

Chapter 3. Environmental Resources, Impacts, and Mitigation

This Chapter describes the current environment and the potential effects of the project. The environment includes the land uses, economy and jobs, traffic characteristics, noise, and air quality; as well as wildlife, wetlands, parkland, and cultural resources.

3.1 Social and Economic Impacts

What types of social and economic effects were studied?

A social and economic setting for each geographic area is defined using data for demographics, communities, neighborhoods, community cohesion, public safety, public facilities, recreation, employment, income, housing, environmental justice areas, and travel patterns. The social and economic topics were then evaluated for possible changes based upon the proposed improvement. The following is a description of topic and the types of change.

- *Community and Accessibility:* Land uses, public facilities, populations, neighborhoods, community cohesion, recreation, travel patterns, and access.
- *Environmental Justice:* Low income and/or minority populations. To identify these specific populations, demographic and economic data were collected and analyzed, supplemented by data collection with stakeholders and meetings with community organizations, service providers, cities, and counties as needed.
- *Economy and Businesses:* Industries, employment trends, the permanent and temporary loss of businesses and business access, and natural resources.
- *Residential and Community Facility:* The number of households and community facilities that would be displaced by the study alternatives.
- *Business:* The number and type of businesses to be displaced by the study alternatives and an estimation of the loss of employment. An analysis of impacts to remaining businesses due to proximity of the proposed highway or changes in access is included.

Why do we study the social economics?

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, directs federal agencies to identify and address disproportionately high and adverse human health or environmental impacts on environmental justice populations. In addition, all populations need to be provided the opportunity to participate in the project planning. U.S. DOT issued its Final Environmental Justice Order 5610.2(a) on May 2, 2012 to comply with EO 12898.

Environmental justice populations include minority and low-income populations. The Council on Environmental Quality (CEQ) defines minority as “individuals who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic” (The federal Council on Environmental Quality, Environmental Justice Guidance Under the National Environmental Policy Act", Appendix A, December 10, 1997). A low-income household is one that has a median household income below the U.S. Department of Health and Human Services poverty guideline as reported by the Census Bureau.

What is environmental justice?

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income.

Title VI of the Civil Rights Act of 1964 and Presidential Executive Order 12898 state that too high or adverse impacts to low-income and/or minority populations as a result of Federal projects should be identified and addressed.

Source:

www.epa.gov/environmentaljustice/basics/index.html

What data were analyzed to determine social and economic effects?

Social and economic resources within the study area were identified using available national, regional, and local data to develop community profiles. The social and economic data sources for the analysis include:

- 2000 and 2010 U.S. Census Data (American Fact Finder, U.S. Census Bureau)
- Illinois Department of Revenue
- Illinois Department of Commerce and Economic Opportunity
- County Assessor Offices
- City Governments and Chambers of Commerce
- Field reviews

3.1.1 Land Use and Zoning

Land Use and Zoning plans are created by each community to address the needs of the community, and thus the people. Land Use Plans and Zoning Plans were evaluated to identify residential and commercial properties and the impacts to people and to identify roadway alignments compatible and supportive of the

Land Use and Zoning minimizes impacts to the community, and thus the people.

How are land use and transportation connected?

Land use patterns and transportation systems influence each other. Transportation systems shape land development while types of land use affect travel patterns and transportation systems. Specifically, highway facilities can connect communities and land uses increasing access to opportunities, goods, services, and other resources to improve the quality of life. However, highway facilities can also be a barrier dividing communities and land uses and also connections to other streets. Travel patterns affect the desirability of doing business in a community; congestion can influence the desire of the public to do business in a specific area. The coordination of land use and transportation plans can ensure that each will support and reinforce each other.

Who regulates land use and zoning?

Within the project study area, the communities of Centralia, Central City, Vandalia and Oconee, and also Shelby and Clinton Counties have adopted comprehensive plans, zoning maps and/or land use plans. Fayette and Marion Counties are included in the regional planning for the South Central Illinois Regional Planning and Development Commission (SCIRPDC). The following comprehensive plans and maps were used:

- Fayette and Marion Counties – SCIRPDC Comprehensive Economic Development Strategy: South Central Region 2009
- Clinton County Comprehensive Plan 2001
- Clinton County Zoning Maps 2001
- Shelby County Comprehensive Plan 2005
- Shelby County Zoning Maps 2005
- Centralia Comprehensive Plan 2007
- Centralia Land Use and Zoning Maps 2007
- Central City Comprehensive Plan 2007
- Vandalia Comprehensive Plan 2001
- Vandalia Zoning District Map 2011
- Oconee Zoning 2005

What are the existing land use patterns?

The primary land use throughout the project study area is agricultural. Within the communities land uses include residential, commercial, institutional, open space, industrial and vacant.

Clinton County

The *Clinton County Comprehensive Plan 2001* states that the county is served by nearby US 51 since US 51 does not actually enter Clinton County but is parallel to the eastern boundary. One of the transportation goals identified in the plan is “promote the safe and efficient movement of goods, services and people within and throughout the county”. An objective is to “prevent the disruption of residential neighborhoods with high volumes of through traffic by directing major transportation corridors around existing neighborhoods”.

A plan recommendation is to “encourage growth to occur in designated growth areas that are most appropriate to accommodate development because of existing infrastructure, and discourage growth in close proximity to livestock operation”. Clinton County has three designated areas for increased development pressure and the conversion of farmland to suburban and urban growth; Western, Centralia and Central. The Centralia Growth Area is the urban ring surrounding the City of Centralia at Clinton County’s most southeast corner. The development potential for this area builds upon the existing urban core of the City of Centralia. The Centralia Growth Area will encourage infill development, including new residential as well as commercial development and provide a transition from the urban core to the agricultural areas.

Fayette and Marion Counties

Fayette and Marion Counties are included in a five county region designated as South Central Region. The other three counties in the region are Clay, Effingham and Jasper. The *SCIRPDC 2009 Comprehensive Economic Development Strategy: South Central Region* characterizes the entire region as a *rural but urbanizing area* which continues its transition away from prior heavy economic dependencies upon *agricultural and manufacturing based industries* to an economy more closely linked with the wholesale/retail trades and support services employment sectors as present and future sources for local employment.

One of the stated development goals in the *SCIRPDC 2009 Comprehensive Economic Development Strategy: South Central Region* is to have an “accessible and mobile District, one that continues to improve its accessibility with outside major markets through a variety of ground and air transportation alternatives that can safely and efficiently move people and products within the

five-county area and beyond as needed”. A measurable development objective is to “promote continued progress toward the completion of preliminary environmental impact statements by engineering consultants in support of the long-term improvement and upgrading of US Routes 50 and 51 within the District to supplemental freeway status”.

Within Marion County the Comprehensive Economic Development Strategy designates growth corridor that follows US 51 north from the Jefferson/Marion border to US 50 in Sandoval and east along US 50. The growth corridor includes the communities of Wamac, Centralia, Central City, and Sandoval. A second growth corridor is designated along Interstate 57 in Fayette County which includes the community of Vandalia. The communities of Centralia and Vandalia are also designated as redevelopment centers.

Shelby County

The *Shelby County 2005 Comprehensive Plan* states development opportunity areas are based upon accessibility to infrastructure, “The Highway 51 divided bypass, near Moweaqua, is an example of new transportation infrastructure that offers economic development opportunities for the County.” The comprehensive plan also states that US 51 near Oconee is planned for an upgrade to a divided four-lane highway.

Centralia

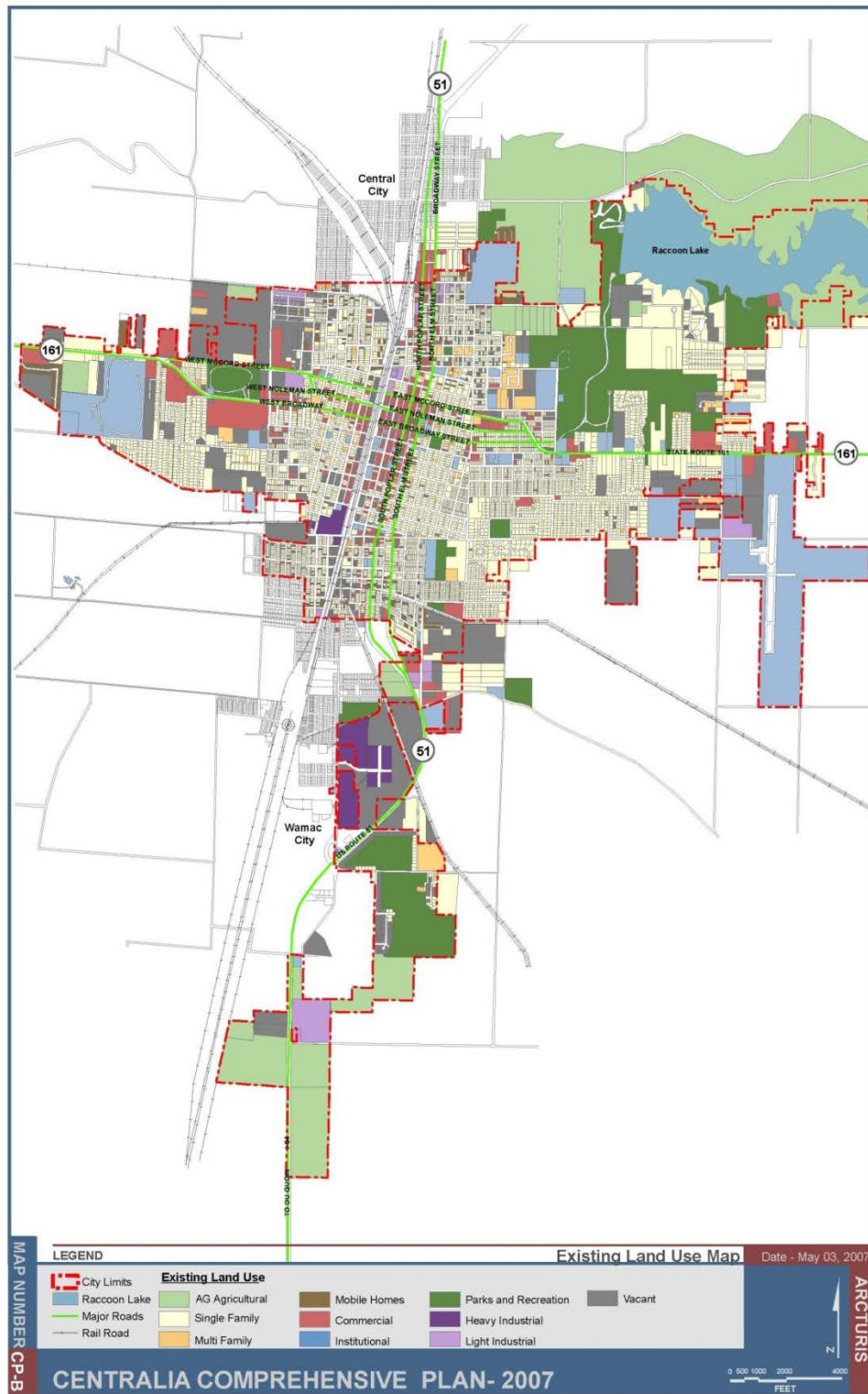
The *City of Centralia, IL, Comprehensive Plan 2007* states the city has grown eastward and continues to do so as open land, lake amenities, and connectivity to a more viable local and regional road system become available. As the eastward growth continues, Centralia’s original municipal configuration is changing. No longer will Centralia continue to follow the historic north/south axis created by the railroads and US 51. The growth pattern is following a west/east pattern along IL 161 as the market extends toward Interstate 57, and slightly south to Interstate 64.

The primary land uses along US 51 in Centralia are commercial and residential. Toward the southern limits of Centralia there is vacant land use, light industrial, agricultural, and parks and recreational uses. The eastern portion of Centralia is primarily institutional, parks and recreation, residential, agricultural and vacant with some commercial uses. The western portion of Centralia is mainly institutional with some commercial, vacant, agricultural and residential uses. The 2007 Existing Land Use Map for Centralia is shown on Figure 3.1-1: 2007 Centralia Land Use Map.

What is supplemental freeway status?

In the 1960s, Illinois adopted a freeway plan with the goal of providing any state resident a trip of 30 minutes or less to reach a "convenient highway" reaching any city of 25,000 or more. FAP 412 was approved as a supplemental freeway; however, a specific alignment was not identified. FAP 412 generally follows the path of US 51 from the Wisconsin border to south of Vandalia. FAP 412 went from I-90 near Rockford via Mendota, La Salle, and El Paso to I-55 north of Normal; I-74 south of Bloomington via Clinton to I-72 north of Decatur; from I-72 west of Decatur via Pana and Vandalia to I-57 north of Salem. As of 2012 FAP 412 has been built to at least a four lane divided facility from Rockford to south of Assumption.

Figure 3.1-1: 2007 Centralia Land Use Map



Within the infrastructure and community facilities section of the comprehensive plan there are two policies that mention US 51; “implement access management solutions along Highway 51 and Highway 161 and other secondary arterials and Major Collectors where curb cuts are closely located and/or unnecessary” and “support the widening of US Route 51 extending from Vandalia to Centralia assuring that the expansion does not by-pass Centralia”.

To achieve their goal Centralia intends to create a corridor redevelopment alignment along US 51 and IL 161 to stabilize and ultimately enhance the economy of Centralia and the value of private property. Other street enhancements of importance include the creation of a circumferential road system around Centralia that connects Greenview Road (south), Schwartz Road/Zion Hill Road (east), Green Street (north), and Noltings Road/Shattuc Road and also improved road access to Kaskaskia College.

Centralia has developed a “neighborhood revitalization plan” that sets priorities for redevelopment and neighborhood reinvestment over time. The areas suggested for revitalization are as follows:

- Hickory Street Designated Development areas, both north and south of IL 161
- The Calumet Street Designated Development area at Calumet Street and US 51 south and contiguous to the downtown core area
- The “Hospital Complex” Designated Development area near Martin Luther King Drive and Pleasant Street
- The “Old High School” Designated Development area near South Lincoln and East Second Street

Central City

The Village of Central City, Illinois, A Comprehensive Plan for Progress and Quality Growth, November 2007 states the village is landlocked to the south by Centralia, but has opportunities for growth to the west, north, and east. Two of the goals stated in the plan are to “promote economic development in the Village of Central City and the surrounding area” and to “create an alternate means of egress for residents situated west of the Canadian National Railway”.

Land use within Central City is primarily residential and commercial.

Vandalia

The *City of Vandalia 2001 Comprehensive Plan* encourages the development of the US 51 corridor. As stated in the transportation vision section of the plan, “Completion of the project will enhance Vandalia’s ability to attract industries to the City”.

A second transportation goal identified in the plan is to develop an effective collector and arterial transportation system. As part of the second goal the following street extensions are recommended:

- Coles Street south to Carlyle Road
- Hickory Ridge Road from IL 140 to US 40
- St. Louis Avenue from Fifth Street to Kennedy Boulevard (US 51)
- US 40 from Randolph Street to road west of Hickory Ridge Road
- Airport Road from IL 185 to Imco Drive
- Randolph Extension to the Lake (IL 185)
- Locust Street linked to Remann Street

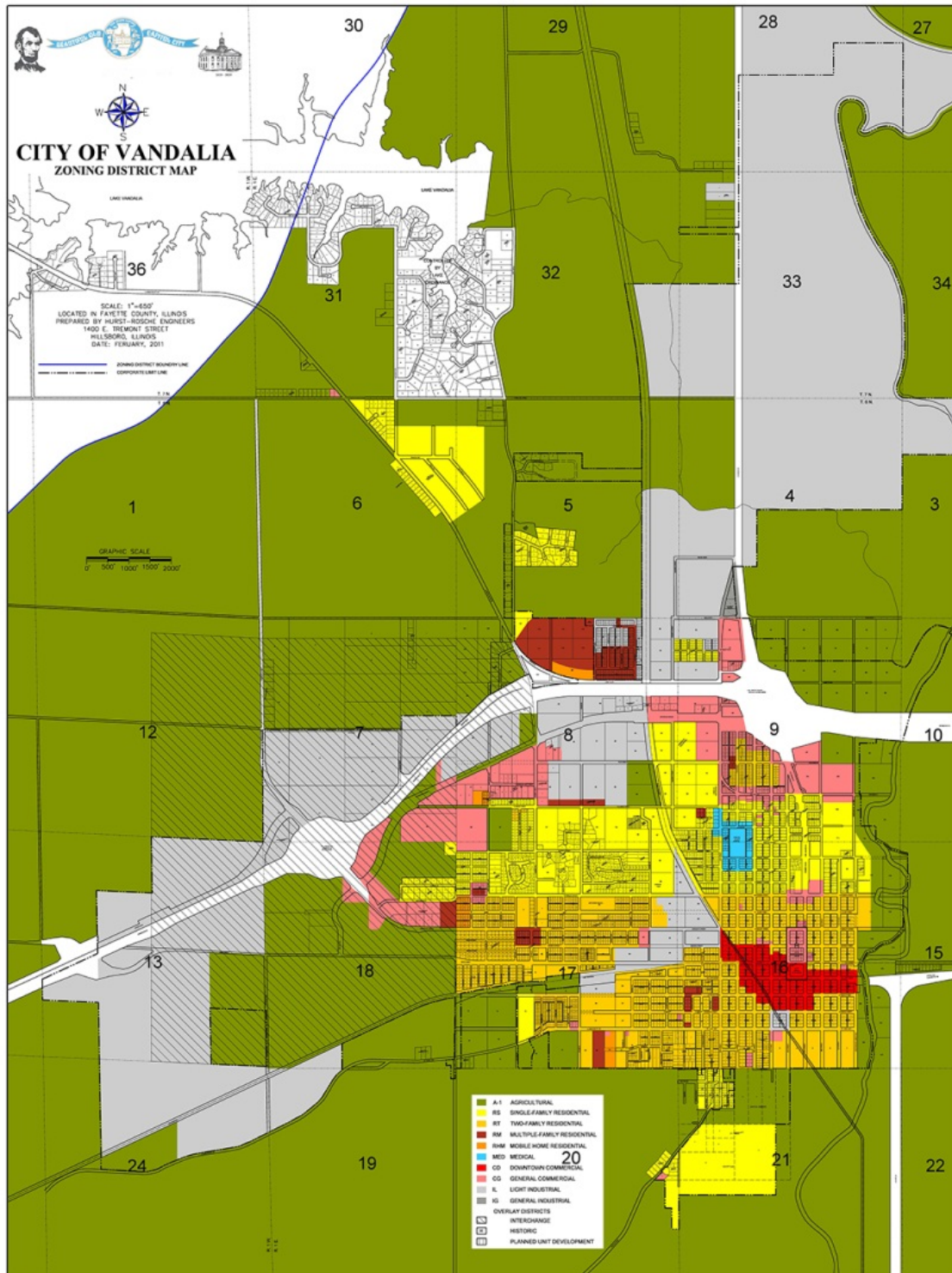
The residential housing trend is to the west of Vandalia and northward towards Lake Vandalia. Due to the west and north residential housing trend and because Lake Vandalia serves as an area of higher priced residences, a tourist attraction, a source of recreation, and a prime source of drinking water, Vandalia has included Lake Vandalia as an integral component of Vandalia’s planning concerns which includes improved transportation access to the lake from I-70.

