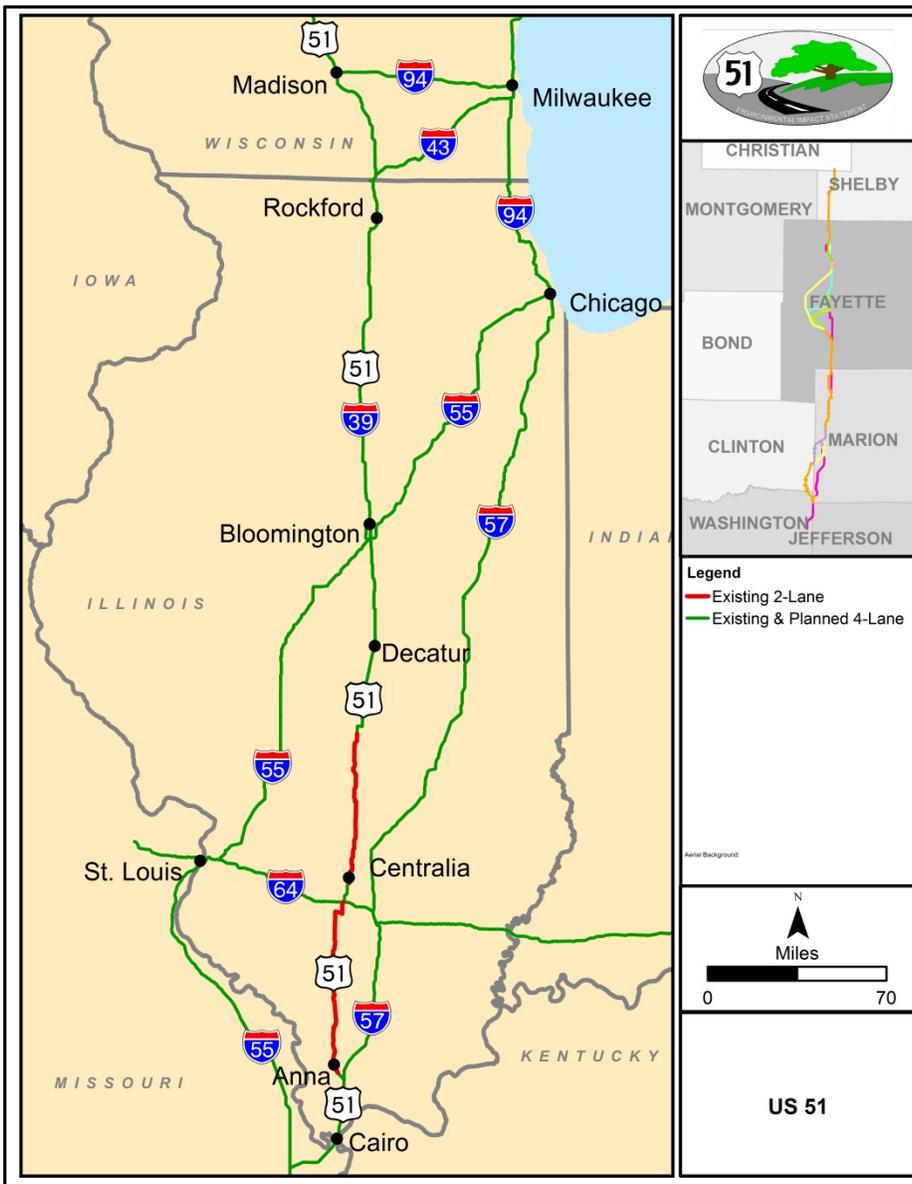


# Chapter 1. Purpose and Need

US 51 is part of a transportation corridor that extends the length of Illinois from Rockford to Cairo. As shown in the map below, in the state of Illinois US 51 is dual marked with I-39, I-55, I-74, I-72 and I-57. All sections of US 51 from the Wisconsin border to the Kentucky border are four-lane roadways or greater, except for the section of US 51 from south of Assumption to south of Centralia and from I-64 to south of Anna. Improvements to the 60 mile, two-lane portion of US 51 from south of Pana to south of Centralia are the subject of this study.



