

# 1.0 Purpose of and Need for Action

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## 1.1 Project Background

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The Illiana Corridor was first envisioned as a vital link of an outer encircling highway in the Chicago region in the early 1900s, and has since been studied in a number of forms over the last 40 years. Previous studies, described in the following paragraph, have indicated possible benefits from the development of an east-west transportation corridor extending from I-55 in Illinois to I-65 in Indiana. These benefits include providing an alternate route for motorists travelling the I-90/94 corridor; relieving traffic on the I-80 Borman/Kingery Expressway and US 30; serving as a bypass for trucks around the congested metropolitan area highways; improving access to one of the largest intermodal freight areas in the US; improving access to the proposed South Suburban Airport (SSA); supporting area economic development; and increasing the potential for substantial job creation. As traffic volumes on other highways in the region have increased, the associated congestion has resulted in travel delays with substantial economic impacts to industries that depend on the ability to efficiently move freight within and through the region.

In late 2006, the states of Indiana and Illinois, through their respective Departments of Transportation, entered into a bi-state agreement that provided a framework for further development of the Illiana Corridor. The Indiana Department of Transportation (INDOT), in cooperation with the Illinois Department of Transportation (IDOT) conducted the *Illiana Expressway Feasibility Study*,<sup>1</sup> which was completed in June 2009. IDOT initiated two additional studies, the *Strategic Role of the Illiana Expressway*<sup>2</sup> (April 2010) and the *Illiana Expressway Economic Opportunities Analysis*<sup>3</sup> (April 2010). Both studies investigated the economic and social benefits that could result from the proposed expressway in the south and southwestern portions of the Chicago region.

The *Illiana Expressway Feasibility Study* reached several conclusions that predicted positive impacts of a new transportation facility between I-57 in Illinois and I-65 in Indiana on congestion relief on I-80 and US 30. Key benefits included improving traffic operations, providing regional economic benefits (including logistics and supply chain effects), improving freight mobility, improving transit linkages, and improving safety. The *Illiana Expressway Economic Opportunities Analysis* concluded that a new transportation facility between I-55 in Illinois and I-65 in Indiana could provide a new east-west connection as an alternative to the congested I-80 and produce substantial northeast Illinois and northwest Indiana regional economic benefits over a 30 year period. These studies were useful in providing the basis for advancing the detailed environmental and engineering studies, of which this Purpose and Need statement is a part.

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<sup>1</sup> Available at [http://www.in.gov/indot/files/FR\\_INDOT\\_IllianaExpresswy\\_07-31-2009.pdf](http://www.in.gov/indot/files/FR_INDOT_IllianaExpresswy_07-31-2009.pdf).

<sup>2</sup> Available at <http://www.dot.state.il.us/Illiana/strategicrole.pdf>.

<sup>3</sup> Available at <http://www.dot.state.il.us/Illiana/finalreport.pdf>.

In addition, both states have passed legislation enabling public-private partnerships (P3s) for the Illiana Corridor. The Public Private Agreements for the Illiana Expressway Act (Illinois Public Act 096-0913) and the Indiana Senate Enrolled Act No. 382 allow a collaborative planning effort for a “new fully access controlled interstate highway connecting Interstate Highway 55 in northeastern Illinois to Interstate Highway 65 in northwestern Indiana, which may be operated as a toll or non-toll facility.”<sup>4</sup> The legislation allows the States to enter into P3s with one or more private entities to develop, finance, construct, manage, and/or operate a roadway connecting I-55 and I-65.

On June 9, 2010, Governors Pat Quinn of Illinois and Mitch Daniels of Indiana signed a Memorandum of Agreement (MOA) for a mutual commitment to the project by both states.

In April, 2011, IDOT and INDOT initiated the Illiana Corridor Tier One Environmental Impact Statement (EIS). To assist in the development of the environmental and engineering studies for the Tier One EIS, a Context Sensitive Solutions (CSS) approach has been established. Through this process, the public and stakeholders have provided input, and reviewed this Purpose and Need statement.

## 1.2 Study Area

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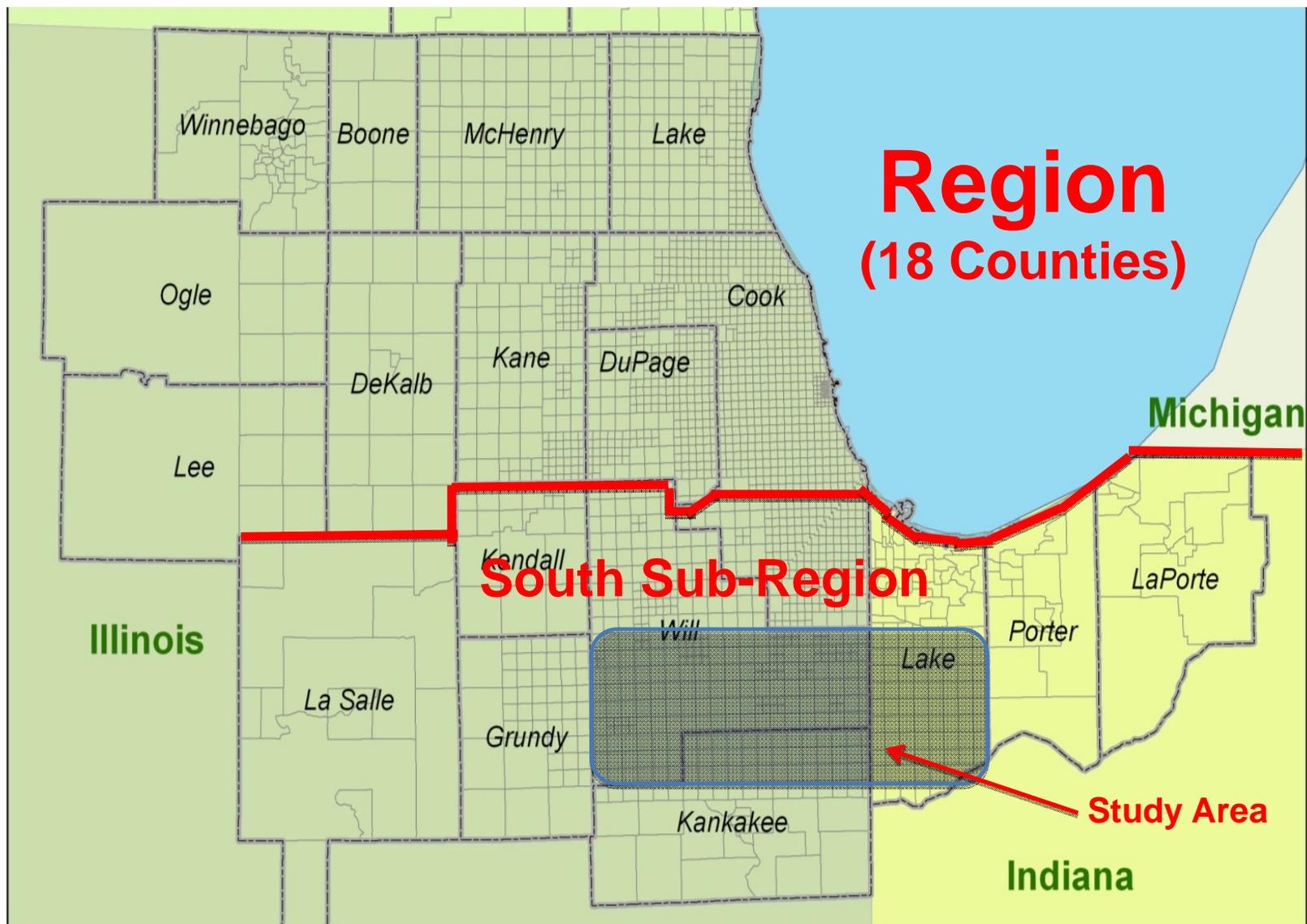
The northeast Illinois and northwest Indiana region is influenced by three key travel sectors: the Region, South Sub-Region, and Study Area. The Region (including 18 counties in Illinois and Indiana for purposes of this study) serves as a vital national link for inter-state and national transportation and commerce movement. The Region is also a key intermodal logistical area for transfer of rail, port, and truck freight between modes, which adds substantial trucking demand. Portions of the Region are fully developed population centers having long-established and balanced functional classification roadway networks. Other areas are not developed but are projected to experience substantial population and employment gains, but lack the full range of functional classification roadways. As the travel demands throughout the Region increase, the impact on performance and the corresponding needs are quite different due to the varying character of existing areas of the Region.

The South Sub-Region has been defined to include the nine county area south of Lake Michigan (Figure 1-1). The South Sub-Region includes regional transportation facilities such as I-80, the Indiana Toll Road, and portions of I-55, I-57, and I-65. The northern portion of the South Sub-Region that includes I-80 is fully developed with limited infill opportunities. This area also has a long-established roadway system with a fully developed functional classification of roadways that includes a mix of Interstates, other multi-lane highways, arterials, collectors, and local streets.

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<sup>4</sup> Illinois Public Act 096-913, Public Private Agreements for the Illiana Expressway Act.

Figure 1-1. Region and South Sub-Region Map



The roadways in the northern portion of the South Sub-Region are congested, and improvements are underway to address the congestion. With the recent rebuilding and capacity improvements to the I-80/94 Borman Expressway by INDOT, I-80 lane additions currently under construction by IDOT, and current studies on I-80 for additional capacity by IDOT, I-80 is projected to be expanded to its maximum capacity and is included as such in the “No-Action” 2040 transportation network.

The portion of the South Sub-Region including the Study Area (Figure 1-2) is less developed. It is approximately 950 square miles in portions of southern Will County and northern Kankakee County in Illinois and southern Lake County in Indiana. The general location of the Study Area is between I-55 in Illinois on the west, I-65 in Indiana on the east, the areas south of US 30 to the northern portion of Kankakee County in Illinois and the southern portion of Lake County in Indiana.

The Study Area is projected to see greater population and employment growth than the South Sub-Region as a whole. It has a less balanced functional network with a lack of east-west Interstates and multi-lane highways to handle growth demands than the more developed northern areas of the South Sub-Region. Additionally, existing and planned intermodal freight centers, and the bypass effects of the congested Chicago area of national freight demand, further strain the Study Area transportation network.

