



Northeast Corridor Rapid Transit Alternatives Analysis Completion Study

Statement of Purpose and Need

*final
report*

May 30, 2008



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Statement of Purpose and Need

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1. Introduction and Background

As part of the ConNECTIONS study in 2001, a Draft Environmental Impact Statement (DEIS) for multimodal transportation improvements in the Northeast Corridor was developed by the Indiana Department of Transportation (INDOT), the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA).¹ The ConNECTIONS study purpose was, “to identify a locally supported, financially feasible transportation strategy to address 2025 traffic congestion and mobility limitations in the Northeast Corridor of the Indianapolis Metropolitan Region.” The ConNECTIONS DEIS determined that “additional studies were needed to determine the transit needs of the greater Central Indiana Region,” which was the impetus for initiation of the DiRecTionS regional rapid transit study. As stated in the purpose and need statement developed early in the DiRecTionS study process,²

The primary purpose of the DiRecTionS study is to evaluate the viability and cost-effectiveness of improving mobility, reducing traffic congestion, and improving air quality within the entire Indianapolis Metropolitan Region through the development of a regional rapid transit system...The analyses have focused on the potential implementation of transit within seven corridors branching out from Downtown Indianapolis. These corridors have been evaluated in terms of regional goals and objectives developed through broad-based public outreach. As the study progressed, implementing rapid transit within the Northeast Corridor proved to satisfy those goals and objectives to a higher degree than the other alternatives considered. In summer 2004, the Indianapolis Regional Transportation Council (IRTC) selected the Northeast Corridor as the first priority for rapid transit implementation.

This revised purpose and need statement builds upon the work conducted for the DiRecTionS study undertaken in fall 2002.

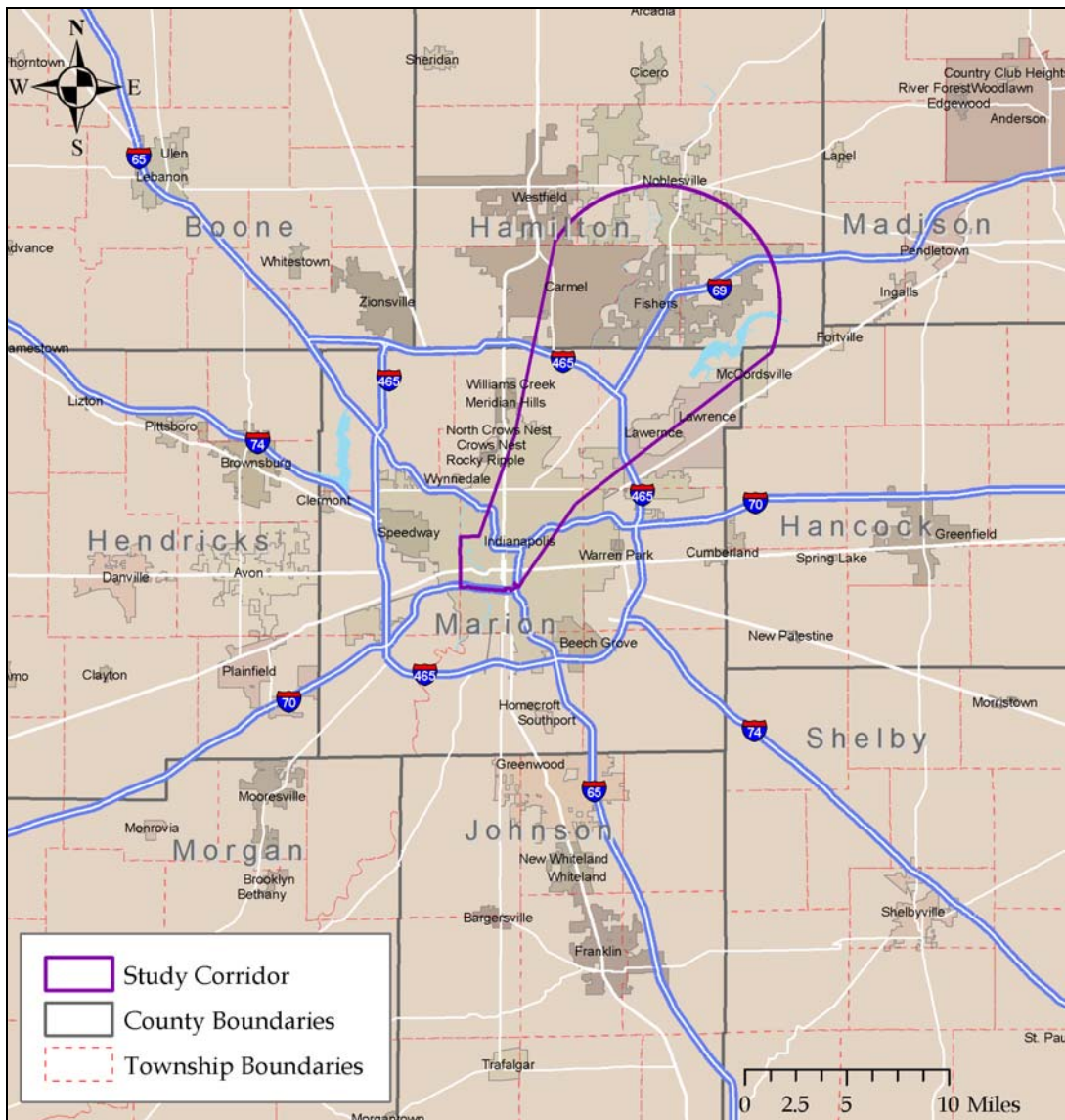
¹ Indianapolis Metropolitan Planning Organization. *Indianapolis Northeast Corridor Transportation Study (ConNECTIONS): Draft Environmental Impact Statement and Section 4(f) Evaluation*. September 2001.

² Indianapolis Metropolitan Planning Organization. *Indianapolis Metropolitan Area Rapid Transit Study (DiRecTionS) Tech Memo III-AAA2: Refined Purpose and Need Statement*. September 2005.

2. Study Area

The corridor under study for new transit facilities is located in Marion and Hamilton Counties, Indiana. As shown in Figure 2.1, the Northeast Corridor extends from the Indianapolis central business district (CBD), hereafter described as the “regional center,” to Noblesville, northeast of Indianapolis.

Figure 2.1 Study Area



3. Purpose: A Vision for the Greater Indianapolis Area

3.1 A Vision for Central Indiana

The Central Indiana region has articulated a vision for mobility, incorporating regional transit, in several recent regional plans. The January 2000 *Central Indiana Transportation and Land Use Vision Plan* focused on the relationship between the region's lack of mobility options and vitality, and recognized that steady growth in traffic volumes and congestion were threatening the region's high quality of life.³ The study found that the Northeast Corridor, and particularly I-69 north of I-465, faces the worst congestion in the region. Central Indiana also has a lower level of transit service than comparable regions, and consequently lower levels of ridership. The region recognizes that increasing traffic congestion is largely the result of land use decisions that foster increased auto usage.

The study outlined a vision for the future, emphasizing an integrated transportation system with both good roadways and comprehensive mass transit. The vision called for more multimodal transportation choices to provide improved access to destinations throughout the region, particularly along corridors where population and employment is concentrated. To support these corridors, the vision was that the region's matrix of urban centers, dominated by the Indianapolis city center, would be further developed and connected by transportation corridors.

The *Indianapolis Regional Center Plan 2020* envisions a vibrant downtown Indianapolis as the regional center of Central Indiana.⁴ The plan emphasizes that "the compact core of convention and tourism facilities is responsible for much of the success of Indianapolis as a destination. As new development occurs, it needs to occur adjacent to existing facilities or be connected to these facilities through transit links." This approach to downtown development is supportive of developing a regional transit system that will allow workers and visitors to reach destinations in the regional center as easily as possible.

³ Central Indiana Regional Citizen's League (CIRCL). *Central Indiana Transportation and Land Use Vision Plan*. January 2000.

⁴ City of Indianapolis, Department of Metropolitan Development. *Indianapolis Regional Center Plan 2020: Final Report*. March 3, 2004. Available at <http://www.indyrc2020.org/>

3.2 Support by Indianapolis Region

The region has recently demonstrated strong interest in developing enhanced multimodal transportation options. The *Indianapolis Regional Center and Metropolitan Planning Area Multimodal Corridor and Public Space Design Guidelines* states:⁵

There is a growing belief that the region must develop a community-integrated, balanced, and accessible multi-modal transportation system to sustain its competitive stance and to enhance its quality of life standard. There is growing recognition that adding highway capacity for conventional transportation is a short-term remedy that leads to long-term congestion and sprawl impacts.

The design guidelines establish a vision for the Metropolitan Planning Area as:

... A regional network of diverse, walkable, bikeable, and transit friendly communities linked by a comprehensive multi-modal system that provides access to home, work, education, commerce, and recreation. This vision recognizes the importance of balance among all transportation modes, connects transportation and land use, and understands that economic and community development is sustained by the region's quality of life and environmental health.

The plan sets forth a series of pedestrian district typologies, including a Transit-Oriented District defined as a compact mixed-use community centered around a transit station. The downtown core is identified as a Central Business Pedestrian District with a centrally located, high-capacity rapid transit center surrounded by intense development. The *Regional Pedestrian Plan* detailing the development of comprehensive pedestrian systems also emphasizes the development of a balanced and intermodal transportation system to reduce reliance on the automobile.⁶

Indianapolis Insight, the Comprehensive Plan for Indianapolis - Marion County, states,⁷

We should provide a variety of transportation choices so that all people regardless of age or ability can travel throughout the region. Both the transportation system and the infrastructure system should anticipate and guide growth of the metropolitan area.

⁵ Indianapolis Metropolitan Planning Organization. *Indianapolis Regional Center and Metropolitan Planning Area Multimodal Corridor and Public Space Design Guidelines: Final Draft for Public Comment*. March 12, 2007.

⁶ Indianapolis Metropolitan Planning Organization. *Regional Pedestrian Plan*. November 2006. Available at <http://www.indympo.org/Plans/bike-ped.htm>

⁷ City of Indianapolis, Department of Metropolitan Development. *Indianapolis Insight: The Comprehensive Plan for Marion-County Indiana*. February 2002. Available at <http://www.indygov.org/dmdplan/indianapolisinsight/>

The plan explicitly supports development of a regional transit system. The demonstrated recognition of the relationship between land use and multimodal corridors is a strong foundation for development of a successful regional transit system.