Since the western interchange (I-70 and US 40) will be the center of most of the industrial expansion the plan recommends changes in the planning and zoning for the area. The recommendations to change zoning for the western interchange are:

- Southwest: large industrial developments with a truck stop and associated uses near the interstate
- Southeast: maintain well established retail identity
- Northeast: large highway type uses
- Northwest: industrial uses

The zoning map adopted in 2011 reflects some of these recommendations as shown in Figure 3.1-2: 2011 Vandalia Zoning Map.

Figure 3.1-2: 2011 Vandalia Zoning Map



Along US 51 the southern portion of Vandalia is mainly agricultural land use until the intersection with US 40. Then moving west and north along US 51 the land use is primarily commercial and residential. North of I-70 the land use is primarily commercial, agricultural and industrial. The western portions of Vandalia are primarily agricultural with some residential land uses. Near the I-70 interchange with US 40 the primary land uses are commercial and industrial.

Oconee

Oconee zoning maps indicate an area for general business southeast Oconee, north of Matney Branch and east of US 51. South of Matney Branch and east of US 51 is currently zoned for industrial.

What are the future land use goals?

Available and approved comprehensive land use and zoning plans of local communities and counties were analyzed for consistency with the No Build and Build Alternatives for US 51. In general, most plans have included the upgrading of US 51 in the plan.

In the *SCIRPDC 2009 Comprehensive Economic Development Strategy: South Central Region* a development goal objective is to “promote continued progress toward the completion of preliminary environmental impact statements by engineering consultants in support of the long-term improvement and upgrading of US Routes 50 and 51 within the District to supplemental freeway status”. *Clinton County Comprehensive Plan 2001* includes a transportation goal objective to “prevent the disruption of residential neighborhoods with high volumes of through traffic by directing major transportation corridors around existing neighborhoods”. Clinton County also has a recommendation to “encourage growth to occur in designated growth areas that are most appropriate to accommodate development because of existing infrastructure, and discourage growth in close proximity to livestock operation”.

The planning area of the City of Centralia is Noltings/Shattuc Road to the west, Red Stripe Road to the north, Odin/Schwartz Road to the east and Baseline Road to the south which includes the communities of Wamac, Centralia, Central City and Junction City. One of the goals for the *City of Centralia, IL, Comprehensive Plan 2007* is to support “the widening of US Route 51 extending from Vandalia to Centralia assuring that the expansion does not bypass Centralia”. Centralia is mainly planning for growth eastward.

The Village of Central City, Illinois, A Comprehensive Plan for Progress and Quality Growth, November 2007 states a goal of growth to the west.

City of Vandalia 2001 Comprehensive Plan states a goal of development of the US 51 corridor to “enhance Vandalia’s ability to attract industries to the City”. Another transportation goal within the Vandalia Comprehensive Plan is to develop an effective collector and arterial transportation system. As part of this goal the extension of Airport Road from IL 185 to Imco Drive is recommended.

The residential housing trend in Vandalia is to the west of Vandalia and northward towards Lake Vandalia. Vandalia has included Lake Vandalia as an integral component of Vandalia’s planning concerns which include improved transportation access to the lake from I-70.

What are the land use impacts of the alternatives?

The Centralia-Sandoval alternatives are not consistent with the *City of Centralia, IL, Comprehensive Plan 2007* goal since they bypass the city of Centralia to the west. As discussed in Chapter 2 Alternatives, an original range of alternatives was developed for Centralia through the public involvement process including Community Advisory Groups (CAGs) and public input. Alternatives that bypass to the east, to the west, or follow existing US 51 through the city were considered. The original alternatives developed were then evaluated using a four-step process and were narrowed down. The four-step process for Centralia is explained in Chapter 2.2 *How were the alternatives screened in the Centralia-Sandoval area?*. Alternatives to the east and through Centralia were eliminated due to floodplain, wetland, and public facility, commercial and residential impacts as agreed to with the CAGs.

CS Alt 1 and CS Alt 2 land uses are mainly agricultural and low density residential with some preserved land, highway commercial, institutional, and medium density residential land uses. Both CS Alt 1 and CS Alt 2 would require acquisition of agricultural, residential, institutional and preserved lands which is not consistent with land use, zoning and development patterns.

V Alt 4 would not improve access to Lake Vandalia; however, V Alt 1, 2, and 3 would improve access.

Land uses are mainly agricultural with some zoning for industrial and single family residential. V Alt 1, V Alt 2, V Alt 3, and V Alt 4 would require acquisition of agricultural and residential lands which is not consistent with land use and zoning but would not affect development patterns.

3.1.2 Public Facilities

What public facilities exist in the study area?

Community Facilities

Parks and schools are community facilities that play a large part in determining the quality of life in a community. Parks provide recreation and opportunities to connect with other community members; schools are a vital part of a thriving and cohesive community where children and adults come together.

Community facilities in the study area include 34 parks, 5 golf courses, 43 educational facilities (including 17 elementary schools, 1 elementary/middle school, 1 elementary/middle/high school, 2 middle schools, 1 middle/high school, 4 high schools, 2 special education schools, 5 alternative schools and 2 colleges), 5 libraries, 7 museums, 21 community centers, 46 cemeteries, and 102 places of worship.

School Bus Routes

Within the thirteen school districts in the study area there are numerous school bus routes. The school bus routes utilize US 51 and local roads.

Public Services

Public services in the study area include 11 fire stations, 11 police stations, 12 medical facilities (including 2 hospitals and 5 clinics) and 33 civic buildings (including 9 post offices, 8 town halls, and 2 chambers of commerce). Additionally, there are 2 correctional facilities located within the study area.

Bicycle/Pedestrian Facilities

Pedestrian and bicyclist resources include sidewalks, bicycle routes, and recreation trails. There are no bicycle routes or recreational trails within the project corridor except within Ramsey Lake State Park which provides recreational trails.

Public Transportation

Public transportation facilities within the study area include an Amtrak station in Centralia and the Vandalia municipal airport.

How will public facilities be impacted?

An impact can be a displacement of a public facility, change in travel pattern or change in access. Displacements are defined as a building being within the new right of way required for the proposed improvement. A change in travel pattern can include introduction of interchange ramps, introduction of raised medians,

alterations of intersections that restrict access to local streets, and/or local street closures. A change in access can include driveway closures and directional restrictions.

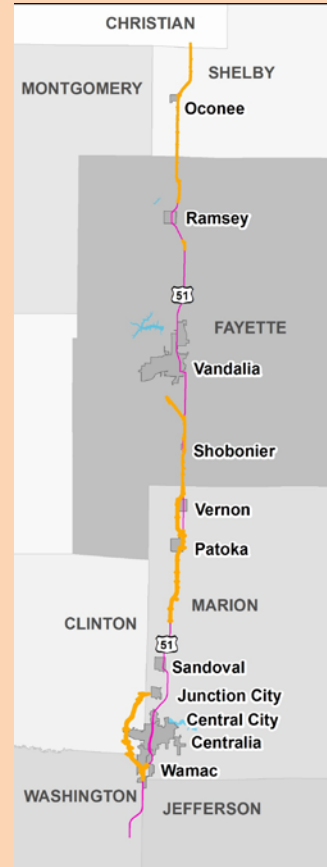
There will be no displacements of public facilities for the proposed project; however, there will be some changes in travel pattern and access.

The proposed project will change the travel pattern for Greenview Church and school and for Patoka School campus on Kinoka Road. A change in access will occur for the Vandalia Correctional Center, Kingdom Hall Jehovah’s Witness, and Hopewell Baptist Church.

Greenview Church and school is located south of Wamac on the east side of US 51 just south of Greenview Church Road. Greenview Church and school have access to US 51 via Greenview Church Road. The US 51 Build Alternative closes Greenview Church Road at US 51, routing traffic to Old US 51. Wabash Avenue is proposed to be realigned opposite Old 51 to form a new intersection with a traffic signal and turn lanes added where appropriate. Patrons of Greenview Church and school from the south could add up to one mile of additional travel distance due to the proposed road closure. Figure 3.1-3: Greenview Church and school on Greenview Church Road and Volume II Map Book sheet 1 show the impacted facility.

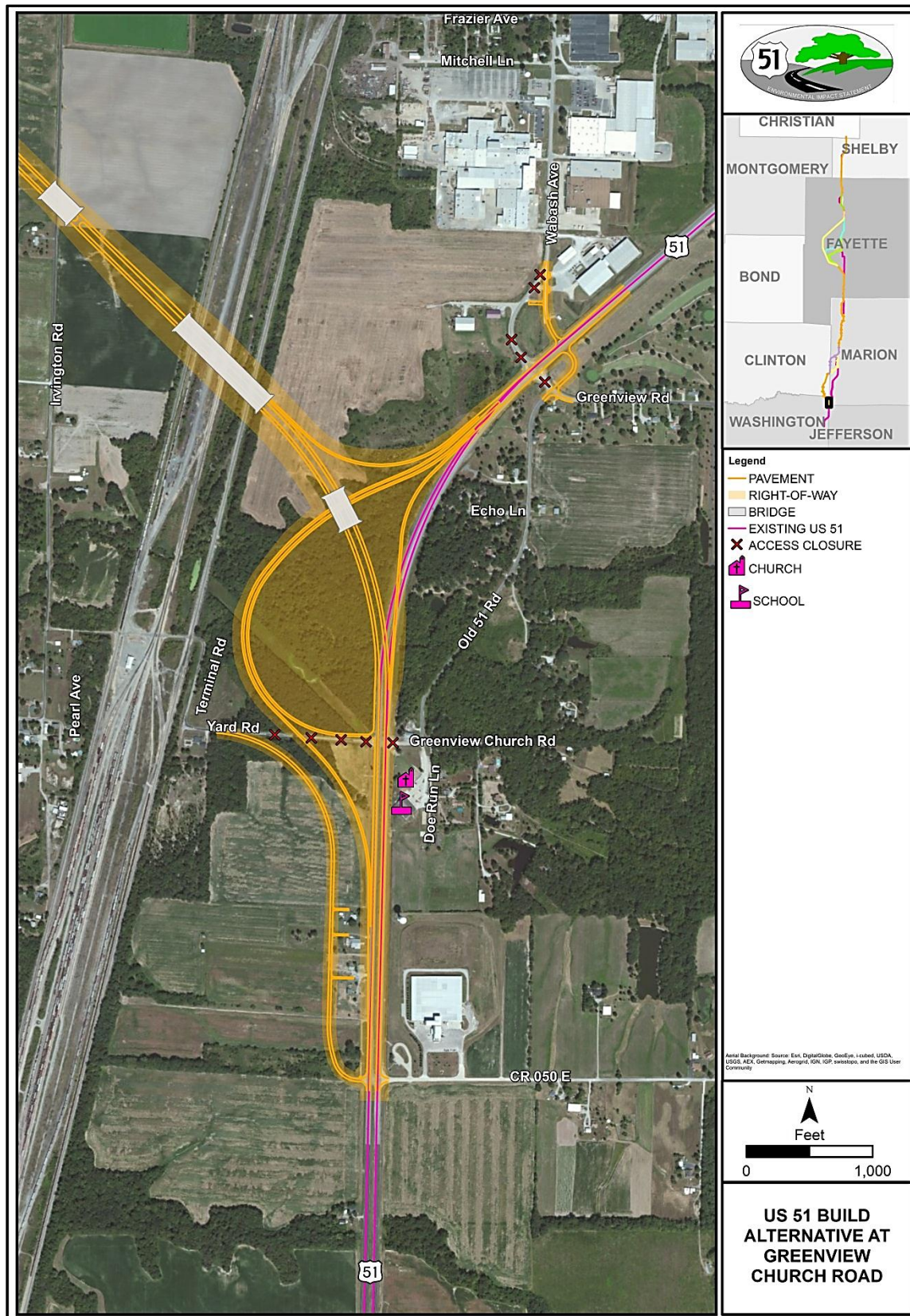
US 51 Build Alternative

The alternative between the larger towns where there is only one remaining alternative is referred to collectively as the US 51 Build Alternative. The US 51 Build Alternative is shown in orange below. Existing US 51 is shown in pink.



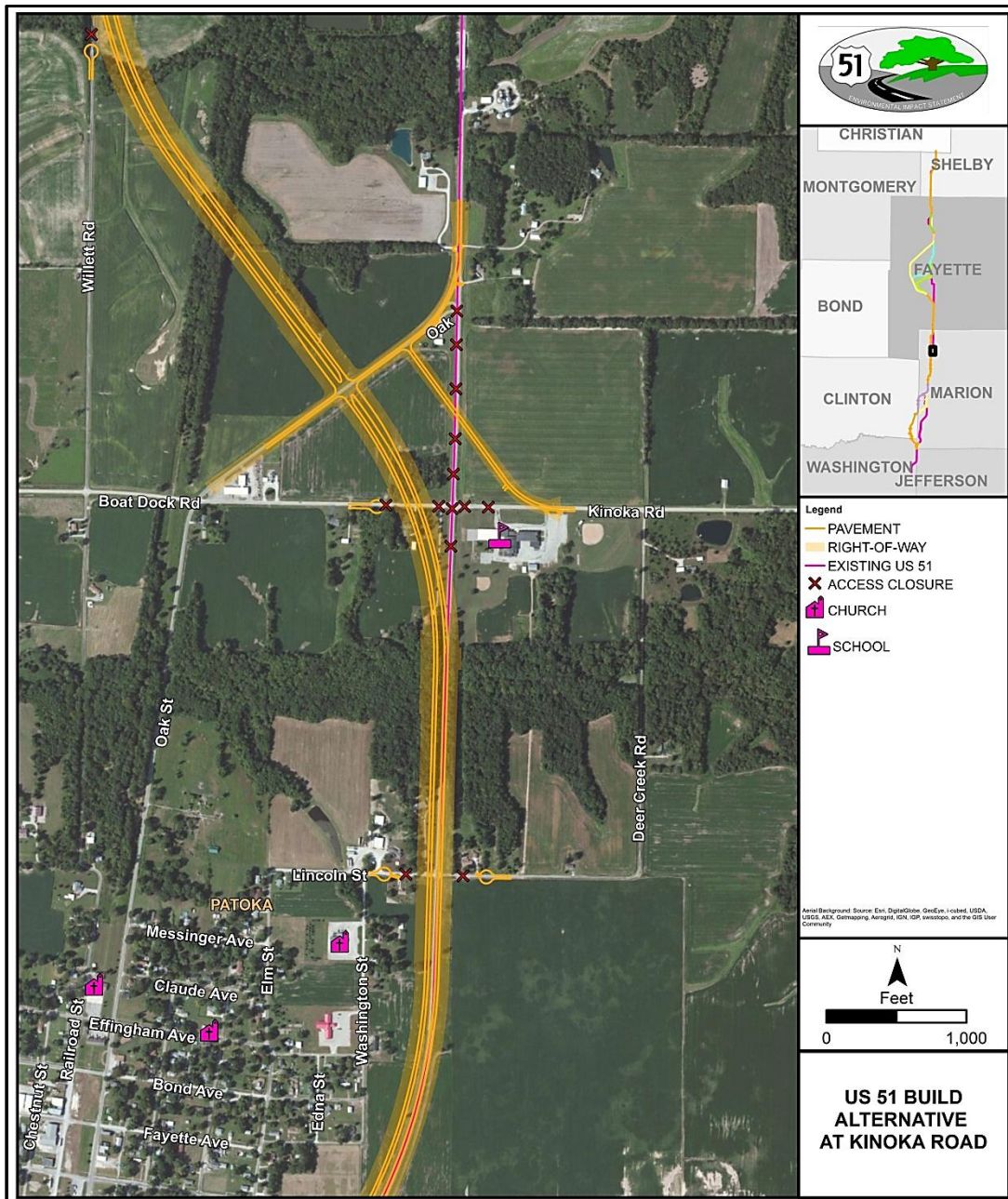
The US 51 Build Alternative is compared against the No Build Alternative. The US 51 Build Alternative and the remaining alternatives near the larger towns are described in Chapter 2.3.

Figure 3.1-3: Greenview Church and School on Greenview Church Road



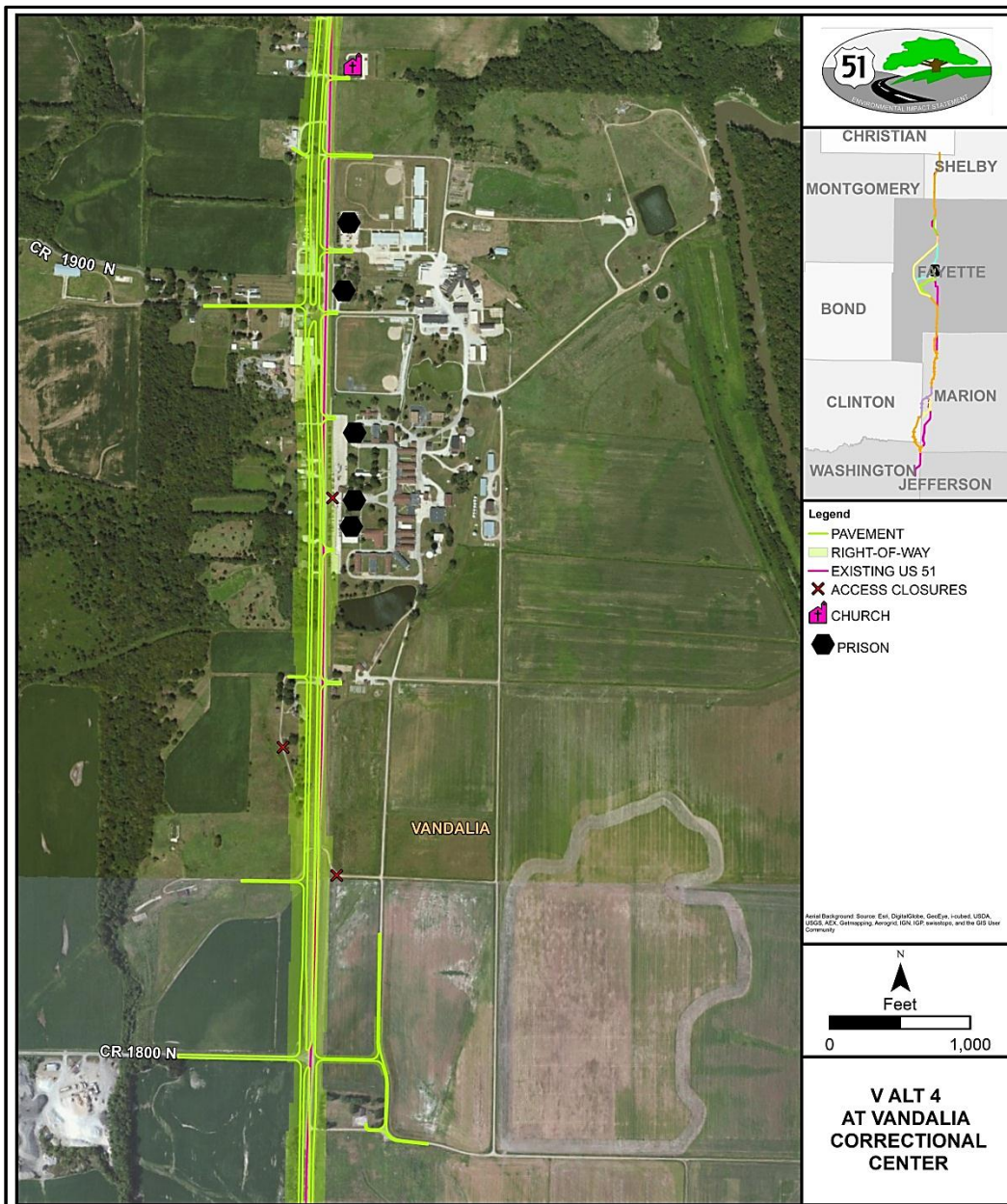
Patoka School campus is east of US 51 on Kinoka Road. Proposed US 51 is aligned approximately 150 feet west of the existing US 51 alignment, creating a greater separation of the school campus from the highway. Kinoka Road will be re-aligned north to intersect with Oak Road which will have full access to proposed US 51. With the shifting of US 51 and the re-alignment of Kinoka Road the westernmost high school driveway could be extended approximately 150 feet to the re-aligned Kinoka Road. The extension could provide additional storage for school busses and any vehicles dropping off or picking up students. Figure 3.1-4: Patoka School Campus on Kinoka Road and Volume II Map Book sheet 44 show the impacted facility.