A line extending from approximately 1 mile south of Laraway Road in Illinois on the west to US 30 in Indiana on the east was determined as the northern boundary of the Study Area due to its location as the generally southern edge of developed land in the Region. Much of the area to the north of this boundary is suburban or urban in character and served by a well-developed transportation system. The southern portion of the Study Area is more rural in nature, served by a lesser-developed transportation system. Population and employment growth projections performed for this project indicate that this area is poised for major growth in the near term. The southern boundary of the Study Area was selected to be north of the Kankakee-Bradley-Bourbonnais developed area, and to incorporate the southern portion of Lake County.

The eastern and western boundaries were developed to be consistent logical termini at I-55 in Illinois and I-65 in Indiana. Both I-55 and I-65 are rational end points because they are major north-south Interstate routes that are major traffic generators, with I-55 connecting the Chicago region with Springfield, Illinois, and St. Louis, Missouri, and I-65 connecting the northwestern Indiana metro region with Indianapolis, Indiana, and Louisville, Kentucky. The distance between I-55 and I-65 is approximately 55 miles.

Thus, the Study Area is large enough to address environmental matters on a broad scope. Major north-south cross-roads in the Study Area include I-55, US 52, US 45, I-57, US 41, and I-65 that offer opportunities for regional mobility. To the west of I-55 and the Study Area is Grundy County, which is a less developed county with a 2010 population of approximately 50,000 persons, and is mostly outside the metropolitan planning organization’s (MPO) jurisdiction. To the east of I-65 and the Study Area, the southern four townships in Porter County are primarily rural and have a 2010 population of



approximately 24,000 persons. This proposed project would not restrict consideration of alternatives for other reasonably foreseeable transportation improvements west of I-55, or east of I-65.

### 1.3 Regional Planning Context

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The jurisdictions of three MPOs extend over most of the Study Area: the Chicago Metropolitan Agency for Planning (CMAP), the Northwestern Indiana Regional Planning Commission (NIRPC), and the Kankakee Area Transportation Study (KATS). All three agencies have recently updated their long-range transportation plans to a 2040 planning horizon; accordingly, the Tier One EIS will use a 2040 planning horizon for consistency with these adopted regional plans.

The Illiana Corridor is described in the current 2040 long-range transportation plans of CMAP, NIRPC, and KATS. CMAP's GO TO 2040 Plan identifies the Illiana Corridor as an unfunded need and "supports initiating Phase 1 engineering for the project in order to narrow the scope to a few feasible alternatives, and recommends that these activities begin as a high priority." NIRPC's 2040 long-range transportation plan also included the Illiana Corridor as an unfunded need. The KATS adopted 2040 Long Range Transportation Plan (LRTP) (May 2010) includes the Illiana Corridor as a solution to the problem of through trucks using Kankakee County as a connection between Illinois and Indiana. In addition, the Tier One EIS is included in the Transportation Improvement Programs for CMAP and NIRPC.

Population and employment projections for the "No-Action" 2040 planning horizon were developed by the project study team. These projections are consistent with the regional control totals of the 2040 policy-based projections of the three regional planning agencies. The 2040 No-Action forecasts reflect market-based projections suitable for design and revenue forecasting decisions that are based on historic trends (90 years of historic regional development) and current development patterns, regional and community land use and development plans, available land for development, transportation network accessibility, national and regional economic factors, and commercially available regional economic and demographic forecasts. Other transportation agencies in the Region, including the Illinois State Toll Highway Authority, have used this market-based methodology to provide population and employment inputs to determine future travel demand for major project planning purposes. The project study team has been coordinating with the regional planning agencies to ensure the methodology is appropriate for the purposes of this Tier One EIS.<sup>5</sup>

Regional and local planning also recognizes the importance of sustainable transportation practices. The Illiana Corridor Study will partner with regional and local planning jurisdictions to coordinate sustainable solutions that acknowledge anticipated future regional and transportation changes and growth.

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<sup>5</sup> Illiana Corridor TSPR, April 2012.

## 1.4 Project Need

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Existing and future travel demand in the Region is driven by growth in population, employment, and commuter traffic; growth of the intermodal and freight logistics industry, and the growth in the Region's role as a vital national link for transportation and commerce. The ability for the existing transportation network to accommodate these demands is strained as these travel demands increase. The I-80/US 30 corridors are projected to be widened to their ultimate footprint by 2040, and the travel demands are shifting to well south of these vital links. The portion of the South Sub-Region located north of the Study Area is already experiencing east-west traffic congestion, because through traffic headed east or west of the Region is forced to go south of Lake Michigan. This results in congestion on major east-west routes in the South Sub-Region, such as I-80/Borman Expressway and US-30, which must carry both northeast Illinois/northwest Indiana regional traffic, as well as national through traffic. A major component of this regional and national traffic on major east-west routes is trucks. With the Region being a major freight hub for the country, and expected continued growth in truck freight movement and transfers between rail and truck modes required to support continued economic growth for the country, future east-west truck traffic is expected to show strong growth. This growing regional and national east-west traffic demands in the South Sub-Region will result in travelers seeking alternative routes, including through the Study Area.

With its prominent role as a key national freight crossroad, the Region has emerged as a prominent freight intermodal and logistics center, especially for the transfer of containerized rail freight of domestic and international origin for distribution by local and long-distance trucking as well as collection of bulk products for domestic and international export via rail. Within the Study Area, this has resulted in the country's largest inland intermodal facility, as well as other large intermodal and truck terminal facilities, developing south of the I-80 corridor. The travel markets of these facilities radiate in all directions for both local truck distribution as well as long distance trips of 300 to 500 miles to serve interstate destinations. The travel demands of this industry overlay on the transportation network sharing roadway facilities with local commuters, other local and long distance trucks, agribusiness vehicles, and various other users.

In addition, the Study Area is forecasted to have strong population and employment growth, as the northeast Illinois/northwest Indiana Region continues to grow. The three counties that comprise the Study Area (Will and Kankakee Counties in Illinois and Lake County, Indiana) added nearly 200,000 in population between 2000 and 2010. The Study Area is expected to increase population by 176 percent and employment by 225 percent between 2010 and 2040. This strong population and employment growth in the Study Area will result in increased local and regional traffic demands.

The Study Area does not have the required roadway network to accommodate this growth in local Study Area traffic and regional and national east-west traffic in the South Sub-Region. The Study Area does not have any through east-west interstates or other principal arterials between I-55 and I-65. The existing roadway network in the Study Area

has a majority of east-west routes being discontinuous at the Illinois-Indiana border. The east-west roadway system in the Study Area also has to traverse around the Midewin Tallgrass National Prairie, the proposed SSA, and Cedar Lake.

A transportation system improvement(s) is needed in the Study Area to address the following needs:

1. Improve regional mobility
2. Alleviate local system congestion and improve local system mobility
3. Provide for efficient movement of freight

These three principal needs were identified based on the analysis performed for the development of the Illiana Corridor *Transportation System Performance Report* (TSPR) and public and stakeholder input. The Illiana Corridor TSPR is included in Appendix A. This analysis included a comparison of 2010 and future 2040 baseline (No-Action) transportation conditions in the Region. It assumes the implementation of committed projects and those financially constrained major transportation projects included in the adopted long-range transportation plans, excluding any major improvement in the Study Area to address this Purpose and Need. A regional travel demand model was used to evaluate transportation system performance on three levels, including the Region, South Sub-Region, and Study Area.

Based on the rigorous technical analysis of the travel demands in the Illiana Corridor TSPR, several components of need that respectively define the regional, local, and freight movement needs of the Study Area have been identified.

#### **1.4.1 Improve Regional Mobility**

“Improve regional mobility” addresses the need to develop a transportation system improvement that serves the projected growth in east-west traffic in the Region, South Sub-Region, and Study Area, reduces regional travel times, and improves access to jobs.

##### ***1.4.1.1 Address Projected Growth in Regional East-West Travel***

Population forecasts developed for the Region show strong growth over the next 30 years, as it continues to attract people and as residential patterns shift. The estimated population growth for the 18-county Region in the regional travel model and the South Sub-Region is shown in Table 1-1. Projected population growth for the Region between 2010 and 2040 is 29 percent or approximately 3 million persons. For the South Sub-Region, population is expected to grow nearly 50 percent or 1.3 million persons between 2010 and 2040.

Total employment for the Region is projected to grow substantially over the next 30 years (Table 1-2). Forecasted growth between 2010 and 2040 is 35 percent with an employment gain of nearly 2 million jobs. The South Sub-Region, of which the Study Area is a part, is projected to increase in employment by over 70 percent by 2040. This is due in large measure to the expansion of new development in the northeast Illinois and northwest

**Table 1-1. Projected Population Growth**

Area	2010 Population	2040 Population Projection	Change
Region	10,025,000	12,922,000	29%
South Sub-Region	2,635,000	3,933,000	49%

Source: Historic and Forecasted Growth of Employment and Population: CMAP Counties and Townships, The al Chalabi Group, 2012.

**Table 1-2. Projected Employment Growth**

Area	2010 Employment	2040 Employment Projection	Change
Region	5,664,000	7,626,000	35%
South Sub-Region	1,099,000	1,889,000	72%

Source: Historic and Forecasted Growth of Employment and Population: CMAP Counties and Townships, The al Chalabi Group, 2012.

Indiana Region into areas of available land close to existing developed centers. Other contributing factors include the development of suburban centers across the Region.

Major Region and South Sub-Region growth would also contribute to a substantial increase in vehicle trips between 2010 and 2040 (Table 1-3).

**Table 1-3. Projected Daily Vehicle Trips**

Area	2010	2040	Change
Region	61,733,000	77,685,000	26%
South Sub-Region	14,224,000	19,323,000	36%

Source: Illiana Corridor TSPR, April 2012.