3.3 Existing Transit and the Transit Experience

Indianapolis is served by the Indianapolis Public Transportation Corporation (IndyGo), the transit operator in Indianapolis - Marion County. IndyGo provides a basic level of bus service and has historically targeted the transit-dependent market – 75 percent of riders have no auto available. As a result the system, which served 8.8 million riders in 2005, operates on a scale smaller than the transit service of comparable cities. Buses run generally every 30 minutes during peak periods and every hour during off-peak periods. A system map is shown in Figure 3.1.

Figure 3.1 IndyGo Bus System



Source: Indianapolis Public Transit Corporation (IndyGo).

In 2004, an Indianapolis Transit Task Force was assembled to find new solutions for Indianapolis transit. The group developed the *Rebuilding Public Transportation in Indianapolis* report, which detailed opportunities for improvement of IndyGo service.⁸ The report noted that one major barrier for IndyGo is that it is legally prohibited from operating outside of Marion County, and therefore cannot serve the large numbers of workers who travel from outside of Marion County to the regional center.

⁸ Indianapolis Public Transit Corporation (IndyGo), Indianapolis Transit Task Force. *Rebuilding Public Transportation in Indianapolis: Final Report*. August 2004.

In its effort to enhance Indianapolis-area transportation options, the Indianapolis-Marion County City-County Council voted to create a Central Indiana Regional Transportation Authority (CIRTA) in 2004. The RTA is governed by a Board with members from jurisdictions throughout the nine-county Central Indiana region. While this agency is still in the process of formally organizing and identifying a consistent funding source, it holds regular discussions of rapid transit options throughout the region.

Previous experience with a regional bus pilot project has shown acceptance of commuter transit. When the Indiana Department of Transportation (INDOT) planned major improvements along a substantial section of the combined I-65 and I-70 arteries in downtown Indianapolis, a critical corridor for daily commuters, it implemented a special transit service for the 175,000 affected daily drivers. INDOT successfully implemented “Hyperfix” park-and-ride service with high quality motor coaches to transport as many as 600 commuters per day to their destinations during the two months of construction.

Downtown Transit Center

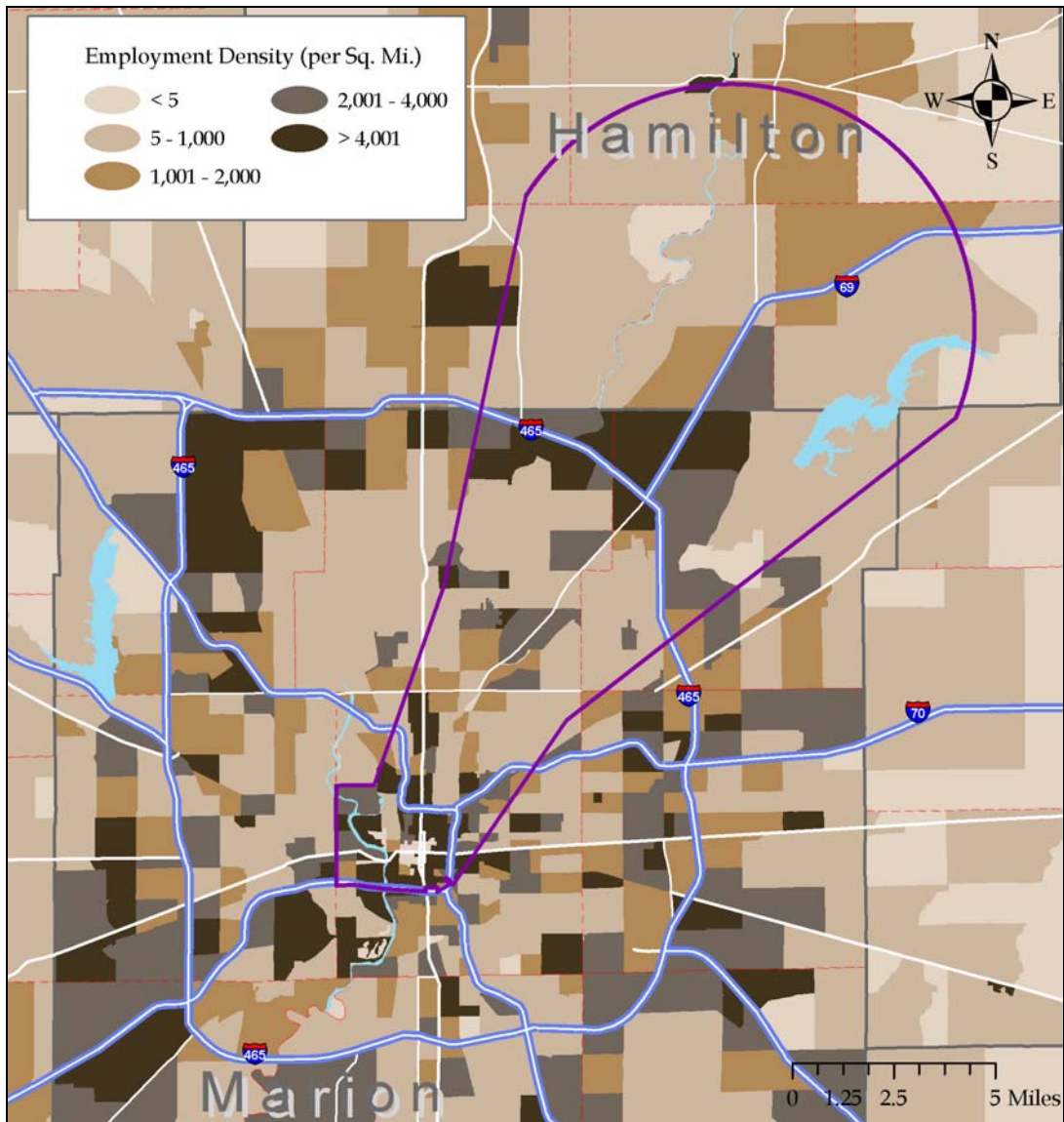
A downtown Transit Center has been proposed by IndyGo at the Post Office building located southeast of the RCA Dome, on South Street between Capitol Avenue and Illinois Street. This center could accommodate regional transit operations such as that of the Northeast Corridor and connections with IndyGo downtown bus circulation.

3.4 Regional Center

Employment Concentration

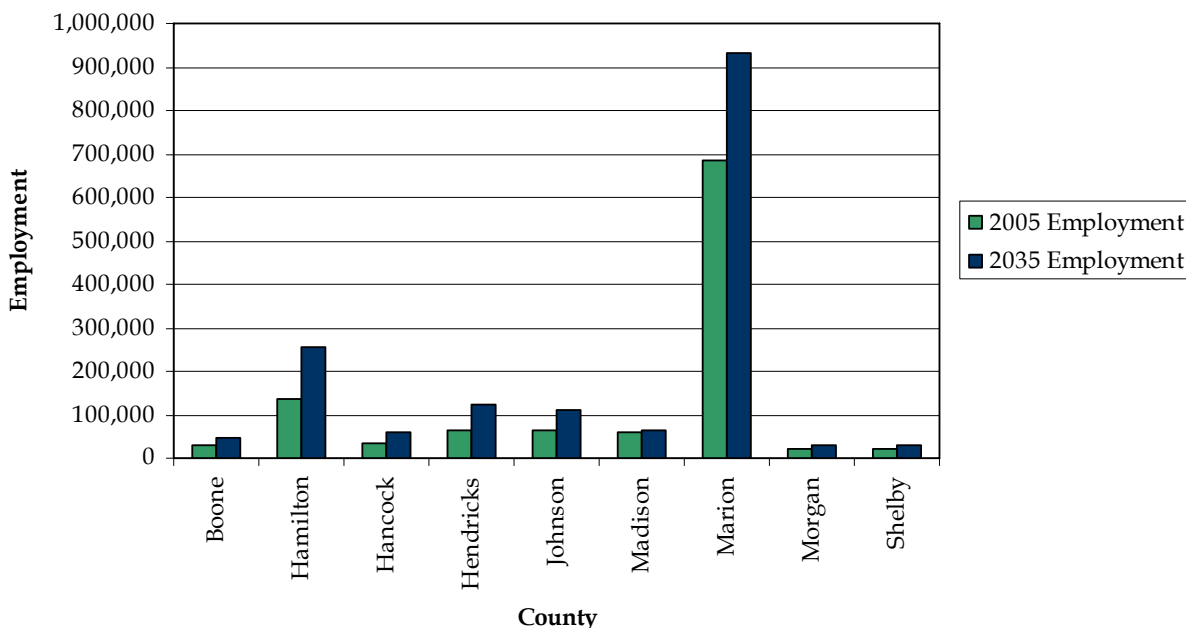
The areas of greatest employment density in the region include the regional center and the area near the intersection of I-495 and I-69, as shown in Figure 3.2. Marion County is by far the dominant county for regional employment, with Hamilton County having the second largest employment concentration, as shown in Figure 3.3. The greatest share of employment growth is forecasted to continue in Marion County over the coming decades, with an increase of more than 245,000 jobs from 2005 to 2035. Hamilton County is forecast to post the second largest increase, with more than 116,000 jobs to be added by 2035.

Figure 3.2 Employment Density, 2000



Source: U.S. Census, 2000.

Figure 3.3 Employment by County



Source: Indianapolis MPO.

In part because of the metropolitan government of Indianapolis and Marion County, Indianapolis is considered a fairly centralized employment market. It ranks among the top cities in the United States from the perspectives of employment concentration in the central city and the share of central city residents who work in the central city.⁹ Fifteen percent of all work trips in the nine-county region are destined to downtown Indianapolis.¹⁰ The city is home to two Fortune 500 Companies: Eli Lilly and Anthem, Inc., both located in or near the regional center. As shown in Figure 3.3, the regional center has the highest employment density in the region, with up to 536,000 employees per square mile (this tiny TAZ of .005 square miles has 2,400 employees). The regional center has 10.5 million square feet of office space, and the office vacancy rate has decreased from 19.9 percent in 2001 to 14.5 percent in 2006.¹¹ To the northeast of the city, concentrations of employment have also emerged, particularly around the intersection of I-465 and I-69.