Figure 3.1-4: Patoka School Campus on Kinoka Road



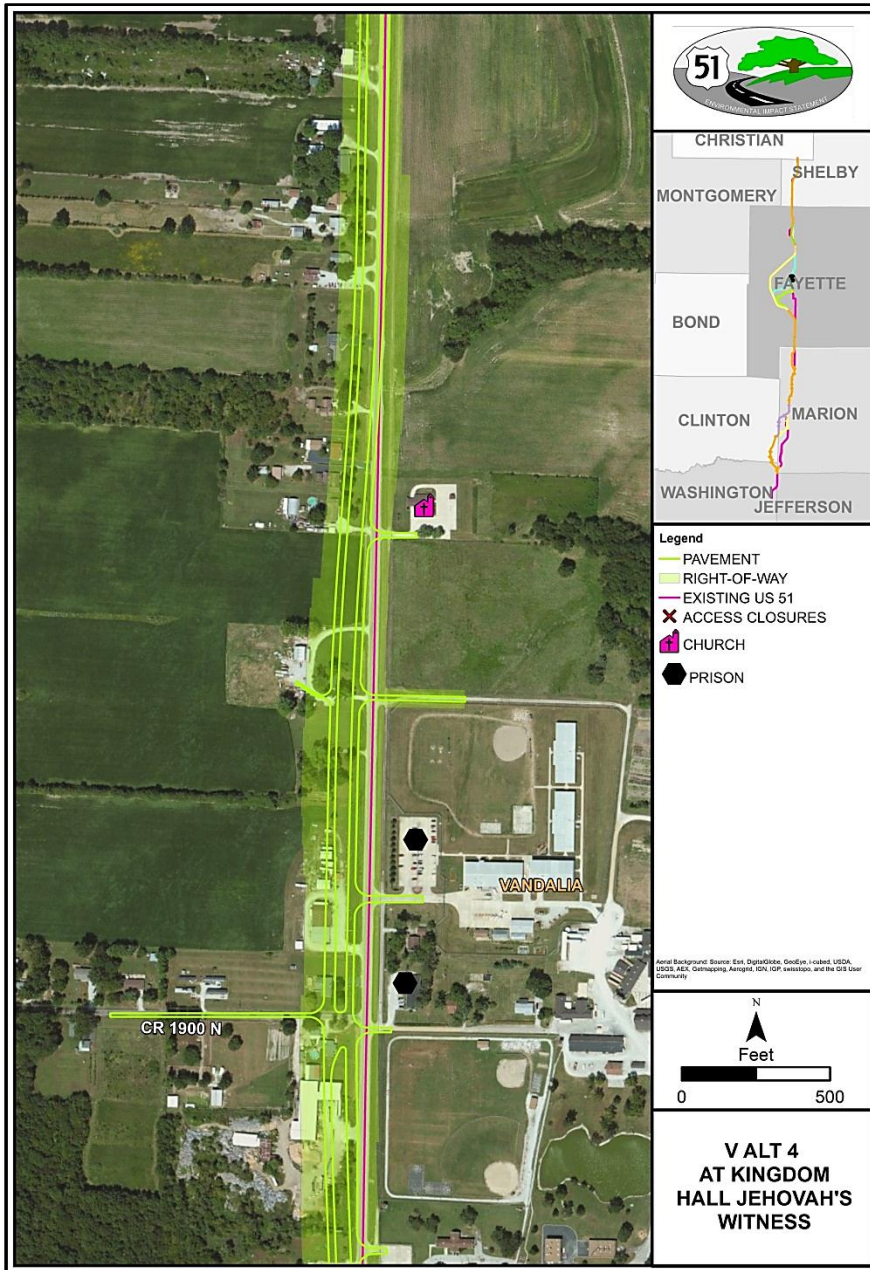
Vandalia Correctional Center property is north of Vandalia on the east and west sides of existing US 51 although buildings are only on the east side. V Alt 4 will impact the Vandalia Correctional Center because right of way will be needed, however, no buildings will be displaced. There will also be a change in access. There are a total of seven access points along the east side of US 51 for the Vandalia Correctional Center. The access point directly across from CR 1900 N will remain and have full access to US 51. The access point south of CR 1800 N will be re-aligned directly across from CR 1800 N and will have full access to US 51. The middle driveway for the main parking area south of CR 1900 N will be eliminated. The remaining four access points will become right-in/right-out only to US 51. Figure 3.1-5: Vandalia Correctional Center and Volume II Map Book sheets 147 to 149 show the impacted facility.

Figure 3.1-5: Vandalia Correctional Center



Access will also change for Kingdom Hall Jehovah’s Witness located north of the Vandalia Correctional Center east of US 51 and Hopewell Baptist Church located north of Old Turkey Farm Road near Oconee. The access for both churches will become right-in/right-out only to US 51. Figure 3.1-6: Kingdom Hall Jehovah’s Witness (Volume II Map Book sheet 149) and Figure 3.1-7 Hopewell Baptist Church (Volume II Map Book sheet 185) show the impacted facilities.

Figure 3.1-6: Kingdom Hall Jehovah’s Witness

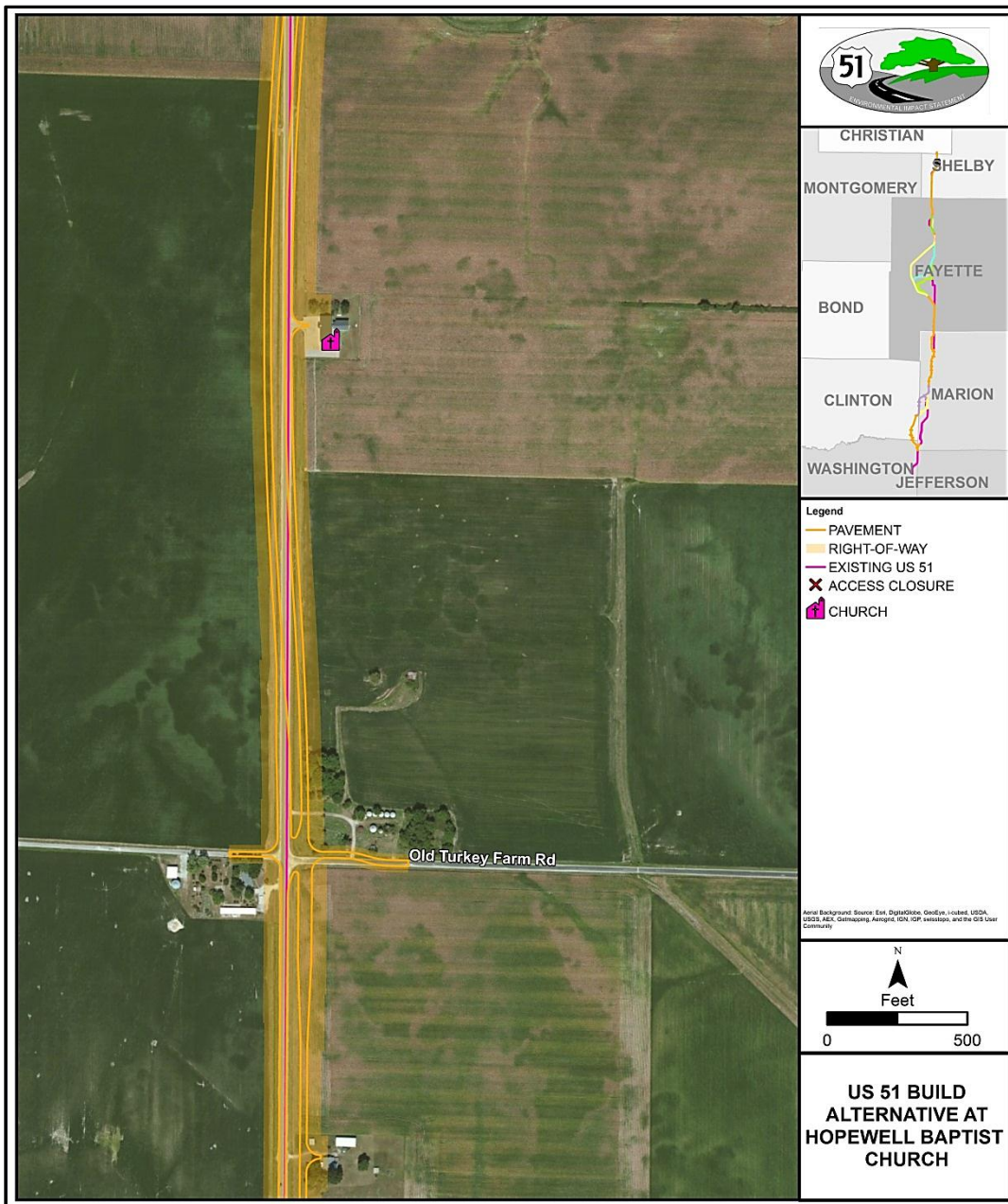


Why do we study population, age, minority populations, income, poverty status, and housing characteristics?

In order to meet the goal of minimizing adverse economic or social impacts, we first characterize the communities located in the study area. And, we review Environmental Justice impact which is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income is required by law. These populations are particularly sensitive to social and economic changes.

To identify these specific populations, demographic and economic data were collected and analyzed. Additional information is gathered by data collection with stakeholders and meetings with community organizations, service providers, cities, and counties as needed.

Figure 3.1-7: Hopewell Baptist Church



School Bus Routes

School bus routes were reviewed for the affected school districts. School bus routes could be slightly affected by some of the local road access changes as discussed in Section 3.1.4 Neighborhoods - Travel Patterns. However, none of those local road access changes are expected to cause more than minor inconvenience, which can be readily addressed by re-routing the affected school bus routes, something which is normally done during each school year to adjust to changes in student residence locations.

Bicycle/Pedestrian Facilities

The alternatives will not cross designated bicycle routes. While it is likely that recreational cyclists use the roads crossing US 51, there is no indication that many people commute to work by bicycle except within the communities.

For communities that are being bypassed, the alternatives will reduce regional traffic in the central business districts making pedestrian and bicycle movements safer and easier.

Public Transportation

The Amtrak station in Centralia and any railroad tracks associated with Amtrak will not be affected by the proposed project.

The Vandalia alternatives will not interfere with the Vandalia municipal airport. The Vandalia alternatives will remain at grade except when elevating over Interstate 70 and, therefore, will not create an obstacle to airplanes taking off and landing at the airport.

3.1.3 Population Characteristics

Who lives in the study area?

With the majority of the study area located in unincorporated areas, a number of small rural agricultural communities are also located within the study area.

Demographic characteristics are presented for the State of Illinois and the counties and municipalities within the study area.

Population

Table 3.1-1 depicts the percentage change for each county and municipality within the study area. Between 2000 and 2010, Clinton and Fayette Counties were the only study area counties that experienced population growth which was an increase of 6.3% and 1.6 % respectively. The remaining study area counties saw a general decrease in population that ranged from -1.6 % in Christian County to -5.4% in Marion County. The population growth rate for the State of Illinois during the same period was approximately 3.3%.

Similarly, study area municipalities also saw a general decline in population between 2000 and 2010 ranging from approximately -1.8% in Ramsey to -27.5% in Vernon. However, Pana experienced an increase in population (4.2%), whereas its respective county (Christian) decreased by -1.6% during the same period. Vandalia also experienced a slight increase in population (approximately 1.0%), which is comparable to that of Fayette County.

Table 3.1-1: Population

Location	2000 Census Population	2010 Census Population	% Change 2000-2010
State			
Illinois	12,419,293	12,830,632	3.3%
County			
Jefferson	40,045	38,827	-3.0%
Washington	15,148	14,716	-2.9%
Marion	41,691	39,437	-5.4%
Clinton	35,535	37,762	6.3%
Fayette	21,802	22,140	1.6%
Shelby	22,893	22,363	-2.3%
Christian	35,372	34,800	-1.6%
Municipality			
Irvington	736	659	-10.5%
Wamac	1,378	1,185	-14.0%
Centralia	14,136	13,032	-7.8%
Central City	1,371	1,172	-14.5%
Junction City	559	482	-13.8%
Sandoval	1,434	1,274	-11.2%
Patoka	633	584	-7.7%
Vernon	178	129	-27.5%
Vandalia	6,975	7,042	1.0%
Ramsey	1,056	1,037	-1.8%
Oconee	202	180	-10.9%
Pana	5,614	5,847	4.2%

Source: U.S. Bureau of Census Data: 2000, 2010.

Age Composition

According to the 2010 Census, the median age of residents within the study area ranges from 45.3 years in Vernon to 33.3 years in Oconee. These median ages are generally lower than their respective county averages with the exception of Patoka, Pana, and Centralia where the median ages are comparable. The median age in Vernon (45.3 years) is higher than the Marion County average of 41.4 years. The median age for the State of Illinois during the same period is 36.6 years.

Defined as persons age 65 or above, the elderly are particularly sensitive to social and economic changes. Elderly populations within the study area municipalities range from 24.8% in Vernon to 10.8% in Junction City.

What does the term median value mean?

The median value is the middle value from a list of values; and, is not the mathematical average.

Centralia, Patoka, Pana, and Vernon all have elderly populations that are higher than their respective county averages, while the remaining municipalities are lower. The percentage of elderly population for each of the study area counties is higher than that of the State of Illinois (12.5%). Table 3.1-2 presents the age composition within the study area.

Table 3.1-2: Age Composition (2010)

Location	Population	Median Age	Total Age 65+	% Total Age 65+
State				
Illinois	12,830,632	36.6	1,609,213	12.5%
County				
Jefferson	38,827	40.6	6,288	16.2%
Washington	14,716	42.3	2,503	17.0%
Marion	39,437	41.4	6,923	17.6%
Clinton	37,762	39.3	5,458	14.5%
Fayette	22,140	39.9	3,580	16.2%
Shelby	22,363	43.5	4,232	18.9%
Christian	34,800	41.6	6,096	17.5%
Municipality				
Irvington	659	39.6	95	14.4%
Wamac	1,185	37.4	154	13.0%
Centralia	13,032	42.0	2,488	19.1%
Central City	1,172	34.8	158	13.5%
Junction City	482	37.6	52	10.8%
Sandoval	1,274	34.7	153	12.0%
Patoka	584	41.3	116	19.9%
Vernon	129	45.3	32	24.8%
Vandalia	7,042	37.2	1,093	15.5%
Ramsey	1,037	34.2	153	14.8%
Oconee	180	33.3	27	15.0%
Pana	5,847	41.6	1,208	20.7%

Source: U.S. Bureau of Census Data, 2010.

How Were Minority and Low Income Populations Determined?

The federal Council on Environmental Quality, Environmental Justice Guidance Under the National Environmental Policy Act", Appendix A, December 10, 1997 provides the following two ways on how to identify the presence of minority and low-income populations:

1. (A) The minority population of the affected area exceeds 50% of the general population or (B) The minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis and
2. The low-income population of the affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty.

In order to identify minority population, this EIS uses the minority population percentage of the study area is meaningfully greater than the minority population percentages of the counties in which the municipalities are located which is option 1(B).

In addition, a potential low-income population exists when the median household income of a block group is less than the Census poverty guideline.

To evaluate potential environmental justice impacts, the following 4-step methodology is used:

1. Determine whether environmental justice populations exist in the study area using the definitions described above.
2. If impacts are anticipated, assess whether they would be high and adverse.
3. Assess whether any high and adverse effects would be borne by environmental justice populations.
4. Determine whether any potentially high and adverse effects would be disproportionately borne by environmental justice populations.

Minority Populations

The U.S. Department of Transportation (USDOT) defines a minority as a person who is Black or African American, Hispanic, Asian American, or American Indian/Alaskan Native.

Year 2010 U.S. Census data was used to determine minority populations in areas impacted by the alternatives. Minority populations were identified by comparing race and ethnicity data among Census tracts, cities, and counties in the study area.

The municipalities within the study area are primarily composed of White population (average of 94.8%). African American populations range between

14.0% in Vandalia to 0.0% in Oconee, Patoka, and Vernon. Hispanic or Latino populations range from 4.9% in Wamac to 0.0% in Oconee. Irvington, Wamac, Centralia, and Vandalia have minority populations (4.9%, 10.6%, 15.6%, and 17.8% respectively) that are higher than their respective county averages, while Central City (7.8%) is comparable to its respective county (Marion). Minority populations in the remaining municipalities are lower than that of their respective county averages. The percentage of minority population for each of the study area counties is lower than that of the State of Illinois (36.3%). Table 3.1-3: Racial & Ethnic Composition (2010) presents the ethnic composition within the study area.

Two minority populations were identified, including:

- Block Group 1, Tract 9005, Clinton County: Block Group 1 is a large unincorporated area located west of Centralia. The Centralia Correctional Center (an approximate 1,500 male facility) is located within Block Group 1, and the correctional center likely accounts for the high minority population. The US 51 Build Alternative is over a mile east of the Centralia Correctional Center, and the center will not be impacted.
- Block Group 2, Tract 9508, Fayette County: Block Group 2 is an area located north of Interstate 70 in Vandalia, on both sides of existing US 51. The Vandalia Correctional Center (an approximate 1,600 male facility) is located within this block group, and the correctional center likely accounts for the high minority population. All four Vandalia alternatives extend through Block Group 2, but V Alt 4 is the only alignment that is adjacent to the correctional center. V Alt 4 will require right of way from the correctional center, but will not displace correctional center buildings, and V Alt 4 is in the same general location as the existing US 51. For these reasons, it is expected that no high or adverse impacts would come to the minority populations in the Vandalia Correctional Center.

Income

According to the 2006-2010 American Community Survey conducted by the U.S. Bureau of Census, the median household income within the study area municipalities ranges from \$60,250 in Irvington to \$22,408 in Ramsey. Only Irvington has a median household income that is higher than that of its respective county (Washington), while Junction City (\$38,472) is comparable to that of Marion County. Median household incomes in the remaining study area municipalities are lower than their respective counties. For all study area

counties, the median household incomes are lower than that of the State of Illinois (\$55,735).