Table 1-4 shows projected daily vehicle miles of travel (VMT) within the Study Area in both the north-south and east-west directions. For north-south travel, projected 2040 VMT by all traffic would increase by more than 2.7 million miles, or 67 percent more than current 2010 conditions. The projection for east-west travel shows an even greater growth rate. By 2040, VMT in this direction are projected to increase by more than 2.5 million miles, or 79 percent more than the existing 2010 condition. This equates to a total projected increase of 72 percent for the entire Study Area, twice that of the South Sub-Region and three times the Region change.

**Table 1-4. Projected Daily Study Area VMT by Direction**

Direction	2010	2040	Change
North-South	4,046,700	6,753,400	67%
East-West	3,291,600	5,880,200	79%
Total	7,338,300	12,633,600	72%

Source: Illiana Corridor TSPR, April 2012.

Figure 1-3 shows the change in total daily vehicle trips from 2010 to 2040, and illustrates the overall desired travel patterns for the growth in all vehicles from various origin districts within and outside of the Study Area. East-west external vehicle trips through the South Sub-Region are projected to have strong growth. These east-west through trips are expected to occur on higher functional classification facilities, such as I-80/94 and the Indiana Toll Road. This adds traffic to north-south corridors in the Study Area since an east-west option is not available.

Figure 1-3 reinforces the conclusion that there is strong vehicle trip demand growth for east-west travel south of I-80. However, I-80/94 is currently the only east-west Interstate highway option for meeting those travel desires.

**1.4.1.2 Regional Travel Delay/Improve Regional Travel Times**

With the projected increases in traffic between 2010 and 2040, vehicle hours of travel (VHT) and hours of delay are expected to increase. Hours of delay are the amount of additional time spent traveling over what would be expected during free flow conditions. VHT increases by 34 percent in the Region and by 53 percent in the South Sub-Region, while hours of delay increase by 46 percent for the Region and by 141 percent for the South Sub-Region (Table 1-5). This results in trip time increases, economic impacts, and loss of jobs accessibility.

**Table 1-5. Projected Change in Daily VMT, Hours of Travel and Hours of Delay**

Area	2010-2040 Change in VMT	Change	2010-2040 Change in VHT	Change	2010-2040 Change in Hours of Delay	Change
Region	56,125,600	31%	1,578,600	34%	219,100	46%
South Sub-Region	20,640,600	46%	526,800	53%	64,300	141%

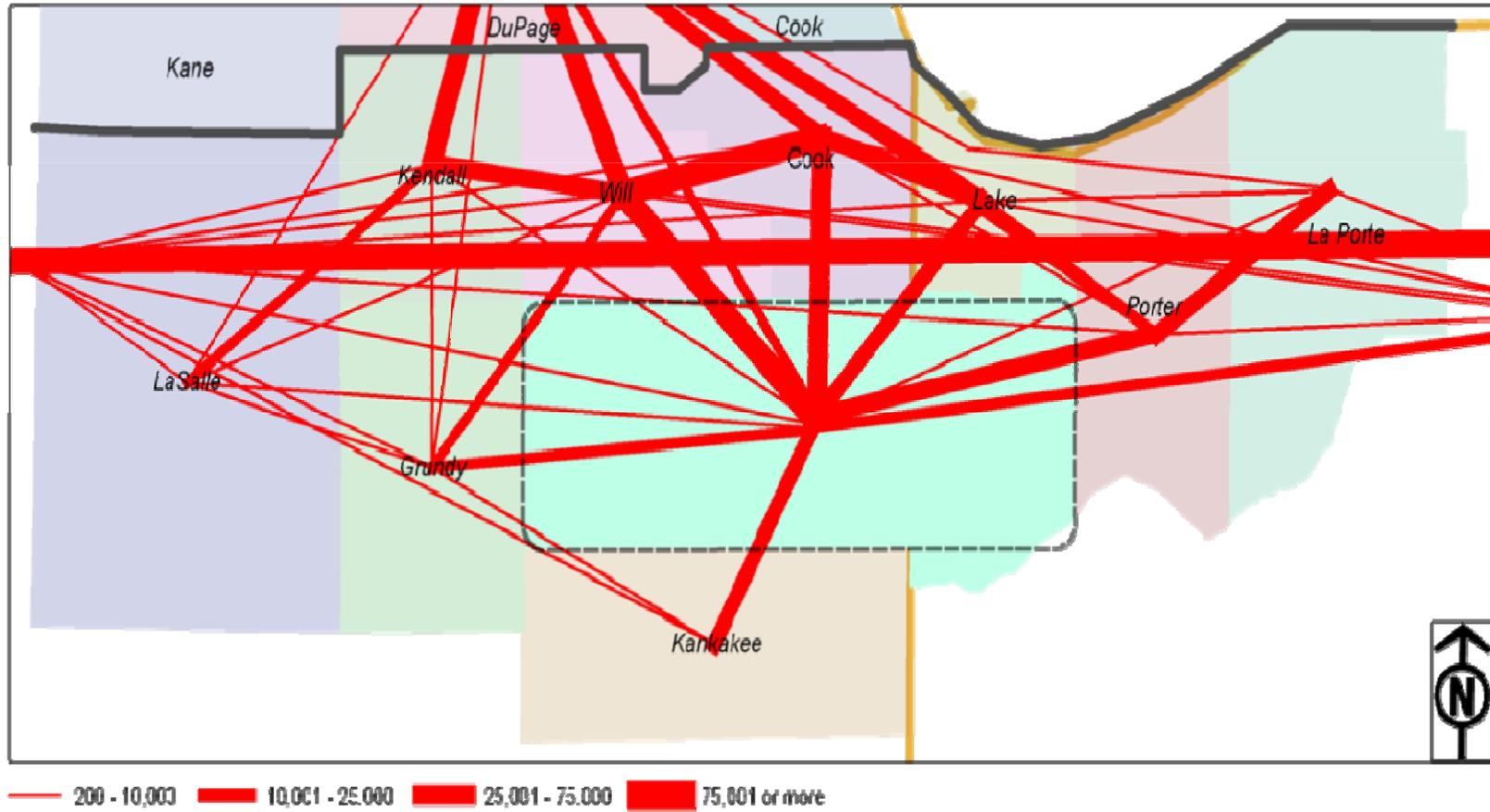
Source: Illiana Corridor TSPR, April 2012.

**1.4.1.3 Improve Access to Jobs**

The Study Area currently (2010) has a jobs-to-population ratio of 0.39 (or 39 jobs for every 100 residents) that is 32 percent less than the Region (0.57 jobs-to-population ratio), with the South Sub-Region jobs-to-population ratio 26 percent less than the Region. The Study Area jobs-to-population ratio is projected to improve by 2040 to 0.46, but it would still be 23 percent less than the Region’s projected 0.59 jobs-to-population ratio. This indicates that in general, the Study Area and South Sub-Region have more workers than jobs; the area is a net exporter of workers.

Regional job accessibility from the Study Area is forecasted to decline between 2010 and 2040 because of increased congestion and travel times. Accessibility, measured in terms of 2010 and 2040 travel times to 2040 jobs (locations of all jobs that would exist in 2040),

Figure 1-3. Projected 2010-2040 Origin-Destination Growth in Vehicle Trips



Source: Illiana Corridor *Transportation Performance Report*, April 2012.

would decline for all trip durations between 2010 and 2040 (Table 1-6). For example, the accessibility to 2040 regional jobs for travel times less than or equal to 30 minutes from the Study Area shows that when using the 2010 highway network, 620,600 future (2040) jobs can be reached, and when using the more congested 2040 highway network, only 491,100 of these future (2040) jobs can be reached; a loss in accessibility of nearly 130,000 jobs or a 21 percent decline.

**Table 1-6. Projected Accessibility to Forecast (2040) Jobs**

Locations	2010	2040	Accessible Jobs Change
Within 15 minutes	128,300	82,900	-45,400
Within 30 minutes	620,600	491,100	-129,500
Within 45 minutes	1,313,400	1,107,300	-206,100
Within 60 minutes	2,283,300	1,953,700	-329,600

Source: Illiana Corridor TSPR, April 2012.

#### **1.4.2 Alleviate Local System Congestion and Improve Local System Mobility**

“Alleviate local system congestion and improve local system mobility” focuses on the need to develop a transportation system improvement that serves the projected growth in local traffic, improves Study Area travel times/reduces delay, and addresses the lack of continuous higher functional classification east-west routes through the Study Area. Addressing system mobility and increased traffic on the local level is key to developing a balanced transportation improvement.

##### **1.4.2.1 Address Projected Growth in Local Traffic; Reduce Local Travel Delay; Improve Local Travel Time**

Population forecasts developed for the Study Area show substantial growth in the next 30 years (Table 1-7). Study Area population is expected to increase by 176 percent in the next 30 years, with a gain in population of over 411,000 residents. Employment in the Study Area is projected to increase by 225 percent by 2040, with a gain in employment of over 207,000 jobs (Table 1-7).

**Table 1-7. Projected Study Area Population and Employment**

	2010	2040	Change
Population	233,400	644,640	176%
Employment	92,070	299,470	225%

Source: The al Chalabi Group, 2012.

Employment growth is projected to be the highest in the northern portions of the Study Area. The highest total employment concentrations would occur in University Park, Monee, Manhattan, Joliet, and Beecher in Illinois, and Hobart and Crown Point in Indiana.

Based on this forecasted increase in population and employment, total vehicle trips originating in or destined to the Study Area are projected to show a substantial increase of 126 percent between 2010 and 2040 (Table 1-8). Local trips made entirely within the Study Area are projected to increase by 135 percent, while trips entering, leaving, or through the Study Area are projected to increase by 128 percent.

**Table 1-8. Projected Daily Study Area Vehicle Trips**

<b>Travel Measure</b>	<b>2010</b>	<b>2040</b>	<b>Change</b>
Total Vehicle Trips Originating in the Study Area	666,720	1,505,180	126%
Total Vehicle Trips Destined to the Study Area	663,000	1,495,180	126%
Total Vehicle Trips Within the Study Area	350,340	823,250	135%
Total Vehicle Trips Entering, Leaving and Through the Study Area	1,680,060	3,823,610	128%

Source: Illiana Corridor TSPR, April 2012.