⁹ Brookings Institution. *Living Cities Census Series: Indianapolis in Focus: A Profile from Census 2000*. May 2001. Available at <http://www.brookings.edu/es/urban/livingcities/Indianapolis.htm>

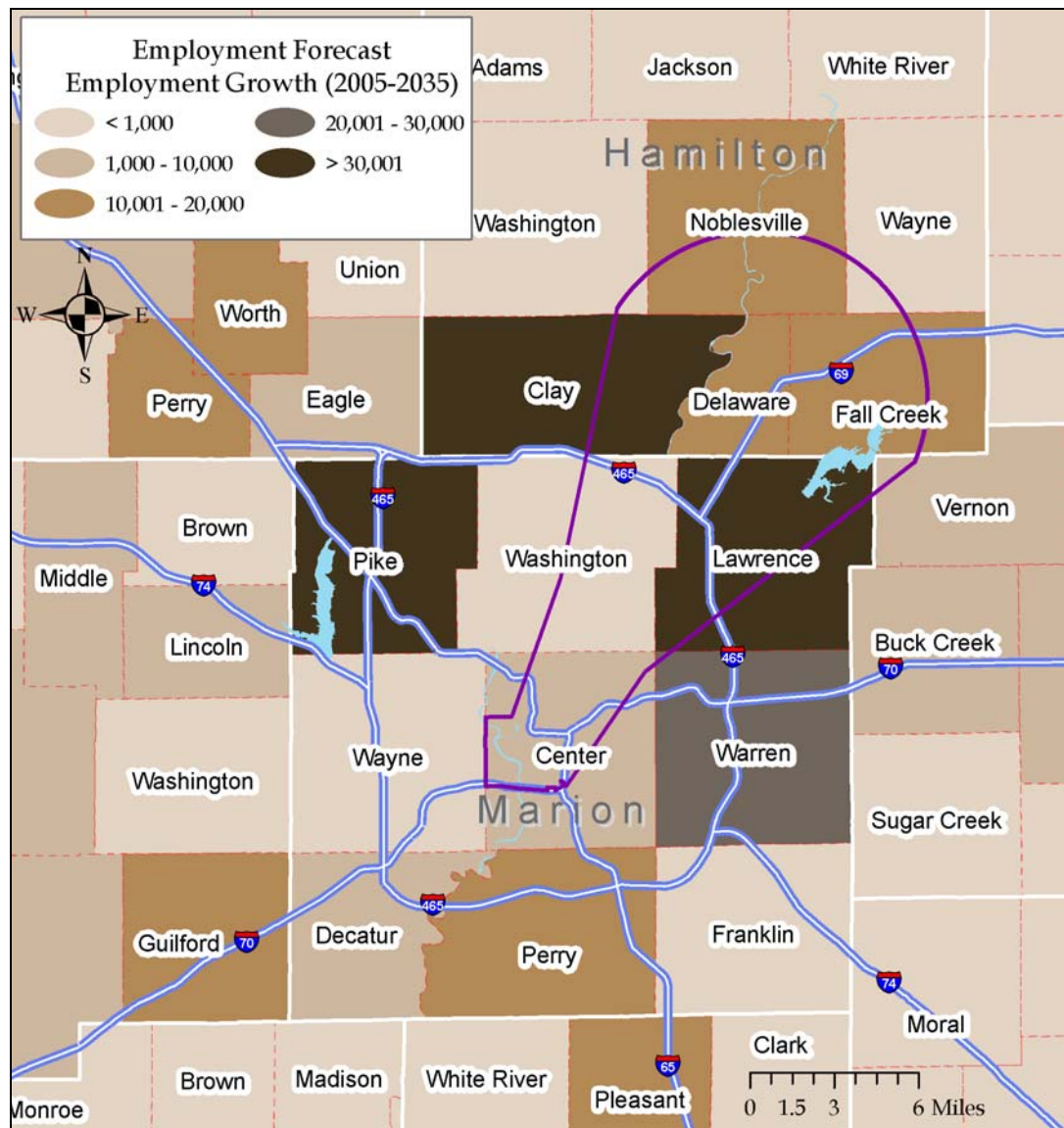
¹⁰ 2000 Census, Journey to Work.

¹¹ Indianapolis Downtown, Inc. *Downtown Indianapolis 2006 Economic Indicators*. April 2007. Available at <http://www.indydt.com/IDI2006Report.pdf>

Indianapolis has been highlighted as a top metropolitan area for business location and is actively pursuing additional corporate growth in the center city. *Expansion Management* magazine listed the Indianapolis MSA among the top 50 most desirable cities in the nation, and *Site Selection* magazine published by the Industrial Asset Management Council, ranked Indianapolis ninth in its 2006 list of top metro areas.

Future employment forecasts shown in Figure 3.3 predict growth concentrated in the regional center and north of the city. The Northeast Corridor includes much of the area forecasted for significant employment growth.

Figure 3.4 Employment Forecast 2005 to 2035



Source: Indianapolis MPO.

Educational and Medical Concentration

A large number of students attend university locations in or near the regional center. In 2006, combined student enrollment at Indiana University - Purdue University Indianapolis (IUPUI), Indiana Business College, and Ivy Tech Community College was 43,636, up 36 percent since 1995.¹² More than 1,000 of the 29,000 students at IUPUI live on campus.

Five major medical facilities are located on or near the IUPUI Campus, including Indiana University Hospital, Wishard Memorial Hospital, Riley Children's Hospital, and the Veteran Administration Medical Center. Methodist Hospital is connected with these facilities via the Clarian monorail system. Together, these facilities represent a medical care concentration of nearly 3,000 beds.

The area around the IUPUI Campus and medical centers, known as the "BioCrossroads," is forecast to attract a significant share of forecast regional growth. A master plan has been developed to guide the area's growth as a center for life sciences business development.

Residential Growth

More people are choosing to live in the regional center. The number of Class A and B apartments downtown has increased 35 percent from 2,403 in 1996 to 3,244 in 2006.¹³

Downtown Indianapolis Attractions

A significant level of construction and renovation has occurred in the regional center in the past three decades to invigorate and strengthen the city core. Multiple attractions exist in the center city that draw people from outlying areas for non-work purposes. The percentage of suburban Indianapolis residents beyond Marion County that have recently visited the regional center was 87 percent in 2006, compared to 77 percent in 2004 and 47 percent in 1994. A total of 17.1 million visits were made to the top 27 downtown attractions in 2006, representing a 288 percent increase compared to 1994.¹⁴

Indianapolis has numerous major sports facilities that host national sports teams and regional competitions and that draw spectators downtown. With the adoption of an increased food and beverage tax in Marion County and six surrounding counties to fund

¹² Indianapolis Downtown, *Downtown Indianapolis 2006 Economic Indicators*. April 2007.

¹³ Ibid.

¹⁴ Ibid.

the new Lucas Oil Stadium, the region has demonstrated a willingness to work together on investments that strengthen the regional center. Downtown sports venues include:

- Conseco Fieldhouse (Pacers basketball, Indiana Fever women's basketball)
- Indiana University Michael A. Carroll Track and Soccer Stadium
- Indiana University Natatorium
- Indiana/World Skating Academy
- Indianapolis Tennis Center
- National Institute for Fitness and Sport
- RCA Dome (current Colts football)
- Lucas Oil Stadium (future Colts football)
- Victory Field (Indians minor league baseball)

The Indianapolis Convention Center complex, along with the RCA Dome, houses more than 400,000 square feet of exhibit space and nearly 140,000 square feet of meeting space. According to the Indianapolis Convention & Visitors Association, in the 10-year period from 1990 to 2000, the number of Indianapolis convention visitors increased 44 percent, from 573,235 to 822,914 people. The RCA Dome has 60,000 seats. The Lucas Oil Stadium, which is under construction and will be the Colts new home beginning in August 2008, will have 150,000 square feet of exhibition space and 63,000 fixed seats. A 1,000-room Marriott hotel is planned at West and Washington Streets as part of the convention center expansion. This hotel, combined with three smaller hotels, will provide 1,568 rooms. The downtown hotel room inventory has increased 50 percent from 3,705 rooms in 1995 to 5,574 rooms in 2006.¹⁵

The regional center is the home to 48 arts organization venues and 20 museums and historic sites, 16 galleries, and 10 performing arts theaters¹⁶. The 400,000-square foot Children's Museum of Indianapolis serves more than one million visitors per year. The Indianapolis Symphony Orchestra, a full-time professional orchestra, performs 200 concerts per year for more than 350,000 people and is the largest performing arts organization in the state of Indiana. The Indianapolis Zoo and Gardens attracted 1.4 million visitors in 2005. Other major attractions in the city include the Eiteljorg Museum of American Indians & Western Art, Indiana Historical Society, Indiana State Museum, Indiana War Memorial Museum, and the National Art Museum of Sport.

The Circle Centre Mall, with 783,000 square feet of commercial space, has more than 100 shopping, dining, and entertainment establishments. Seven hotels are attached to the mall. The adjacent Artsgarden is the site of more than 300 free performances and exhibits annually.

¹⁵ Indianapolis Downtown, *Downtown Indianapolis 2006 Economic Indicators*. April 2007.

¹⁶ Ibid.

3.5 Regional Population Growth Patterns

Indianapolis is the nation’s 12th largest city according to 2000 Census data, with 781,870 residents. From 1990 to 2000 population increased seven percent. A large share of the region’s population is located along the Northeast Corridor stretching from the regional center to Noblesville. Hamilton County has the second largest population within the nine-county MSA. Hamilton County has registered the highest growth rates by far among the nine counties, with an increase of 66 percent from 1990 to 2000; county population has more than tripled since 1970.

Table 3.2 Population Growth by County, 1970 to 2000

	1970	1980	1990	2000	Growth 1970-2000	Growth 1990-2000
Boone	30,950	35,520	38,040	46,110	49%	21%
Hamilton	54,760	82,520	110,270	182,740	234%	66%
Hancock	35,110	43,950	45,690	55,390	58%	21%
Hendricks	54,130	70,000	76,060	104,090	92%	37%
Johnson	61,340	77,610	88,780	115,210	88%	30%
Madison	138,520	139,340	130,670	133,360	-4%	2%
Marion	794,130	765,550	796,980	850,450	8%	8%
Morgan	44,290	52,210	56,130	66,690	51%	19%
Shelby	37,870	39,950	40,380	43,450	15%	8%
Total	1,251,040	1,307,800	1,384,990	1,507,490	28%	16%

Source U.S. Department of Commerce, Bureau of the Census.

