive" shipments, the average percentage of inbound and outbound shipments to be delivered within one hour scheduled time was 15% and 31%, respectively.



One question was included on the questionnaire to determine how much expansion of existing trucking operations could be expected in the future. Only two businesses reported plans to expand within the next four years. One business anticipates a 30% growth, while the other business reported a more substantial growth of 50% in truck shipments.

The last section of the questionnaire asked respondents to rate the current deficiencies of the existing roadway network that shipping industries utilize regularly. Several roadway issues were listed and businesses were asked to rate them 1-5, with 1 being not a problem and 5 being a serious problem. Ten respondents rated the listed conditions. The results have been summarized and an average rating is shown for each issue in **Figure 4-8**.



**Figure 4-8: Responses to Question 11 from the Business Survey**

The highest average-rated issue with a 2.7 rating is congestion. This is a popular concern for businesses with shipping needs located in an urban setting such as the Park Hill study area. However, the survey respondents did not report having a significant amount of time-sensitive shipments, so this may not be an operational issue. More interesting are the next two highest rated conditions, tied with a 2.5 rating: at-grade rail crossings and turning radii at intersections. One other issue mentioned as being a serious problem include on-street parking taking up driving lanes through the area.

A total of six survey respondents commented on transportation improvements they would like to see made within the study area. Improvements along Hill Street seemed to be the most frequent response, with four of the six respondents making various recommendations along the roadway. The Hill Street comments included: roadway widening, intersection improvements at 7<sup>th</sup> and 9<sup>th</sup> Streets, railroad bridge



reconstruction at 6<sup>th</sup> Street, grade-separated rail crossing construction at 15<sup>th</sup> Street, and I-65 access from Hill Street. Additional improvements included widening of McCloskey Avenue between Algonquin Parkway and Hill Street and improving the at-grade railroad crossing at W. Kentucky Avenue.



## 5.0 Traffic Simulation

In 2006, Metro Planning and Design asked ENTRAN to develop a large-scale traffic simulation model encompassing much of the metro area. Under a separate contract, ENTRAN had previously developed a traffic simulation model covering the Kennedy Interchange study area. This model was developed using the TransModeler software package. TransModeler is a product of Caliper Corporation, developers of the TransCad travel demand software used by the Kentucky Transportation Cabinet (KYTC) and the Kentuckiana Planning and Development Agency (KIPDA.) ENTRAN expanded the model developed for the Kennedy Interchange to include nearly all of Metro Louisville inside I-264 and west of I-65, and from I-65 east to Zorn Avenue on I-71. Figure 5-1 depicts the limits of this model area.



**Figure 5-1: Original Metro Traffic Simulation Model Area**

Portions of the original Metro traffic simulation model were extracted to create a Park Hill Study area model. The limits of this model area include Broadway to the north, 22<sup>nd</sup> Street to the west, Algonquin Parkway and Winkler Avenue to the south, and Second Street to the east. The model area is shown in **Figure 5-2**.



**Figure 5-2: Park Hill Traffic Simulation Model Area**

As the original model was based on the street system depicted in the base year (2000) version of KIPDA's travel demand model network, several modifications were required to accurately reflect existing conditions. Perhaps the most obvious change is the extension of 9<sup>th</sup> Street to the south and the construction of a single point urban interchange at 9<sup>th</sup> Street and Oak Street. Prior to this interchange being constructed in 2004, Oak Street was two-way west of 8<sup>th</sup> Street and one-way (eastbound) to the east. As the interchange was completed, the section of Oak Street east of 8<sup>th</sup> Street was converted to two-way traffic. St. Catherine was included in the base year model as being one-way westbound. In about 2002, St. Catherine was converted to two-way traffic west of Third Street.



With the geometric modifications complete, additional traffic data provided by Metro Public Works were incorporated into the model. These data included traffic counts that were not available during the development of the original model.

Geographically, the regional travel demand model is divided into traffic analysis zones (TAZ's); each zone has a center of activity called a centroid. Centroid connectors are used to load and unload traffic from the centroids to and from the model network. Although a street segment may have several driveways that serve as entry and exit points, it is not practical to model individual entrances or exits. A simplifying assumption was made whereby traffic for each TAZ was loaded via centroid connectors in three or four mid-block locations. Typically these were located at major mid-block traffic generators like parking lots.

Entry and exit points to the network at its external boundaries are referred to as external nodes. It is the collection of external nodes and centroids that were used to load traffic into and receive traffic from the model network.