## 1.1 Project Location and Background

### *Where is the project located?*

The study area for the US 51 project includes the counties of Shelby, Christian, Fayette, Washington, Jefferson, Marion, and Clinton. The following communities are located in the US 51 study area: Oconee, Ramsey, Vandalia, Shobonier, Vernon, Patoka, Sandoval, Junction City, Central City, Centralia, and Wamac. See Figure 1.1-1: Project Study Area.

### *What is the background of this project?*

Between 1980 and 1986, economic development initiatives spurred by the “Build Illinois” program and the completion of a four-lane section improvement north of Decatur prompted a delegation of State legislators, elected city officials, and community leaders to request that IDOT revisit the concept of four-lane improvements from Decatur to I-64. Funding for the US 51 Environmental Impact Statement has been earmarked as part of the 2005 federal transportation bill legislation; Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

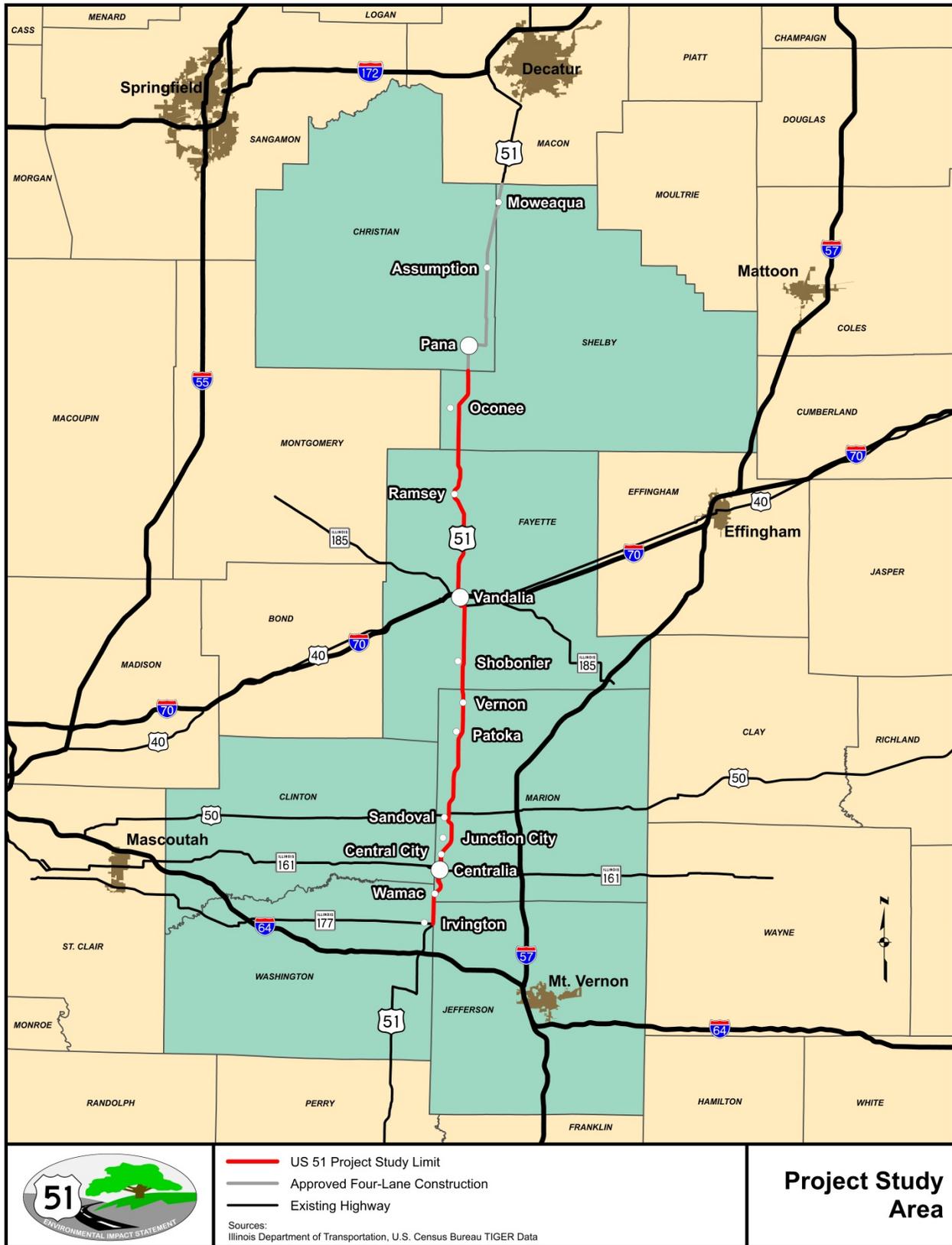
### *What other projects are underway for US 51?*