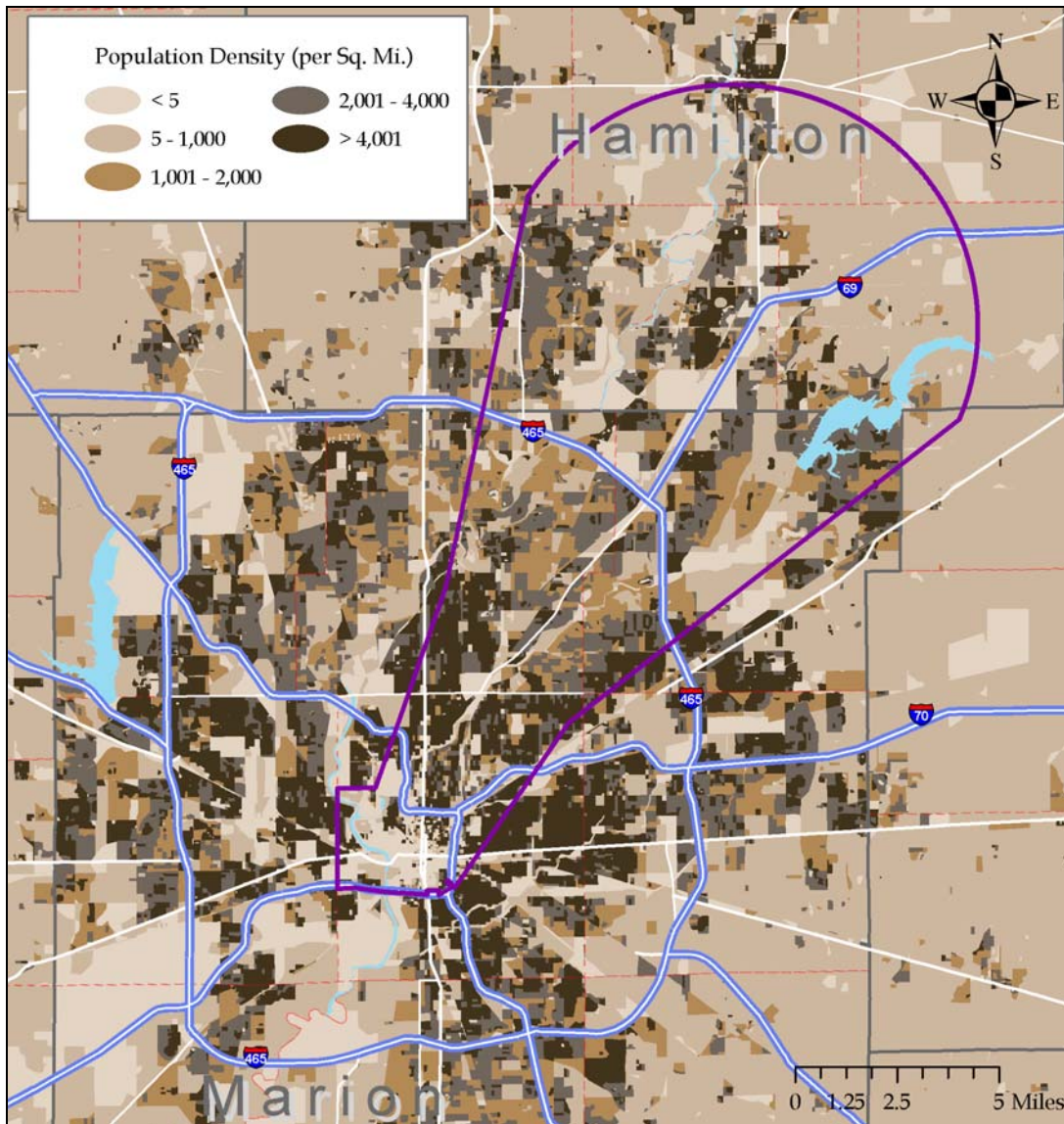
Within Marion County, Lawrence and Washington townships to the northeast have shown strong growth. Lawrence Township growth has far exceeded overall growth in the county with household increase of 70 percent between 1980 and 2000. Washington Township’s household growth of 12 percent is in line with the overall regional growth rate. Combined, Washington and Lawrence townships to the northeast of the CBD comprise 29 percent of Marion County’s households. Growth in Marion and Hamilton Counties has been predominantly along and beyond I-465 northeast of the city. As shown in Figure 3.5, among the areas with highest population are zones extending from north of the regional center to the I-465 beltway. Areas with significant density also extend beyond I-465 to the northeast.

Table 3.3 Household Growth in Marion County by Township

	1980	1990	2000	Absolute Change 1980-2000	Percent Change 1980- 2000
Center	100,184	69,767	66,176	-34,008	-34%
Washington	53,287	57,553	59,606	6,319	12%
Wayne	50,133	50,621	55,144	5,011	10%
Lawrence	25,607	36,618	43,651	18,044	70%
Perry	28,794	33,524	38,112	9,318	32%
Warren	35,767	36,982	38,015	2,248	6%
Pike	6,682	20,178	30,539	23,857	357%
Franklin	3,493	7,318	11,897	8,404	241%
Decatur	5,243	7,260	9,024	3,781	72%
Total	309,190	319,821	352,164	42,974	14%

Source: Indianapolis MPO.

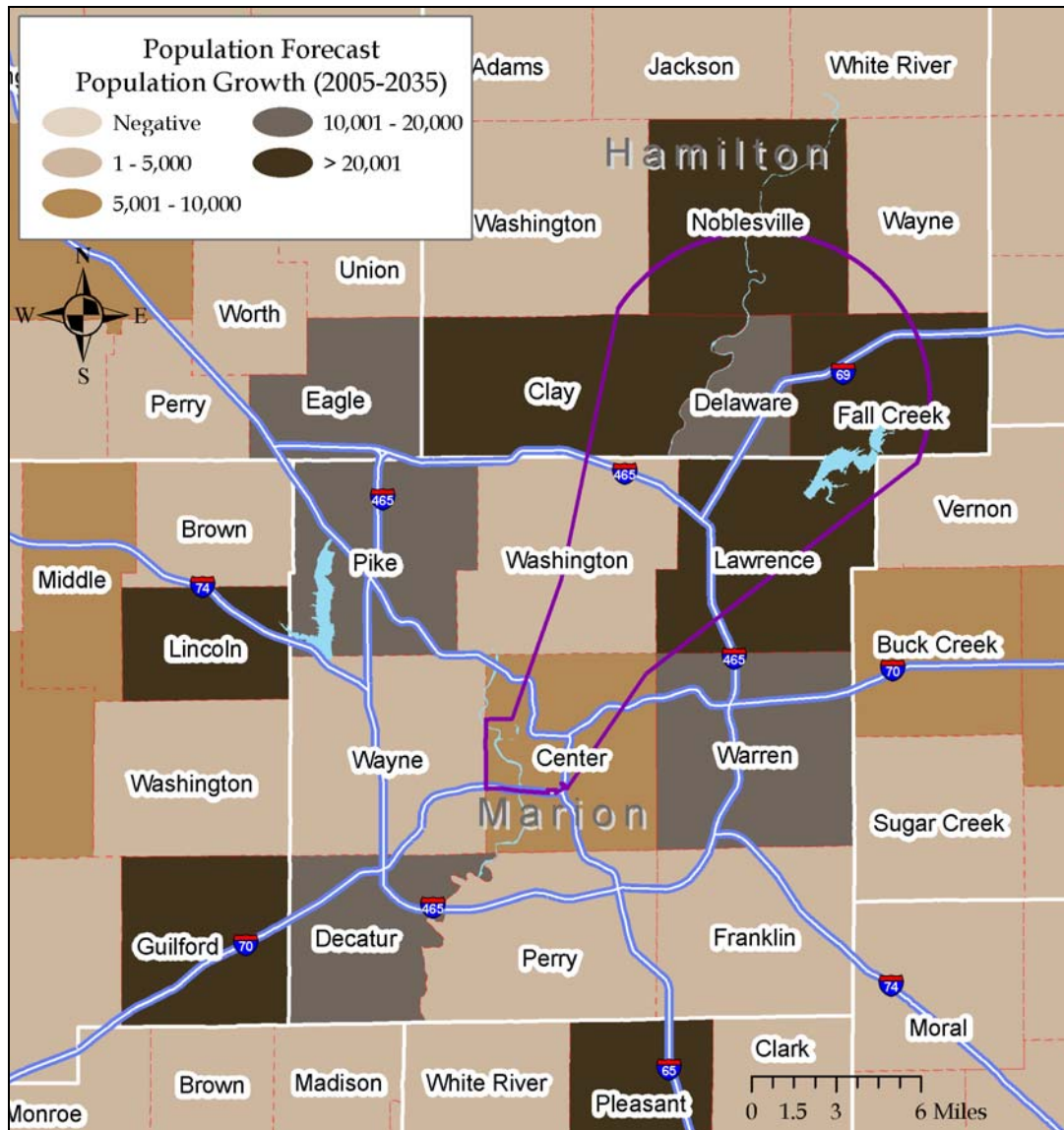
Figure 3.5 2000 Population Density



Source: U.S. Census, 2000.

As shown in Figure 3.6, if existing patterns continue, the most profound population growth is forecast to continue northeast of Indianapolis beyond I-465. The absolute numbers of forecasted population change are displayed in Figure 3.6 as this data most effectively demonstrates the future transportation demand.

Figure 3.6 Population Forecast 2000 to 2035



Source: Indianapolis MPO.

Outlying Activity Centers

Keystone Crossing is a major regional shopping mall located on the northeast side of Indianapolis directly off I-465 at the intersection of 86th Street and Keystone Avenue. The mall has 684,000 feet of gross leasing area with more than 100 stores and restaurants. Five hotels with 1,404 rooms are adjacent to the mall. Over two million square feet of Class A office space exist within Keystone at the Crossing.

The Town of Fishers, in Hamilton County adjacent to I-69, has grown dramatically over the past decade. Population in Fishers has more than doubled from 24,700 in 1996 to

60,000 in 2005. Fishers expects to exceed a population of 72,000 by 2010. The City of Carmel to the west of Fishers has also undergone tremendous growth with population increasing from 18,000 residents in 1980 to 37,700 in 2000. Population in 2006 is estimated at 72,000. Both municipalities are in the process of developing new downtown areas with compact, mixed use development and a pedestrian orientation.

3.6 Travel Patterns

Work trip travel patterns from the 2000 Census provide an estimate of the overall magnitude of travel demand that a rapid transit investment in the Northeast Corridor could serve.¹⁷ Because a major travel market in the corridor is commuter trips to the downtown employment center, Census work trips reflect a significant share of the potential demand for rapid transit service. However, other trip purposes, including special events, school trips, medical trips, and recreational trips, will likely contribute to ridership on rapid transit as well.

To aid in review, the Northeast Corridor is divided into twelve districts. Odd numbered districts reflect groups of Census traffic analysis zones (TAZs) within approximately one mile (a typical market shed for walk and short bus trips to and from rapid transit) of the corridor. Even numbered districts reflect groups of TAZs in a wedge-shaped area ranging from approximately two miles from the corridor at the downtown end (including the area around the regional center) up to approximately six miles from the corridor at the northern end (a typical market shed for park-and-ride access to rapid transit). The Hoosier Heritage Port Authority (formerly Nickel Plate) railroad is used as a representative corridor centerline for this analysis.