Table 3.1-3: Racial & Ethnic Composition (2010)

Location	Population	White ⁽¹⁾	Black or African American ⁽²⁾	Hispanic or Latino Minority of any Race ⁽³⁾	Total Minority ⁽³⁾	% White ⁽¹⁾⁽⁴⁾	% Black or African American ⁽²⁾⁽⁴⁾	% Hispanic or Latino	% Minority
State									
Illinois	12,830,632	9,177,877	1,974,113	2,027,578	4,662,879	71.5%	15.4%	15.8%	36.3%
County									
Jefferson	38,827	34,315	3,585	799	4,908	88.4%	9.2%	2.1%	12.6%
Washington	14,716	14,376	144	197	456	97.7%	1.0%	1.3%	3.1%
Marion	39,437	36,734	1,955	542	2,981	93.1%	5.0%	1.4%	7.6%
Clinton	37,762	35,284	1,500	1,058	2,996	93.4%	4.0%	2.8%	7.9%
Fayette	22,140	20,750	1,039	304	1,555	93.7%	4.7%	1.4%	7.0%
Shelby	22,363	22,045	84	180	441	98.6%	0.4%	0.8%	2.0%
Christian	34,800	33,610	631	471	1,469	96.6%	1.8%	1.4%	4.2%
Municipality									
Irvington	659	628	20	9	32	95.3%	3.0%	1.4%	4.9%
Wamac	1,185	1,076	56	58	126	90.8%	4.7%	4.9%	10.6%
Centralia	13,032	11,124	1,571	281	2,033	85.4%	12.1%	2.2%	15.6%
Central City	1,172	1,100	59	25	91	93.9%	5.0%	2.1%	7.8%
Junction City	482	469	1	3	16	97.3%	0.2%	0.6%	3.3%
Sandoval	1,274	1,242	16	19	51	97.5%	1.3%	1.5%	4.0%
Patoka	584	577	0	8	13	98.8%	0.0%	1.4%	2.2%
Vernon	129	129	0	2	2	100.0%	0.0%	1.6%	1.6%
Vandalia	7,042	5,880	983	205	1,254	83.5%	14.0%	2.9%	17.8%
Ramsey	1,037	1,016	3	10	28	98.0%	0.3%	1.0%	2.7%
Oconee	180	178	0	0	2	98.9%	0.0%	0.0%	1.1%
Pana	5,847	5,754	24	48	131	98.4%	0.4%	0.8%	2.2%

Source: U.S. Bureau of Census Data, 2010.

Notes: (1) Those reporting as exclusively White.

(2) Those reporting as exclusively Black or African American or as Black or African American in combination with one or more races.

(3) Total Minority was defined as those reporting as Hispanic, Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, Some Other Race, or Two or More Races.

(4) The percentages may exceed 100% as the Census allowed the reporting of more than one race per person.

Per capita income within the study area municipalities ranges from \$26,131 to \$13,807. With the exception of Irvington, the income of the study area is lower than the per capita income of their respective counties and the State of Illinois (\$28,782). Table 3.1-4: Income (2006-2010) presents the income statistics within the study area.

Table 3.1-4: Income (2006-2010)

Location	Median Household Income in Past 12 Months	Per Capita Income in Past 12 Months
State		
Illinois	\$55,735	\$28,782
County		
Jefferson	\$41,161	\$21,370
Washington	\$51,440	\$24,846
Marion	\$38,974	\$20,493
Clinton	\$55,278	\$25,392
Fayette	\$41,269	\$21,663
Shelby	\$44,627	\$21,891
Christian	\$41,712	\$21,519
Municipality		
Irvington	\$60,250	\$26,131
Wamac	\$23,558	\$13,807
Centralia	\$33,484	\$19,478
Central City	\$33,672	\$16,271
Junction City	\$38,472	\$16,564
Sandoval	\$27,674	\$14,877
Patoka	\$37,625	\$19,824
Vernon	\$28,500	\$15,509
Vandalia	\$38,227	\$19,664
Ramsey	\$22,408	\$16,591
Oconee	\$40,417	\$15,914
Pana	\$33,877	\$16,406

Source: U.S. Bureau of Census Data: 2006-2010 American Community Survey.

Poverty Status

The USDOT defines low-income as a person whose median household income is below the U.S. Department of Health and Human Service (HHS) poverty guidelines. The 2012 HHS poverty guidelines show an income of \$23,050 for a family of four as being at poverty level. Additionally, IDOT uses the U.S.

Census - American Community Survey Census Poverty Level (CPL) as a basis for determining poverty status. The 2010 CPL for a family of four is \$22,314.

Year 2010 U.S. Census data was used to determine low-income populations in areas impacted by the alternatives. Low-income populations were identified using a combination of the U.S. Department of Health and Human Services (HHS) poverty guidelines or U.S. Census poverty statistics.

According to the 2006-2010 American Community Survey, the percent of families below poverty level within the study area municipalities ranges from 27.3% in Sandoval to 1.7% in Irvington. Only Irvington, Vernon, and Patoka have percentages of families below poverty level (1.7%, 5.4%, and 8.9% respectively) that are lower than that of their respective counties, while the remaining study area municipalities are higher. Fayette, Marion, Jefferson, and Christian Counties (10.8%, 12.2%, 12.4%, and 12.7% respectively) all have higher percentages of families below poverty level than the State of Illinois (9.2%).

The percent of individuals below poverty level within the study area municipalities ranges from 31.6% in Wamac to 6.4% in Irvington. Irvington, Vernon, Patoka, and Central City all have percentages of individuals below poverty level (6.4%, 12.2%, 15.2%, and 16.0% respectively) that are lower than that of their respective counties, while the remaining study area municipalities are higher. Fayette, Marion, Christian, and Jefferson Counties (16.1%, 16.5%, 16.6%, and 17.1%, respectively) all have higher percentages of individuals below poverty level than that of the State of Illinois (12.6%).

Table 3.1-5: Poverty Status (2006-2010) presents the poverty status within the study area.

One low-income population was identified: *Tract 9510, Fayette County*: Tract 9510 is an area located south of I-70 in and around Vandalia. The percentage of those in poverty, as defined by the U.S. Census, was lower in Tract 9510 than in Vandalia or in Fayette County. Several residences, scattered throughout Tract 9510, will be displaced by the alternatives. The alternatives are approximately seven miles long through Tract 9510 since it is a large geographical area. The number of impacted residences within Tract 9510 varies from one to seven, depending upon the alternative, and is relatively low in comparison to the total number of residences (1,004) in this large geographical area. Also these impacted residences are not concentrated in one area within the tract. Since the percentage of impacted residences within Tract 9510 is low and the impacted residences are not located in one particular area within the tract, it is expected that no high or adverse impacts would come to the low-income population in Tract 9510.

Table 3.1-5: Poverty Status (2006-2010)

Location	% Families Below Census Poverty Level ⁽¹⁾	% Individuals Below Census Poverty Level
State		
Illinois	9.2%	12.6%
County		
Jefferson	12.4%	17.1%
Washington	5.5%	9.1%
Marion	12.2%	16.5%
Clinton	5.2%	7.8%
Fayette	10.8%	16.1%
Shelby	7.8%	11.3%
Christian	12.7%	16.6%
Municipality		
Irvington	1.7%	6.4%
Wamac	24.2%	31.6%
Centralia	16.5%	20.0%
Central City	15.7%	16.0%
Junction City	17.6%	25.5%
Sandoval	27.3%	30.4%
Patoka	8.9%	15.2%
Vernon	5.4%	12.2%
Vandalia	12.4%	18.9%
Ramsey	16.7%	22.4%
Oconee	8.3%	18.9%
Pana	23.3%	28.3%

Source: U.S. Bureau of Census Data: 2006-2010 American Community Survey.

Notes: (1) The 2010 Census Poverty Level for a family of four is \$22,314. The Health and Human Services 2012 Poverty Guideline for a family of four is \$23,050.

Housing Characteristics

Vacancy and home ownership rates are one measure of the stability of a community. Four of the twelve municipalities (Junction City with 4.4%, Patoka with 6.1%, Central City with 9.4%, and Vandalia with 10.6%) have vacancy rates lower than their respective county averages while the vacancy rates in the remaining municipalities are higher. The vacancy rates for each of the study area counties except Washington, Clinton, and Christian (7.4%, 7.5%, and 9.0% respectively), are higher than that of the State of Illinois (9.4%).

Central City, Patoka, Junction City, and Vernon all have ownership rates

(75.6%, 76.3%, 80.0%, and 82.0% respectively) that are higher than their respective county averages. Irvington – with 83.0%, is comparable to the Washington County average. Ownership rates in the remaining municipalities are lower than their respective counties and range from 71.2% in Ramsey to 60.4% in Vandalia. The ownership rates for each of the study area counties are higher than that of the State of Illinois (69.2%).

With the exception of Vandalia (\$74,900), the median home values within the study area municipalities are lower than that of their respective counties and range from \$74,900 in Vandalia to \$24,200 in Wamac. For all study area counties, the median home values are lower than that of the State of Illinois (\$202,500). Table 3.1-6: Housing Characteristic (2006-2010) presents the housing characteristics within the study area.

Table 3.1-6: Housing Characteristic (2006-2010)

Location	Vacancy Rate	Ownership Rate	Median Home Value
State			
Illinois	9.4%	69.2%	\$202,500
County			
Jefferson	10.2%	75.0%	\$85,800
Washington	7.4%	83.2%	\$103,100
Marion	12.0%	74.6%	\$71,400
Clinton	7.5%	80.0%	\$124,200
Fayette	12.2%	79.5%	\$73,200
Shelby	12.3%	79.5%	\$84,500
Christian	9.0%	75.0%	\$80,500
Municipality			
Irvington	21.4%	83.0%	\$69,900
Wamac	17.3%	71.3%	\$24,200
Centralia	13.5%	66.5%	\$61,600
Central City	9.4%	75.6%	\$50,000
Junction City	4.4%	80.0%	\$29,200
Sandoval	14.2%	64.5%	\$60,600
Patoka	6.1%	76.3%	\$47,600
Vernon	13.8%	82.0%	\$51,400
Vandalia	10.6%	60.4%	\$74,900
Ramsey	20.7%	71.2%	\$51,300
Oconee	22.0%	67.2%	\$69,200
Pana	11.5%	67.5%	\$69,600

Source: U.S. Bureau of Census Data: 2006-2010 American Community Survey.

How do the alternatives affect the people that live in the study area?

Two blocks of minority populations (Tract 9005, Clinton County and Tract 9508, Fayette County) and one tract for low-income populations Tract 9510, Fayette County) were identified. However, the alternatives will not cause any high or adverse impacts for the general population, elderly, minority, or low-income populations. Nor will the alternatives cause any high or adverse impacts to housing vacancy or ownership characteristics in the project study area.

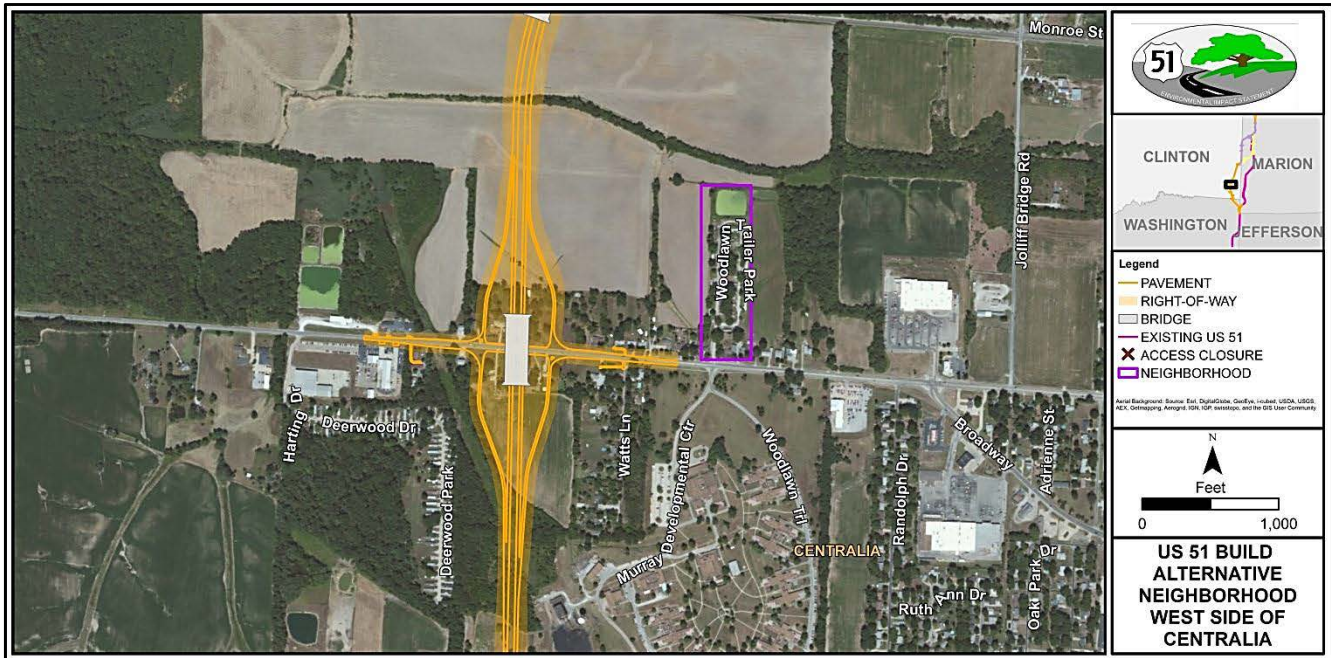
3.1.4 Neighborhoods

What neighborhoods exist in the study area?

Neighborhoods can easily be found in larger cities; in rural areas neighborhoods are sparse. For this study neighborhoods are defined as a non-linear cluster of residential development located within unincorporated areas. For example, Deerwood Park is within the city limits of Centralia so is not considered a neighborhood for this study. The following is a listing of the neighborhoods identified in the project study area.

- Woodlawn Park, Centralia: Just east of Deerwood Park on IL Route 161 and directly opposite the Warren G Murray Development Center. The Woodlawn Park mobile home community maintains approximately 21 mobile homes scattered over a 4.86 acre property parcel. A single service drive provides access to the neighborhood from IL 161.
- Figure 3.1-8: Neighborhood on the West Side of Centralia and Volume II Map Book sheet 10 show the area.

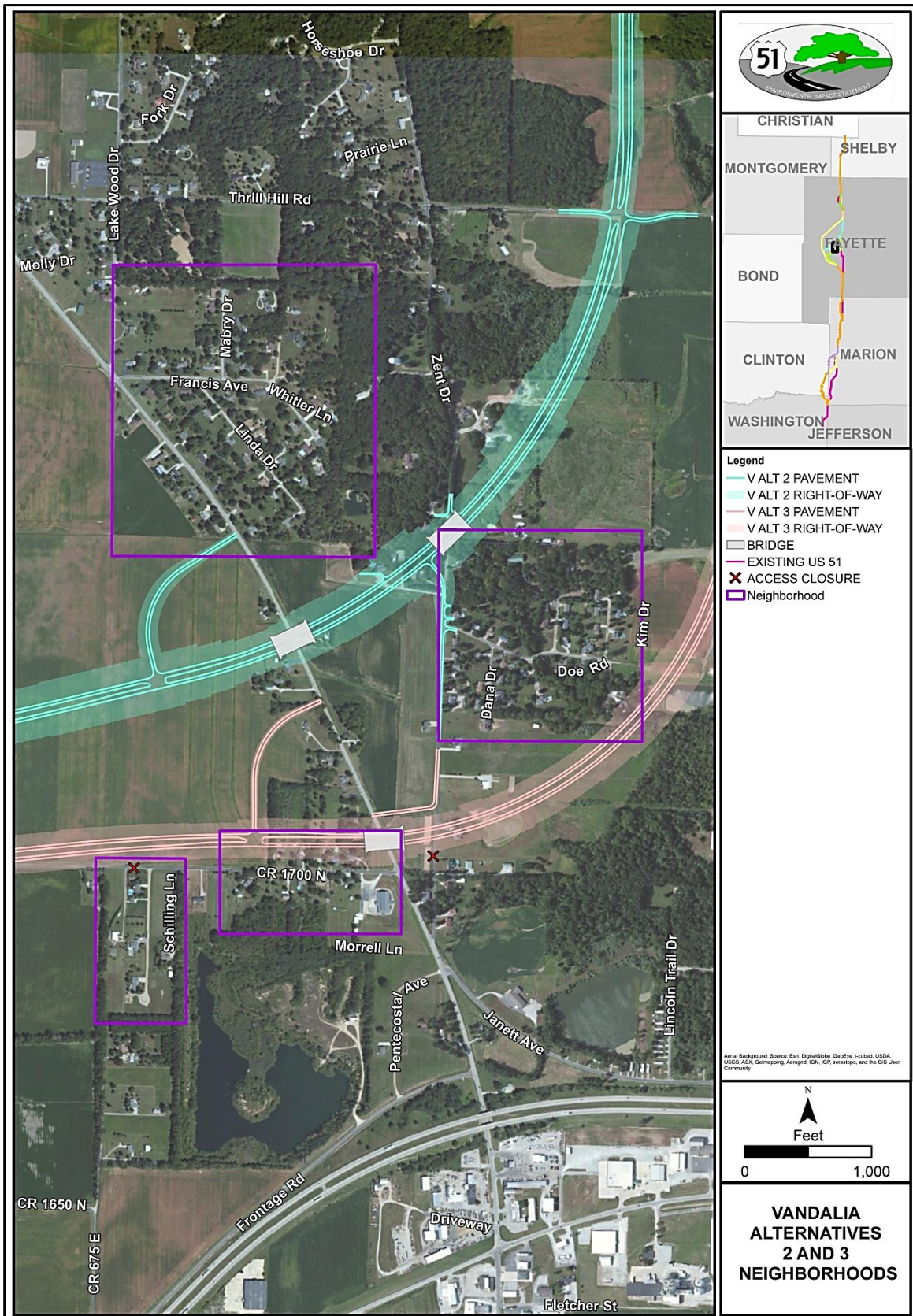
Figure 3.1-8: Neighborhood on the West Side of Centralia



- Schilling Lane, Vandalia: Approximately 5 single family and farmstead homes are in the neighborhood just outside of the Vandalia city limits located south of Highway 12 and west of Hillsboro Road.
- Highway 12, Vandalia: Approximately 13 single family homes are in the neighborhood just outside of the Vandalia city limits which includes Highway 12 just west of Hillsboro Road. Figure 3.1-7: Neighborhoods on the North Side of Vandalia shows the area.
- Doe Run Drive, Vandalia: Located north of I-70 east of Zent Drive the neighborhood houses approximately 37 single family homes and includes Doe Run Drive, Kim Drive, Angie Drive, Dana Drive, Kelly Lane, and Bambi Lane.
- Francis Avenue, Vandalia: Located north of I-70 east of Hillsboro Road the neighborhood houses over 50 single family homes and farmstead homes and includes Francis Avenue, Linda Avenue, Whitler Lane, Mabry Lane, and a portion of Hillsboro Road.