Of the 100 miles between Decatur and I-64 studied in the late 1980’s, the 35 miles immediately north of the Christian/Shelby County line have been upgraded to or are planned to be upgraded to a four-lane section. Most recently, an Environmental Impact Statement was completed in 1992 for US 51 between Decatur and Pana with the Preferred Alternative identified as a four-lane highway. A four-lane US 51 south of Moweaqua opened to traffic in the fall of 2007. In the summer of 2012 the four-mile long bypass around Assumption was opened to traffic. Another four-mile straight line section from south of Assumption to north of Pana and a bypass extending seven miles around Pana are being designed and will be constructed when funding becomes available.



*Transportation improvements are planned for US 51 north of the study area.*

Figure 1.1-1: Project Study Area



**What guidelines have been used in developing the current project?**

Since the conclusion of the previous studies, new procedures have been adopted for involving the general public and other stakeholders when developing transportation projects. The US 51 EIS study is being developed using IDOT’s Context Sensitive Solutions (CSS) policy and the Federal Highway Administration’s (FHWA) guidance under SAFETEA-LU legislation. The IDOT policy and FHWA guidance require early coordination with stakeholders to better understand the concerns and needs of the communities in the study corridor. The public’s input has been sought in the development of the project’s purpose and need, and the development and solution of alternatives, and will continue to be sought throughout the project to provide the stakeholders in the US 51 corridor a project that addresses transportation issues and fits into the broader context of communities where they live and work.



**How have the public and other stakeholders been involved in developing this project?**

Using CSS and SAFETEA-LU guidelines, Community Advisory Groups (CAGs) have been formed for the communities of Ramsey, Vandalia, Vernon/Patoka, Sandoval, and Junction City / Central City / Centralia / Wamac – communities that are adjacent to or separated by existing US 51. The Project Study Group (PSG) met with each CAG to discuss transportation problems, community issues, and community context. Input from the CAGs was used to develop problem statements in the individual communities that address the transportation issues in the corridor from a user’s perspective.

Input from the Regional Advisory Group (RAG) will be used to look at existing US 51 between the communities and address transportation issues from a regional perspective. The Stakeholder Interaction Diagram depicts the relationship between the CAGs, the RAG and the PSG.

**What is a Community Advisory Group (CAG)?**

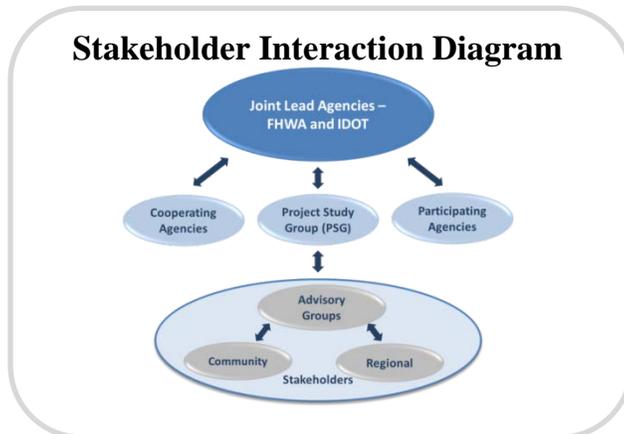
A Community Advisory Group is a diverse group of local and regional stakeholders that provide input on the concerns and values of their respective communities.

