4.0 ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

Chapter 4 describes the environmental consequences that would result from implementation of each of the alternatives. The analysis presented in this section has been prepared in accordance with CEQ's NEPA Regulations 40 CFR 1502.16 on environmental consequences. The direct environmental effects of each alternative are provided under the resource headings described in Chapter 3 and listed below. This section also provides analysis of growth-inducing, cumulative, indirect, and unavoidable adverse effects. Chapter 4 assesses and compares the significance of impacts of each of the alternatives.

4.1.1 Determination of Significance

The CEQ Regulations for implementing NEPA 40 CFR 1508.27 define significance of effects in terms of context and intensity. Context refers to society as a whole, the affected region or interests and the locality. For example, impacts to wetlands located in Nevada are likely viewed as more intense that impacts to wetlands in Indiana because wetlands are generally more abundant in Indiana than Nevada. The significance of effects varies depending on the setting of the proposed action. Intensity refers to the severity of the effect. Section 7.5 of BIA's NEPA Guidebook describes in a bit more detail the analysis of significance of project impacts.

CEQ regulations 40 CFR 1508.27 establish that the following criteria are considered in evaluating intensity of project impacts:

- Effects may be both beneficial and adverse.
- The degree of public health or safety effects – Public safety factors include cumulative impacts on demand for infrastructure such as traffic safety features, water supply systems, control features for contaminants on the site, underground storage tanks, waste and storm water disposal, impacts to flight patterns near airports, food safety, fire protection or law enforcement.
- Unique resource characteristics of the geographic area – Unique resources include, but are not limited to wetlands, wild and scenic rivers, refuges, floodplains, rivers placed on a national inventory or prime and unique farmlands.
- The degree of controversy over environmental effects – "Highly controversial" has a NEPA-specific meaning. The term was an issue in Foundation for North American Wild Sheep v. USDA 681 F.2d 1172 (9th Cir. 1982). The Ninth Circuit stated: The term "controversial" refers to cases where a substantial dispute exists as to the size, nature or effect of a major federal action rather than to the existence of opposition to a use. In a later case, the definition of controversial was expanded to include whether or not the entities with jurisdiction 40 CFR 1508.26 or special expertise 40 CFR 1508.15 agree or disagree with regard to the impacts of the alternatives or the span of alternatives.

- Uncertainty and unknown risks of effects – For some project impacts, risk and uncertainty can be measured using specific professional standards or procedures. For example, risk of flooding at a given point can be expressed as a recurrence interval, say a 100-year flood elevation. Standard hydrologic statistical procedures are used to compute the elevation of a 100-year flood at a given location. On the other hand, at some locations, such as a closed watershed, the hydrologic risk analysis might be statistically indeterminate, meaning the flood risk is unknown or much less certain than more typical locations.
- The degree to which the action may set a precedence – These are generally new department or agency policies or program guidance set at headquarters, not by specific project impacts.
- Cumulative effects – Effects on the environment that result from the incremental impact of the action when added to other past present or reasonably foreseeable future actions regardless of what agency or person undertakes such actions. Significant cumulative impacts can occur from individually minor impacts but collectively significant impacts. For example, demand for water supply for the preferred alternative might not be significant alone, but water demand for adjoining and reasonably foreseeable development might exceed the capacity of the water supply system, a cumulatively significant impact. Reasonably foreseeable means that there is some documentation of future projects, perhaps including land use zoning, government resolutions, applications for building permits, written demographic growth factors, or similar documents.
- Effects on scientific, cultural or historic resources – Normally thought of as compliance with Section 106 of the National Historic Preservation Act, American Indian Religious Freedom Act, Archeological Resources Protection Act or similar tribal ordinances.
- Effects to endangered or threatened species or its habitat – Compliance with Section 7 of the Threatened and Endangered Species Act.
- Violation of federal, state or local environmental regulations – This includes entities with jurisdiction by law or special expertise for the location of a given alternative. This could also include tribal ordinances. This generally does not include state or local mandates for lands after they have been taken into trust ownership by the United States for the beneficial use of the applicant tribe, unless the tribal government has formally adopted a specific standard, such as a local building code, fire protection standards or so forth.

For each of the general criteria, there are various kinds of specific professional practices and standards. For example, the American Water Works Association provides guidelines and design criteria for the water plant manager to determine whether a cumulative above increase in demand for water supply for a given alternative exceeds the capacity of the water mains in place or the existing water treatment plant. For underground storage tanks, the standards for public health and safety include EPA regulations 40 CFR 280. For identifying contaminants on the site, one standard is ASTM E1527-05 for conducting Phase I Environmental Site Assessments. The U.S. Army Corps of Engineers has jurisdiction to assess and permit impacts to wetlands under Section 404 of the Clean Water Act. And so forth for the remaining general criteria.

4.2 LAND RESOURCES

4.2.1 Significance Criteria

4.2.1.1 Topography, Land Forms, Drainage & Gradients

For the purposes of this analysis, BIA considers impacts to topography as significant and a threat to public health and safety or water quality standards if construction or operation of a proposed alternative would:

- prevent the conveyance of surface water from the undeveloped portions of the site into natural drainages;
- result in excessive sedimentation of eroded materials within natural drainages;
- result in landslides;
- cause other substantial changes to landscape topography normally not permitted by local building codes or that result in gradients that are too steep, such as exceed standard vertical road sight distances.