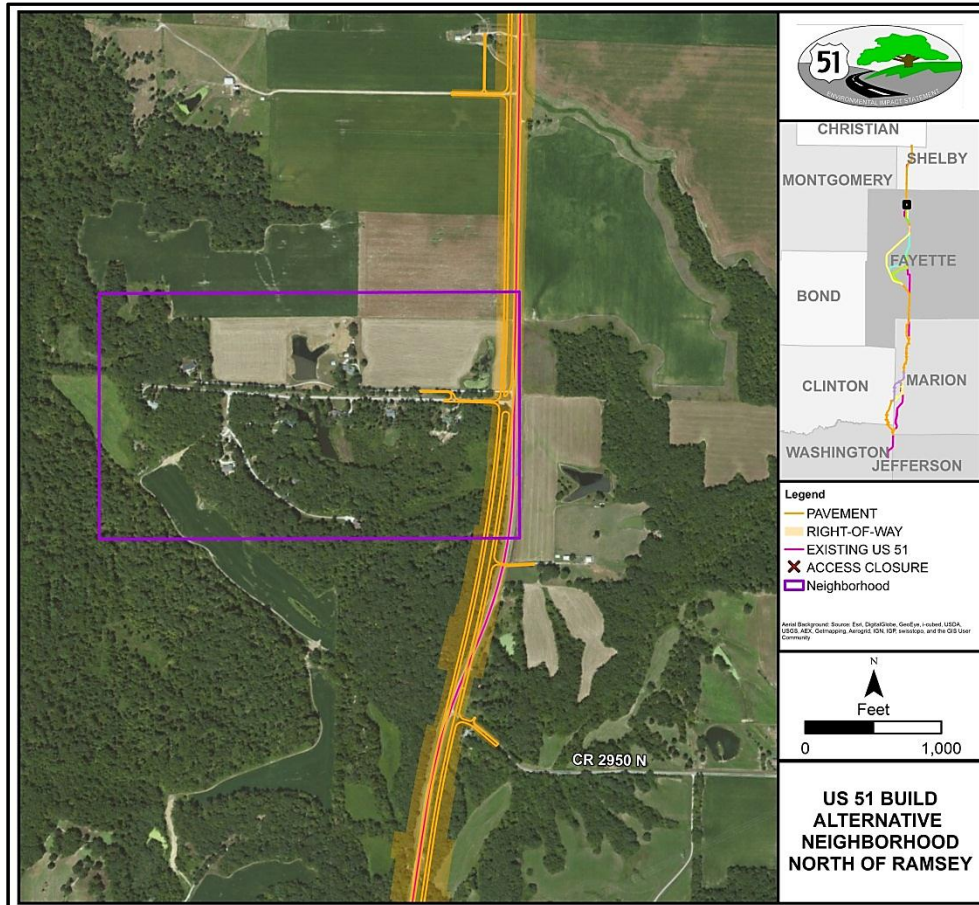
Figure 3.1-9: Neighborhoods on the North Side of Vandalia depicts each neighborhood area described. The neighborhood areas are also shown on Volume II Map Book sheets 94, 95, 118 and 119.

Figure 3.1-9: Neighborhoods on the North Side of Vandalia



- CR 3000 N, north of Ramsey: Approximately 10 single family homes and farmstead homes are in the neighborhood located on the west side of US 51 on CR 3000 N and includes two private roads. Figure 3.1-10: Neighborhood North of Ramsey and Volume II Map Book sheet 173 shows the area.

Figure 3.1-10: Neighborhood North of Ramsey



How are communities impacted by the alternatives?

The proposed project would lead to changes in community cohesion, travel patterns and access.

Community Cohesion

Community cohesion is a term that refers to an aggregate quality of a residential area. Cohesion is a social attribute that indicates a sense of community, common responsibility, and social interaction within a limited geographic area. It is the degree to which residents have a sense of belonging to their neighborhood or community or a strong attachment to neighbors, groups, and institutions as a continual association over time. US 51 is an existing facility that traverses through primarily rural areas and traverses through or near the communities of Irvington, Centralia, Wamac, Central City, Junction City, Sandoval, Patoka, Vernon, Vandalia, Ramsey, Oconee, and Pana.

Where the improvements remain on the existing alignment community cohesion would likely remain intact since US 51 is an existing facility that currently divides neighborhoods to either side of the roadway.

Where the improvements are on a new alignment, the highway extends around or bypasses, rather than traverses through an existing city. Bypasses are typically used by regional traffic that is “through” traffic and does not have a planned destination in the bypassed city, thus reducing traffic volumes within the previously passed through city. Because a bypass changes traffic patterns in a city, social and economic effects may occur. Economic effects of bypasses are discussed in section 3.1.5 of the DEIS; social effects of bypasses are identified below.

Highway bypasses typically have a positive effect on social aspects of an existing city by improving community cohesion and quality of life; however, a bypass can affect rural neighborhoods. The effects include bisecting or isolating portions of neighborhoods, reducing cohesion from physical separations created by the road, and reducing quality of life due to increased traffic, visual effects, and noise and air pollution.

Travel Patterns

The proposed project will result in a change in travel patterns. Changes in travel patterns can include introduction of interchanges, introduction of medians, alterations of intersections that restrict access to local roads, and/or closures of local roads.

The proposed improvement includes bypasses around Centralia-Sandoval area, Vernon, Vandalia and Ramsey which would have a higher design speed than the existing alignment, would provide a more efficient and safer route and would save travel time costs. These benefits would encourage regional traffic to use the bypasses and would alleviate regional traffic volumes including trucks from within the communities. Interchanges will be added for US 51 near Wamac for the US 51 Build Alternative, IL 161 west of Centralia for the US 51 Build Alternative, US 50 west of Sandoval for CS Alt 1, US 50 east of Sandoval for CS Alt 2, and Interstate 70 west of US 40 for V Alt 4. Where interchanges are added traffic volumes would be expected to increase on the roadway between the business district of the community and the interchange. Jug handles will be added for IL 140 west of Vandalia for V Alt 1, 2, 3, and 4; US 40 west of Vandalia for V Alt 1, 2, and 3; and IL 185 for V Alt 1, 2, and 3. Evaluation for traffic signals on roadways at ramp intersections will be performed at the time of design. The re-aligned intersection of Wabash Avenue and Old 51 will also be evaluated for traffic signals.

What is a jug handle?

A jug handle is a grade separation with minor streets or ramps connecting the roads.

The introduction of a median with the improved roadway restricts which side streets will have full access to US 51. Full access will be provided for roads that intersect US 51 every mile. Roads that will not have full access and yet cross US 51 will either be closed, grade separated, restricted to right-in/right-out

(RI/RO), or re-aligned as necessary. Some intersections are being re-designed or re-aligned to accommodate the future US 51 alignment as shown in Volume II Map Book. Tables 3.1-7 thru 3.1-11 list the roads that intersect the future US 51 and their corresponding proposed access.

Table 3.1-7: Access Changes – US 51 Build Alternative

Road	Location	Access Type
Yard Rd/Terminal Rd	Wamac	Full Access Re-aligned opposite Base Line Rd
Greenview Church Rd	Wamac	Close
Irvington Rd	Wamac	Grade Separation
Wilkin Rd	West of Centralia	RI/RO
17 th St Rd	West of Centralia	Full Access
10 th St Rd	West of Centralia	RI/RO
4 th St	West of Centralia	Grade Separation
IL 161	Centralia	Interchange
Linn St	West of Central City	Grade Separation
College Rd	West of Central City	Grade Separation
Felton Rd	West of Junction City	RI/RO
Jolliff Bridge Rd	West of Junction City	Grade Separation
Junction Rd	West of Junction City	Full Access
Centralia-Sandoval Alternatives (see Table 3.1-8)		
Fairman Rd	North of Sandoval	RI/RO
CH 14 (Ferrydale Rd)	North of Sandoval	Full Access
Bowen Rd	North of Sandoval	RI/RO
Gerrish Rd	North of Sandoval	RI/RO
Wisher Rd	North of Sandoval	Full Access
Britt Rd	North of Sandoval	Full Access
E Clinton Ave/Berry Rd	Patoka	Full Access
Lincoln St/Deer Creek Rd	Patoka	Close
CH 6 (Boat Dock Rd)	North of Patoka	Close
Kinoka Rd	North of Patoka	Full Access Re-aligned to Oak St
Oak St	North of Patoka	Full Access
Existing US 51	North of Patoka	Full Access Re-aligned opposite Oak St
Willett Rd	North of Patoka	Close
Dickey Pond Rd	North of Patoka	Full Access
Ballance Rd/Lair St	Vernon	Full Access
Willett Rd	Vernon	Full Access Re-aligned to Ballance Rd

Road	Location	Access Type
Existing US 51	North of Vernon	Close
Fayette Rd	North of Vernon	Full Access
CR 700 N	North of Vernon	Full Access
CR 750 N west of alignment	North of Vernon	RI/RO
CR 800 N	North of Vernon	Full Access
CR 885 E	South of Shobonier	Close
CH 23 (CR 900 N)	Shobonier	Full Access
CR 885 E	North of Shobonier	Full Access at CR 1000 N
CR 1000 N	North of Shobonier	Full Access
CR 1025 N	North of Shobonier	RI/RO
CR 1075 N	North of Shobonier	Full Access
CR 1125 N	North of Shobonier	RI/RO
Existing US 51	North of Shobonier	Full Access
CR 750 E west of alignment	North of Shobonier	Full Access
Vandalia Alternatives and Ramsey Creek Alternatives (see Tables 3.1-9 and 3.1-10)		
CR 2600 N	South of Ramsey	Full Access
Ramsey Alternatives (see Table 3.1-11)		
CR 2950 N	North of Ramsey	RI/RO
Private Road	North of Ramsey	Full Access
CR 3100 N	North of Ramsey	Full Access
CR 800 E	North of Ramsey	Close
CR 3200 N	North of Ramsey	Full Access
CR 3250 N	North of Ramsey	RI/RO
CR 3300 N	North of Ramsey	Full Access
CR 100 N	North of Ramsey	RI/RO
CR 100 E	North of Ramsey	Full Access
CH 13 (CR 200 N/Herrick Rd)	North of Ramsey	Full Access
CR 300 N	North of Ramsey	Full Access
CR 400 N	North of Ramsey	Full Access
Existing US 51	Oconee	Re-align with 200 N Rd
CH 14 (CR 500 N)	Oconee	Full Access
CR 250 E	North of Oconee	Close
Old Route 51	North of Oconee	Full Access
Old Turkey Farm Rd	North of Oconee	Full Access
CR 800 N	North of Oconee	Full Access

Road	Location	Access Type
CR 00 N	North of Oconee	Full Access

Notes: RI/RO designates right turn in and right turn out access only.

Table 3.1-8: Access Changes – Centralia-Sandoval Alternatives

Road	Location	CS Alt 1 Access Type	CS Alt 2 Access Type
Barton Rd	North of Junction City	N/A	Full Access
Red Stripe Rd	North of Junction City	N/A	Close
Old 51 Rd	South of Sandoval	N/A	Close
Existing US 51	Sandoval	N/A	Full Access
Cemetery Rd	Sandoval	N/A	Full Access to Existing US 51
Sandoval Rd/Nevada Ave	Sandoval	Full Access	N/A
Mississippi Ave	Sandoval	N/A	Close
Illinois Ave	Sandoval	N/A	Grade Separation
US 50	Sandoval	Interchange	Interchange
Meridian Rd	North of Sandoval	Close	N/A
Pope Rd	North of Sandoval	Full Access	N/A
Range Rd	North of Sandoval	Full Access to Pope Rd	Full Access
Existing US 51	North of Sandoval	Full Access Re-aligned opposite Pope Rd	Close
Old 51 Rd	North of Sandoval	Full Access at Boone St	Full Access at Boone St
Boone Street Rd	North of Sandoval	RI/RO	RI/RO
Tonti Rd	North of Sandoval	Full Access	Full Access

Notes: RI/RO designates right turn in and right turn out access only.

N/A Not Affected by alternative.

Table 3.1-9: Access Changes – Vandalia Alternatives

Road	Location	V Alt 1 Access Type	V Alt 2 Access Type	V Alt 3 Access Type	V Alt 4 Access Type
CR 750 E east of alignment	North of Shobonier	RI/RO	RI/RO	RI/RO	RI/RO
CH 10 (Carlyle Rd)	North of Shobonier	Full Access	Full Access	Full Access	Full Access
CR 1375 N	North of Shobonier	RI/RO West, Close East	RI/RO West, Close East	RI/RO West, Close East	Full Access Re-aligned to CH 10
CR 700 E	North of Shobonier	N/A	N/A	N/A	Full Access Re-aligned to CH 10
CH 140 (W St Louis Ave)	West of Vandalia	Full Access	Full Access	Full Access	Full Access
CR 475 E south of I-70	West of Vandalia	Grade Separation	Grade Separation	Grade Separation	Close
CR 1550 south of I-70	West of Vandalia	N/A	N/A	N/A	Close
I-70	West of Vandalia	Grade Separation	Grade Separation	Grade Separation	Interchange
US 40 north of I-70	West of Vandalia	Full Access	Full Access	Full Access	Full access at US 40 and I-70
CR 1550 N north of I-70	West of Vandalia	Grade Separation	Grade Separation	Grade Separation	Full access to Re-aligned US 40
CR 500 E north of I-70	West of Vandalia	N/A	N/A	N/A	Close
US 40 at I-70	Vandalia	N/A	N/A	N/A	Interchange
IL 185	Vandalia	N/A	N/A	N/A	Grade Separation
US 51 at I-70	Vandalia	N/A	N/A	N/A	Interchange
Janette Dr	Vandalia	N/A	N/A	N/A	Full Access
Imco Dr	Vandalia	N/A	N/A	N/A	Full Access
8 th Street	Vandalia	N/A	N/A	N/A	Close
Payne Rd	Vandalia	N/A	N/A	N/A	Full Access
CR 1650 N	West of Vandalia	RI/RO	Full Access	Full Access	N/A
CR 400 E	West of Vandalia	Close	N/A	N/A	N/A
CH 12 (CR 1700 N)	West of Vandalia	Full Access	RI/RO West, Close East	RI/RO West, Close East	N/A
CR 600 E	West of Vandalia	N/A	Full Access	Full Access	N/A

Road	Location	V Alt 1 Access Type	V Alt 2 Access Type	V Alt 3 Access Type	V Alt 4 Access Type
IL 185	Vandalia	N/A	Full Access	Full Access	N/A
Zent Dr.	North of Vandalia	N/A	RI/RO	Re-align to IL 185	N/A
Doe Run Dr	North of Vandalia	N/A	N/A	N/A	N/A
CR 400 E	West of Vandalia	Close	N/A	N/A	N/A
CR 1775 N	Vandalia	N/A	N/A	N/A	Re-align to Thrill Hill Rd
CR 1800 N (Thrill Hill Rd)	Vandalia	Full Access	Full Access	Full Access	Full Access
IL 185	West of Vandalia	Full Access	N/A	N/A	N/A
CR 1825 N	Vandalia	N/A	N/A	N/A	RI/RO West, Close East
CR 1900 N	Vandalia	N/A	Full Access	Full Access	Close West, Full Access East
CR 2000 N	North of Vandalia	Full Access	Full Access	Full Access	Full Access
Existing US 51	North of Vandalia	N/A	Re-align to CR 2000 N	Re-align to CR 2000 N	N/A
CR 500 E	West of Vandalia	RI/RO North, Close South	N/A	N/A	N/A
CR 2100 N	North of Vandalia	RI/RO West, Close East	Full Access	Full Access	Full Access
CR 975 E	North of Vandalia	N/A	RI/RO	RI/RO	RI/RO
CR 600 E	North of Vandalia	Full Access	N/A	N/A	N/A
CR 700 E	North of Vandalia	Full Access	N/A	N/A	N/A
CR 2200 N	North of Vandalia	Re-aligned to CR 700 E North	N/A	N/A	N/A
CR 2215 N	North of Vandalia	N/A	Full Access	Full Access	Full Access
CR 2225 N	North of Vandalia	N/A	Re-align to CR 2215 N	Re-align to CR 2215 N	Re-align to CR 2215 N
CR 2300 N	North of Vandalia	N/A	Full Access	Full Access	Full Access
CH 9 (CR 2400 N)	North of Vandalia	Full Access	Full Access	Full Access	Full Access

Notes: RI/RO designates right turn in and right turn out access only. N/A Not Affected by alternative.

Table 3.1-10: Access Changes – Ramsey Creek Alternatives

Road	Location	Ramsey Creek Alt 1 Access Type	Ramsey Creek Alt 2 Access Type
CR 2450 N	South of Ramsey	RI/RO	RI/RO
CR 2475 N	South of Ramsey	RI/RO	Full Access
CR 870 E	South of Ramsey	Close	Close
CR 2460 N	South of Ramsey	Close	Close
CR 2500/CR 2525 N	South of Ramsey	Full Access	Full Access

Notes: RI/RO designates right turn in and right turn out access only.

Table 3.1-11: Access Changes – Ramsey Alternatives

Road	Location	R Alt 1 Access Type	R Alt 2 Access Type
CR 2650 N	South of Ramsey	RI/RO	Re-align to CR 2675 N
CR 2675 N	South of Ramsey	Close	Full Access
Existing US 51	South of Ramsey	N/A	Re-align to CR 2675 N
CR 800 E/Fayette St	South of Ramsey, Ramsey	Close CR 800 E, Re-align Fayette St between 6 th St and Existing US 51	N/A
Existing US 51	South of Ramsey	Full Access Re-align to Bypass	N/A
8 th St	Ramsey	Close	N/A
6 th St	Ramsey	Close West, Re-align to Fayette St East	Close
CH 24 (CR 2800 N/Main St)	Ramsey	Full Access	Full Access
Existing US 51	North of Ramsey	Re-align to re-aligned Ramsey Lake Rd	Re-align to Ramsey Lake Rd
CR 2885 N	North of Ramsey	Full Access opposite re-aligned Ramsey Lake Rd	Close West, RI/RO East
Ramsey Lake Rd	North of Ramsey	Full Access Re-aligned opposite CR 2885 N	Full Access

Notes: RI/RO designates right turn in and right turn out access only.

N/A Not Affected by alternative.

The following are the areas that will have travel patterns impacted that are approximately one mile or greater in length due to changes in access for local roads.

- Greenview Church Road/Yard Road (US 51 Build Alternative) south of Wamac: The US 51 Build Alternative closes Greenview Church Road at US 51, routing traffic to Old 51. Wabash Avenue is proposed to be re-aligned opposite Old 51 to form a new intersection with a traffic signal and turn lanes added where appropriate. Yard Road will also be closed at US 51 and the road will be realigned approximately 0.5 miles south to connect to US 51 at E. Baseline Road (CR 050 E). Figure 3.1-3: Greenview Church and school on Greenview Church Road and Volume II Map Book sheet 1 show the impacted area.
- CR 1550 N and CR 475 E (V Alt 4) at I-70 west of Vandalia: V Alt 4 will close CR 1550 N on each side of I-70. North of I-70 CR 1550 N will have access to the re-aligned US 40. South of I-70 CR 1550 N will close west of Sloan Implement near V Alt 4. Traffic on CR 1550 N will need to utilize US 40 to cross I-70. V Alt 4 will also close CR 475 E south of I-70. Traffic on CR 475 E will need to utilize IL 140 to travel east. Figure 3.1-11: CR 1550 N and CR 475 E (V Alt 4) at I-70 west of Vandalia and Volume II Map Book sheets 137 and 138 show the impacted area.

Figure 3.1-11: CR 1550 N and CR 475 E (V Alt 4) at I-70 west of Vandalia



- East of proposed US 51 (US 51 Build Alternative) at Lincoln Street and Deer Creek Road near Patoka: US 51 Build Alternative will close Lincoln Street on either side of proposed US 51. Figure 3.1-4: Patoka School Campus on Kinoka Road shows the impacted area.