**What is a Regional Advisory Group (RAG)?**

A Regional Advisory Group is made up from a representative of each CAG and other stakeholders that provide input on the concerns and values from the region.

**What is the Project Study Group (PSG)?**

The project study group is an interdisciplinary technical team used for making project recommendations to the leadership of IDOT and FHWA. The team is made up of consultants and IDOT officials.



***What was the public's input?***

Working with the CAGs, issues and the context of each community along the study corridor were identified. The project stakeholders came to a consensus on three elements for the CSS problem statement for this study:

- The existing US 51 highway does not provide an efficient and safe connection between local communities and commercial centers, and does not encourage long distance travel.
- The US 51 highway hinders travel and the movement of goods and services, limits tourism and commerce, and limits residential, commercial, and industrial growth.
- The existing US 51 highway is unsafe for cars, trucks, buses, pedestrians, bicycles, and farm equipment to share the road at the same time.

The PSG, working with the CAGs and the RAG, will address the identified problems while being sensitive to the unique aspects of each community. The public coordination will help to maintain or improve the quality of life within these communities.

**1.2 The Project Need*****Why do we need the US 51 Project?***

The purpose of the US 51 project is to improve the transportation facility and connectivity within the south central Illinois region and to enhance the highway system continuity. The region needs a centralized roadway that effectively connects communities as well as local and commercial centers, while also providing a roadway that promotes efficient and safe travel in the region for a wide variety of transportation users. Connectivity and continuity are issues that can be addressed by a transportation improvement, while being sensitive to the economic development goals and safety concerns expressed in the problem statements of the local communities.

***What is the role of US 51 at the local and regional level to allow people, goods and services to move freely?***

Centralia and Vandalia are the largest communities in the project corridor. For residents in this corridor, Vandalia and Centralia are destination points to access retail, cultural, education, and community services not available in the smaller communities. US 51 is the most direct north-south route for access to local destinations. In addition to connecting to local destinations, US 51



*A Community Advisory Group identifying study area problems together.*

**What is Connectivity?**

Connectivity means efficient access for all types of transportation and effectively moves people, goods, and services.

**What is Continuity?**

Continuity means uniform speed and pavement width to promote free flow movement of goods and services.



*Safety concern: slow moving farm equipment sharing the road with faster moving cars and trucks. Photo taken: September 2008 on US 51 north of Vandalia.*

provides access to routes connecting to metropolitan areas throughout the Midwest. Seven highways cross US 51 throughout the project corridor:

- I-70 in Vandalia,
- US 40 in Vandalia,
- IL 185 in Vandalia,
- US 50 in Sandoval,
- IL 161 in Centralia, and
- IL 177 in Irvington.

Regional employment centers are scattered throughout the project study area, with the greatest concentrations in the metropolitan locations. See Figure 1.2-1: Major Employers Near Project Area. Providing efficient access to the interstates and to major communities within the corridor enhance regional connections. Presenting solutions to the continuity issues (i.e. 90 degree turns and traffic signals) would remove impediments to traffic flows. Truck traffic comprises a higher percentage of the annual average daily traffic (AADT) (up to 24%) in the northern portions of the project corridor, with much lower numbers (6%) at the southern limits. One corporation, GSI Group, is headquartered north of the project study area near Assumption. In addition to Assumption, production centers for the company are located in Paris, Newton, and Flora, distributed east of US 51 throughout the project limits. Continuity on US 51, that bisects the south central region, would provide a viable alternate to the existing interstate system.