4.2.1.2 Soils/Geology/Minerals/Paleontological Resources

For the purposes of this analysis, BIA considers impacts to soils/geology/mineral or paleontological resources as significant and a threat to public health and safety, water quality standards or potentially substantial tribal revenues from mineral or paleontological resources if construction or operation of a proposed alternative would:

- cause the soils to become unstable as a result of the project and potentially result in a landslide, lateral spreading, subsidence, liquefaction, or collapse;
- prevent the conveyance of surface water off of the site and into natural drainages;
- cause excessive erosion or loss of topsoil and/or fill material;
- result in excessive sedimentation of eroded materials within natural drainages; or
- cause other substantial changes to soils;
- degrade or eliminate potential minerals or paleontological resources that might have a similar or greater economic value to the tribal government than the value of implementation of that particular alternative.

4.2.2 Comparative Impact Assessment of Alternatives – Land Resources

The impact assessments in Sections 4.2.3 to 4.2.6 found that none of the alternatives have significant impacts on topography, land forms, drainage, gradients, soils, geology or access to valuable minerals or paleontological resources. All alternatives except No Action require changes to topography for grading and filling to support development. The site plans help show that none of

the resulting gradients and land forms will exceed standard engineering site development standards to help protect public health and safety. All development alternatives revise gradients and increase erosion potential to some degree, at least during construction. However, use and monitoring of the mitigation measures proposed for each development alternative, and BMPs for NPDES stormwater construction permits would help ensure that erosion and gradient revisions predicted by BIA will not exceed significant levels, and would help protect public health and safety and surface water quality.

This portion of the comparative analysis in Chapter 4 helps respond to 40 CFR 1502.14 but because the alternatives, except No Action, similarly lack significant impacts, does not help sharply define issues and thus provide a clear basis for BIA's choice among the options. Because the purpose and need for the proposal are principally socioeconomic in nature, it will be the socioeconomic impacts that are the most sharply defining issues for BIA to consider.

4.2.3 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

4.2.3.1 Topography, Land Forms, Drainage & Gradients

Currently, the elevation across the site is variable and in order to accommodate the proposed construction elements, site clearing and grading would have to occur. Alternative A would involve clearing and grading 78.79 acres. This is not considered significant because the site development would follow best engineering practice. Examples of best engineering practice include erosion and sediment control plans, grading plans, and obtaining appropriate permits. The proposed drainage plan is shown in Section 2 (**Figure 2.3-2**). Because the overall topography over the area of the site is not currently level, there would be some smoothing of hilly contours to accommodate the proposed construction and likely excavation and fill to establish adequate foundation for development features. Throughout this grading process the drainage integrity would be considered; however, current drainage conditions have been altered in the past and do not necessarily follow the natural topography.

The construction of the casino, hotel, and parking garage would require level surfaces for buildings and a pitched parking lot to ensure proper water drainage. The overall impact for the commercial development of Alternative A on the topography from existing conditions would be a cut of 6,230 cubic yards (cu. yd.). Additional cut and fill volumes are shown in Table 4.2-1 below.

The housing and community center construction would require grading in order to accommodate buildings and yardscapes that are usable to its residents. The finished grading would incorporate the natural drainage features and avoid the existing wetlands that are present in this section of the project area. Structural BMPs would be incorporated into the final drainage plan which includes enhanced retention ponds and wetlands. The overall impact for residential development of

Alternative A would be 7,822 cubic yards of required fill material. Fill values have not been adjusted for compaction purposes. Additional volumes are given in Table 4.2-1 below.

Table 4.2-1
Alternative A: Cut and Fill Volumes

Land Use	Feature	Cut (cu. yd.)	Fill (cu. yd.)	Net (cu. yd.)*	
Commercial	Casino & Hotel	18,390	54,410	36,020	Fill
	Parking Deck	6,950	11,900	4,950	Fill
	Parking Lots and Roads	20,540	91,010	70,470	Fill
	Detention Ponds	44,780	70	44,710	Cut
	Landscaping	177,310	104,350	72,960	Cut
	Subtotal	**267,970**	**261,740**	**6,230**	**Cut**
Residential	All Buildings	5,790	17,180	11,390	Fill
	All Parking Lots & Roads	120	8,440	8,320	Fill
	Detention Ponds	7,600	410	7,190	Cut
	Landscaping	14,250	9,550	4,700	Cut
	Subtotal	**27,760**	**35,580**	**7,820**	**Fill**
Total		**6,230**	**7,822**	**1,592**	**Fill**

* Net volume calculations do not include compaction factors.

Note: Cut volumes do not include soils removed below existing grade.

The alterations to the topography would not be considered significant impacts due to proper mitigation measures applied to the landscape. The resulting slopes would be designed using standard engineering practice for site planning to not be too steep for public safety or standard sight distances for roads. During and after construction appropriate structural and nonstructural Best Management Practices would be implemented to eliminate, reduce, and/or mitigate erosion and sedimentation.

4.2.3.2 Soils/Geology/Minerals/Paleontological Resources

Alternative A would not have significant effects on soil erosion, geology, or access to minerals or paleontological resources. Alternative A would affect soils during construction in the forms of displacement, fill and compaction. Erosion would be anticipated during and post construction; however, the loss of soil would be greatly reduced by the appropriate BMP's as part of compliance with the NPDES general construction site permit from the EPA. Based on the soil properties described in Section 3.2 there is moderate to low erosion potential based on the soil type and varying slope gradients. Only the unconsolidated material at the South Bend site would be affected. The depth of the underlying bedrock is great enough that it would not be reached during construction. Typical construction activities anticipated to construct Alternative A include but are not limited to pollution prevention components installing, clearing and grubbing, grading, drainage features installing, building constructing, trenching and backfilling for utilities and sewer construction, road and parking paving, top soiling, landscaping, and final seeding.