Trip interchanges for all possible origin-destination ("O-D") combinations of centroids and external nodes are stored in an O-D matrix, which the traffic models used to load or "assign" traffic to the network. For the base year A.M. and P.M. peak hour scenarios, O-D matrices were developed using the Origin-Destination Matrix Estimation (ODME) tool within TransModeler. The ODME tool uses existing traffic counts – both hourly directional link or roadway segment counts and intersection turning movement counts – in developing the O-D matrices. As part of the matrix estimation, TransModeler creates a matrix that can be assigned to the model network.

The assigned volumes then were compared to the traffic counts for individual links and model adjustments were made until there was a very favorable agreement between projected assignments and counts. The Root Mean Square Error (RMSE) test was used in this calibration; in practice, a RMSE of 30% or less is considered good for an area-wide model. For the base year traffic simulation models, a RMSE of 12.1% was obtained for the A.M. peak matrix and 13.7% was computed for the P.M. peak matrix. It was determined that the base year O-D matrices were calibrated to within acceptable limits and that assignment of these matrices by the models reasonably reflects observed traffic volumes.

## 5.1 Existing Conditions

Models initially were developed to simulate typical weekday A.M. and P.M. peak hour traffic conditions for the base year. These were calibrated to the point where the models accurately reflected known traffic conditions. In the A.M. peak hour, which is typically somewhere between the hours of 7:00 A.M. and 9:00 A.M. depending on the area in question, the model includes a total of 20,049 trips. This represents the demand for travel during morning peak hour. In the P.M. peak hour, which typically occurs somewhere between 4:00 P.M. and 6:00 P.M., the model includes a total of 21,383 trips.

The total trips contained within the O-D matrices can be disaggregated by trip type – internal versus external. Internal trips have a trip end (the origin or destination) at a location internal to the model area, while external trips have a trip end at a location external to the trip area (or at the boundary of the study area.) Examination of the total trips by trip type can reveal travel patterns that currently exist within the study area. **Table 5-1** depicts the trip types estimated for the A.M. and P.M. peak hour O-D matrices.



**Table 5-1: Trip Types for the Peak Hour O-D Matrices**

Peak	Trip Type	External	Internal
	AM Peak	External	26.8%
Internal		20.6%	15.3%
PM Peak	Trip Type	External	Internal
	External	31.0%	27.8%
Internal	30.7%	17.2%	

In the A.M. peak, the highest percentage of trips is External-Internal (37.3%), indicating that the majority of the trips during the morning enter the study area and are destined for a location within the study area. This condition is somewhat intuitive as the A.M. peak represents the period where most commuters travel to their place of employment. The second-highest percentage of trips is External-External (26.8%), suggesting that travel through the study area represents slightly less demand than travel into the study area. Internal-Internal trips, where the trip originates and terminates within the study area, represent the least demand (15.3 %.)

In the P.M. peak, the highest percentage of trips are External-External (31.0%), indicating that demand for travel through the study area is highest. However, the Internal-External trips are only slightly less (30.7%), which represents the demand for travel for commuters from their places of employment back to their homes in the evening. As is the case in the A.M. peak, Internal-Internal trips, where the trip originates and terminates within the study area, represent the least demand (17.2%.)

TransModeler allows users the ability to define the composition of the vehicle fleet which will be simulated. **Table 5-2** includes the distribution of vehicle types used in the simulations.

**Table 5-2: Vehicle Fleet Assumptions for Peak Hour Simulation Models**

Name	Description	Percentage of Fleet
PC1	High performance passenger cars	25.0
PC2	Medium performance passenger cars	29.7
PC3	Low performance passenger cars	23.0
PU	Pickup trucks or utility vehicles	15.0
ST	Single-unit trucks	4.0
TT	Tractor/semi-trailer trucks	2.0
B	Buses	1.0
M	Motorcycles	0.3



TransModeler also has the ability to simulate interruptions due to pedestrian crossings at intersection and mid-block crosswalks, but pedestrian crossing data were not available for the Park Hill models. It is also possible to simulate specific bus routes, including scheduled route stops, but this information was not included in the models. However, buses as a percentage of the overall traffic stream (an assumed one percent) were included.

There are many performance measures that can be extracted from the simulation model output. **Table 5-3** presents a summary of some of the network-wide statistics that were reported for the existing simulation models.

**Table 5-3: Performance Measures for the Existing Peak Hour Simulation Models**

Peak Period	Vehicle-miles of Travel (VMT)	Vehicle-hours of Travel (VHT)	Average Speed (MPH)	Delay (hours)	Average Delay (sec/mi)	Number of Stops (100's)
AM Peak	19,359.1	1,165.5	16.6	736.4	203.2	589.0
PM peak	21,192.0	1,124.8	18.8	654.8	145.3	600.0

The overall results suggest that traffic congestion is not a significant issue within the study area. Relatively high average travel speeds (16.6 MPH in the A.M. and 18.8 MPH in the P.M.) are maintained, and delay is relatively low. The results suggest more travel occurs during the P.M. peak hour which corresponds to a higher number of trips in the estimated P.M. O-D matrix.