*Amtrak service through Centralia*

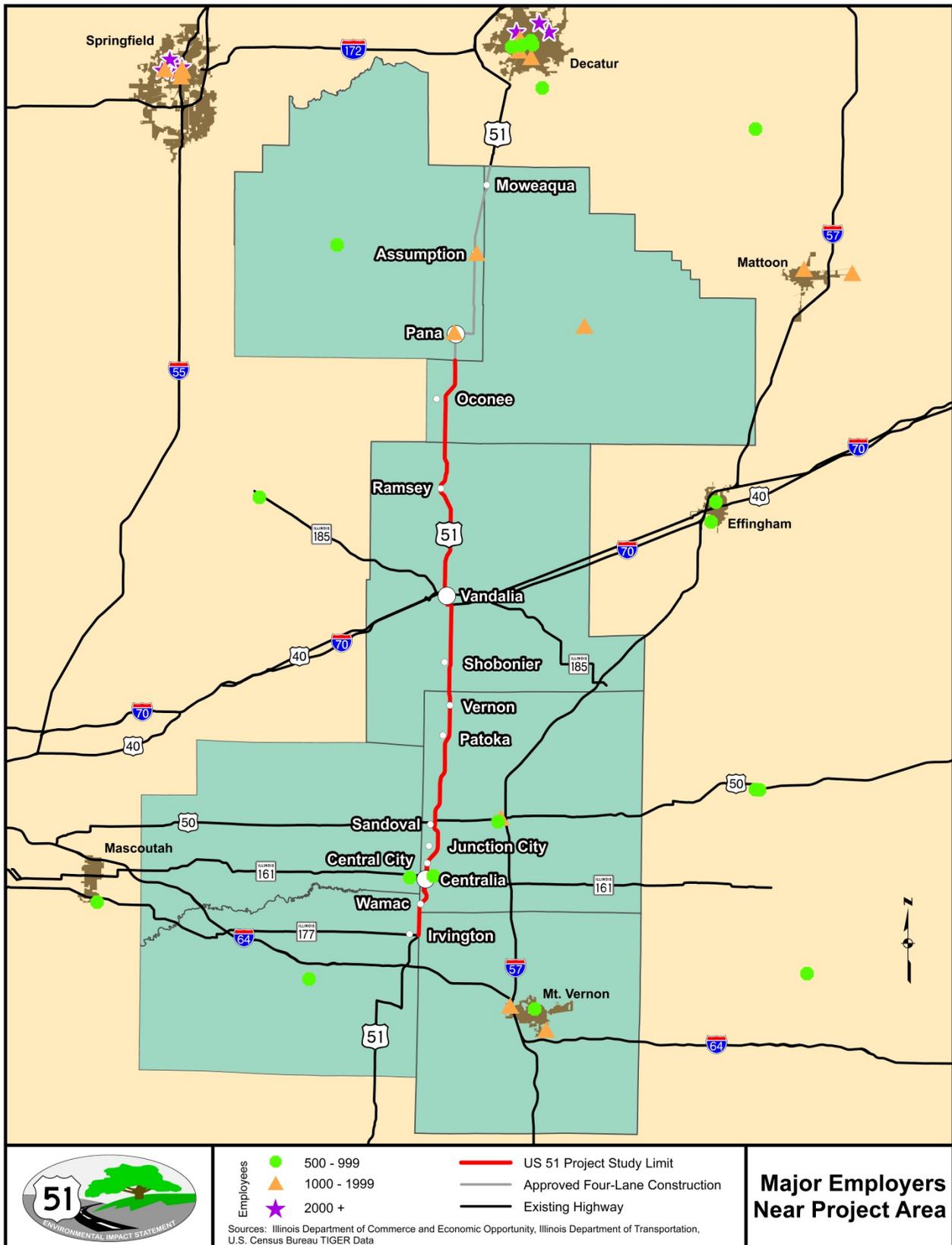
***What is the role of other modes of transportation to allow people and goods to move freely?***

There are other modes of transportation in the region, such as rail, bus, and air, that connect to destinations nationwide but do not provide as direct a north-south connection as US 51.