Soils that would need special consideration during design and construction are those that are very poorly drained or those that are known to occur on steep slopes. The Adrian muck, undrained (AbhAU) (located near the residential area, but outside of the construction footprint) is a very poorly drained soil; additionally, this soil is predominantly hydric. Two soils occur at the proposed project area that have slopes of 10–18%, these are the Hillsdale-Tracy sandy loam (HkpD2) (located below the proposed casino) and the Tyner loamy sand (TxuD) (located at the proposed maintenance road and residential area). See Section 3.2 for NRCS soil map unit locations.

Upon the decision and acceptance of the proposed Alternative A, the design process would begin which would include the development of an Erosion Control Plan as part of the NPDES general construction permit process. The specific erosion control elements are discussed in further detail in Section 5 - Mitigation.

The implementation of the Erosion Control Plan would result in minimized erosion and increased site stabilization by vegetating and protecting the land resources which currently exist at the proposed site. Although the effects to soil from the implementation of Alternative A would be mitigated, the proposed level of surface disturbance is substantial and therefore considered to be somewhat significant.

The Kankakee Drainageways Physiographic Region is characterized by broad tracts of sandy outwash, lake plains and scattered clusters of dunes (Franzmeier, et.al, 1999). Rocks and fossils recorded in South Bend are from the Devonian and Carboniferous Period; fossils are primarily aquatic consisting of corals, decayed plant and algae, brachiopods, and crinoids just to name a few (Fall et. al., 2003). There are no known mapped mines within the South Bend Site as displayed by the EPA's Enviromapper (EPA 2009). There is also no visual evidence of mining activity, and the field survey did not indicate past or present mines or quarries.

4.2.4 Alternative B – Elkhart Site Tribal Village and Casino

4.2.4.1 Topography, Land Forms, Drainage & Gradients

Currently, the site is a relatively flat surface, however, in order to accommodate the proposed construction elements, site clearing and grading would have to occur. Alternative B would involve clearing and grading 87.86 acres. This is not considered significant because the site development would follow best engineering practice. Examples of best engineering practice include erosion and sediment control plans, grading plans, and obtaining appropriate permits. Because the overall topography is somewhat flat, the areas around proposed facilities would be designed to have adequate exaggerated vertical relief necessary to promote drainage to standard requirements. The Elkhart proposed drainage plan is shown in Section 2 (see **Figure 2.4-2**).

The construction of the casino, hotel, and parking garage would require level surfaces for buildings and a pitched parking lot to ensure proper water drainage. All rainwater to fall on this area would

be kept on-site and would be channeled and directed to the western side of the site to two separate detention ponds. The detention ponds would be a holding place to reduce turbidity and velocity of water where it would then drain offsite below State Road 19. The overall impact for the commercial development of Alternative B would be to cut 170,488 cu. yd. Additional volumes are given in Table 4.2-2 below.

The housing and community center construction would require grading in order to accommodate buildings and yardscapes that are usable to its residents. The grading would be accomplished with the natural drainage integrity generally remaining intact. The majority of water to fall on this site would be redirected to the outer perimeter of the residential area in a series of channelized ditches. Water channeled from the residential area would be directed west toward the commercial development, where it would eventually empty into the detention ponds discussed above. The overall impact for residential development of Alternative B would be to fill 19,334 cu. Yd.; additional volumes are given in Table 4.2-2 below.

Table 4.2-2
Alternative B: Cut and Fill Volumes

Land Use	Feature	Cut (cu. yd.)	Fill (cu. yd.)	Net (cu. yd.)*	
Commercial	Casino & Hotel	9,938	35,733	25,795	Fill
	Parking Deck	462	27,955	27,493	Fill
	Parking Lots and Roads	58,726	27,340	31,386	Cut
	Detention Ponds	144,709	1	144,709	Cut
	Landscaping	60,753	13,072	47,681	Cut
	Subtotal	**274,589**	**104,101**	**170,488**	**Cut**
Residential	All Buildings	1,836	11,737	9,902	Fill
	All Parking Lots & Roads	170	15,697	15,527	Fill
	Detention Ponds	-	-	-	
	Landscaping	8,010	2,158	5,852	Cut
	Subtotal	**10,010**	**29,344**	**19,334**	**Fill**
Total		**264,579**	**74,758**	**151,154**	**Cut**

* Net volume calculations do not include compaction factors.

Note: Cut volumes do not include soils removed below existing grade.

4.2.4.2 Soils/Geology/Minerals/Paleontological Resources

The thickness of unconsolidated material at the Elkhart site is thick enough that the bedrock would not be reached during construction. The construction activities which would be necessary to produce Alternative B include but are not limited to clearing, grading, trenching, and backfilling. Based on the NRCS (2011) soil properties described in Section 3.2 there is moderate to low erosion potential based on the soil type and slope gradients.

Soils that would need special consideration during construction are those that are very poorly drained or those that are known to occur on steep slopes. The Brookston loam (BuuA) (located throughout the proposed project site) is poorly drained; however it is not 'very' poorly drained, but if the soil is drained then it would be classified as Prime Farmland. The Riddles-Metea complex (RoqC2) (located near the residential area, but it may be outside of the construction footprint) is classified as having slopes of 5–10%. See **Figure 3.2-4** for NRCS soil map unit locations.

Upon the decision and acceptance of the proposed Alternative B, the design process would begin which would include the development of an Erosion Control Plan. The specific erosion control elements are discussed in further detail in Chapter 5, Mitigation.

The implementation of the Erosion Control Plan would result in minimized erosion and increased site stabilization by vegetating and protecting the land resources which currently exist at the proposed site. The proposed grading and the excess volume of cut material would be removed from the site; however, the effects are considered to be less than significant due to the mitigation efforts proposed.