Figure 3.7 shows the boundaries of each district. District 1 includes the greater downtown area, bounded by 16th Street on the north, I-70 / I-65 on the east, I-70 on the south, and a boundary west of the White River on the west, commonly defined as the regional center.¹⁸ Other districts are divided at major east-west arterial streets, including 38th Street, 96th Street (the Marion-Hamilton county line), and 146th Street.

According to the 2000 Census, 156,000 work trips are produced in the Northeast Corridor, as shown in Table 3.4. More than a quarter of work trips from the corridor are destined to the Indianapolis CBD (District 1). A significant share of trips (10 percent) that originate in the center of the corridor (Districts 1, 3, 5, 7, 9, 11), are traveling to destinations in one of those same six zones, and could be served by a potential rapid transit line. The high share

¹⁷ Bureau of the U.S. Census Year 2000 Census Transportation Planning Package (CTPP) Journey-to-Work (JTW) Part III travel pattern data by Census traffic analysis zone. Released May 2004.

¹⁸ City of Indianapolis. *Indianapolis Regional Center Plan 2020*. Adopted March 3, 2004. Available at <http://www.indyrc2020.org>

of commutes to the downtown emanating from origins in the northeast creates positive conditions for transit along this heavily traveled corridor.

The 2000 Census also provides information on work trip mode share between specific origins and destinations. In the district pairs in the center of the corridor, transit mode share ranges from zero (typical of commutes from outside I-465 where there is little or no transit service) to nearly 20 percent (commutes from inner city neighborhoods in District 3 to downtown (District 1) and the I-465 area (District 7)).

Figure 3.7 Indianapolis Northeast Corridor Districts

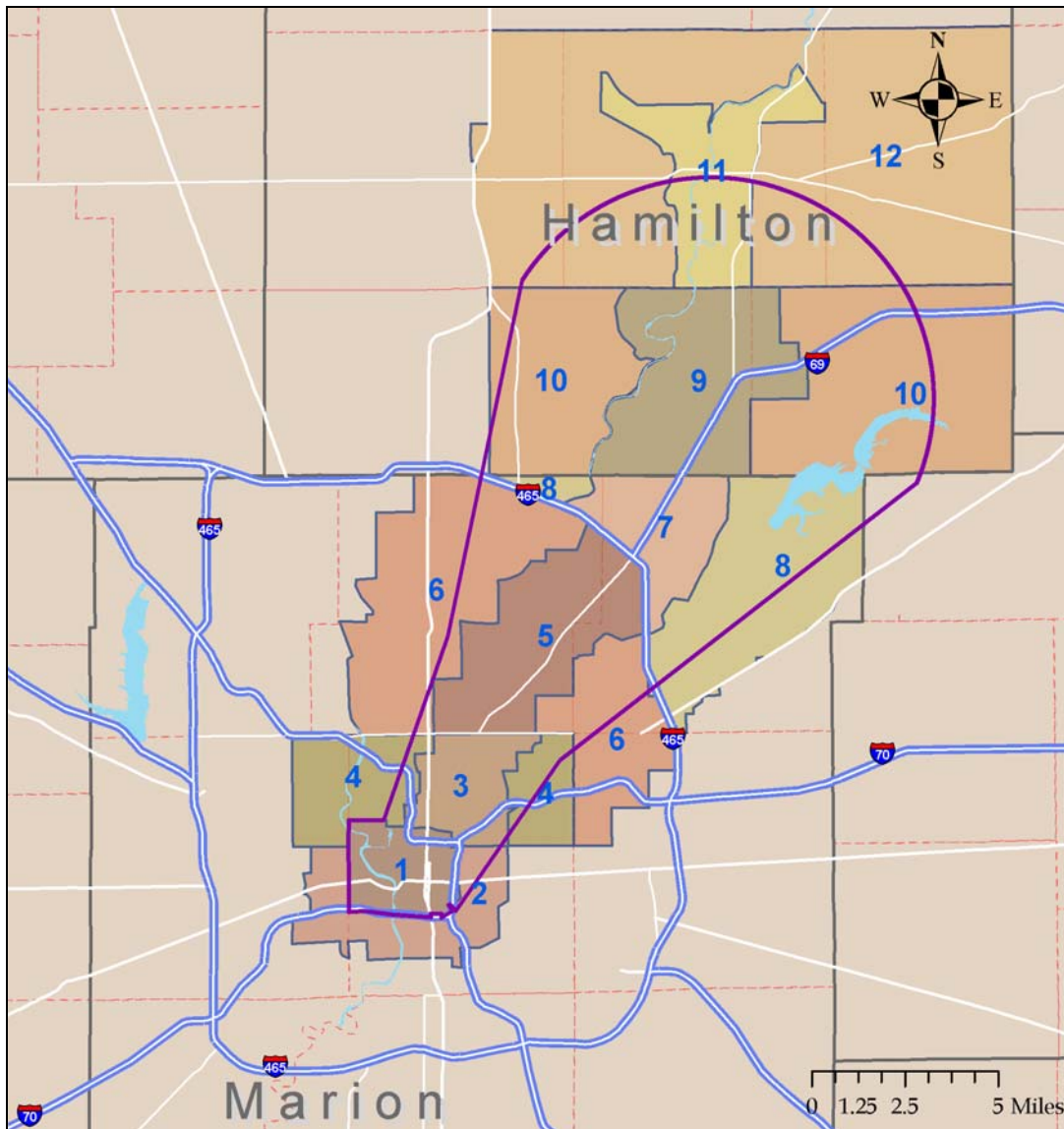


Table 3.4 Work Trips and Transit Mode Share between Northeast Corridor Districts

		Destinations												Total Trips Produced
		1	2	3	4	5	6	7	8	9	10	11	12	
Origins	1	4,159 5.7%	313 4.5%	418 12.2%	116 26.7%	295 12.9%	522 7.9%	59 0.0%	120 4.2%	44 0.0%	40 0.0%	0 0.0%	23 0.0%	6,109 6.9%
	2	3,555 10.9%	2,230 2.8%	617 7.9%	366 4.6%	306 0.7%	969 6.6%	264 6.8%	240 0.0%	47 12.8%	57 0.0%	9 0.0%	11 0.0%	8,671 7.1%
	3	2,621 19.3%	481 7.1%	1,521 7.0%	389 14.7%	609 13.6%	973 12.8%	303 19.8%	222 12.2%	103 9.7%	63 22.2%	24 0.0%	27 0.0%	7,336 14.2%
	4	4,540 13.9%	793 1.5%	1,354 9.8%	1,969 2.1%	560 7.7%	1,886 7.3%	439 5.0%	473 2.3%	215 0.0%	136 0.0%	18 0.0%	58 0.0%	12,442 8.5%
	5	5,710 4.7%	592 5.6%	1,406 2.0%	536 3.5%	4,200 1.0%	3,354 3.3%	1,798 1.4%	664 1.7%	585 0.0%	426 0.0%	86 0.0%	60 0.0%	19,418 2.9%
	6	9,669 3.8%	1,153 0.5%	2,023 4.1%	1,148 3.1%	2,569 1.5%	10,357 1.3%	2,009 0.0%	1,422 0.4%	846 0.0%	657 0.0%	183 0.0%	155 8.4%	32,190 2.2%
	7	1,836 2.0%	214 0.0%	343 0.0%	167 0.0%	861 0.0%	1,493 0.5%	3,674 0.0%	1,076 0.0%	1,045 0.0%	432 0.0%	155 0.0%	139 0.0%	11,435 0.4%
	8	3,479 1.0%	587 0.0%	596 0.0%	212 0.0%	1,020 0.0%	2,322 0.0%	1,988 0.0%	3,736 0.0%	873 0.0%	392 0.0%	111 0.0%	87 0.0%	15,404 0.2%
	9	2,431 0.3%	303 0.0%	325 0.0%	44 0.0%	722 0.0%	1,682 0.0%	1,656 0.0%	639 0.0%	3,521 0.3%	826 0.0%	544 0.0%	188 4.3%	12,882 0.2%
	10	2,877 0.0%	296 0.0%	445 0.0%	106 0.0%	621 0.0%	1,978 0.0%	1,520 0.0%	655 0.0%	1,223 0.0%	4,468 0.0%	363 0.0%	305 0.0%	14,857 0.0%
	11	710 0.0%	109 0.0%	130 0.0%	0 0.0%	230 0.0%	591 0.0%	494 0.0%	156 0.0%	740 1.5%	631 0.0%	3,153 0.0%	539 0.0%	7,483 0.2%
	12	599 0.0%	110 0.0%	161 0.0%	60 0.0%	292 0.0%	631 0.0%	723 0.0%	202 0.0%	588 1.7%	813 0.0%	1,748 0.0%	1,788 0.9%	7,715 0.3%
Total Trips Attracted		42,186 5.9%	7,181 2.2%	9,339 4.8%	5,113 4.1%	12,285 2.1%	26,759 2.4%	14,928 0.9%	9,605 0.7%	9,831 0.5%	8,941 0.2%	6,393 0.0%	3,381 1.1%	155,942 3.0%

Source: 2000 U.S. Census, Journey to Work.