Freight rail facilities in Centralia are served by the Burlington Northern Santa Fe, the Canadian National Rail and the Norfolk Southern Railroad. Centralia has an Amtrak station with service to Chicago and Carbondale, Illinois, continuing on to New Orleans, Louisiana.

Amtrak's ridership records indicate from 2000 to 2012 ridership has increased 49% with the increase from 2011 to 2012 being 3.5%, and trends indicate continued increases. The Centralia station had 26,496 riders in 2012. Other Amtrak stations in the region outside the study area are in Springfield,

Figure 1.2-1: Major Employers Near Project Area



Carlinville, and Alton with service to Chicago and St. Louis, continuing on to national destinations.

A regional bus service does not exist in the local area. South Central Transit (SCT) is a demand responsive service that operates within Centralia and a few nearby communities. SCT maintains a Kaskaskia College Shuttle available within the City of Centralia and feeder routes to the Metro Transit system which services the St. Louis area.

**What is a one-way couple?**

A one-way couple is a set of parallel one-way streets with traffic flowing in opposite directions that takes the place of a two-way street.



*One-way couple in Centralia*

There is regional air service at the Lambert-St. Louis International Airport or MidAmerica St. Louis Airport. There are municipal airports in Centralia and Vandalia. The other modes of transportation available in the south central Illinois region do not connect people and goods to community services or employment centers, nor do they provide a more efficient north-south route through central Illinois than US 51.

***How does US 51 discourage long distance travel and hinder efficient and safe travel?***

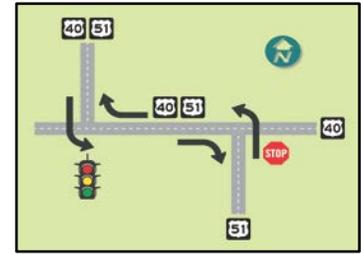
US 51 in the study area is generally a two-lane highway through small communities and rural areas. Two exceptions are in the City of Centralia where US 51 becomes a one-way couple through the city, and through a portion of the City of Vandalia where US 51 is a four-lane roadway for approximately one-half mile. Drivers using US 51 will encounter numerous traffic problems, including traffic signals in Centralia and Vandalia, at-grade railroad crossings in Sandoval and Centralia, business districts with on-street parking and cross streets, multiple changes in speed limit, abrupt right angle turns in Vandalia, and slow moving oversized farm equipment throughout the corridor. The interruptions to free flow travel combined with limited opportunities to safely pass slower moving and oversize vehicles, hinders efforts to move freely though the US 51 corridor, and encourage risky driving behavior. The National Cooperative Highway Research Program (NCHRP) links behaviors such as speeding and unsafe passing to drivers who believe that their travel is being hindered unnecessarily.

**Speed Limits Along US 51**

30 mph	Centralia
30 mph	Ramsey
30 mph	Vandalia
35 mph	Sandoval
40 mph	Vernon
55 mph	Unincorporated
65 mph	S of Wamac

Driving directly through the cities of Centralia and Vandalia and smaller communities along US 51 discourages long distance travel by presenting the driver with a wide range of speed limits, that increase and decrease repeatedly along the route. The speed limit on US 51 is generally 55 miles per hour (mph) in rural areas, and is reduced to 30 mph in some municipalities. South of Wamac where US 51 is already a four-lane divided highway, the speed limit increases to 65 mph. A continuous free flow condition does not exist for the motorist traveling the US 51 corridor due to the speed limit changes.

US 51 is a north-south route that undergoes an east-west “jog” at the south end of Vandalia as depicted in the diagram to the left. These are the only two 90 degree turns of US 51 along the corridor. With stop signs at the east intersection and traffic signals at the west intersection, free flow is hindered and travel times are increased.