The Plymouth Morainal Complex Physiographic Region is characterized as disorganized ridged till and stratified drift of northern, northeastern, and eastern sources (Franzmeier, et. al., 1999). There are no known mapped mines within the Elkhart Site as displayed by the EPA's Enviromapper (EPA 2009). There is also no visual evidence of mining activity, and the field survey did not indicate past or present mines or quarries. Rocks and fossils recorded in Elkhart are from the Devonian and Carboniferous Period; fossils are primarily aquatic consisting of corals, decayed plant and algae, brachiopods, and crinoids just to name a few (Fall et. al., 2003).

4.2.5 Alternative C – South Bend Site Tribal Village With Commercial Development

4.2.5.1 Topography, Land Forms, Drainage & Gradients

Currently, the elevation across the site is variable and in order to accommodate the proposed construction elements, site clearing and grading would have to occur. Alternative C would involve clearing and grading 41.87 acres of the surface area to accommodate the proposed construction elements, but to a lesser degree than Alternative A. This is not considered significant because the site development would follow best engineering practice. Examples of best engineering practice include erosion and sediment control plans, grading plans, and obtaining appropriate permits. The development of Alternative C is limited to housing, family entertainment center, a travel center, and associated parking structures for each facility. Throughout the grading process the drainage integrity would be considered; however, current drainage conditions have been altered in the past and do not necessarily follow the natural topography. The proposed drainage plan is shown in Section 2 (see **Figure 2.5-2**).

The construction of the travel center, family entertainment center, and outdoor activity area would involve less surface area disturbance than Alternative A. Similar to the grading described in Alternative A, in Alternative C the western portion of the construction plan would be graded to divert water into a series of detention ponds ultimately discharging to the Prairie Avenue culvert in the northwestern portion of the property. The overall impact for the commercial development of Alternative C would be a cut of 54,870 cu. yd. not including cut material volumes below existing grade. Additional volumes are given in Table 4.2-3 below.

The housing and community center construction plan for Alternative C remains the same as that described for Alternative A.

Table 4.2-3
Alternative C: Cut and Fill Volumes

Land Use	Feature	Cut (cu. yd.)	Fill (cu. yd.)	Net (cu. yd.)*	
Commercial	Buildings	7,177	3,117	4,061	Cut
	Parking Lots and Roads	38,108	48,383	10,275	Fill
	Detention Ponds	55,135	5,886	49,249	Cut
	Landscaping	21,950	12,554	9,396	Cut
	Subtotal	**122,358**	**67,487**	**54,871**	**Cut**
Residential	All Buildings	5,792	17,176	11,384	Fill
	All Parking Lots & Roads	117	8,444	8,327	Fill
	Detention Ponds	7,597	409	7,188	Cut
	Landscaping	14,249	9,548	4,701	Cut
	Subtotal	**27,755**	**35,577**	**7,822**	**Fill**
Total		**150,113**	**103,064**	**47,049**	**Cut**

* Net volume calculations do not include compaction factors.

Note: Cut volumes do not include soils removed below existing grade.

4.2.5.2 Soils/Geology/Minerals/Paleontological Resources

The thickness of unconsolidated material at the South Bend site is thick enough that the bedrock would not be reached during construction. The construction activities which would be necessary to produce Alternative C include but are not limited to clearing, grading, trenching, and backfilling. Based on the soil properties described in Section 3.2 there is moderate to low erosion potential based on the soil type and slope gradients.

Soils that would need special consideration during construction are those that are very poorly drained or those that are known to occur on steep slopes. The Adrian muck, undrained (AbhAU) (located near the proposed residential area, but outside of the construction footprint) is a very poorly drained soil; additionally, this soil is predominantly hydric. Two soils occur at the proposed project area that have slopes of 10-18%, these are the Hillsdale-Tracy sandy loam (HkpD2) (located outside of the construction footprint) and the Tyner loamy sand (TxuD) (located below the

proposed entrance road of the family and shopping centers and residential area). See Section 3.2 for NRCS soil map unit locations.

The development of Alternative C would require the development of an Erosion Control Plan. Typical erosion control elements are discussed in further detail in Chapter 5 - Mitigation.

The implementation of the Erosion Control Plan would result in minimized erosion and increased site stabilization by vegetating and protecting the land resources which currently exist at the proposed site. The effects to soil from the implementation of Alternative C would be mitigated; therefore the adverse effects are considered to be less than significant.

The Kankakee Drainageways Physiographic Region is characterized by broad tracts of sandy outwash, lake plains and scattered clusters of dunes (Franzmeier, et.al, 1999). There are no known mapped mines within the South Bend Site as displayed by the EPA's Enviromapper (EPA 2009). There is also no visual evidence of mining activity, and the field survey did not indicate past or present mines or quarries. Rocks and fossils recorded in South Bend are from the Devonian and Carboniferous Period; fossils are primarily aquatic consisting of corals, decayed plant and algae, brachiopods, and crinoids just to name a few (Fall et.al, 2003).

4.2.6 Alternative D – No Action

Under the No Action Alternative, the South Bend property would not be placed in federal trust for the benefit of the Tribal Government and would remain undeveloped wooded land, the topography and soils would not be affected. The Elkhart property would not be placed into federal trust for the benefit of the Tribal Government, but would remain as agricultural farm land. The No Action Alternative would not have significant impacts on the site topography, land forms, drainage, gradients and soils would not be altered beyond that which is already occurring for agricultural operations. There are no known mineral or paleontological resources on the South Bend or Elkhart project locations that would degrade or become inaccessible with the No Action Alternative.