Access

Access impacts to driveways include re-aligning the driveway to another road, restricting the access to right-in/right-out (RI/RO), or changing the location of the driveway on the property. The majority of residential access along existing US 51 will be restricted to RI/RO. Farm access will be coordinated with property owners at the time of design to ensure access to farm fields. Table 3.1-12: Driveway Access Impacts identifies the number of driveway access impacts for the alternatives.

Table 3.1-12: Driveway Access Impacts

	Residential	Residential Other Buildings ¹	Farm Residential	Farm Residential Other Buildings ¹	Farm Business	Farm Business Other Buildings ¹
US 51 Build Alternative	19	31	49	117	1	12
CS Alt 1	0	0	3	2	0	3
CS Alt 2	2	1	6	5	0	3
V Alt 1	0	0	2	3	0	0
V Alt 2	4	4	9	22	0	0
V Alt 3	4	4	9	21	0	0
V Alt 4	7	28	9	20	0	0
Ramsey Creek Option A	0	0	2	1	0	0
Ramsey Creek Option B	0	0	2	1	0	0
R Alt 1	1	3	12	21	0	0
R Alt 2	2	2	6	17	0	0

¹ Garages, barns, sheds.

3.1.5 Jobs and Economics

What are the area's largest industries?

According to the Illinois Workforce Center (part of the Illinois Department of Employment Security) the industry with the highest percentage of Illinois employees is Health Care and Social Assistance (12.7%), followed by Manufacturing (11%), and then Retail Trade (10.7%). The study area counties largely follow state trends and have concentrated employment in Health Care and Social Assistance and Manufacturing. Four study area counties have their highest employment concentrations in Manufacturing (Jefferson, 16.9%; Washington, 23.3%; Shelby, 22.2%; Christian, 16.4%). The remaining three counties follow state trends more closely and have Health Care and Social Assistance as their top employment industry (Clinton, 18.3%; Fayette, 14.3%; Marion, 23.1%).

Major employers and businesses in the study area are shown in Table 3.1-13: Major Employers in Study Area. Four of the five largest employers in the study area are in Centralia, and the two largest employers are in the health care industry (St. Mary's Good Samaritan Hospital and the Warren Murray Center). The third and fourth largest employers are both correctional centers. Vandalia's correctional center is the third largest employer, followed by the correctional center in Centralia. The majority of the remaining major employers in the study area are private companies, most of which are in manufacturing.

What are the area's employment trends?

Employment data for the study area counties and the State of Illinois from 1990 to 2013 is presented in Table 3.1-14: Unemployment Rate. The table shows Marion and Fayette County reported higher unemployment rates than the state for all years studied. Christian County also has a higher current unemployment rate than the state average. All of the other study area counties currently have an unemployment rate lower than the state average rate as seen in Figure 3.1-12: State and County Unemployment Rates.

Why are the area's largest industries and employers studied?

These are studied to evaluate if the project has negative employment and economic impacts by displacing the largest employers.

Table 3.1-13: Major Employers in Study Area

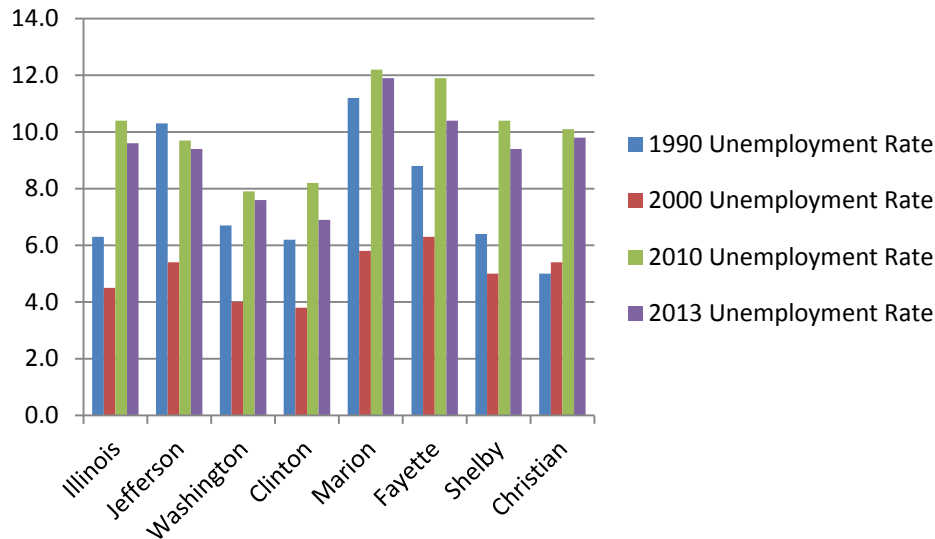
No.	Location	Business Name	Product or Service	Employees
1	Centralia	St. Mary's Good Samaritan Hospital	Health Care	814
2	Centralia	Warren Murray Center (State of Illinois)	Mentally Handicapped Center	565
3	Vandalia	Vandalia Correctional Center	Penal/Rehabilitation	449
4	Centralia	Centralia Correctional Center	Correctional Institutional	375
5	Centralia	Glister - Mary Lee Corporation	Cake Mixes	367
6	Centralia	Swan Corporation	Shower Walls	305
7	Vandalia	Graham Packaging Co.	Plastic Containers	280
8	Centralia	Graphic Packaging Corporation	Packaging Materials	256
9	Centralia	Canadian National and Burlington/Northern Santa Fe Railroad	Railroad Freight	235
10	Centralia	Engineered Fluid Inc.	Water Distribution Equipment	160

Source: Illinois Department of Commerce and Economic Opportunity. Accessed July 2012. Centralia data last updated 2008, Vandalia data last updated 2009, Patoka data last updated 2011, Sandoval data last updated 2011.

Table 3.1-14: Unemployment Rate

Location	1990	2000	2010	2013
Illinois	6.3	4.5	10.4	9.6
Jefferson	10.3	5.4	9.7	9.4
Washington	6.7	4.0	7.9	7.6
Clinton	6.2	3.8	8.2	6.9
Marion	11.2	5.8	12.2	11.9
Fayette	8.8	6.3	11.9	10.4
Shelby	6.4	5.0	10.4	9.4
Christian	5.0	5.4	10.1	9.8

Source: Local Area Unemployment Statistics, Illinois Department of Employment Security. Accessed August 2013

Figure 3.1-12: State and County Unemployment Rates

Where are the areas targeted for economic development?

The study area's largest cities, Centralia and Vandalia, promote the majority of economic development opportunities in the study area.

The City of Centralia offers various incentives for economic development:¹

- Enterprise Zone (targeted area for economic development or redevelopment)
 - Sales Tax Exemptions
 - Tax Credits/Deductions
 - Property Tax Abatement
- Tax Increment Financing
- Community Development Assistance Program (CDAP), Department of Commerce and Economic Opportunity
- Customized Incentive Proposals

¹ City of Centralia Economic Development. <http://city.centralia.il.us/business?iid=2167>. Accessed May 2011.

Centralia has three business parks located within the city's enterprise zone. Two the three business parks, Principle Meridian Business Park and Centralia Business Park #1 are located along existing US 51.

The City of Vandalia also offers an enterprise zone and tax increment financing as economic development incentives.² Vandalia has an industrial park on the west side of the city that is 0.5 mile from the US 40 exit from I-70 and adjacent to all of the Vandalia alternatives.

How many jobs will be created by construction of the project?

The number of jobs created by the construction phase of the alternatives was estimated. Construction employment is a function of:

- Direct employment (i.e. on-site construction employment, one employee for one year);
- Indirect employment (i.e. off-site employment, manufacture, preparation of supplies and equipment); and
- Induced employment (i.e. employment generated to fulfill demands for goods and services to newly employed households).

To estimate the number of jobs created for each category above, IDOT-recommended employment multipliers were used for the assessment. These multipliers were multiplied by the cost of construction to provide an estimate of the total number of jobs created by proposed project construction.

The following multipliers were used:

- Direct employment multiplier—8.35 jobs for every \$1 million spent;
- Indirect employment multiplier—9.25 to 12.7 jobs for every \$ 1 million spent; and
- Induced employment multiplier—10.5 jobs for every \$ 1 million spent.

Employment multipliers represent the additional employment generated by a construction project.

Construction jobs generated by the alternatives are presented in Table 3.1-15: Construction-Related Employment (number of employees). The alternatives would generate approximately 18,123 (using the low estimate and the

² City of Vandalia Economic Development. <http://www.vandaliaillinois.com/economic.html>. Accessed May 2011.

alternatives that would create the fewest jobs) to 21,986 jobs (using the high estimate and the alternatives that would create the most jobs).

Table 3.1-15: Construction-Related Employment (number of employees)

Alternative	Direct	Indirect	Induced	Total
US 51 Build Alternative	3,767	4,173-5,730	4,737	12,678-14,234
CS Alt 1	576	638-876	725	1,939-2,177
CS Alt 2	626	694-953	788	2,108-2,366
V Alt 1	779	863-1,185	980	2,622-2,944
V Alt 2	793	878-1,206	997	2,668-2,995
V Alt 3	813	901-1,237	1,022	2,736-3,072
V Alt 4	1,152	1,277-1,753	1,449	3,878-4,354
Ramsey Creek Option A	93	103-141	117	312-351
Ramsey Creek Option B	103	114-156	129	346-388
R Alt 1	170	188-258	214	572-642
R Alt 2	170	188-259	214	572-642

Note: IDOT-recommended multipliers were used in the analysis. They are derived from Robert Gorman's Analysis of Employment Statistics: Field Survey to Determine Employment Impacts of the Surface Transportation Act of 1982, Final Report' (Gorman, 1985) and FHWA Direct Employment Impacts: A Quantitative Analysis, Apogee Research, 1995.

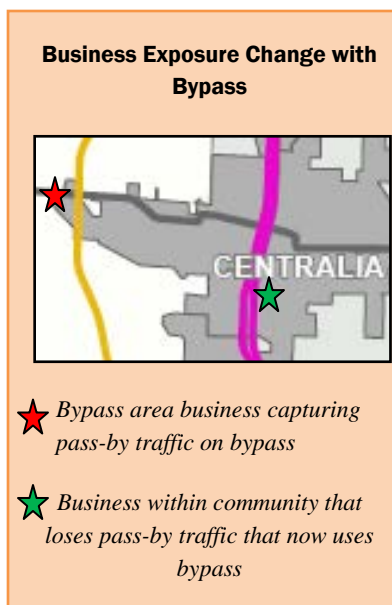
How will the proposed highway bypasses affect businesses?

Local economic effects of bypasses are typically due to changes in traffic patterns. A bypass allows vehicles to avoid driving through communities, which reduces traffic volumes within the community. Reduced traffic volumes can improve traffic safety and traffic operations in the community. However, bypasses also may reduce potential customers by reducing the amount of traffic that drives by businesses.

Businesses that are dependent upon pass-by traffic for their customer base frequently are located on high-volume roads, interchanges, or high-volume intersections to increase exposure for their businesses.

Table 3.1-16 provides examples of travel-dependent businesses. Travel-dependent businesses benefit from exposure to pass-by vehicle traffic. If through traffic is relocated to a bypass, pass-by traffic would be reduced for local businesses and patronage of these businesses may decrease. The bypass can influence commercial highway-oriented land development near the bypass that would compete with existing businesses in the community.

Table 3.1-16: Travel-Dependent Businesses



TYPICALLY TRAVEL-DEPENDENT	
Restaurant/ Lounge	Gas Station
Convenience Stores	Hotel/ Motel
Confectionery/ Ice Cream	Vegetable Stands
TRAFFIC DEPENDENCY UNCERTAIN	
Garden Center	Food Market
Hardware	Antiques
Art/Craft/Gifts	Recreational
Video	Boat Sales/ Service
TYPICALLY NOT TRAFFIC-DEPENDENT	
Bank	Industrial
Medical Services	Real Estate Agency
Personal Grooming	Laundry
Pharmacy	Newspaper/ Printing
Auto Sales/ Parts	Insurance
Legal Services	Mortuary
Furniture Stores	Appliance Sales/ Repair

Source: IDOT Community Assessment Impact Manual, October 2007

Studies to determine economic impacts of rural highway bypasses for communities, similar to conditions in the US 51 study area, found that the majority of communities with bypasses showed increases in total population and employment following construction of a bypass and that the overall gross annual sales grow more rapidly where bypasses have been constructed.³ Several cities surveyed stated the implementation of a bypass resulted in a cleaner and quieter Central Business District (CBD) shopping environment.⁴ Studies also found businesses closer to the bypass experienced increases in sales, while a large portion of the businesses located further from the bypass experienced decreases in sales.⁵ Larger communities, with a population greater than 2,000 residents, were found to experience greater benefits than smaller communities.

Smaller communities with a population less than 500 experienced greater adverse effects because a greater percentage of total area trade comes from through traffic. However, overall commercial property values along original highways did not decrease as a result of the bypass. In addition, traffic congestion and accident rates decreased along the original highway.⁶

The typically travel-dependent businesses along existing US 51 in the study area are listed in Table 3.1-17: Travel-Dependent Businesses along Existing US 51.

³ Buffington, Womack, and Lemer. "Effects of Highway Bypasses on Rural Communities and Small Urban Areas"; NCHRP Synthesis Project 20-5, 1996.

⁴ Otto, Daniel and Connie Anderson. "The Economic Impact of Rural Bypasses: Iowa and Minnesota Case Studies." Midwest Transportation Center, Iowa State University, 1995.

⁵ Blackburn, Sabrina and James Clay. "Impacts of Highway Bypasses on Community Businesses"; 1991.

⁶ Welch, Thomas. "A Literature Review of Urban Bypass Studies"; Office of Project Planning, Iowa Department of Transportation, 1989, revised 1992.

Table 3.1-17: Travel-Dependent Businesses along Existing US 51

Centralia	
Americas Best Value Inn Baker's Dozen Bigeez Convenience Store BP Broadway Tavern Burger Haven Burger King Cardinals (restaurant) Citgo Corner Café Dairy Queen Dave's Chicken Ranch Domino's Pizza	Farm Fresh Dairy Store Green Grill Holiday Motel Huck's Gas Station Kay's Bar Mamma Antonio's Trattoria Marilyn's Restaurant Monocle's Pizza Motel Centralia Queen City Motel Quizno's Road Hogs bar and grille sports bar The Pantry (restaurant)
Sandoval	
BP Crossroads (bar)	Slo Joe's Restaurant & Lounge Taylor Maid Ice Cream
Patoka	
Fast Stop Gas Station	
Vernon	
Joyce's Café	
Vandalia	
Arby's BP Burger King Circle K Days Inn Depot Steakhouse Doyle's Redwood Inn Joe's Pizza and Pasta	Long John Silver's Marathon Pizza Hut Quizno's Rancho Nueva restaurant Sonic Travel Lodge Wendy's
Ramsey	
Casey's General Store Dairy Dee	Hunt Brothers Pizza Ramsey Café

Centralia:

The US 51 Build Alternative would result in a bypass of the Centralia area including Wamac, Central City and Junction City. At its furthest distance the bypass would be about two miles west of existing US 51. The most likely businesses that would be impacted would be the approximately 27 travel dependent businesses along US 51, such as hotels/motels, restaurants and gas stations. One of the goals for the City of Centralia, IL, Comprehensive Plan 2007 is to support “the widening of US Route 51 extending from Vandalia to Centralia assuring that the expansion does not bypass Centralia”. Centralia is mainly planning for growth eastward. However, the Centralia area is a larger destination city, of approximately 13,000 residents, compared to some of the other smaller towns along US 51. Studies have shown the impact of a bypass would likely be less in a larger city than in a smaller town and a greater percentage of Centralia’s businesses sales are likely to come from local residents, instead of through traffic.

Sandoval:

CS Alt 1 and CS Alt 2 would both bypass Sandoval. CS Alt 1 would be about 1.4 miles to the west of existing US 51 and CS Alt 2 would be about 0.2 miles to the east of existing US 51. There are four travel dependent businesses along US 51 in Sandoval. CS Alt 1 would be more likely to have adverse effects on the travel dependent businesses since it would be 1.2 miles farther away from existing US 51 than CS Alt 2. Sandoval has approximately 1,300 residents. Studies have shown that communities under 2,000 residents are less likely to have as much positive economic benefits from a bypass as cities over 2,000 residents.

Vernon:

The US 51 Build Alternative would bypass Vernon about one half mile to the west of existing US 51. The Village has approximately 130 residents. There is one travel dependent business along US 51 in Vernon. Since communities with a population less than 500 have a greater percentage of total area trade come from through traffic Vernon’s travel dependent businesses would be more likely to have adverse effects from this project.

Vandalia:

Downtown Vandalia would be bypassed to the west by all four Vandalia alternatives. V Alt 1 would be 3.6 miles west of existing US 51 while V Alt 2 and V Alt 3 would be 3.2 miles west of existing US 51. The southern portion of V Alt 4 would be up to 3.1 miles west of Vandalia. Part of V Alt 4 would use existing US 51 in Vandalia but that section of US 51 only has two travel dependent businesses. The most likely businesses that would be impacted in

Vandalia would be the approximately 16 travel dependent businesses along US 51. All of but two of these businesses are south of I-70. Vandalia is a destination city, of approximately 7,000 residents. In addition, the historic State Capital building is a tourist destination located in Vandalia. With the historic attraction the impact of a bypass on travel dependent businesses would likely be reduced. In addition, a larger percentage of Vandalia's businesses sales are likely to come from local residents, instead of through traffic.

Ramsey:

The Ramsey alternatives both bypass Ramsey to the east. R Alt 1 would be about 0.3 miles to the east of existing US 51 and R Alt 2 would be about 0.6 miles to the east of existing US 51. There are four travel dependent businesses along US 51 in Ramsey. R Alt 2 would be more likely to have adverse effects on the travel dependent businesses since it would be 0.3 miles further away from existing US 51 than R Alt 1. Ramsey has approximately 1,000 residents and would be less likely to have positive economic benefits from this project.

How can impacts be reduced?

Impacts to travel-dependent businesses can be reduced by providing signs directing traffic from the bypass to businesses in the Central Business District (CBD), working with businesses to plan early for a bypass route, providing adequate local streets from the bypass to existing businesses, and community planning efforts (such as annexation and comprehensive planning) to integrate the bypass into the community.⁷

What are the mineral resources, natural gas, and petroleum resources?

The study area includes a variety of mineral resources, including coal reserves, quarries, sand and gravel pits, oil wells, and gas wells. These resources are an economic resource for the communities along the road. There is a potential for strip mining or underground mines within the corridor. Formerly there were four underground coal mining operations approximately 100 feet below ground surface in the study area; however, these operations have been inactive since at least 1964. There is a potential for subsidence risk in formerly coal mined areas. Mine subsidence is the ground movement caused by a roof collapse of a subsurface mine. These areas will be accounted for in the design phase. Figure 3.1-11 shows the location of these mines near Centralia, Sandoval, Vernon, and Patoka and where the alternatives would cross over former mined areas.

⁷ Caltrans. "California Bypass Study – The Economic Impacts of Bypasses Vol. 1: Planning Reference." May 2006.