US 51 “jog” at the south end of Vandalia.

During the spring planting and fall harvesting seasons, farm equipment volumes increase in the US 51 corridor. Many farm vehicles are oversized, encroaching into the opposing traffic lane as depicted in the photo to the left. Additionally, the limited time to complete their planting and harvesting often requires work and travel after sunset. Area farmers depend on US 51 for their operations, and they must share the two lane roadway with other users. The mix of users creates an impediment to efficient travel and causes safety concerns for farmers, the traveling public and commercial trucks.



Slow moving and oversized agricultural vehicles increase travel times.

The CAG identified features of existing US 51 that hinder safe, long distance travel from a driver’s perspective. For example, there are numerous areas of US 51 where existing hills and curves impede a driver’s view making it difficult to pass a slow moving vehicle or farm implement. Inadequate shoulder widths on US 51 do not permit slow moving vehicles to pull over and let traveling public pass either. Also, travelers entering or exiting driveways and field entrances often slow the through traffic along US 51, and the difference in speeds between through and turning traffic increases crash potential.

IDOT tracks crash data throughout the state and identifies locations with high potential for crashes also known as 5% Segments. Locations with high potential are where more crashes occur than should be expected for the type of roadway and amount of traffic. The most recent report in 2012 identifies three locations in the US 51 corridor where fatalities or severe injuries have occurred at rate higher than what should be expected.

The two roadway sections on US 51 are located north of Patoka to Vernon and north of Oconee to the county line. One roadway section on US 50 coincides with US 51 within Sandoval city limits and can be seen in Figure 1.2-2:

Locations of Importance Based on Severity and Occurrence.



September 27, 2008: fatal accident closed US 51 for 2 1/2 hours south of Vandalia

**What is AADT?**

Annual Average Daily Traffic (AADT) is a number that indicates how many vehicles pass a given point on average during a 24-hour period. It includes all vehicle types and is the total of both directions of travel.

**Is rural access important?**

According to IDOT's 2007 Illinois State Transportation Plan, accessibility to activities and services is the greatest transportation need in rural areas.

***What will the traffic volumes be in 2040?***

In order to estimate the predicted traffic, the project team studied the traffic volumes over the past 25 years, as well as the population and employment trends and land use changes. In the US 51 study area, the traffic volumes have fluctuated over the last 25 years (1985 to 2010 data). The project study area experienced annual average changes in AADT ranging from a decrease of 0.7% to increases of up to 1.7%. The historic traffic volume trends, along with population and employment trends, current traffic projections on adjacent roadways, recent changes in land use, as well as future land use plans were all considered in developing an estimate of future traffic volumes on US 51. The 2040 predicted traffic volumes are shown on Figure 1.2-3: 2040 Average Daily Traffic. In the southern part of the project, 2040 average traffic daily traffic volume is estimated to be more than 8,400 vehicles from Irvington to Central City, and more than 6,700 from Central City to Sandoval. In the central area of the project, 2040 estimates are for more than 6,700 vehicles from Shobonier to Vandalia. In the northern area, from Oconee traveling north, estimated daily traffic volume traffic is more than 5,000 vehicles.

***What will happen if improvements are not made to US 51?***

If no improvements are made to US 51, the existing conditions on the roadway, such as inconsistent traffic speeds, inefficient local and regional connections, and reduced safety for vehicles will not be improved. Inefficient connections hinder accessibility for rural communities. The movement of goods, services, and vehicles would continue to be impeded by the lack of connectivity and continuity associated with the US 51 study area. Local and regional traffic will be adversely affected by the two-lane section of US 51 that connects with the four-lane US 51 roadway to the north and south. The efficiency and safety of travel in the US 51 study area will continue to be a concern for the communities in the study area as there are few four-lane alternatives for travel in a north-south direction.