4.3 WATER RESOURCES

4.3.1 Significance Criteria

4.3.1.1 Drainage and Surface Water Quality

For the purposes of this analysis, potential impacts to drainage and surface water quality were considered significant if construction or operation of a proposed alternative would:

- fail to meet the objectives of the national, state and local standards for storm water management;
- substantially alter the existing drainage pattern of the site in a manner which would result in substantial erosion or siltation, or increase the rate or amount of surface runoff in a

manner which would result in flooding on or off-site, or violate local ordinances on acceptable increase in impervious surfaces where the proposed alternative impacts the drainage system of an adjoining government;

- otherwise substantially degrade water quality; or
- impact the floodplain elevations of currently mapped 100-year floodplains within the watershed determined by FEMA Flood Insurance Studies and shown on Flood Insurance Rate Maps.

4.3.1.2 Groundwater Quantity and Quality

For the purposes of this analysis, potential impacts to groundwater quantity and quality were considered significant if construction or operation of a proposed alternative would:

- substantially deplete ground water supplies or interfere substantially with ground water recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level in a non-sustainable manner;
- violate any federal ground water quality standards (e.g., source water protection mission of the EPA's Office of Ground Water and Drinking Water and in accordance with Indiana Code, Title 13, Environment); or
- otherwise substantially degrade the ground water quality

4.3.2 Comparative Impact Assessment of Alternatives – Water Resources

No significance criteria would be triggered by the proposed actions of Alternatives A, B, C, or D for surface water quantity. Alternatives A, B, and C would alter land usage, ultimately creating more impervious surface area which generally leads to larger quantities of storm water runoff. St. Joseph County would regulate the amount of allowable post development storm water runoff for Alternatives A and C, while the Greater Elkhart County Storm Water Partnership would regulate storm water flows for Alternative B; storm water effects would be mitigated by the series of swales and detention basins proposed at the respective sites and discussed below.

The combination of swales and detention basins proposed for Alternatives A, B, and C would be designed to mimic existing peak flow conditions. The swales and detention basins would also provide the water quality treatment through natural filtration prior to leaving the site. The detention basins would be sized to detain the volume of storm water produced by the development and provide management for the potential increased runoff rates for at least the 100-year, 24-hour storm event. Effectively managing the runoff from the 100-year, 24-hour storm event would therefore, cause no adverse impact to the published FEMA floodplain elevations that exist in the lower, more populated regions of the watershed.

No significance criteria would be triggered by the development of Alternatives A, B, or C for surface and groundwater quality. With each of these Alternatives, the EPA via IDEM would mandate specific

requirements to address construction site runoff (Rule 5) and to implement the objectives of the Federal Clean Water Act (Rule 13). Those requirements specifically help mitigate water quality impacts through the development of monitoring and reporting programs, education programs, and the incorporation of BMPs during and post construction to minimize erosion and maximize infiltration for groundwater recharge. Additionally, none of the Alternatives would be expected to have adverse impacts on the St. Joseph Sole Source Aquifer. Communications with the EPA's Region 5 Sole Source Aquifer Coordinator indicated that no additional screening or approval processes are warranted by the EPA. As the EPA is a cooperating agency on this project, the Preliminary Draft EIS was reviewed and recommendations for aquifer protection were provided, including implementation of green infrastructure and low impact design principles (William Spaulding, EPA Region 5 Sole Source Aquifer Coordinator, pers. comm.) (see Section 5.0 for examples of these BMPs). The Band has utilized these practices at other construction projects in the past, and would voluntarily implement similar methods during design and construction of Alternatives A, B, or C.

The Band has established de-icing techniques that would be implemented in Alternatives A, B, and C. At their existing gaming operation, the Band uses a beet juice pretreatment on roadways before snow events, followed by plowing and road salting, as required. Sidewalks are plowed or shoveled and treated with a calcium chloride (salt) product. The filtration of runoff water in the swales and detention basins and the use of salt products only as needed would result in no significant impacts on runoff or groundwater quality.

Alternative D, the No Action Alternative, would not trigger the significance criteria for surface water quality; however, current agricultural practices would continue at the Elkhart site location. Typical agricultural fertilizer application and nutrient management processes can negatively affect downstream waters and habitat by increasing nitrogen and phosphorus concentrations. When excess nutrients in downstream waters reach a critical point for a water body, eutrophication occurs, algae blooms develop and, and habitats suffer. Some downstream waters are regulated by the EPA, requiring local communities to adhere to TMDL studies, which identify impaired water bodies and create restrictions on point source nutrient loadings.

No significance criteria would be triggered by the development of Alternatives A, B, C, or D with regards to groundwater quantity; however, implementation of Alternatives A and C could benefit the area through increased groundwater extraction and potential lowering of the groundwater table. This region is experiencing increased localized flooding, and current groundwater mitigation projects to reduce the water table are ongoing near the proposed site location in South Bend. A large ethanol plant that once required large quantities of groundwater has recently closed, causing the water table to rise and initiate localized flooding. During the plant's operational years, residential developments were designed based on existing groundwater conditions and built in the vicinity. These residents are now experiencing regular basement flooding, and the city has negotiated with the current owners of the non-operational plant to continue pumping water to partially alleviate and mitigate the neighborhood's flooding issues.

Groundwater quality would not be significantly impacted based on BMPs proposed and adherence to regulations enforced by the United States Department of Labor Occupational Safety and Health Administration. This organization regulates facilities with the potential risks associated with storage, use and handling of toxic substances that could contaminate the site and infiltrate the groundwater. Specific BMPs would be installed or used to prevent contamination of the aquifer through spill prevention measures. Hazardous materials would be managed in compliance with applicable laws including CERCLA and the Resource Conservation and Recovery Act.