4. Need: Deteriorating Mobility and Quality of Life

4.1 Existing Transportation Infrastructure

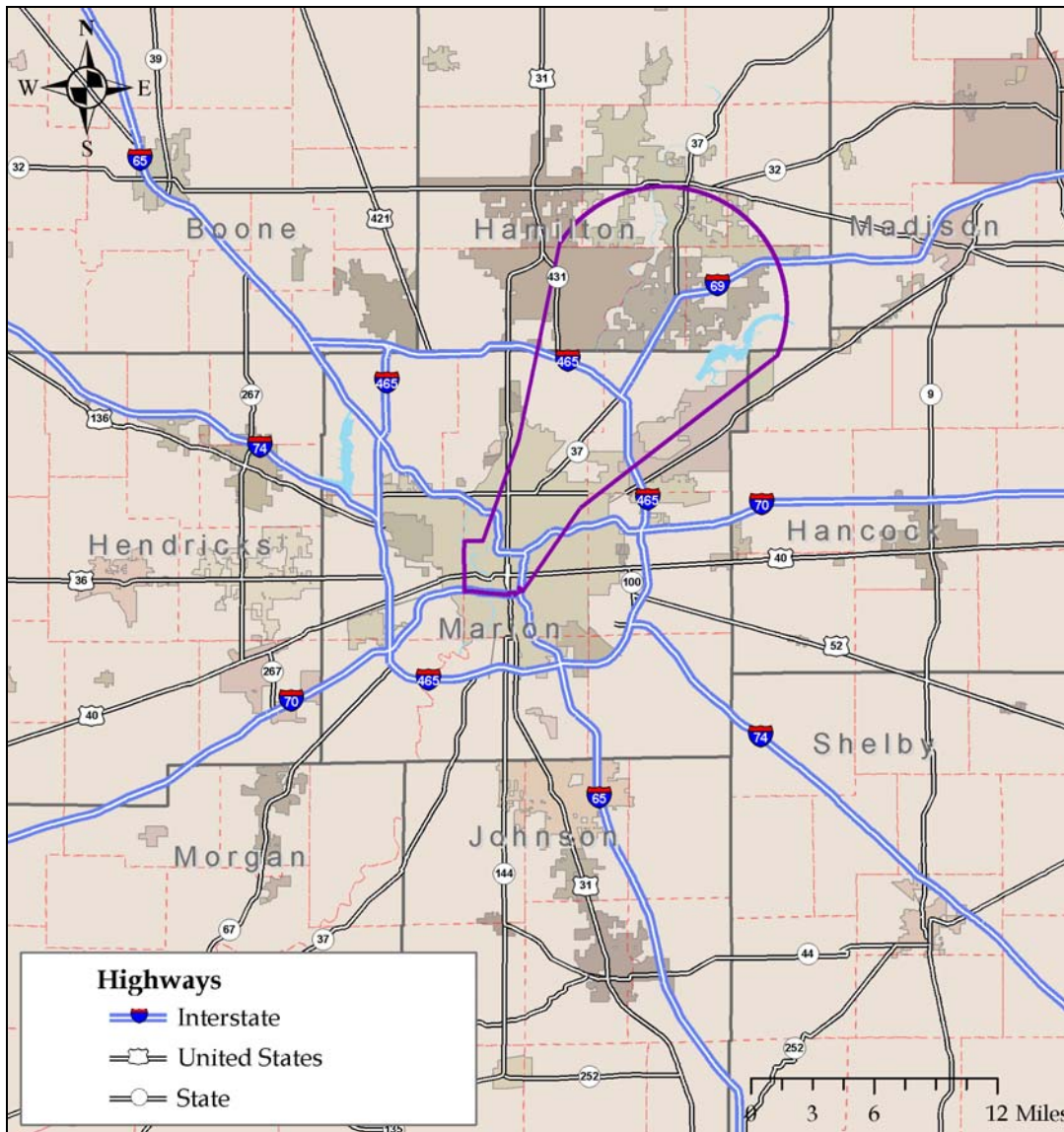
Indianapolis, like many large cities, is served by a “beltway” to provide access around the city. Access to this beltway, Interstate 465, is provided by two interstates that connect in the northeast quadrant, I-69 and I-70, as shown in Figure 4.1. I-69 traverses the state from the Michigan border, through Fort Wayne, and into Marion County, where it connects with I-465. A planned link between I-465 and downtown (proposed I-165) was abandoned in the 1980s in large part because of public concerns over right-of-way impacts. I-69’s termination at I-465 forces downtown-bound traffic to merge into on the beltway south to I-70, an east-west route that provides connectivity to the downtown area. Alternatively, inbound motorists on I-69 can travel west on I-465 to US-31 or SR-431 (both arterial streets) and then travel south to reach downtown Indianapolis. Other motorists use only the arterial network to travel downtown. The intersection of I-465 and I-69 was identified as one of the top two bottlenecks in the state by a market research project conducted for INDOT.¹⁹

The Indiana DOT (INDOT) has programmed incremental improvements on I-465 and I-69 to reduce congestion at this bottleneck. The improvements are based on Alternative H5 – Intermediate Freeway Expansion, as described in the ConNECTions study.²⁰ This highway alternative includes improvements on several roadways that build to the maximum extent possible predominantly within the existing right-of-way. In addition, the alternative assumes that rapid transit will be built on a parallel alignment northeast of the regional center. In the design of recent highway capacity upgrades along I-465, INDOT has made provisions to accommodate future rapid transit by ensuring adequate clearance in the Hoosier Heritage Port Authority (formerly Nickel Plate) railroad corridor.

¹⁹ Indiana Department of Transportation. *Market Research Project: Draft Report*. June 2004. Available at <http://www.in.gov/dot/div/planning/market/completedocument.pdf>

²⁰ Indianapolis Metropolitan Planning Organization. *Indianapolis Northeast Corridor Transportation Study (ConNECTions): Draft Environmental Impact Statement and Section 4(f) Evaluation*. September 2001.

Figure 4.1 Existing Roadway Network



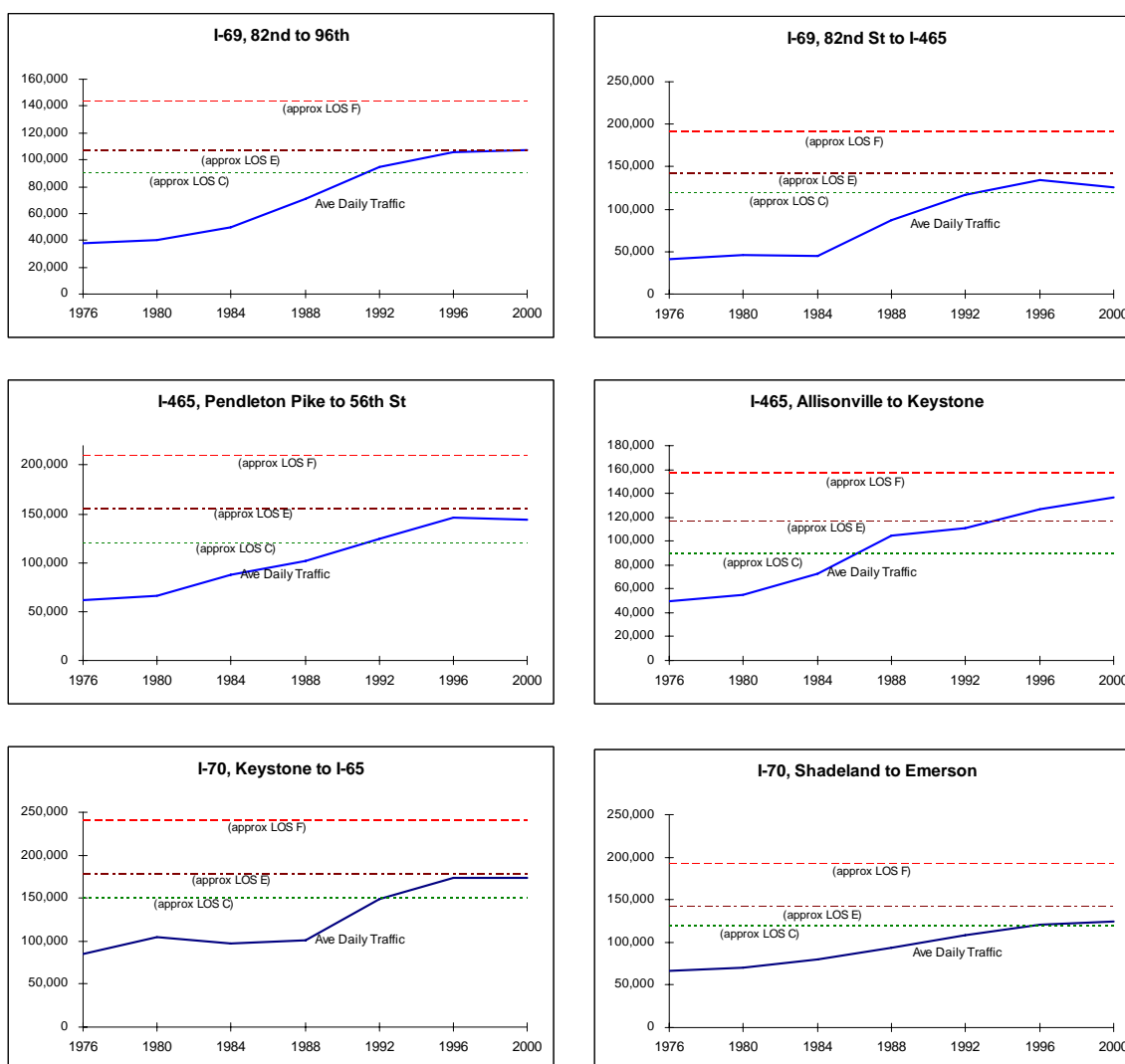
4.2 Traffic Congestion is Worsening

According to the 2007 Urban Mobility Report, Indianapolis ranks among the top 25 cities in the United States in terms of average delay per peak-period traveler, with more than 24 million person-hours per year spent in congestion.²¹ Traffic congestion has steadily

²¹ Texas Transportation Institute. *The 2007 Urban Mobility Report*. September 2007. Available at http://tti.tamu.edu/documents/mobility_report_2007_wappx.pdf