Figure 1.2-2: Crash Locations of Importance Based on Severity and Occurrence

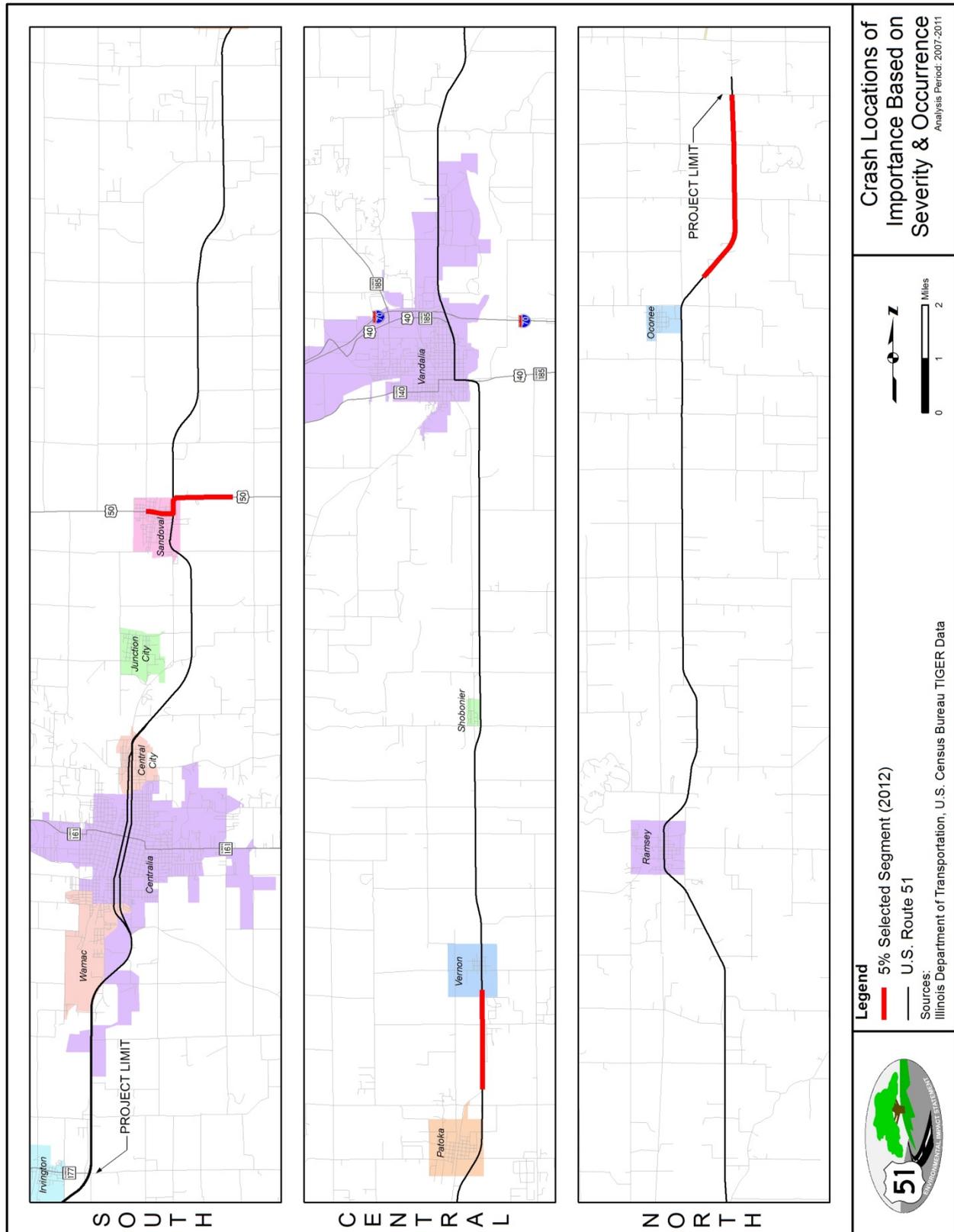


Figure 1.2-3: 2040 Average Daily Traffic