Average daily and forecasted traffic volumes within the Study Area on arterial roads are expected to increase substantially (Figure 1-4 and Figure 1-5). Between 2010 and 2040, increases in average daily traffic volume (ADT) would be most pronounced in the northern half of the Study Area, and along the I-55, I-57, US 41 and I-65 corridors.

The 2010 to 2040 change in ADT by functional classification for roadways in the Study Area (Table 1-9) shows increased ADT consistent with the growth in projected daily Study Area vehicle trips in Table 1-8. Minor arterials and other principal arterials are expected to double their ADT and will be congested. As a result, longer distance trips are being diverted to collector and local roads. Although these collector and local roads are adequate for local travel needs, they are not designed to carry longer distance external trips, as they are designed to carry slower speed traffic to provide local access.

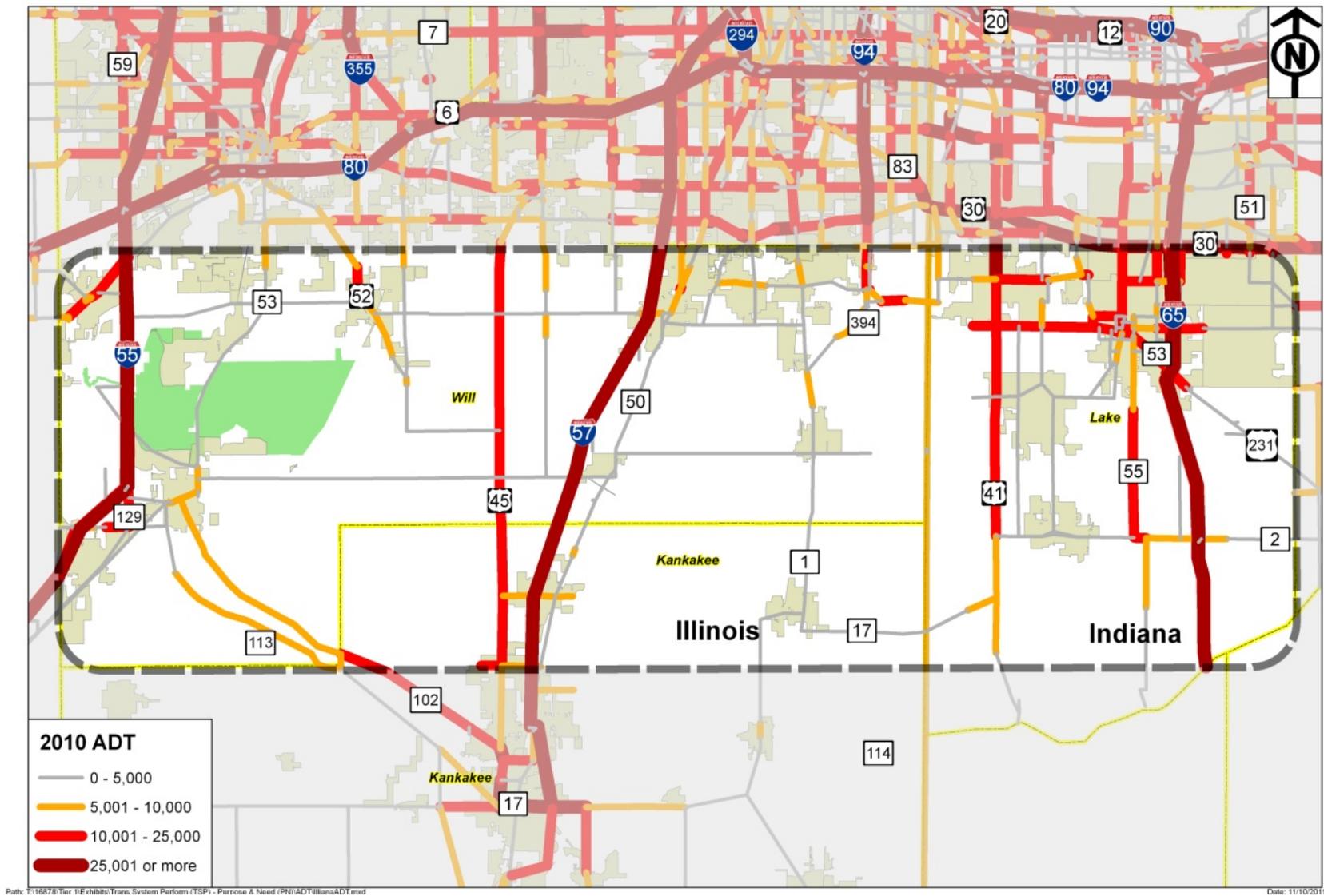
**Table 1-9. Projected Study Area Growth in ADT by Functional Classification**

<b>Functional Classification</b>	<b>2010-2040 Change in ADT</b>
Principal Arterial - Interstate	65%
• Other Principal Arterial	124%
• Minor Arterial	98%
• Collectors, Locals	159%
Total	116%

Source: Illiana Corridor TSPR, April 2012.

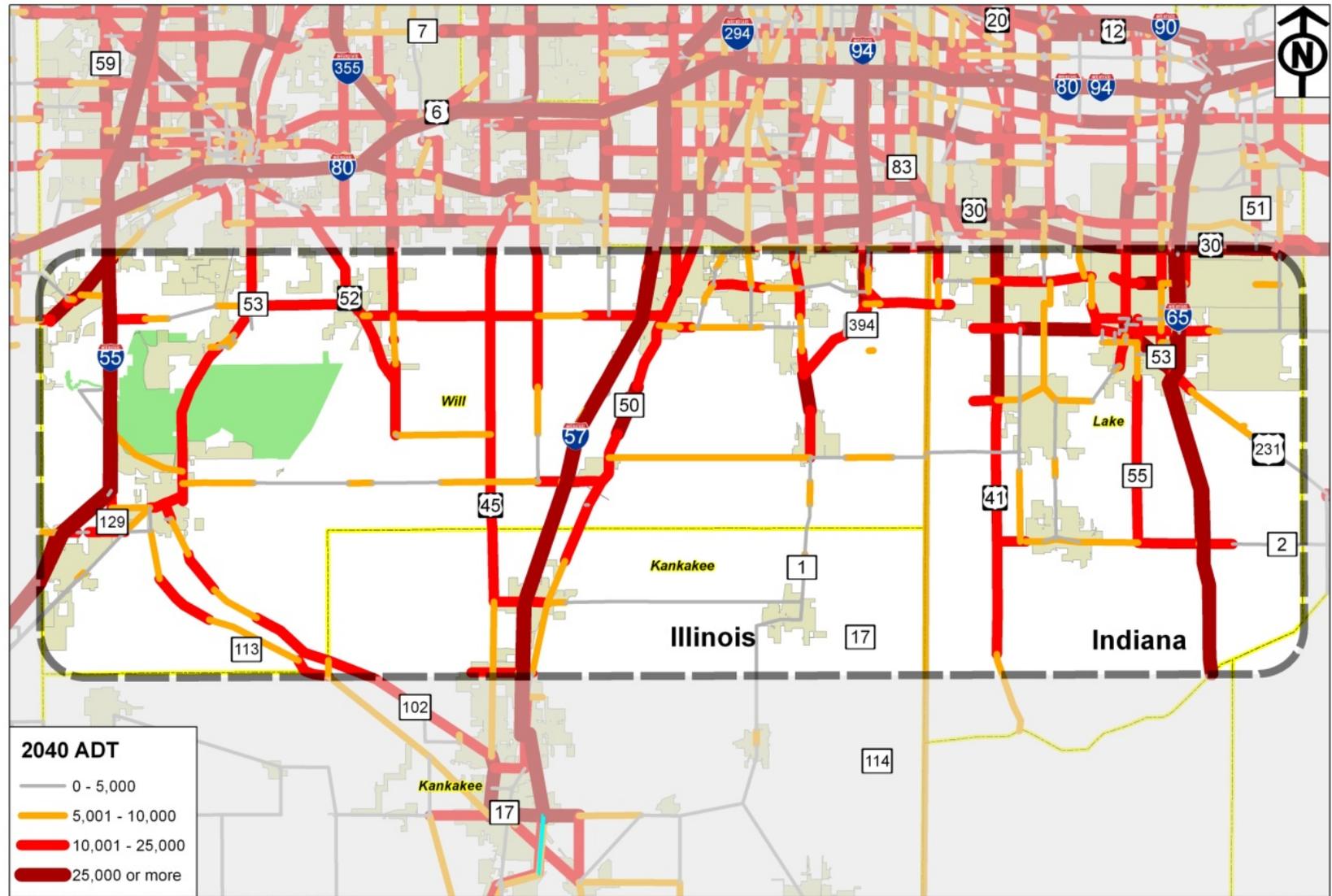
Forecasted traffic congestion in the Study Area was determined by calculating the volume to capacity (V/C) for the proposed project. Some of the current and projected congestion on north-south routes such as I-57, I-55 and I-65 in the Study Area can be attributed to longer distance regional traffic accessing I-80 in an out-of-direction pattern due to a lack of other available higher-classification east-west routes (see previous

Figure 1-4. ADT (2010)



Source: Illiana Corridor TSPR, April 2012.

Figure 1-5. No-Action ADT (2040)



Source: Illiana Corridor TSPR, April 2012.

discussion in Section 1.4.1.1 and Figure 1-3). This condition adds travel and congestion onto the north-south access routes as travelers seek east-west alternatives to the lower functional classification routes in the Study Area.

V/C is a transportation congestion measure that represents the traffic volumes present to a roadway's ideal carrying capacity. V/C equal to one indicates a roadway is at its limit of carrying capacity. V/C is considered to be uncongested when it is 0.50 or less, approaching congestion when it is between 0.51 and 0.85, and congested when it is 0.86 or more.

With a few exceptions, the immediate Study Area is operating at V/C of 0.50 or less in its existing roadway network configuration and with 2010 volumes. However, the two main east-west roadways directly north of the Study Area, I-80/94 and US 30, both experience high levels of congestion currently. With these main east-west routes congested, and Manhattan-Monee Road and Peotone-Wilmington-Beecher Road, which are the main east-west arterials in the Study Area, becoming congested in 2040, some longer distance, external traffic will be using lower functional classification roads to avoid congestion.