## 5.2 Future Conditions

A future-year scenario was developed for the Park Hill Corridor that assumes no significant changes in land use. Traffic forecasts were developed for a horizon scenario in the year 2030. This scenario can be considered a “No-Build” scenario in that it considers no improvements to the existing transportation network and includes only background traffic growth that is anticipated to occur within the area.

Using the KIPDA demand model network, screen lines were created and travel across these lines was quantified for both the base year and 2030 future year. Growth factors for traffic across these lines were developed and stored in a separate matrix. The growth factors matrix then was applied to the base year simulation model A.M. and P.M. O-D matrices in order to create year 2030 O-D matrices. It should be noted that the KIPDA model is a 24-hour model; that is, it only produces 24-hour travel forecasts. It was assumed that growth in peak hour traffic volumes will be similar to the growth in total daily traffic volumes.

Given changes that have occurred to the existing street system since the development of KIPDA’s year 2000 travel demand model was developed, it was not considered feasible to use the existing trips from that model as a basis from which to forecast future traffic conditions. However, KIPDA provided a 2009 version of its network with assigned traffic. This version was utilized as a base year in the development of future year O-D matrices.



Several areas are anticipated to experience negative growth through 2030. These are found primarily in the western and southwestern portions of the study area. For example, Algonquin Parkway west of 22<sup>nd</sup> Street is anticipated to see 10% fewer trips in 2030. The highest growth is anticipated to the north and east. The area north of Broadway near 15<sup>th</sup>, 16<sup>th</sup>, and 17<sup>th</sup> Street is anticipated to increase by over 50% by 2030, and travel along the 2<sup>nd</sup> Street corridor north of Broadway is anticipated to increase by over 40%.

**Table 5-4** presents a summary of the existing and anticipated 2030 trips within the study area, including a comparison of the average growth forecast.

**Table 5-4: Summary of Existing and Anticipated 2030 Trips in the Park Hill Study Area**

Year	AM Trips	PM Trips
Existing	20,049	21,383
2030	21,252	23,232
<i>Increase</i>	6%	9%

Overall, the KIPDA model does not predict strong growth in travel within the study area. This is evidenced by the anticipated 6% growth in A.M. peak hour trips and the 9% growth in P.M. peak hour trips between now and 2030. This suggests that if land use changes are not implemented or significant development does not occur within or near the study area, the demand for travel within the study will not increase significantly.

The future year 2030 traffic O-D matrices were simulated using the No-Build model network. The simulation results are found in **Table 5-5**.

**Table 5-5: Performance Measures for the 2030 Peak Hour Simulation Models**

Peak Period	Vehicle-miles of Travel (VMT)	Vehicle-hours of Travel (VHT)	Average Speed (MPH)	Delay (hours)	Average Delay (sec/mi)	Number of Stops (100's)
AM Peak	20,341.6	1,238.5	16.4	786.6	186.4	629.0
PM peak	22,822.3	1,248.2	18.3	740.7	151.9	666.0

As would be expected based on the anticipated growth in travel within the study area, the results from the 2030 simulation models suggest that traffic conditions will not worsen significantly under a No-Build condition. Average travel speeds decrease slightly as traffic increases, but overall delay does not increase significantly. In summary, traffic conditions in the future are not anticipated to be a significant issue.



## 6.0 Conclusions and Recommended Next Steps

The following sections discuss the conclusions from Phase I of the Park Hill Industrial Corridor Short-term Transportation Planning Study, and the recommended next steps for consideration during the Phase II efforts.

### 6.1 Master Planning Effort

Louisville Metro will coordinate a more comprehensive Master Plan update for the Park Hill Industrial Corridor beginning some time in 2007. The focus area for the Master Plan will be somewhat smaller than that for the Short-term Transportation Planning Study, but the recommendations from the Master Plan may have a tremendous impact on the area's transportation system.

With that in mind, consideration must be given to the scope of and timeline for suggested changes in land use within the Park Hill corridor. The relationship between land use and transportation is often convoluted in that needed transportation improvements come after the land use changes are implemented. With the environmental concerns related to the brownfields within the study area, phasing of improvements is critical to ensure that the transportation system will be capable of accommodating the multimodal traffic (including vehicular, truck, transit, pedestrian, and bicycle) that will be generated.