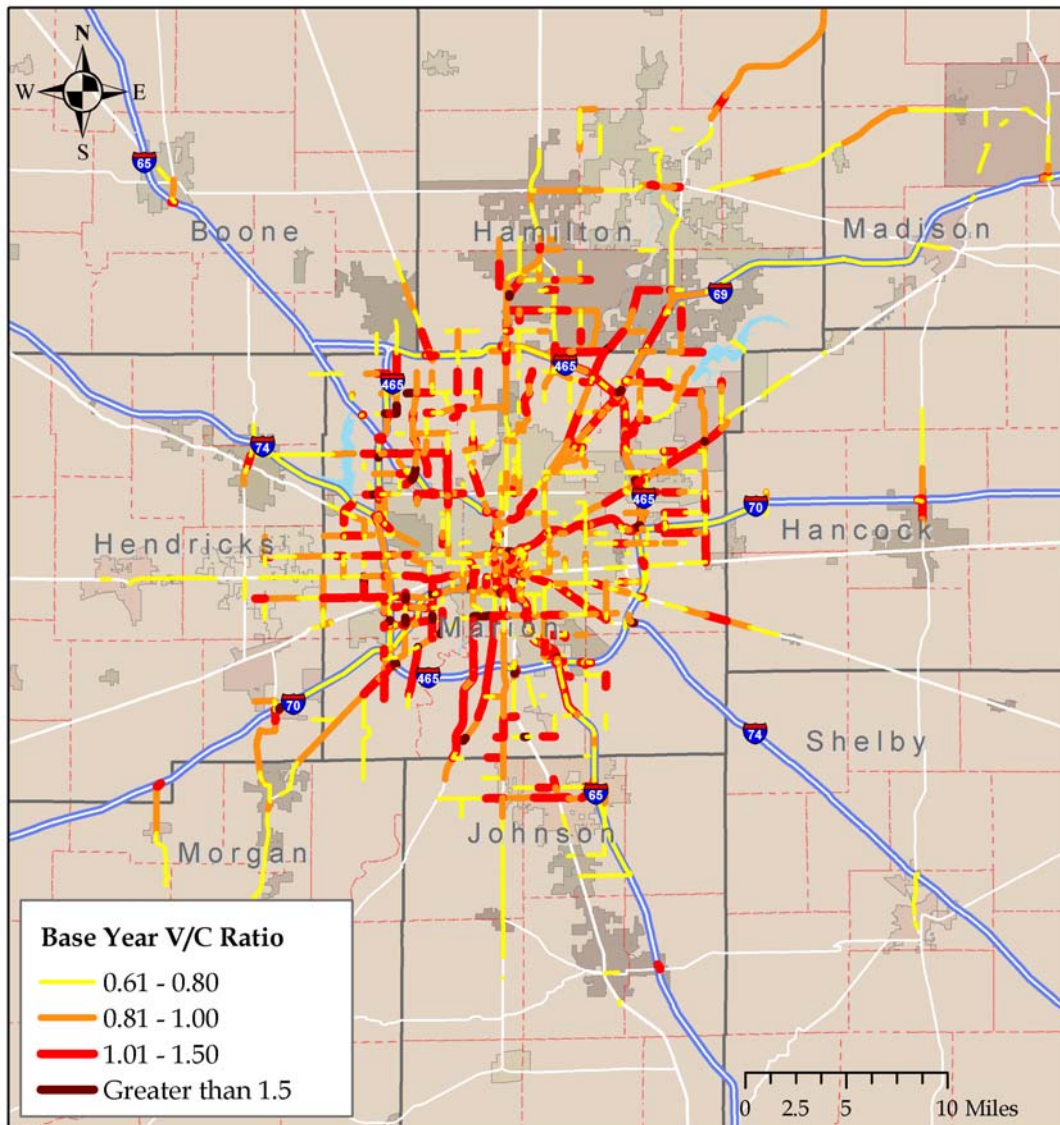
increased over the past three decades on the three Interstate routes that traverse the Northeast Corridor: I-69, I-465 and I-70. A key measurement of traffic flow is level of service (LOS), grouped into six categories ranging from LOS A (free flow) to LOS F (gridlock). As shown in Figure 4.2, average daily traffic in 2000 (the most recent data available) shows that traffic congestion is approaching or exceeding level of service LOS E, which is one level better than gridlock and characterized by traffic moving well below the posted speed limit. The I-465 segment from Allisonville Road to Keystone Avenue is facing the worst traffic congestion in the area and approaching LOS F.

Figure 4.2 Average Daily Traffic Volumes on Major Northeast Corridor Roadways



Source: Indiana Department of Transportation.

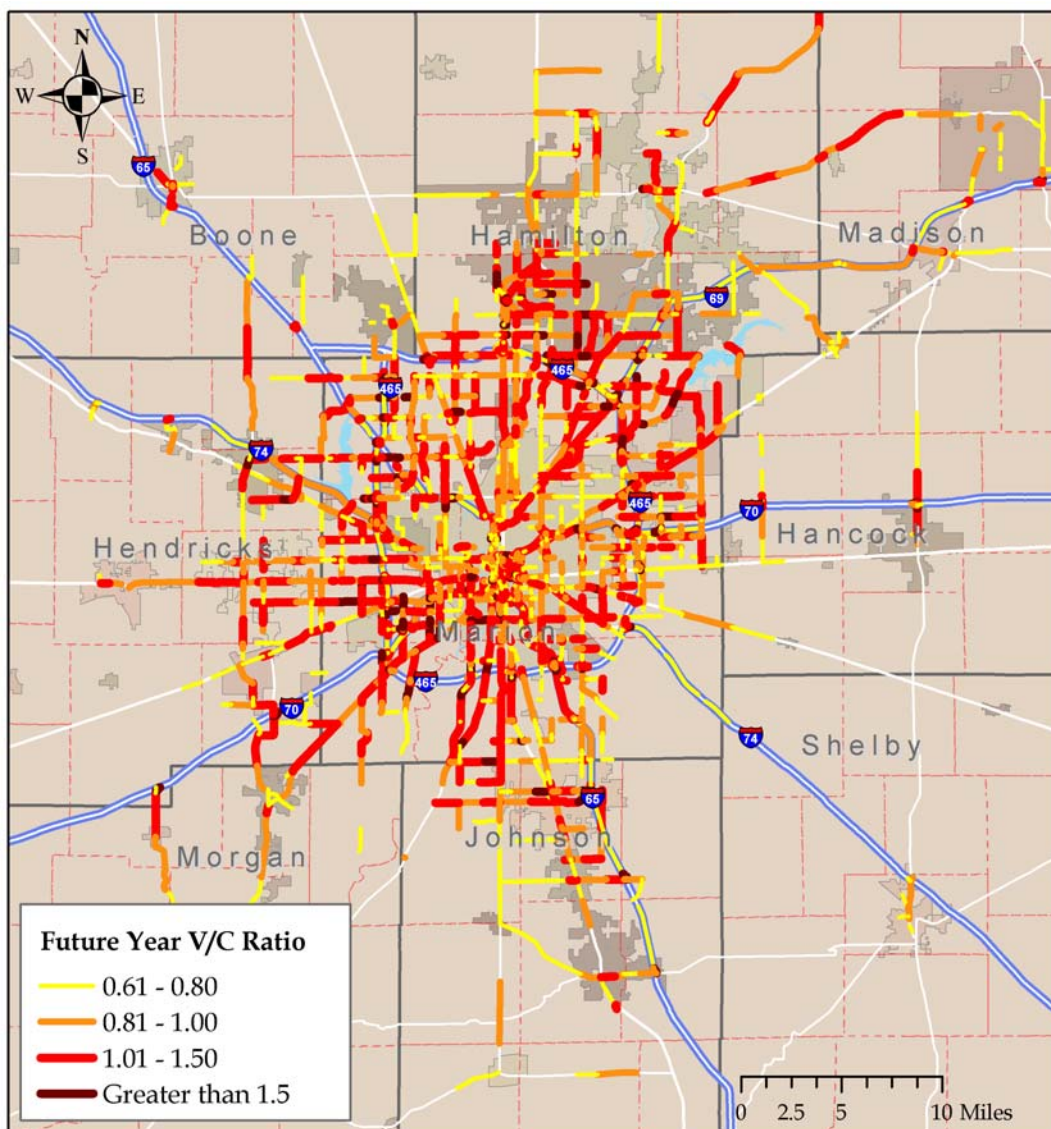
Figure 4.3 Existing Congestion, 2000



Source: Indianapolis MPO Regional Travel Demand Model.

Figure 4.3 provides a view of congestion on the regional system as a whole, expressed as the ratio of daily traffic volume to roadway capacity. As volume approaches capacity, roadway LOS suffers. A volume-to-capacity (v/c) ratio of 1.00 is considered LOS E. Segments of all major roadways to the northeast of Indianapolis are approaching capacity, with levels of service on nearly all roadways north of the regional center to I-465 experiencing volumes that approach or exceed their capacity.

Figure 4.4 Future Congestion, 2035



Source: Indianapolis MPO Regional Travel Demand Model.

As shown in Figure 4.4, congestion levels are forecast to worsen on many of the major roadways in the Northeast Corridor are expected to remain congested by 2035, particularly on northeast arterials leading into the city.

Increasing congestion is expected to continue to contribute to deteriorating air quality in Central Indiana. The eight-county Indianapolis metropolitan planning area lies within or partly within two non-attainment areas as classified by the U.S. Environmental Protection Agency. In July 2004, the nine-county area including Boone, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, and Shelby counties was classified as non-attainment for the ground-level pollutant, ozone (O₃), under the 8-hour standard. In April 2005, the 5-county area including Hamilton, Hendricks, Johnson, Marion, and

Morgan counties was classified as non-attainment for fine particulate matter (PM_{2.5}) under the annual standard.²²

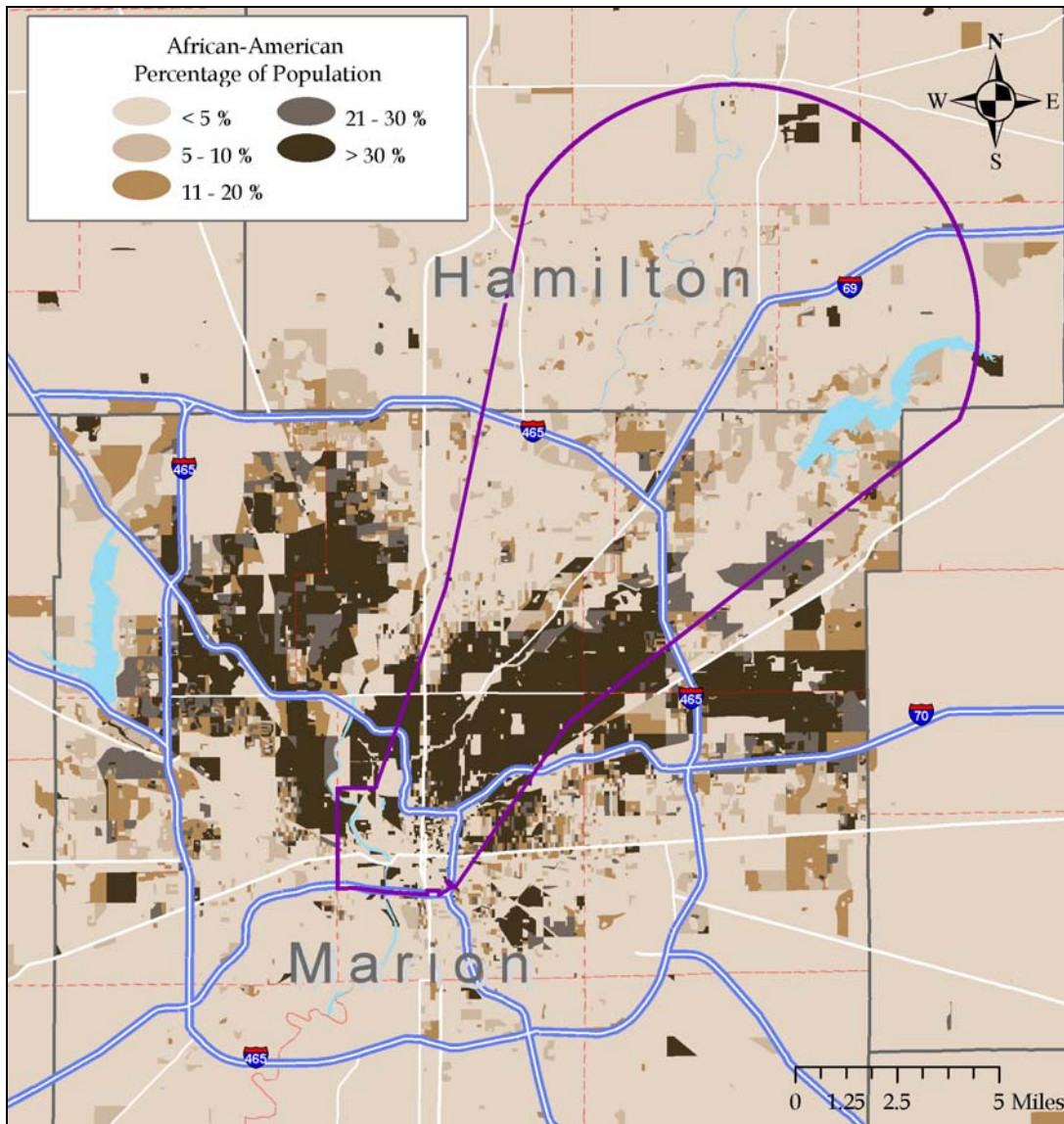
4.3 Transportation Equity

Transportation equity is an important consideration for future transportation investments. As shown in Figure 4.5, many areas immediately northeast of the regional center that have high proportions of African-American population or high levels of poverty would be served by improved transit service in the Northeast Corridor. The corridor also includes a few clusters with high Hispanic population to the east of the regional center and near the intersection of I-465 and I-69, as shown in Figure 4.6.