Figure 1-6 and Figure 1-7 show 2010 and projected 2040 V/C for roadways in the Study Area. For I-80/94, this measure predicts congested conditions for nearly all sections in 2010 as well as the 2040 No-Action. For US 30, this measure indicates "approaching congestion" and "congested," with increasing congested segments primarily east of I-57. Multilane and two-lane highways would also experience substantial deterioration in their operations. Congestion would be especially noticeable on principal arterials with additional segments having V/C ratios "approaching congestion" and "congested" in the year 2040.

With the projected increases in traffic between 2010 and 2040, VMT, VHT, and vehicle hours of delay within the Study Area are all projected to increase substantially. VHT is the total time spent traveling by all vehicles on the roadway network. Vehicle hours of delay are the increased time spent traveling over what would be expected during free flow conditions. VMT increases by 72 percent from 2010-2040, VHT increases by 84 percent, and vehicle hours of delay increases by over 200 percent of the current condition (Table 1-10). This substantial increase in travel time would lead to economic loss with 15,000 hours of daily delay in 2040, which is equivalent to \$113 million annually, assuming an average vehicle value of time of \$20.61/hour.<sup>6</sup>

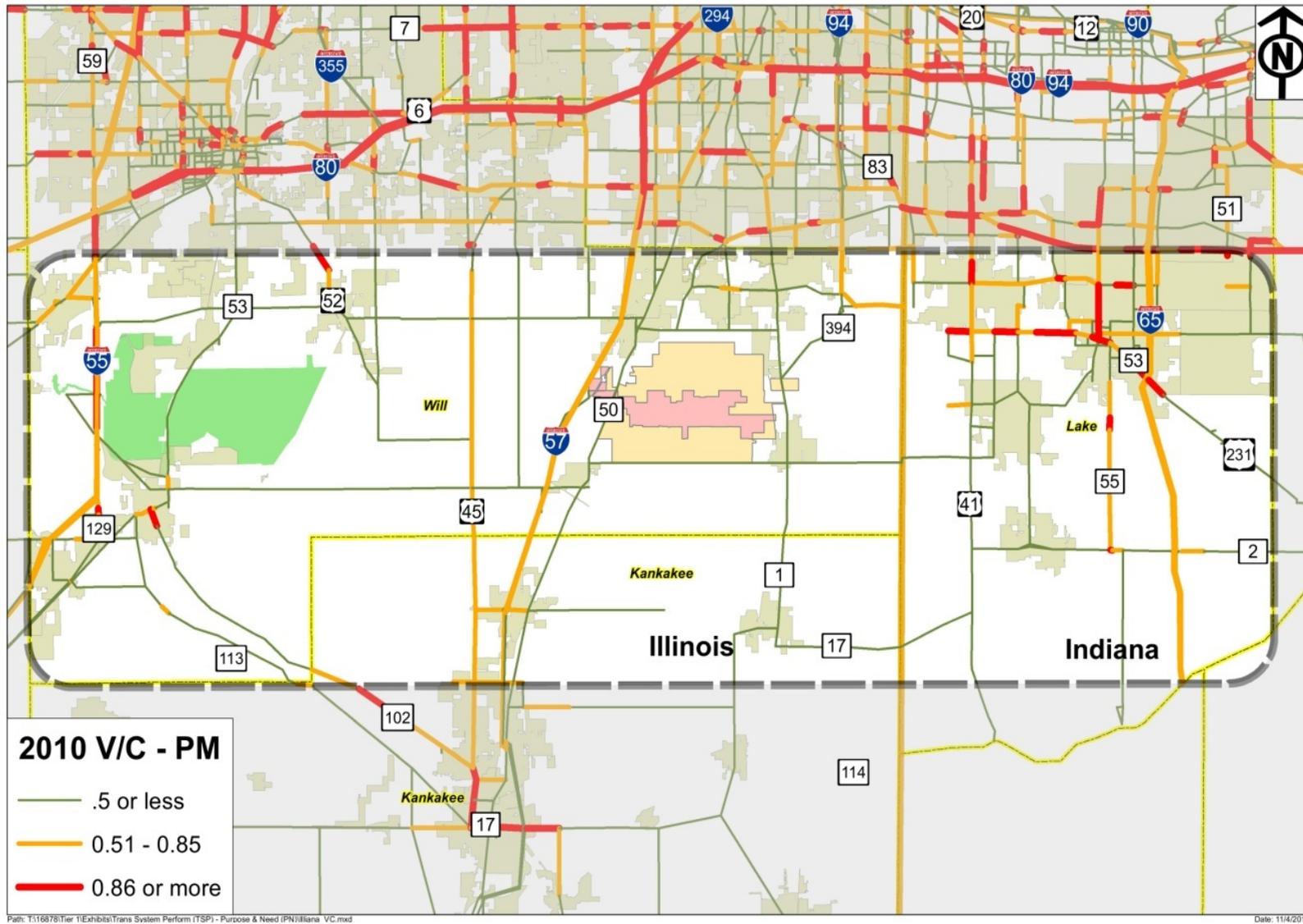
**Table 1-10. Projected Daily Study Area VHT and Hours of Delay**

<b>Congestion Measure</b>	<b>2010</b>	<b>2040</b>	<b>Change</b>
VMT	7,338,000	12,634,000	72%
VHT	177,200	326,000	84%
Hours of Delay	4,900	15,000	206%

Source: Illiana Corridor TSPR, April 2012.

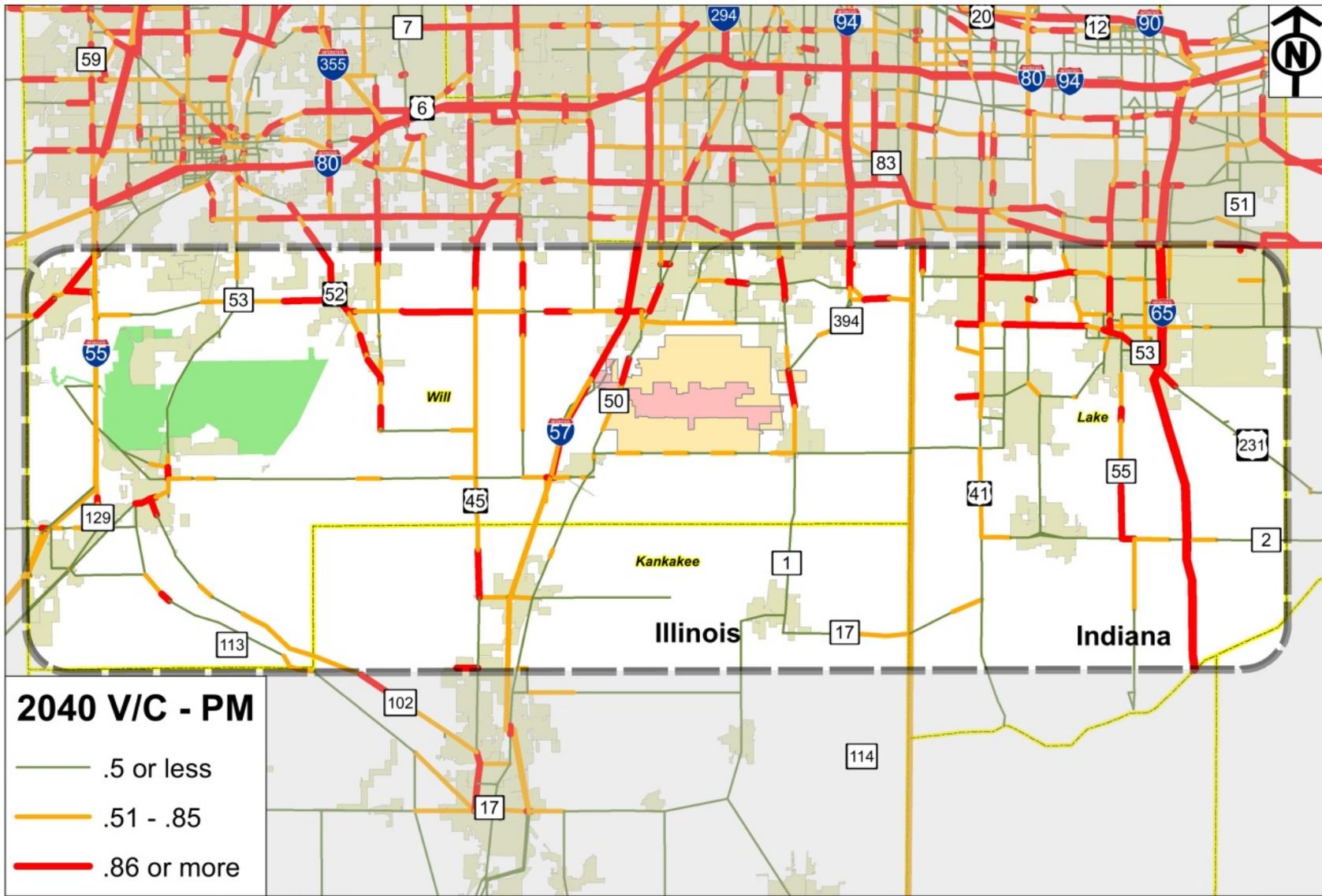
<sup>6</sup> NCHRP Report 456 Guidebook for Assessing the Social and Economic Effects of Transportation Projects.

Figure 1-6. V/C (2010)



Source: Illiana Corridor TSPR, April 2012.

Figure 1-7. Predicted No-Action V/C (2040)



Source: Illiana Corridor TSPR, April 2012.

**1.4.2.2 Address Lack of Continuous Higher Functional Classification East-West Routes through the Study Area**

There are limited east-west, higher functional class roads in the Study Area (Figure 1-8). Functional classification is the grouping of roads by the character of service they provide. This includes, in descending order of capacity, principal arterials (Interstates, expressways, and other principal arterials), minor arterials (urban and rural), collectors, and local roads. There is also a lack of continuous east-west travel routes through the entire Study Area. The majority of east-west streets are not continuous across the state line between Illinois and Indiana. There are also natural features and federally protected lands in the Study Area, such as the Des Plaines and Kankakee rivers and the Midewin National Tallgrass Prairie located in the western portion of the Study Area, and West Creek and Cedar Lake in the eastern portion of the Study Area. These natural features and federally protected lands constrain options for east-west travel. The proposed SSA, for which IDOT is currently acquiring property, would result in east-west road closures.