4.3.3 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

4.3.3.1 Storm Water Management

Based on the FEMA Flood Insurance Rate Maps for the proposed project area shown on **Figures 3.3-5 and 3.3-6**, no Special Flood Hazard Areas are identified on-site; however, FEMA mapped floodplains exist downstream of the site. FEMA floodplains are developed based on current land use storm water runoff from tributary areas, and are hydraulically evaluated along the entire stream or river section to be mapped. Changes in land use that include the creation of more impervious surfaces will generally contribute more storm water runoff; this could ultimately increase the quantity of storm water flows to the mapped study area and increase floodplain elevations. If peak flows would increase from a proposed development, a Conditional Letter of Map Revision flood study would be required before the project could be developed in order to determine the level of impact downstream. To avoid adversely affecting downstream mapped floodplains in the watershed by maintaining existing peak flow drainage conditions, any increases in peak storm water flows would be mitigated by implementing numerous BMPs to mimic existing conditions as previously discussed.

Construction of the Preferred Alternative A would create new impervious surfaces over approximately 34 acres of the project site, thereby preventing precipitation from infiltrating into the soil in those areas. This equates to about 21 percent additional impervious surface on the property. The casino building would be situated near the upstream end of the main drainage channel. This drainage channel would be rerouted around the building with a reduced slope to increase infiltration and sedimentation, and reduce erosion.

To reduce the project's potential to increase surface runoff, storm water would be managed on-site, and impervious surfaces would be minimized to the greatest extent practical. Where practical, all areas outside of the buildings, parking lots, and roads would be kept as permeable surfaces. Vegetated swales instead of traditional curb and gutter would be used as practical to decrease runoff velocities, improve water quality through nutrient uptake by plants, increase sedimentation, and increase infiltration.

The proposed family housing component of the development would be situated along the eastern portion of the property. Approximately 5.5 acres of the residential development area would drain north. Detention Basin A, as displayed on **Figure 2.1-2**, would be designed to meet EPA water quantity standards and provide flood storage capacity during the base flood, 100-year, 24-hour storm event, used in determining FEMA floodplain maps. This would help ensure that the Alternative A would not have significant impacts regarding increases of the base flood elevations on the FEMA Flood Insurance Rate Maps. This is because the increase in peak storm flow volume from existing to proposed conditions calculated for the 100-year, 24-hour storm event would be retained in the Detention Pond A. Detention Pond A was sized using Hydraflow software, and the conceptual design capacity of the pond would be 21,000 cubic feet or 0.48 acre-feet. Hydraflow hydrographs output and drainage area maps can be found in **Appendix H**. BIA in consultation with the Band, have agreed to work with the local community to meet state and local objectives regarding water resources management.

Detention Basin B, shown on **Figure 2.1-2**, would collect surface runoff from the southern portion of the residential development and the community center. Using the same software, Detention Basin B was sized to provide additional on-site flood storage capacity during the 100-year, 24-hour storm event. This would help ensure that Alternative A would not have significant impacts regarding increases of the base flood elevations on the FEMA Flood Insurance Rate Maps. A size of 46,000 cubic feet is proposed for Detention Basin B to reduce the proposed peak storm flows to existing storm flow discharges.

The remainder of the development, including the casino, parking deck, parking lots, townhomes, a portion of the community building, and service roads, are oriented on the western portion of the property. Existing drainage paths flow westerly towards the Prairie Avenue Culvert (**Figure 2.1-2**). To manage the increase in peak flows from the proposed development for the 100-year, 24-hour storm event, a series of vegetative swales and detention basins have been proposed (for aesthetics and site layout design) as opposed to one large detention pond.

The outlet from Detention Basin B would discharge flows to Detention Basin C, located near the Prairie Street Culvert, along with runoff directly from the community center, associated roadways, and parking. Detention Basin C would have a capacity of approximately 104,000 cubic feet.

Runoff from the casino and associated parking areas would be directed to a different pair of detention basins. Storm water runoff from the parking lots and a portion of the building would be directed initially to Detention Basin D, adjacent to the parking lot; this basin would have a capacity of approximately 107,000 cubic feet. The runoff from the remainder of the casino and associated roadways would be directed to Detention Basin E; this basin would have a capacity of approximately 367,000 cubic feet and would discharge flows to the Prairie Street Culvert (see **Figure 2.1-2**). The detention basin sizes were determined by using Hydraflow software (see **Appendix H**).

The Prairie Street Culvert would receive storm water flow from Detention Basins E and C, as well as runoff from 136 acres of undeveloped land that would not pass through any detention basins. The basins would allow for a controlled release of storm water runoff so that downstream runoff during the peak period of the storm would not exceed predevelopment conditions. The on-site detention basin storage would retain excess runoff volume created from newly developed impervious surfaces; this would help maintain a release rate less than that experienced during existing conditions. Theoretically, by incorporating detention basins and other BMPs on-site, the hydrologic and hydraulic conditions on-site would mimic existing hydrologic and hydraulic conditions; therefore, the development would not significantly affect downstream drainage conditions or the mapped FEMA floodplains downstream in the watershed.