Traditional and reverse commuters originating from areas with relatively high African-American and low-income populations could be served by improved transit service in the Northeast Corridor. As shown in Table 3.4, transit mode share from the inner city neighborhoods northeast of the regional center (District 3) to destinations in downtown Indianapolis (District 1) and the area around I-465 (District 7) are the highest in the Northeast Corridor.

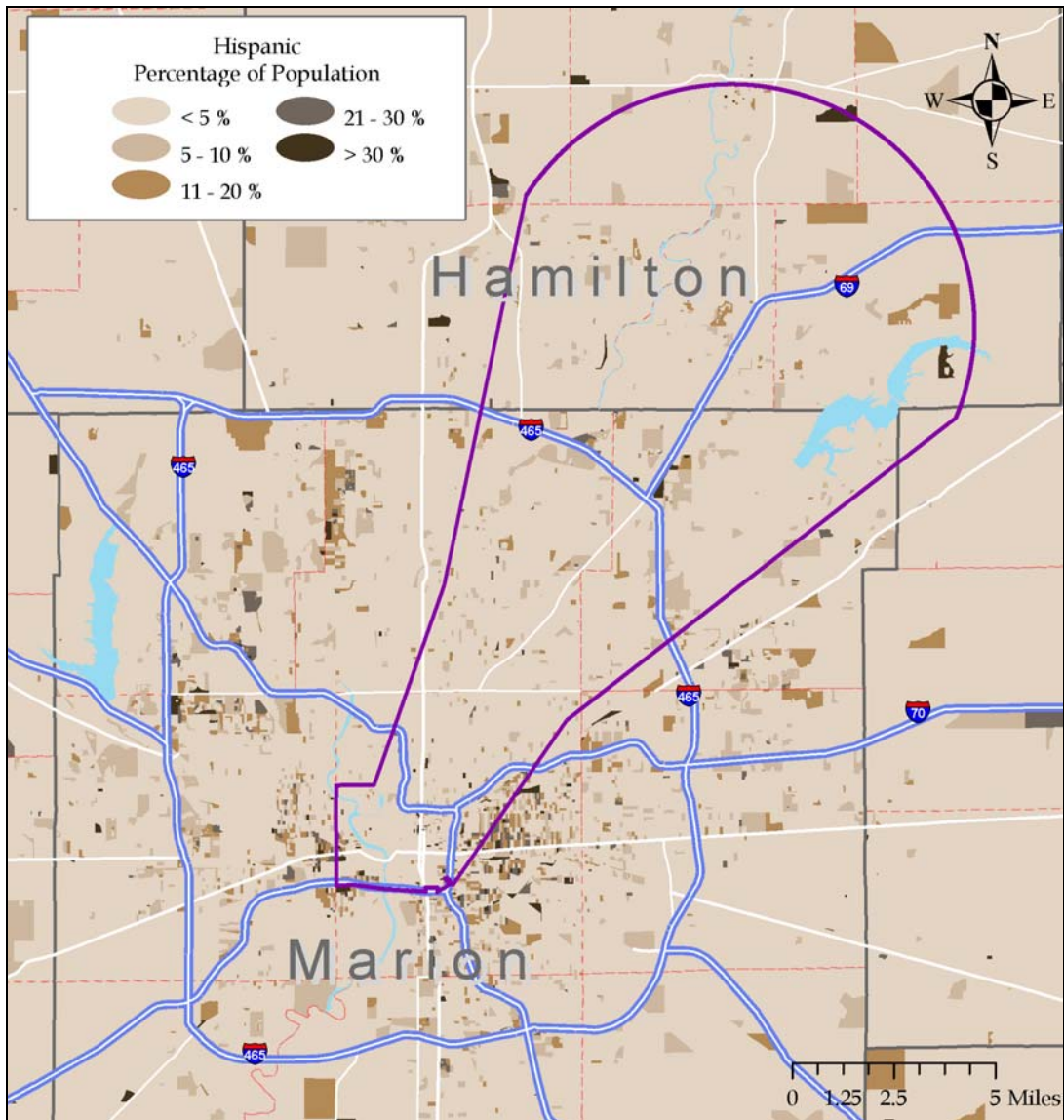
²² Indianapolis MPO. "Air Quality and Congestion Management System." Available at <http://www.indympo.org/Plans/air-cms.htm>

Figure 4.5 Percent African-American Population



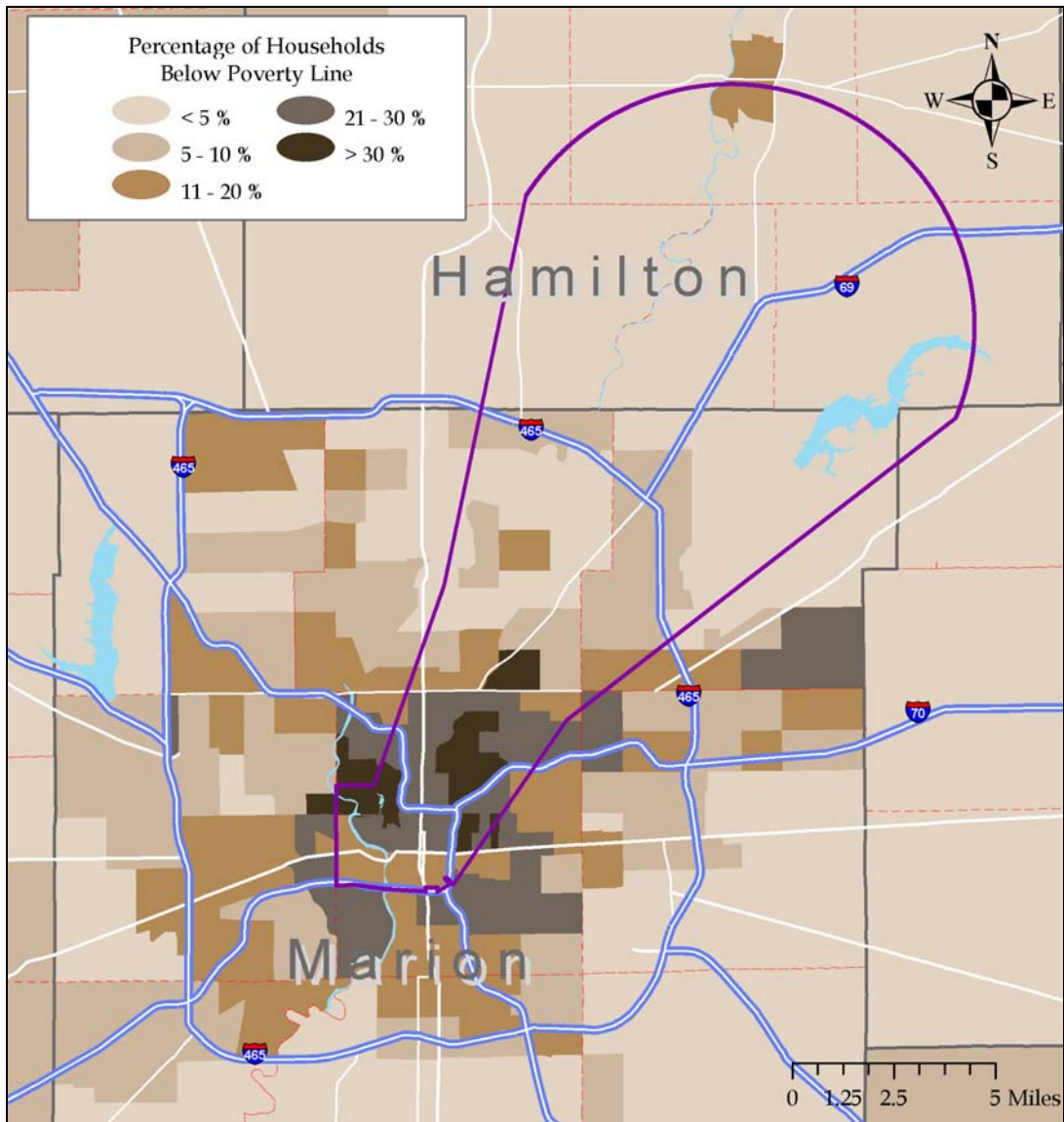
Source: 2000 Census.

Figure 4.6 Percent Hispanic Population



Source: 2000 Census.

Figure 4.7 Percent Below Poverty



Source: 2000 Census.

5. Statement of Purpose and Need

The greater Indianapolis region is seeking a sustainable solution to mobility problems in the Northeast Corridor. The region is particularly interested in enhancing multimodal transportation opportunities to mitigate traffic congestion and provide alternative transportation options.

Key considerations informing a decision to develop regional transit are:

- Indianapolis is a very strong urban center both in terms of employment density and attractions.
- The areas of greatest population density and growth in the Central Indiana region are occurring to the northeast of downtown Indianapolis, in northeast Marion County and Hamilton County.
- Severe and growing traffic congestion is a critical issue in the Northeast Corridor, in part due to the lack of available right-of-way for expansion of expressway and arterial connections to downtown Indianapolis.
- A transit solution that provides a choice of travel modes and more competitive options along the Northeast Corridor between downtown Indianapolis, corridor employment centers, and outlying residential areas could provide additional transportation capacity and improve mobility for both traditional and reverse commuters.
- A transit solution could also help the region achieve attainment of its air quality goals.