Immediately north of the Study Area there is a well-developed roadway system with a balanced functional classification system. This includes Interstate highways and other principal arterial highways in the east-west direction, including I-80/94, US 30, and US 6. However, I-80 is assumed to be built out to its maximum capacity in the 2040 No-Action, and the Study Area proper contains no east-west Interstate routes. The first available east-west Interstate route south of I-80/94 is I-74, which is approximately 100 miles to the south. Manhattan-Monee Road and Peotone-Wilmington-Beecher Road are the main east-west other principal arterials in the Study Area, and they are two-lane facilities that do not extend completely across the Study Area.

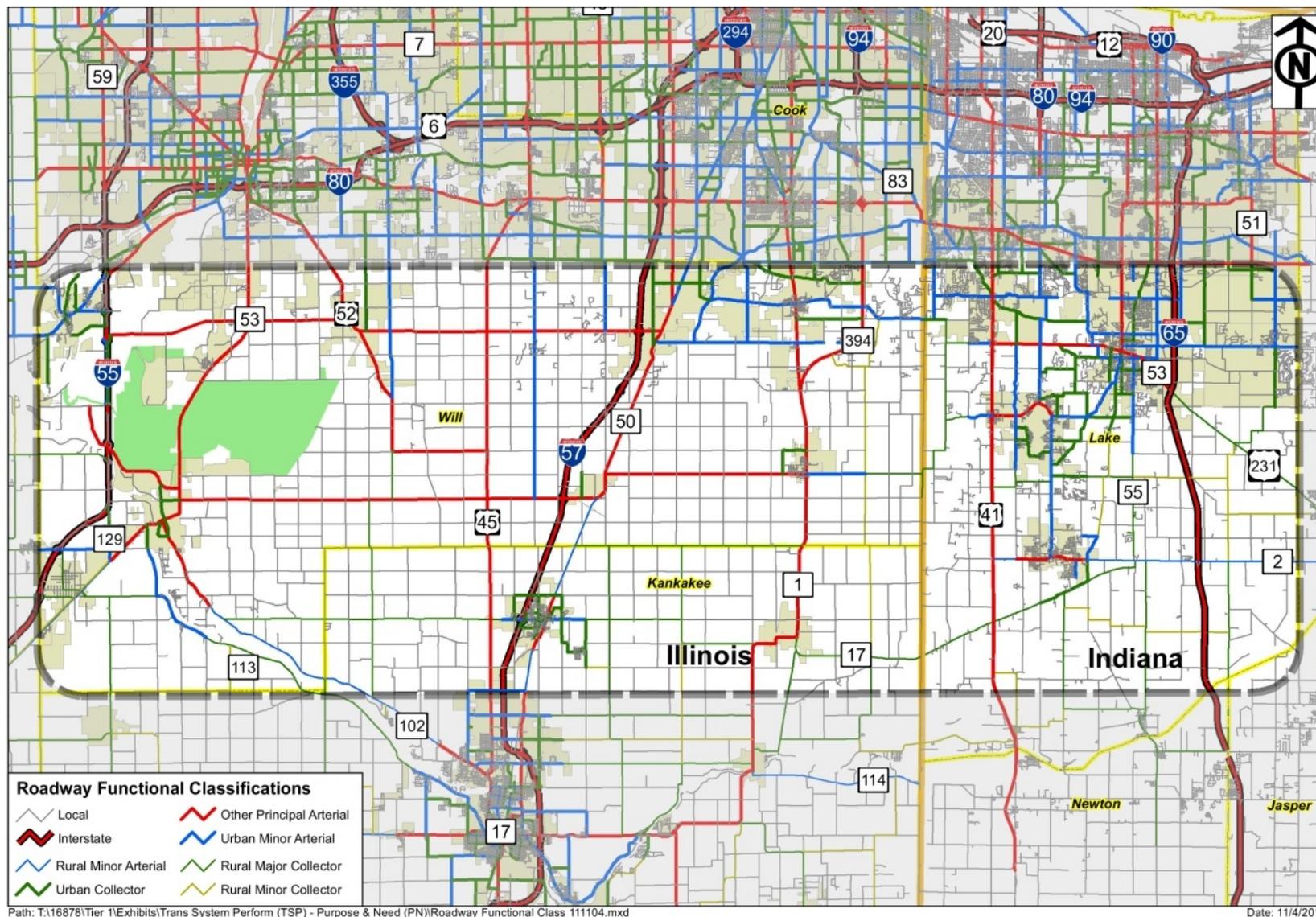
There are only 141 east-west lane miles of other principal arterials in the Study Area (Table 1-11). Given that the Study Area is a rectangle of more than 55 miles in the east-west direction and approximately 20 miles in the north-south direction, there are a disproportionately small number of Interstate and other principal arterial lane miles in the east-west direction compared to the north-south direction that would need to accommodate the projected growth in east-west travel (Figure 1-3).

**Table 1-11. Study Area Lane Miles by Functional Classification**

<b>Functional Classification</b>	<b>North-South</b>	<b>East-West</b>
Interstate Highways	210	0
Other Principal Arterial	224	141
Minor Arterial (Urban)	76	123
Minor Arterial (Non-Urban)	33	24
Collector & Local (Urban & Non-Urban)	1,375	1,158
<b>Total</b>	<b>1,914</b>	<b>1,445</b>

Source: Illiana Corridor TSPR, April 2012.

Figure 1-8. Study Area Roadway Functional Classification



Source: Illiana Corridor TSPR, April 2012.

The lack of available east-west Interstate and other principal arterial routes in the Study Area forces some trips having an east-west destination to first travel north to I-80, the nearest east-west Interstate highway. This is contributing to the congestion on the north-south arterial routes that access I-80. The lack of continuous higher functional class east-west routes limits travel route options causing adverse travel that adds economic cost, delay, congestion, reduced job accessibility, and a mismatch of trip type with appropriate routes.

### 1.4.3 Provide for Efficient Movement of Freight

To sustain its role as a vital national link for national commerce movement, and address the growing travel demands of intermodal transfer activity, the transportation system must meet the need for efficient movement of freight. “Provide for efficient movement of freight” focuses on the need to improve the accessibility of freight movement to and from its distribution points throughout the Region, including providing more efficient freight movement on the roadway network.

#### 1.4.3.1 Provide More Efficient Freight Movement

The northeast Illinois and northwest Indiana Region serves as a freight transportation center for the country. The movement of freight is critical to both the national and regional economies. In the Chicago region, trucks carry about 1.5 billion tons of freight annually and rail carries 631 million tons.<sup>7</sup>

Truck hours of travel (THT) are projected to increase for both the Region and South-Sub-Region, with the Study Area showing over 80 percent growth by 2040 (Table 1-12). The Study Area growth in THT is expected to increase at a faster rate than the Region and South Sub-Region. This is due to the Study Area having a higher growth rate in truck trips and congestion. Truck hours of delay are shown in this table, with substantial 2010 to 2040 growth, especially for the South Sub-Region and Study Area, which grow at 324 percent and 442 percent, respectively.

**Table 1-12. Projected Daily THT and Truck Hours of Delay**

Area	2010 THT	2040 THT	Change	2010 Truck Hrs of Delay	2040 Truck Hrs of Delay	Change
Region	286,400	433,600	51%	55,860	113,900	111%
South Sub-Region	90,900	155,000	70%	5,890	25,000	324%
Study Area	15,700	28,400	81%	480	2,600	442%

Source: Illiana Corridor TSPR, April 2012.

This table shows the added travel time and delay time that would be faced by trucks in the South Sub-Region and Study Area due to the increased future congestion, resulting in diminished accessibility and economic loss. The 2,600 hours of daily truck delay in 2040

<sup>7</sup> CMAP website, <http://www.cmap.illinois.gov/2040/freight-system>.

translates to nearly \$34 million annually, assuming \$35.73/truck vehicle hour as a value of time.<sup>8</sup>

The Study Area includes a number of existing and planned freight transportation facilities (Figure 1-9). In particular, there are several large freight facilities that exist or are proposed for the Study Area. These include the existing CenterPoint Intermodal Center in Elwood, Illinois; the existing CenterPoint Global IV Intermodal Center in Joliet, Illinois; the proposed RidgePort Logistics Center in Wilmington, Illinois; and the proposed CenterPoint Intermodal Center in Crete, Illinois, which are rail-truck intermodal transfer facilities with additional existing and proposed logistics/warehousing businesses in the immediate vicinity of each facility. The two existing intermodal centers in Elwood and Joliet handled more container units in 2008 (3,000,000 20-foot equivalent units, or approximately 1.5 million trucks) than any comparable land-based facility, and all but three of the largest coastal ports in the US.<sup>9</sup> These existing and proposed facilities are projected to account for 47,000 daily truck movements by 2040. In addition, the proposed SSA is expected to include a freight cargo facility.

Table 1-13 shows the projected growth in truck trips within the Region, South Sub-Region, and Study, while Figure 1-10 and Figure 1-11 graphically show 2010 and projected 2040 truck ADT for the Study Area.

**Table 1-13. Projected Daily Truck Trips**

Area	2010	2040	Change
Region	3,850,200	5,223,400	36%
South Sub-Region	824,900	1,340,900	63%
Study Area	87,800	257,100	193%

Source: Illiana Corridor TSPR, April 2012.