Quarry operations are active in all counties within the study area with the exception of Washington County. In total, there are three stone quarry operations and eleven other mineral producers (primarily sand & gravel) (Masters et al, 1997).

Oil production occurs in all counties within the study area. The heaviest concentration occurs in Marion County with over 5,600 oil wells, as shown in Table 3.1-18: Summary of Oil and Gas Wells by County and Figure 3.1-13: Location of Coals Mines, Oil Wells, and Gas Wells.

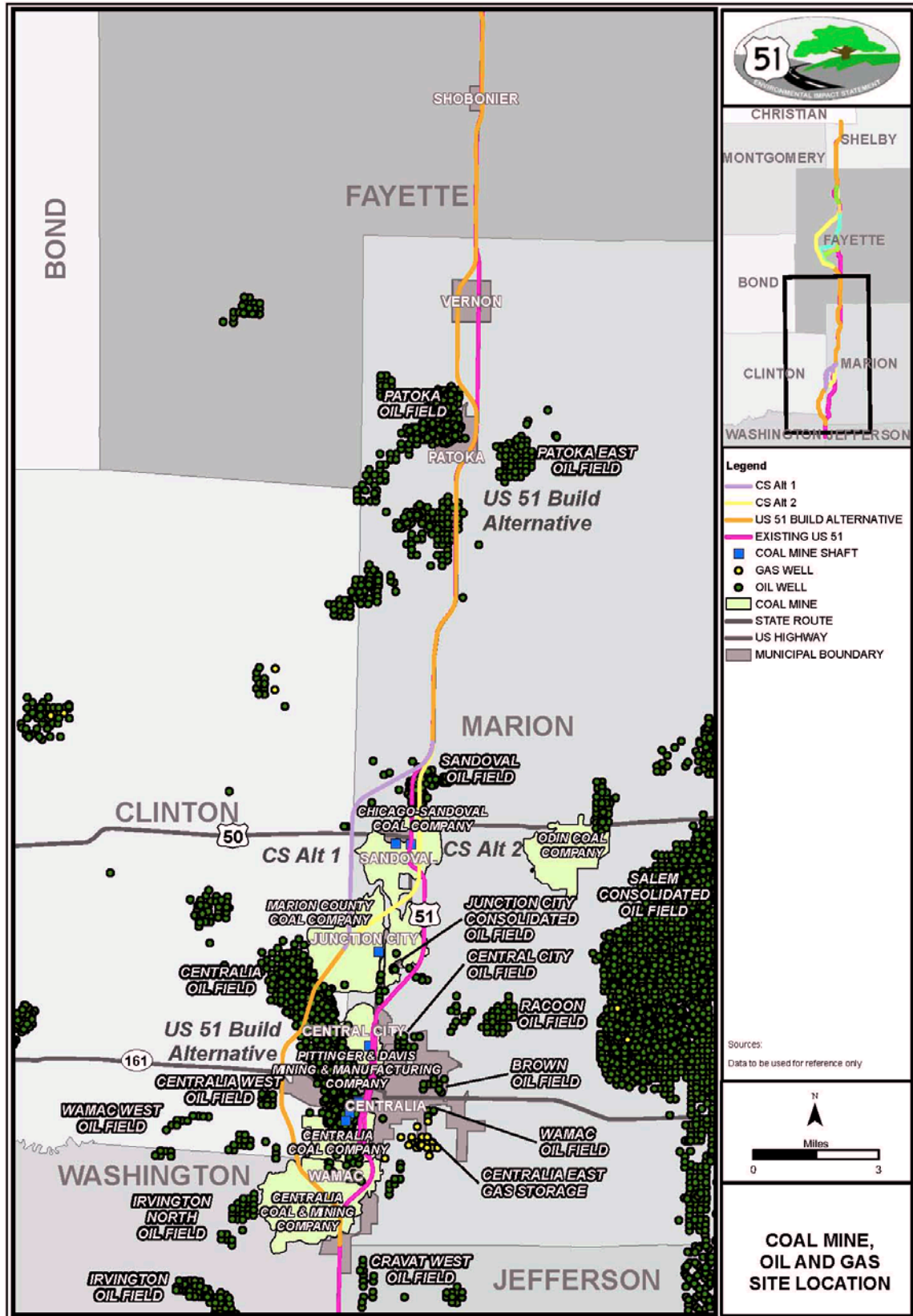
Natural gas wells are present in five of the seven counties in the study area (Washington, Clinton, Marion, Fayette, and Shelby), with the largest concentration of wells occurring in Fayette County.

Table 3.1-18: Summary of Oil and Gas Wells by County

County	Number of Gas Wells	Number of Oil Wells
Jefferson	0	2,040
Washington	19	1,069
Clinton	23	2,003
Marion	32	5,654
Fayette	64	3,751
Shelby	3	153
Christian	0	1,207

Source: ISGS, 2009

Figure 3.1-13: Location of Coals Mines, Oil Wells, and Gas Wells



How will mineral resources, natural gas, and petroleum resources be affected by the alternatives?

Natural Gas and Oil Wells

No natural gas wells are located within 200 feet of any of the alternatives, and as a result, should not be affected.

The alternatives are within and adjacent to several oil well fields south of Vernon, Illinois. A total of nine oil wells within the Centralia Oil Field would be taken out of operation by the US 51 Build Alternative. These oil wells are located west of the US 51 Build Alternative and north of Linn Street.

CS Alt 1 and CS Alt 2 impact one and two oil wells, respectively, within the Sandoval Oil Field. All of these potential well impacts occur in Marion County. The oil wells within the ROW would be purchased and plugged in accordance with *62 Ill. Adm. Code Ch. I, Section 240*.

The Vandalia and Ramsey alternatives do not affect any oil wells.

Quarries

Five mining operations (one stone quarry, three sand and gravel pits, and one sand pit) are located within one mile of the alternatives; however, no ROW would be required from mining operations. These facilities currently have access to US 51 by local roads and there would be no change in access.

3.1.6 Property Acquisition

Will homes be displaced?

The following section discusses single family, multi-family, and farmstead residential impacts. Farmstead residential impacts are also covered in Section 3.2 of the DEIS. Residential impacts include the home and any residential outbuildings associated with the home such as garages, sheds, and barns. A displacement is defined as a particular building or property being within the new ROW required for the proposed improvement.

US 51 Build Alternative

The areas where there is only one alternative are referred collectively as the US 51 Build Alternative. The US 51 Build Alternative is a combination of alignment on new terrain, such as the bypass of Centralia, and expansion of the existing US 51. The US 51 Build Alternative starts at the northern border of Jefferson County and affects residences throughout the project corridor. The projected displacements for the US 51 Build Alternative can be summarized as

follows and shown in Figure 3.1-6Figure 3.1-14: US 51 Build Alternative Displacements:

- Section 1 (Wamac to Junction City – shown on Volume II Map Book sheets 1 thru 13)
 - Would displace 11 single family homes.
 - Would displace 2 multi-family homes.
 - Would displace 7 farmstead homes.
 - Would displace 16 residential outbuildings.
- Section 2 (North of Sandoval to south of Vandalia – shown on Volume II Map Book sheets 35 thru 59)
 - Would displace 4 single family homes.
 - Would displace 16 farmstead homes.
 - Would displace 15 residential outbuildings.
- Section 3 (South of Ramsey – shown on Volume II Map Book sheets 160 thru 161)
 - Would displace 3 single family homes.
- Section 4 (North of Ramsey to Christian/Shelby County line – shown on Volume II Map Book sheets 172 thru 187)
 - Would displace 3 single family homes.
 - Would displace 5 farmstead homes.
 - Would displace 1 residential outbuilding

Figure 3.1-14: US 51 Build Alternative Displacements (Page 1 of 2)

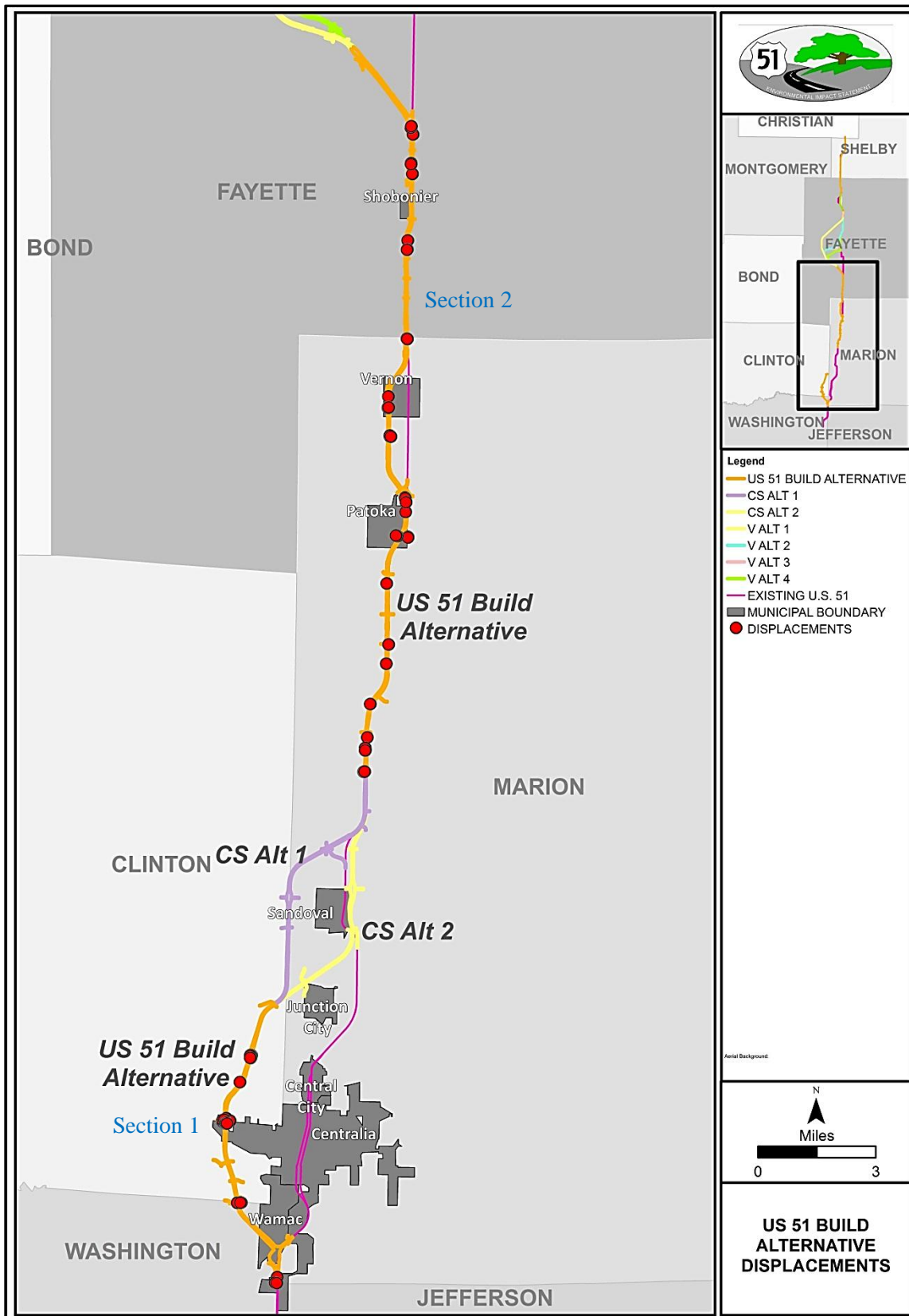
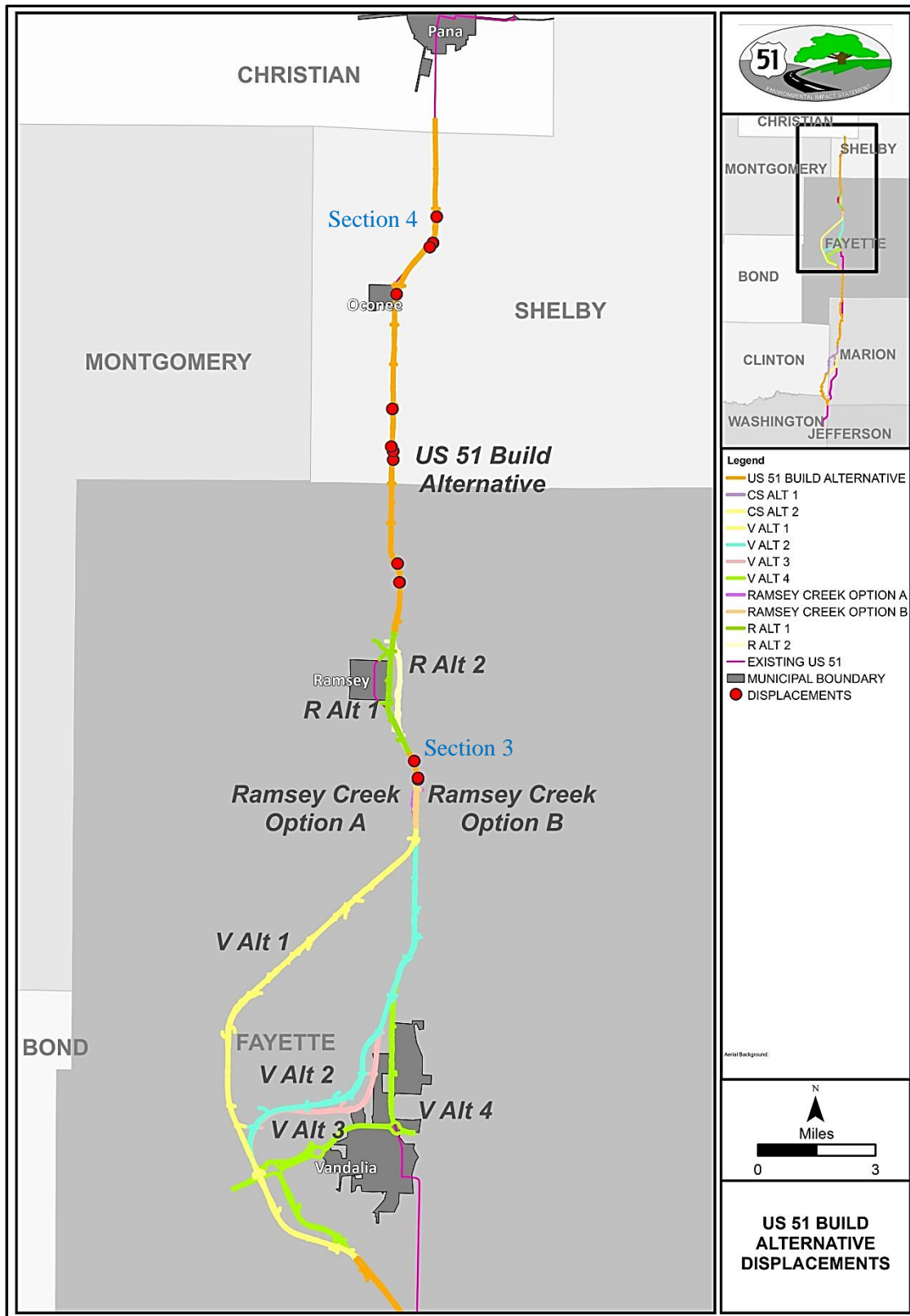


Figure 3.1-14: US 51 Build Alternative Displacements (Page 2 of 2)

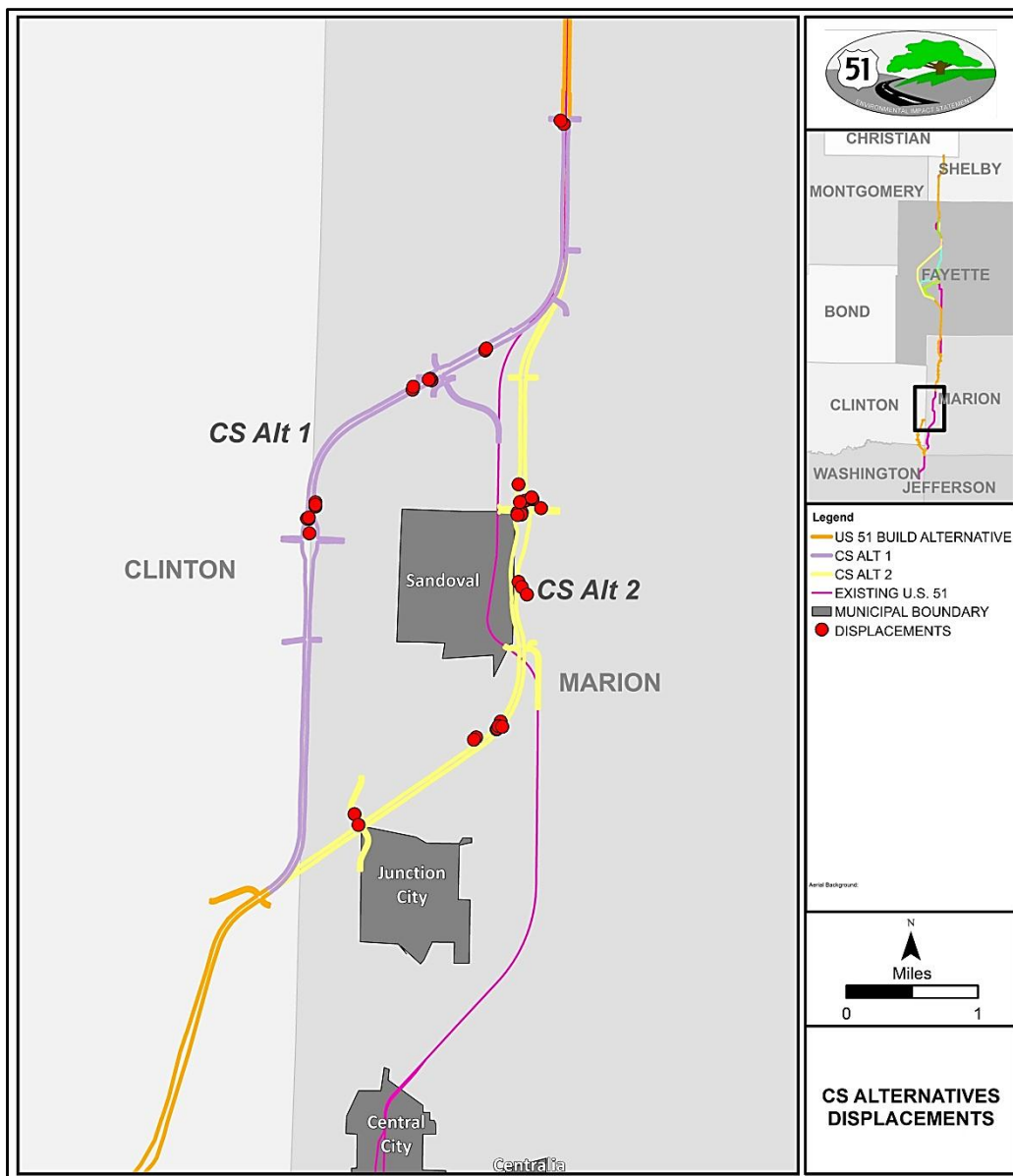


Centralia-Sandoval Alternatives

CS Alt 2 has more residential displacements than CS Alt 1. The difference in displacements is associated with CS Alt 2 being closer to the developed area of Sandoval and CS Alt 1 is farther away from developed areas. The differences in displacements can be summarized as follows and shown in Figure 3.1-15: Centralia-Sandoval Alternative Displacements and Volume II Map Book sheets 13 thru 24 (CS Alt 1) and 25 thru 35 (CS Alt 2):

- CS Alt 2 would displace seven more single family homes than CS Alt 1.
- CS Alt 2 would displace the same number of farmstead homes as CS Alt 1.
- CS Alt 2 would displace two more residential outbuildings than CS Alt 1.