4.3.3.2 Water Quality

Construction Surface Water Quality

Potential effects to surface water quality can result from both construction and operational activities at the proposed facilities. Construction activities on the project site would be regulated by EPA's NPDES storm water program and require coverage under EPA's NPDES Phase II General Permit for Storm Water Discharges from Construction Activities. To receive project authorization under the EPA's Construction General Permit, the Tribal government, as developer, would be required to prepare a Storm Water Pollution Prevention Plan (SWPPP) to control discharge of pollutants in storm water. This plan would be kept on-site during construction and would be available for review by the EPA upon request. The plan would incorporate temporary BMPs, including those listed in the Indiana Storm Water Quality Manual Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality (IDEM 2007). The plan would also include an inspection and monitoring section consistent with the requirements of the NPDES program. Implementation of the SWPPP would ensure that pollutants in storm water runoff from the construction site would be reduced to the greatest extent practicable.

The following BMP's could be incorporated into the SWPPP: silt fences, vegetated swales, inlet protection, temporary seeding, erosion control blankets, energy dissipaters, sediment traps, dust control procedures and crushed aggregate construction entrances and exits.

Operational Surface Water Quality

The goal for post construction water quality is to reduce the discharge of pollutants from storm water runoff to the maximum extent practicable (MEP) using structural BMPs such as detention basins and nonstructural BMPs such as increased street sweeping and low impact fertilizer application management practices. The site would be regulated by the National Pollutant Discharge Elimination System as a small Municipal Separate Storm Sewer System (MS4) as defined in 40 CFR 122.26 (b)(16)(i). Currently, the Pokagon Band of Potawatomi is not a NPDES authorized permitting authority, and therefore the site's NPDES MS4 permit would be reviewed and issued by

the EPA Regional Office (40 CFR 122.33 (a)). The Band would be required to implement a storm water program to protect local water quality, and satisfy water quality requirements of the Clean Water Act including public education and outreach on storm water impacts, illicit discharge detection and elimination, construction site storm water runoff control, post-construction storm water management, and pollution prevention through an operation and maintenance program. Additionally, through practices that would be outlined in the NPDES MS4 permit application, the Band would comply with all requirements of Section 438 of the Energy Independence and Security Act, which mandates that federal development projects design, construct and maintain stormwater management strategies to maintain or restore to the maximum extent technically feasible (METF), the predevelopment hydrology. The proposed design of Alternative A would include the implementation of vegetative swales throughout the site to both convey storm water into the detention basins, and enhance water quality by providing filtration opportunities. If the South Bend site allows for proper design according to the IDEM Storm Water Manual (including proper soils, channel design, adequate slopes, a low groundwater table, and specific vegetation), the average removal efficiencies by pollutant by vegetated swales are shown below in Table 4.3-1. Final removal efficiencies would be determined using a water quality modeling software package, should this project move through the design process.

Table 4.3-1
Vegetative Swale Pollutant Removal Efficiencies
Per IDEM Design Specifications

Pollutant	Percent Removed
Suspended Sediments	81
Nitrate	38
Phosphorus	9
Copper	51
Lead	67
Zinc	71

Source: IDEM Post-Construction Storm Water Control Measures 2013

The proposed site layout includes structural BMP designs, such as vegetative swales and detention basins, situated in series and in parallel to reach the targeted Total Suspended Solids (TSS) removal efficiency for Alternative A. Wet detention basins, including retention ponds and wet extended detention ponds as defined by IDEM's Storm Water Quality Manual, incorporate a permanent pool allowing contaminated sediments to settle and remain in the pond, while also providing flood storage for peak flow attenuation. The sedimentation process removes particulates, while additional nutrients are removed through biological uptake with emergent aquatic vegetation. A higher level of pollutants can be removed using wet detention basins rather than extended dry detention or infiltration basins (IDEM 2007). Dry detention and infiltration basins can effectively treat storm water; however, IDEM guidance suggests at least 10 acres of surface area should be available to prevent outlet clogging. The final detention pond layout and selection for Alternative A may include a combination of wet and dry detention basins to accommodate project site constraints.

During the final design stages of this project, the permanent pool surface area and outlet configuration would be designed to achieve the remaining TSS removal efficiencies not captured through the vegetative swales or additional nonstructural BMPs. Water quality models, such as WinSLAMM or P8, can be used to model overall TSS removal and other pollutant removal efficiencies for the entire proposed development in order to meet the objectives of the local, state, and federal standards.

To verify control measures and ensure the appropriate reduction of contaminants in surface water runoff, the EPA's NPDES permit program requires surface water quality monitoring on a regular basis. The site-specific surface water quality program would identify the water quality objectives, source reduction measures, and record keeping protocol, and include an annual review of the surface water quality program to identify any necessary changes or additions that need to be made to ensure that the surface water quality objectives are being met.

Groundwater Management

Dewatering may be required throughout the site during construction and may also impact the final structural BMP configurations. The groundwater table would be identified through a geotechnical analysis, and site dewatering measures would be determined and outlined in the erosion control, construction sequencing, and dewatering plans of the final design plan set and specifications.

Groundwater Quality

In general, if a shallow ground water table exists, there is greater potential for groundwater contamination from accidental spills during construction or from post construction operations. One potential source of such spills could come from haul trucks, backhoes, front end loaders or other equipment's refueling and maintenance processes occurring during construction. Spill prevention is addressed in the EPA's NPDES permitting process through the good housekeeping and materials

management requirements. These practices can help mitigate and reduce the frequency of accidental spills during and after construction- related activities.

Alternative A does not include permanent refueling services, or temporary refueling services for construction purposes. Alternative A would not be expected to store significant amounts of hazardous materials during operation of facilities; with the exception of the emergency generators. Small amounts of petroleum products would be stored landscaping and maintenance equipment. If the emergency generators are powered by diesel approximately 8,000 gallons of fuel would be needed to accommodate a 48 hour emergency. Any petroleum products stored on-site would be retained in areas with secondary containment or would be kept in secured areas with impermeable floors. If diesel emergency generators are utilized it would require the preparation of a Spill Prevention, Control, and Countermeasures Plan (SPCC) as administered by the EPA.