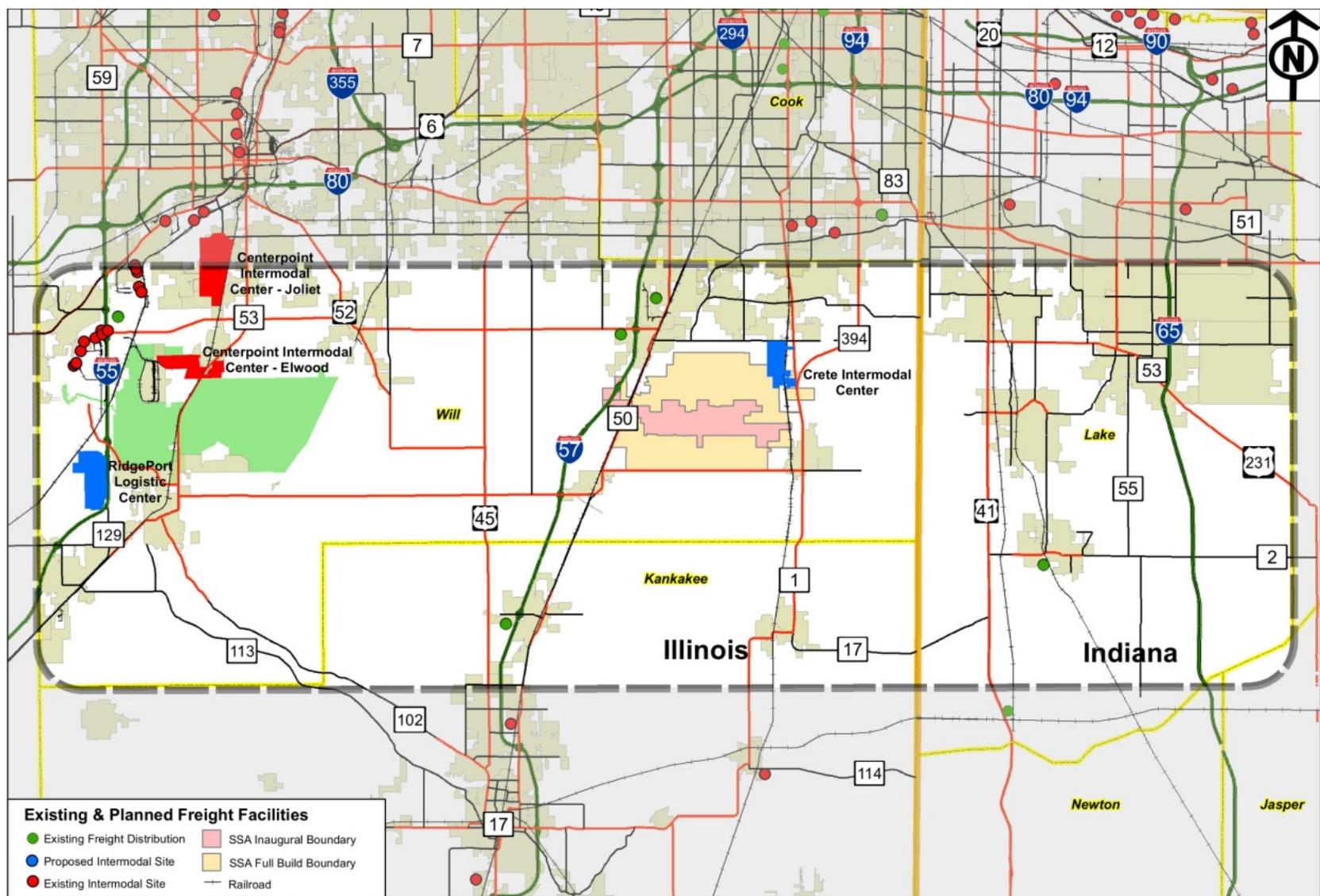
It is more difficult to isolate and identify rail freight traffic growth through the Study Area. However, a 2007 national rail study indicated that rail freight tonnage demand in the US will increase by 88 percent from 2004 to 2035 (to over 4 billion tons/year) and that a corresponding increase in rail freight traffic will result. In particular, the Burlington Northern Santa Fe Railway (BNSF) line through the far western part of the Study Area (serving the CenterPoint Elwood and proposed RidgePort intermodal facilities) has an anticipated 80-200 trains/day traffic growth and the CSX/Union Pacific Railroad (UPRR) line through the Study Area (serving the proposed Crete intermodal facility) has an anticipated 30-80 trains/day traffic growth, from 2004 to 2035.<sup>10</sup>

<sup>8</sup> NCHRP Report 456 Guidebook for Assessing the Social and Economic Effects of Transportation Projects.

<sup>9</sup> "Inland Port Impact Study", Will County Center for Economic Development, September 2010.

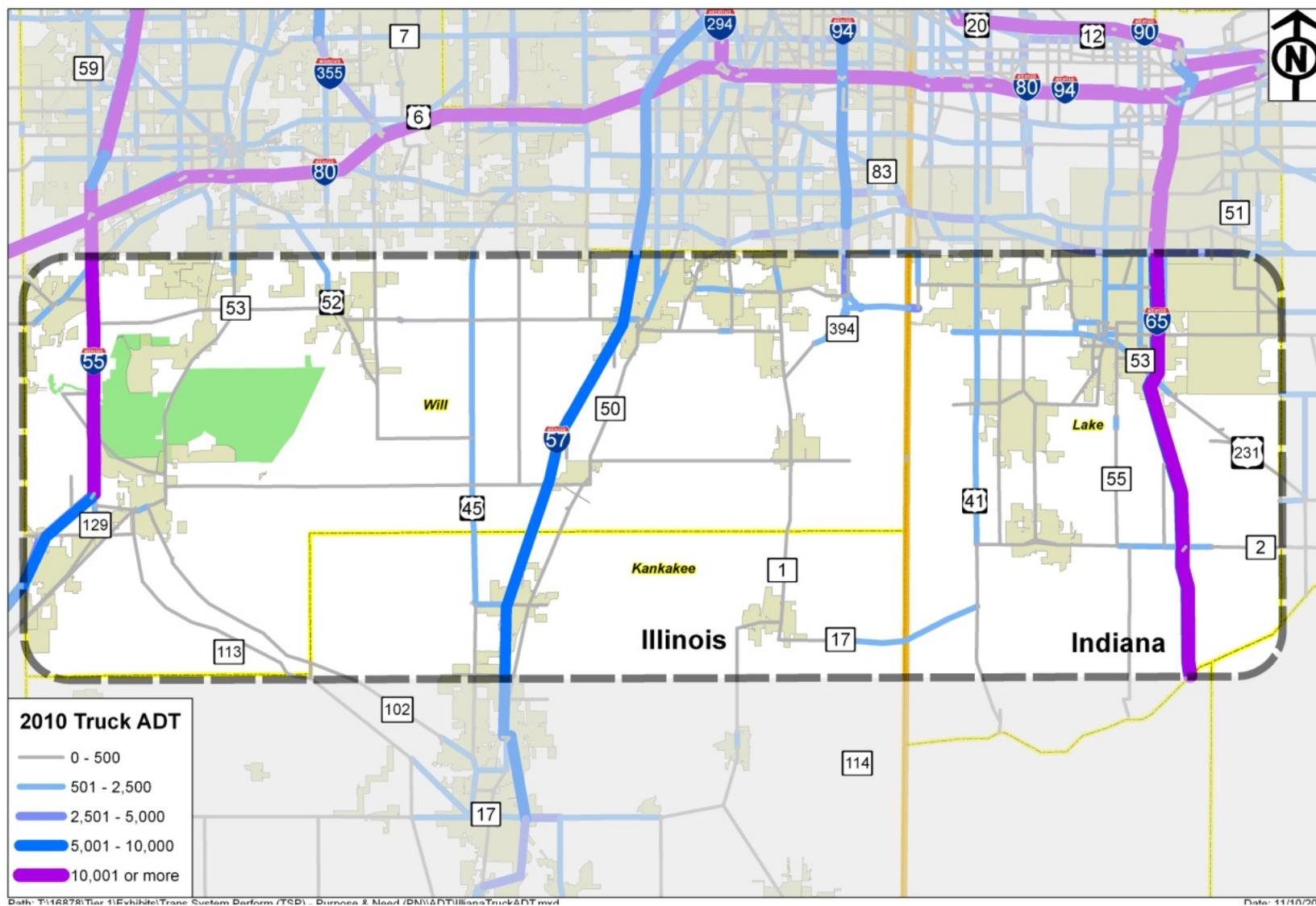
<sup>10</sup> National Rail Freight Infrastructure Capacity and Investment Study AAR, 2007.

Figure 1-9. Existing and Planned Freight Facilities



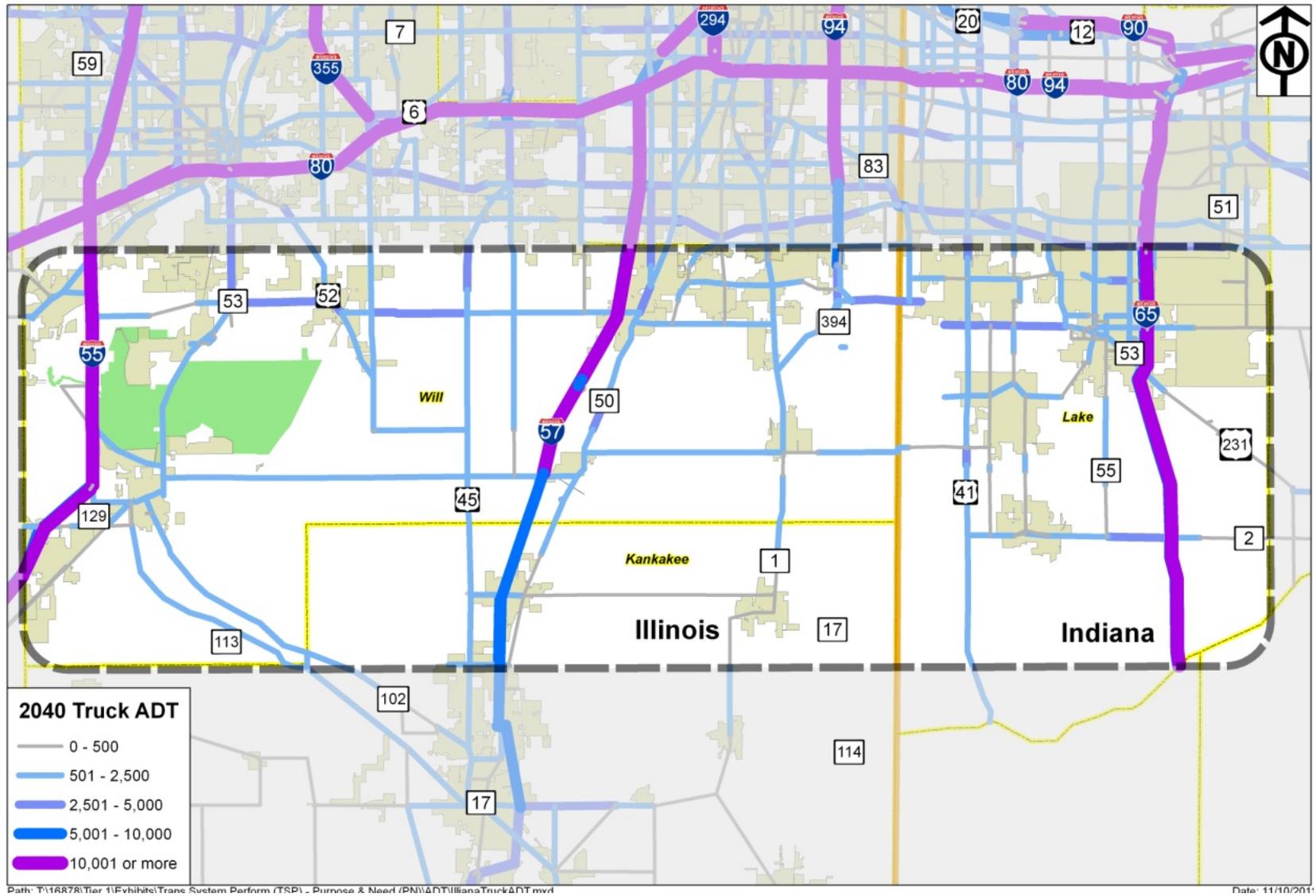
Source: Illiana Corridor TSPR, April 2012.