Figure 3.1-15: Centralia-Sandoval Alternative Displacements

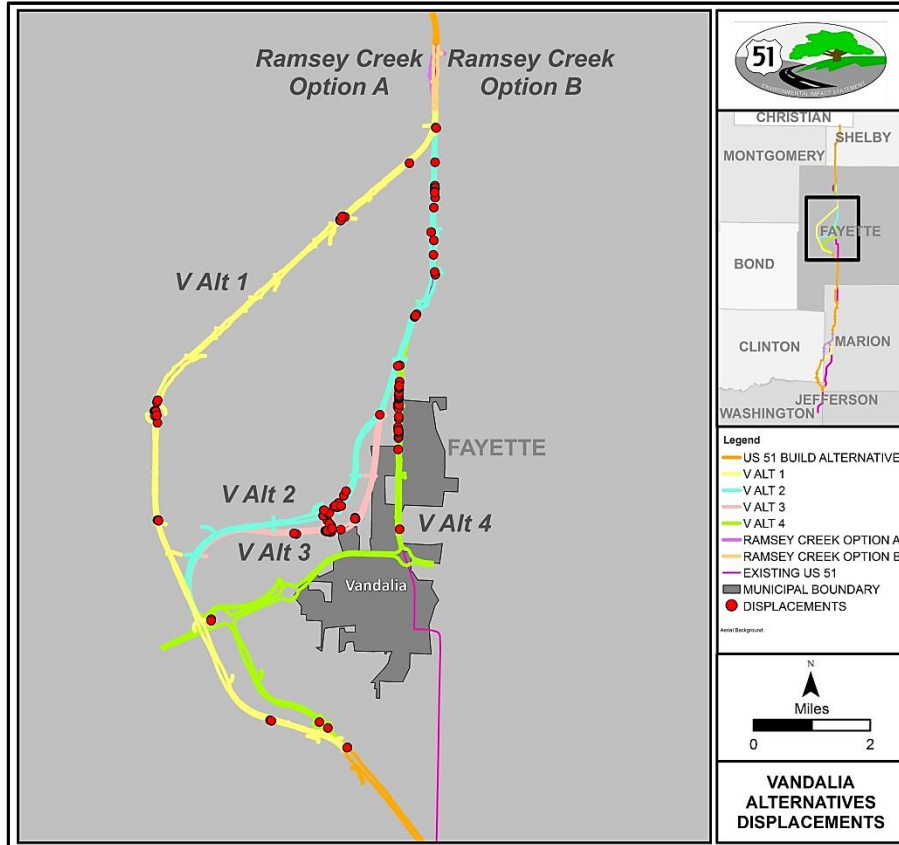


Vandalia Alternatives

V Alt 1 would have fewer displacements to the number homes than all of the other Vandalia alternatives. The magnitude of displacements for V Alt 1 is attributed to the location, direction, and distance from Vandalia as compared to the other alternatives. V Alt 4 displaces more homes than V Alt 1 because V Alt 4 is closer to developed areas of Vandalia and uses more of existing US 51 where existing homes have access. V Alt 2 and V Alt 3 fall in between the other two alternatives for the amount of displacements to homes. The projected displacements can be summarized as follows and shown in Figure 3.1-16: Vandalia Alternative Displacements and Volume II Map Book sheets 59 thru 81 (V Alt 1), 82 thru 105 (V Alt 2), 106 thru 130 (V Alt 3), and 131 thru 156 (V Alt 4):

- V Alt 1 would not displace any single family homes. V Alt 2 would displace five single family homes and V Alt 3 would displace 15 single family homes. V Alt 4 displaces 24 single family homes, the most of all of the Vandalia alternatives.
- V Alt 1, V Alt 3, and V Alt 4 would displace the fewest farmstead homes with 9, 14, and 14, respectively. V Alt 2 would displace 20 farmstead homes, the most of all of the Vandalia alternatives.
- V Alt 2 and V Alt 4 would displace the fewest residential outbuildings with 12 and 14, respectively. V Alt 1 and V Alt 3 would each displace 16 residential outbuildings, the most of all of the Vandalia alternatives.

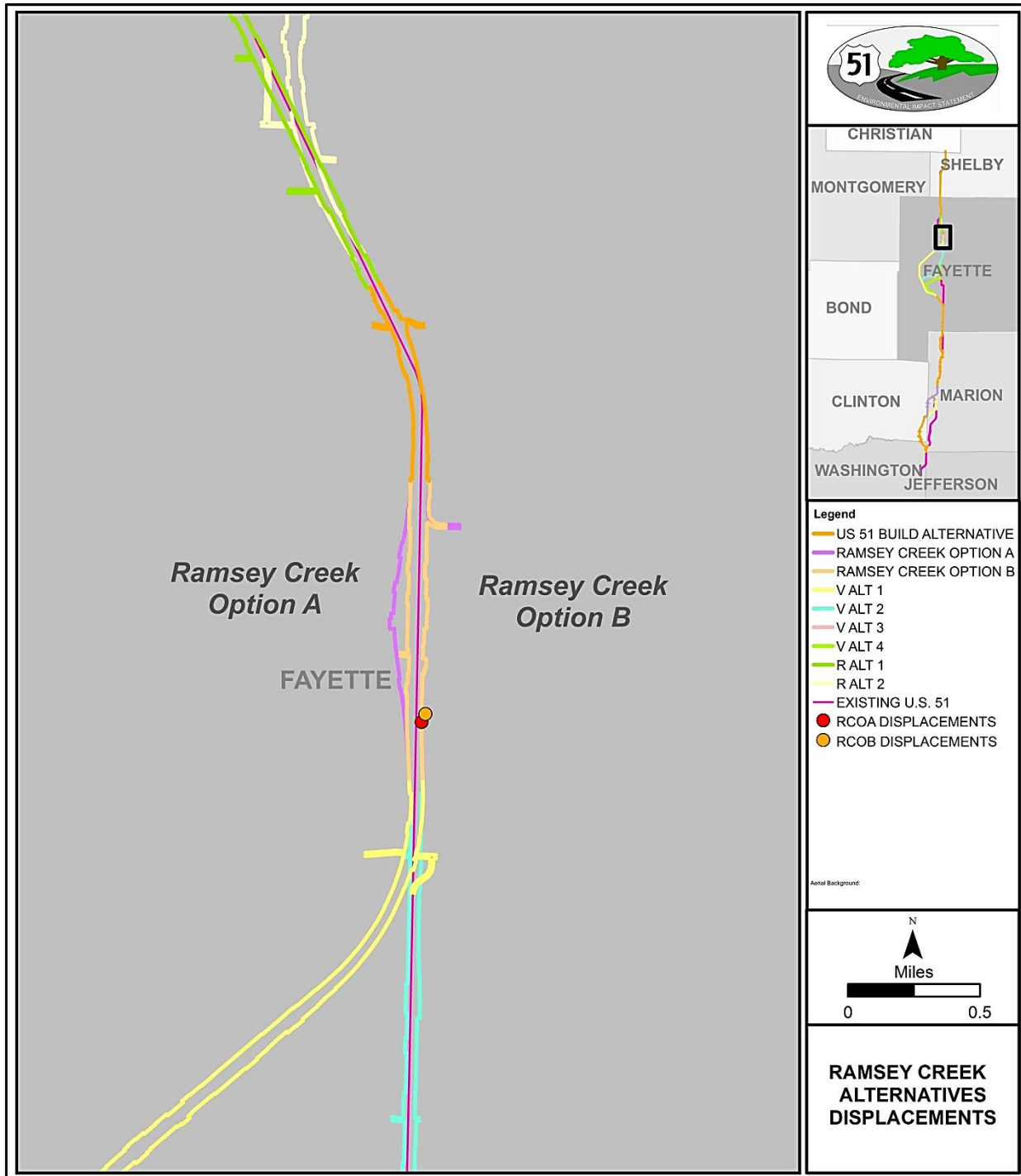
Figure 3.1-16: Vandalia Alternative Displacements



Ramsey Creek Options

The two options for Ramsey Creek have the same residential displacements, both displacing one residential outbuilding as shown in Figure 3.1-17: Ramsey Creek Options Alternative Displacements and Volume II Map Book sheets 156 thru 158 (RCOA) and 159 thru 160 (RCOB).

Figure 3.1-17: Ramsey Creek Options Alternative Displacements



Ramsey Alternatives

R Alt 1 has more residential displacements than R Alt 2. The main reason for the difference in displacements is that R Alt 1 is closer to Ramsey and displaces more developed areas than R Alt 2. The projected displacements can be summarized as follows and shown in Figure 3.1-18 and Volume II Map Book sheets 161 thru 167 (R Alt 1) and 168 thru 172 (R Alt 2):

- R Alt 1 would displace 13 single family homes compared to three homes displaced by R Alt 2.
- R Alt 1 would displace two farmstead homes compared to three homes displaced by R Alt 2.
- R Alt 1 would displace three more residential outbuildings than R Alt 2.

Figure 3.1-18: Ramsey Alternative Displacements

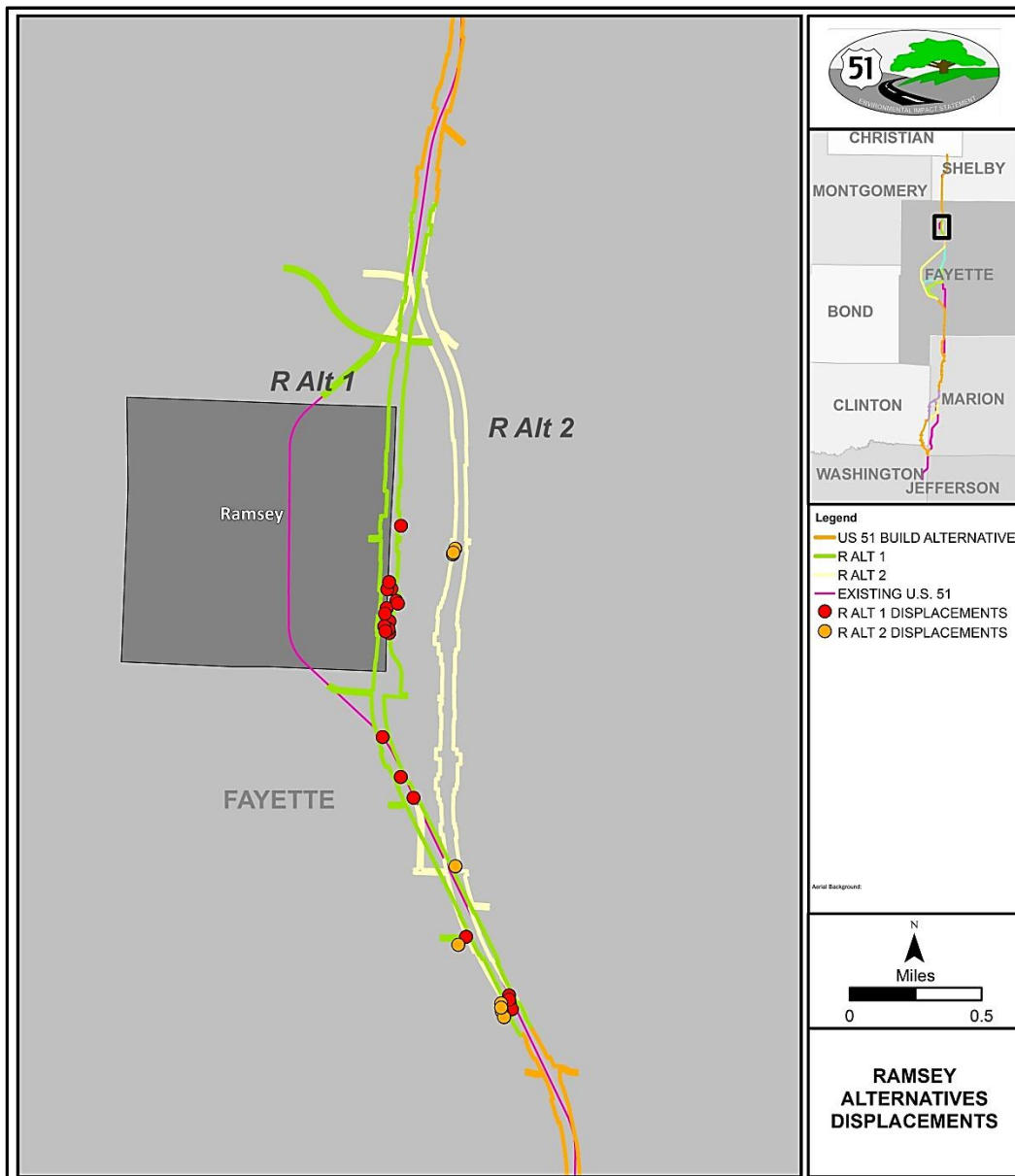


Table 3.1-19: Residential Displacements summarizes the number and type of displacements for each alternative.

Table 3.1-19: Residential Displacements

	Single Family Residential Displacements (total number)		Multi-family Residential Displacements (total number)		Farmstead Residential Displacements (total number)	
	Residences Displaced	Other Buildings Displaced ¹	Residences Displaced	Other Buildings Displaced ¹	Residences Displaced	Other Buildings Displaced ¹
US 51 Build Alternative	21	10	2	0	28	22
CS Alt 1	1	2	0	0	4	7
CS Alt 2	8	5	0	0	4	6
V Alt 1	0	0	0	0	9	16
V Alt 2	5	0	0	0	20	12
V Alt 3	15	6	0	0	14	10
V Alt 4	24	6	0	0	14	8
Ramsey Creek Option A	0	0	0	0	0	1
Ramsey Creek Option B	0	0	0	0	0	1
R Alt 1	13	7	0	0	2	0
R Alt 2	3	4	0	0	3	0

¹ Garages, barns, sheds.

Will businesses be displaced?

The US 51 Build Alternative is located within the western edge of the Warren Murray Center property, the study area’s second largest employer, but no buildings would be displaced from the site. The US 51 Build Alternative will bridge over railroad tracks in the Centralia area but no tracks or structures from the railroad will be displaced. Canadian National and Burlington/Northern Santa Fe Railroad is the ninth largest employer in the study area. V Alt 4 would require land on the western edge of the Vandalia Correctional Center’s property, the study area’s third largest employer. This would impact some parking at the Vandalia Correctional Center but no buildings would be displaced. None of the major employers listed in Table 3.1-13: Major Employers in Study Area will be displaced by the project, however, portions of property will be required.

The US 51 Build Alternative would displace five businesses. Of these two are vacant or abandoned. A vacant business south of Centralia on the west side of US 51 north of CR 2400 N near the southern terminus of the project would likely be displaced as shown on Volume II Map Book sheet 1. An abandoned meat processing facility north of Sandoval at the northwest corner of CR 1400 N

(Fairman Road) and US 51 would be also displaced as shown on Volume II Map Book sheet 36.

A building that is part of Folze Welding Pipeline Maintenance on the southeast side of Patoka in the southeast corner of the intersection of US 51 and East Clinton Avenue/CR 1900 N would be displaced as shown on Volume II Map Book sheets 43. Better Built, Inc. in the northwest corner of Elm Street and East Clinton Avenue/ CR 1900 N in Patoka would be displaced as shown on Volume II Map Book sheet 42. The fifth displacement removes three to four buildings at Jim Burks Hardwood Lumber north of Vernon on the west side of US 51 north of Burks Road as shown on Volume II Map Book sheet 49.

CS Alt 1 would not displace any businesses. CS Alt 2 would displace buildings at two businesses including a building that is part of Team Fenex, and buildings at Foster Salvage on the east side of Sandoval as shown on Volume II Map Book sheets 31.

V Alt 1 would not displace any businesses. V Alt 2 and V Alt 3 would impact one business north of Vandalia on the west side of US 51 and north of CR 2225 N as shown on Volume II Map Book sheets 103 and 130. The area needed for ROW is used for the storage of shipping containers and would have part of its property displaced.

V Alt 4 would displace two businesses. Several buildings at Liquidation Warehouse, near CR 1900 N on the west side of US 51, would be displaced as shown on Volume II Map Book sheet 149. In addition the business north of CR 2225 N, which is used for the storage of shipping containers, would also have part of its property displaced similar to business impacts for V Alt 2 and V Alt 3.

Ramsey Creek Options A and B would displace five buildings at GL Beaumont Lumber on the east side of US 51 north of CR 2450 N. Four out of nine buildings and much of the land at the facility would remain intact as shown on Volume II Map Book sheets 156 thru 160.

R Alt 1 would likely displace a building at a business south of Ramsey on the east side of US 51 by its intersection with CR 800 E as shown on Volume II Map Book sheet 162. R Alt 2 would not impact the same building.

What are the parking impacts to businesses that remain?

Only US 51 Build Alternative and V Alt 4 would have impacts to parking.

The US 51 Build Alternative would have minor parking impacts to the Brookside Manor to the west of Centralia on the north side of IL 161. Likewise the car dealership on the south side of IL 161 will have minor parking impacts.

Brookside Manor and the car dealership are shown on Volume II Map Book sheet 9.

V Alt 4 would have minor parking impacts to the Ramada Inn on Veteran's Parkway. V Alt 4 would require land on the western edge of the Vandalia Correctional Center's which would impact its parking as shown on Volume II Map Book sheets 142.

How will IDOT purchase properties identified for displacement?

Relocation assistance and compensation will be provided to any residence or business displaced, in accordance with applicable State and Federal regulations and guidelines.

The Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Uniform Relocation Act) (Title 42 United States Code Sections 4601-4655), as amended applies to all federal or federally assisted activities that involve the acquisition of real property or the displacement of residences or businesses. IDOT will implement the provisions of the State of Illinois Relocation Assistance Plan in accordance with the Uniform Relocation Act. IDOT will provide just compensation for each property displaced by new right of way. Just compensation is a monetary payment most often equivalent to the fair market value of the property. Fair market value is the highest price estimated in terms of money that the property will bring, if exposed to sale on the open market, with a reasonable time allowed to find a buyer, buying with the knowledge of all of the uses to which it is adapted, and for which it is capable of being used. Mitigation of displacements or displaced structures will be in the form of financial remuneration or compensation for property loss and relocation expenses, as outlined in the Uniform Relocation Act.

What is just compensation?

Just compensation is required to be paid when private property is taken for public use. It is generally equal to the fair market value of the property.

Displaced residents and businesses will be given the opportunity to relocate in the same area if desired. The majority of the farm residences may be relocated onsite (i.e., onto property already owned by the resident). A November 2014 search for available homes for sale in the study area on the National Association of REALTORS® website revealed over 1,000 homes and properties available for sale. Adequate replacement housing appears to be available for the displaced residences within the study area. IDOT will provide housing of last resort if comparable housing is not available at the time of displacement. Many of the businesses also may rebuild or relocate onsite. For those that cannot relocate onsite there is available developable land near their existing locations to re-establish the business. None of the alternatives will affect Section 8 or other publicly subsidized housing.