### 6.2 Development of Conceptual Recommendations

An underlying objective of Phase I was to determine where deficiencies exist within the area transportation system so that improvement options can ultimately be developed. These improvements will focus on issues that will foster redevelopment of the area by improving access and mobility. To that end, a list of objectives has been developed against which potential improvements may be evaluated. These objectives include the following:

- Promote connectivity:
  - To the surrounding neighborhoods
  - To the freeway system
  - To the University of Louisville
  - To Louisville International Airport
  - To the Jefferson Riverport
- Provide enhanced circulation opportunities within the Park Hill Industrial Corridor
- Enhance the multimodal transportation system, including:
  - Transit system
  - Bicycle and pedestrian facilities
  - Embrace the "Complete Street" concept
- Provide designated truck routes
- Manage land access so as to preserve capacity and safety for the future
- Increase quality of life within the surrounding neighborhoods
- Limit opportunities for vehicle-rail interaction
- Promote the development of intermodal facilities
- Partner with developers and businesses to promote development opportunities in the Park Hill Industrial Corridor



Once the Master Plan process is underway and a vision for future land use becomes more clear, these objectives can provide guidance and direction in scoping improvements that should be considered for implementation within and surrounding the Park Hill Industrial Corridor.

As an example of the types of improvements that should be considered, Metro indicated that several parcels north of Algonquin Parkway and east of 7<sup>th</sup> Street are likely to undergo some redevelopment in the near future. The area in question is shown in **Figure 6-1**. This redevelopment area, which is likely to include residential and perhaps small-scale commercial development, is bounded by Norfolk Southern rail on the south and west and CSX to the east. The rail lines carve out a wedge of land east of 7<sup>th</sup> Street that is currently accessible by only Lee Street/Shipp Avenue and 7<sup>th</sup> Street. The Lee Street/Shipp Avenue connection has an at-grade rail crossing on the CSX line making that corridor undesirable for increased traffic. Because of issues with intersection geometry, no left turns are allowed from Hill Street to 7<sup>th</sup> Street.



**Figure 6-1: Proposed Development Area and Connectivity Issues**

Because of its proximity to the University of Louisville, consideration should be given to establishing a more-direct connection between the existing street system and the redevelopment area. Currently, Eastern Parkway and Cardinal Boulevard provide access between the university and I-65 and Brandeis Avenue runs between 2<sup>nd</sup> and 4<sup>th</sup> Street. These three corridors should be evaluated for options to cross the CSX rail line with a grade separation to connect the redevelopment area with areas east. A feasibility analysis will be required to determine if the benefits outweigh the impacts of such a connection; however, such a determination cannot be made until it has been thoroughly investigated.



Other improvement options that could be considered in a subsequent study include the following (listed in no particular order):

- Conversion of one-way portions of 7th and 8th Street to two-way traffic
- Realignment of offset intersections along 18<sup>th</sup> Street/Dixie Highway
- Improvements to Hill Street, such as the following:
  - Railroad overpass: horizontal and vertical clearance improvements
  - 7<sup>th</sup> Street intersection: widening to provide left turn lanes
- Conversion of one-way portion of Oak Street/Virginia Avenue (west of 16<sup>th</sup> Street) to two-way traffic
- Reconnection of streets through the study area, such as the following:
  - East-west: Ormsby Avenue, St. Catherine Street, Breckinridge Street
  - North-South: 11<sup>th</sup> Street, 13<sup>th</sup> Street
- Conversion of select at-grade rail crossings to grade-separated crossings
- Implementation of an at-grade railroad crossing improvement program
- Improvements to 28<sup>th</sup> Street to provide a better connection to the I-264 / River Park Interchange from West Broadway (outside the study area)
- Establishment of an intermodal hub within the Park Hill Industrial Corridor
- Elimination of abandoned rail lines