Figure 1-10. Truck ADT (2010)



Source: Illiana Corridor TSPR, April 2012.

Figure 1-11. Projected Truck ADT (2040)



Source: Illiana Corridor TSPR, April 2012.

The primary freight rail capacity deficiency identified by the Illiana Corridor study is on the western UPRR line through the Study Area (serving the Global IV intermodal facility in Joliet, Illinois). The opening of this facility in 2010, along with the proposed introduction of high speed intercity passenger rail service from Chicago to St. Louis, requires rail infrastructure improvements in both freight and passenger systems. A total of \$1.2 billion in federal funds has been identified for the Chicago-St. Louis high speed rail line to date, and additional studies are underway to address the provision of the required operating capacity for both passenger and freight services.<sup>11</sup> Currently, no other freight rail capacity issues within the Study Area have been identified, either by interviews with the individual railroads or by research of available freight railroad information. North of the Study Area, the Chicago Region Environmental and Transportation Efficiency (CREATE) program and capacity improvements by the Class 1 railroads are improving rail capacity issues, primarily within Chicago and the immediate surrounding area.<sup>12</sup>

The predicted increase in both truck and rail freight demand creates mobility needs that have not been addressed. Total truck trips originating in or destined to the Study Area are projected to increase by 186 and 185 percent respectively between 2010 and 2040 (Table 1-14). Local trips made entirely within the Study Area are projected to increase by 228 percent, while trips entering, leaving, or through the Study Area are projected to increase by 193 percent. This projected increase in Study Area vehicle trips greatly exceeds the projected 36 percent increase in total truck trips for the Region.

**Table 1-14. Projected Daily Study Area Truck Trips**

<b>Travel Measure</b>	<b>2010</b>	<b>2040</b>	<b>Change</b>
Total Truck Trips Originating in the Study Area	36,870	105,520	186%
Total Truck Trips Destined to the Study Area	36,560	104,320	185%
Total Truck Trips Within Study Area	14,410	47,220	228%
Total Truck Trips Entering, Leaving and Through the Study Area	87,840	257,070	193%

Source: Illiana Corridor TSPR, April 2012.

Truck VMT within the Study Area in both north-south and east-west directions are shown in Table 1-15. For north-south travel, projected miles traveled by truck traffic each day would increase by more than 425,000 miles from 2010 to 2040, a 60 percent increase. Even greater is the projection for east-west truck travel. By 2040, truck miles traveled in this orientation are projected to increase by nearly 578,000 miles or 106 percent more than the existing 2010 condition. This equates to a total projected increase in VMT of 80 percent for the entire Study Area.

<sup>11</sup> Illinois High Speed Rail website: <http://www.idothsr.org>.

<sup>12</sup> CREATE website: <http://www.createprogram.org>.

**Table 1-15. Projected Daily Study Area Truck VMT**

<b>Direction</b>	<b>2010 Truck VMT</b>	<b>2040 Truck VMT</b>	<b>Change</b>
East-West	547,300	1,124,900	106%
North-South	705,800	1,131,800	60%
Total	1,253,100	2,256,700	80%

Source: Illiana Corridor TSPR, April 2012.

Figure 1-12 shows the change in truck volumes from 2010 to 2040, and illustrates the overall desired travel patterns for multi-unit trucks from various origin districts within and outside of the Study Area. Truck volumes are expected to grow from the southern part of Will County to the northern part of Will County and to Cook County, including demand growth for east-west as well as north-south truck travel within the Study Area. This exhibit reinforces the conclusion that trucks have market destinations south of I-80, but I-80/94 is currently the only east-west Interstate highway option for meeting those travel desires.

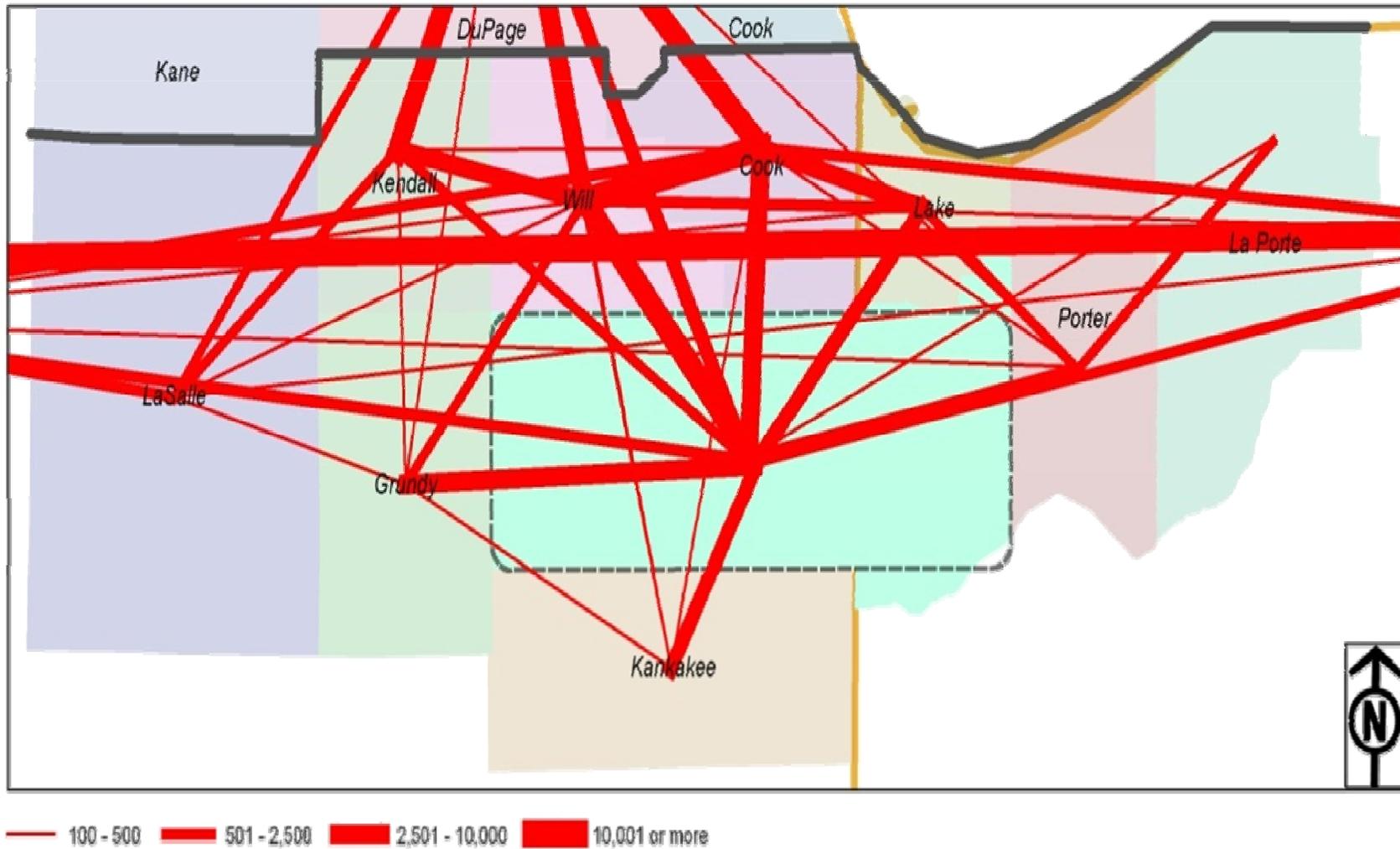
## 1.5 Purpose Statement

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Based on the Project Need identified in Section 1.4, the purpose of the Illiana Corridor Project is to improve east-west connectivity in the general vicinity of I-55 to the west and I-65 to the east in the Study Area in a manner that may be adapted to sustainable future local and regional transportation and economic development goals so as to:

- Improve regional mobility, travel times, and access to jobs by addressing growing east-west regional and national traffic demand that is required to traverse the region and South Sub-Region regardless of the trip origin or destination
- Alleviate local system congestion and improve local system mobility, and address lack of connectivity for Will, Kankakee, and Lake Counties to meet and support projected traffic growth from increased population, employment, transportation, and economic development including the lack of continuous, higher functional classification east-west travel routes in the Study Area, and improving travel times; and
- Accommodate market demands for the increasing freight logistic transportation and more efficient freight movement including better accommodation of regional and national truck trips.

Figure 1-12. Projected 2010-2040 Origin Destination Growth in Truck Trips



Source: Illiana Corridor TSPR, April 2012.