### 6.3 Additional Coordination

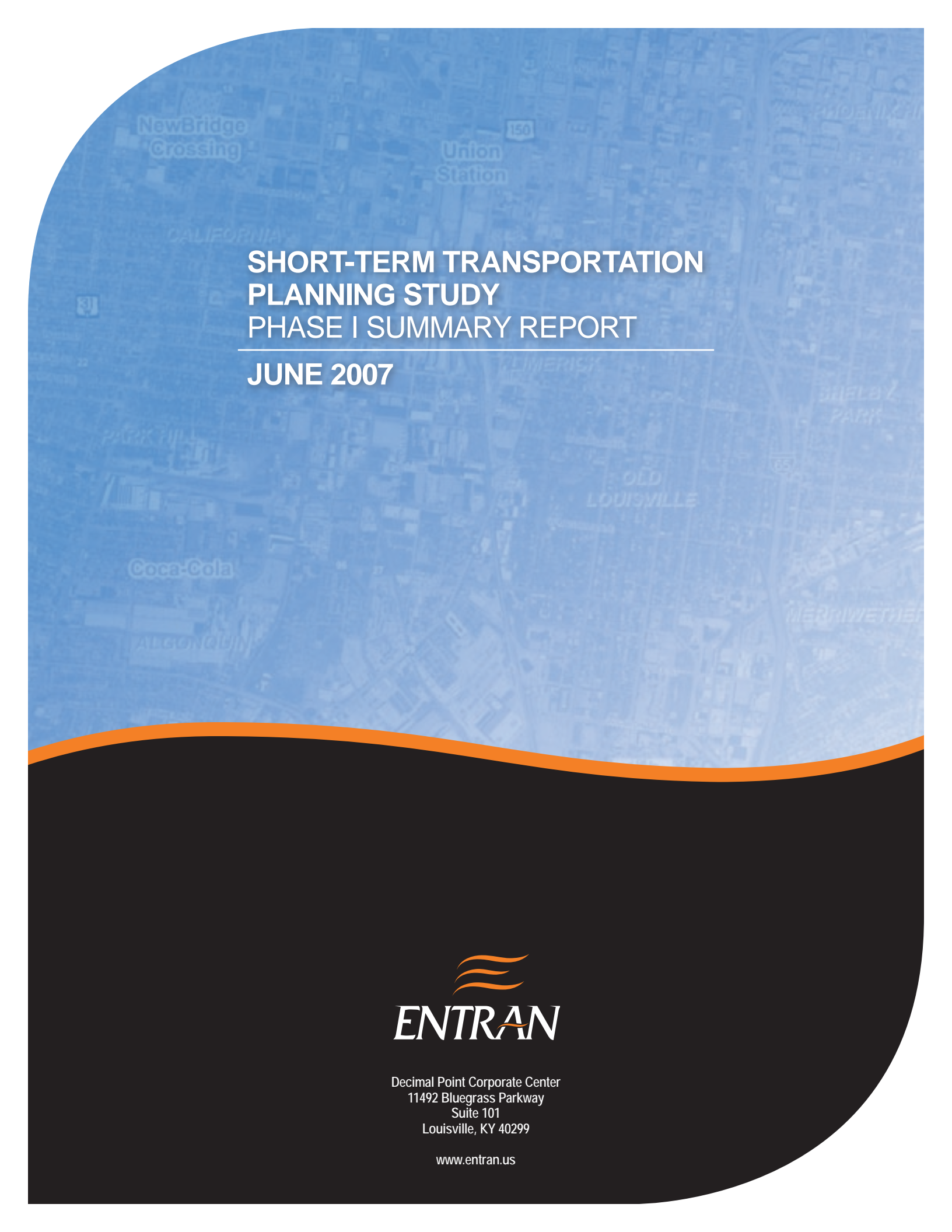
Throughout Phase I, the Study Team has attempted to coordinate with the rail operators within the Park Hill study area. CSX Transportation, the Paducah and Louisville Railway, and Norfolk Southern have indicated they will provide information relative to their operations and future plans for the Park Hill Industrial Corridor. However, only CSX has provided such information to date. The Study Team will continue to work with the other railroads to ensure that their operations are given the consideration they are due, particularly during the development of improvement scenarios.

It is important to the success of the study that existing businesses are provided the opportunity to voice their concerns and to provide information on their specific needs. Therefore, the business survey sent to trucking operations in Phase I may be sent to additional facilities in the future. Additionally, surveys will be sent to businesses outside of the Park Hill study area to solicit input regarding locating operations within the study area.

Additional coordination and public outreach will be engaged with the study area stakeholders (Redefining Brownfields group, area residents, businesses, property owners, public and non-profit sector representatives, etc.) to obtain feedback regarding private and public transit issues, accessibility of places of employment to workers, parking, area's public transportation level of service, pedestrian and bicycle mobility needs, and similar topics.

### 6.4 Phase II

Whereas Phase I focused on the definition of existing conditions and the establishment of project goals, Phase II will begin to develop transportation improvement options for future consideration. Ideally, Phase II study efforts will allow for coordination with the master planning consultant to ensure land use considerations are fully planned for in terms of their transportation needs. The product for Phase II will be the Transportation Elements/Mobility chapter for insertion into the Master Plan.



**SHORT-TERM TRANSPORTATION  
PLANNING STUDY  
PHASE I SUMMARY REPORT**

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