A watershed's storm water runoff characteristics are altered when impervious surfaces replace natural vegetation. Storm water runoff can carry contaminants including sediment, fertilizer and pesticides, and petroleum pollutants from vehicle parking lots. Structural and nonstructural BMPs for Alternative A discussed above include detention basins and vegetative swales. The vegetative swales and dry detention basin options would provide infiltration benefits. Depending on the height of the groundwater table based on the geotechnical analysis that would be conducted further along in the design process, pretreatment or non-infiltration specific BMPs such as wet detention basins may be used in the final grading plan for Alternative A. The decision on what exact types of detention basins to utilize would be determined based on water quality modeling results, cost, site constraints, and design efficiency. Infiltration specific BMPs are best suited for treating storm water runoff from small residential and commercial developments. Infiltration BMPs are not recommended in areas with higher contamination land uses typically associated with chemical storage, areas of high pesticide use, waste storage or vehicle maintenance areas. To determine whether infiltration BMPs could be implemented, a full geotechnical analysis would be conducted further along in the design process. A SWPPP would be developed before construction since it is required for all developments and would include groundwater contamination prevention processes and mitigation measures.

Groundwater Quantity

The development of Alternative A would not adversely affect groundwater tables and the volume of the aquifer because the additional drawdown of the aquifer in this location would mitigate localized flooding issues. Current groundwater mitigation projects are ongoing near the South Bend site location to reduce the water table (Mike Mecham, City Engineer, pers. comm.). A large ethanol plant that once required large quantities of groundwater has recently closed, causing the water table to rise and initiate localized flooding. During the plant's operational years, residential developments were designed based on existing groundwater conditions and built in the vicinity. These residents are now experiencing regular basement flooding, and the city has negotiated with the current

owners of the non-operational plant to continue pumping water to partially alleviate and mitigate the neighborhood's flooding issues.

4.3.4 Alternative B – Elkhart Site Tribal Village and Casino

4.3.4.1 Storm Water Management

Based on the FEMA Flood Insurance Rate Maps for the area shown on **Figures 3.3-11 and 3.3-12**, no Special Flood Hazard Areas are identified on-site. To avoid adversely affecting downstream floodplains and maintain existing peak flow drainage conditions, increases in peak storm water flows from the proposed design's change in land use would be addressed by including several BMPs. The construction of Alternative B would not significantly affect storm water management goals because of the mitigation measures that would be implemented, including vegetated swales and a series of detention basins.

Construction of Alternative B would create impervious surfaces over approximately 37 acres of the project site, thereby preventing precipitation from infiltrating into the soil in those areas. This equates to 21.5 percent additional impervious surface on the property.

To reduce the project's potential to increase surface runoff, storm water would be managed on-site and impervious surfaces would be minimized to the greatest extent practical. Where practical, all areas outside of the buildings, parking lots and roads would be kept as permeable surfaces. Vegetated swales instead of traditional curb and gutter would be used as practical to decrease runoff velocities, improve water quality through nutrient uptake by plants, increase sedimentation and increase infiltration.

A portion of the development, including the casino building and part of the residential area, would be located in the southern portion of the property. Detention Basin A would be located at the southwest corner of the project site (**Figure 2.2-2**). This basin would be designed to meet the objectives of local, state, and federal water quantity standards and provide flood storage capacity during the base flood, 100-year, 24-hour storm event, used for determining FEMA floodplain maps. The increase in storm flow volume from existing to proposed conditions calculated for the 100-year, 24-hour peak storm would be retained in the Detention Pond A to reduce existing drainage peak flows released from the site. This basin would have a capacity of approximately 360,000 cubic feet. The appropriate detention basin size was determined by using Hydraflow software. Hydraflow hydrographs output and drainage area maps can be found in **Appendix H**.

The Detention Pond A's outlet control structure would be designed to meet the objectives of local and state standards to control peak storm flow discharges and improve water quality. Therefore, additional runoff from the project site would not significantly affect downstream drainage conditions.

The remainder of the development, including the main parking lot, community center, and a portion of the residential area would drain to the north. To manage the increase in peak flows from existing conditions to proposed conditions for the 100-year, 24-hour storm event, a series of vegetative swales and detention basins have been proposed (for aesthetics and site layout design) as opposed to one large detention pond. The increase in storm water volume would be detained on-site in Detention Basin B (see **Figure 2.2-2**) which would have a capacity of approximately 650,000 cubic feet. The appropriate detention basin size was determined by Hydraflow software using the 100-year, 24-hour storm event (see **Appendix H**).

Detention Basin B would be located at the west side of the project site near the existing north culvert. The detention basin would be designed to meet the objectives of local, state, and federal water quantity standards and provide flood storage capacity during the base flood, 100-year, 24-hour storm event. The increase in peak storm flows from the proposed development calculated for the 100-year, 24-hour peak storm would be retained in Detention Basin B to maintain existing drainage peak flows released from the site. Therefore, additional runoff from the project site would not significantly affect downstream drainage conditions.

4.3.4.2 Water Quality

Construction Surface Water Quality

Potential effects to surface water quality could result from both construction and operational activities of the proposed facilities. Construction activities on the project site are regulated by EPA's NPDES storm water program and require coverage under EPA's NPDES Phase II General Permit for Storm Water Discharges from Construction Activities. To receive project authorization under the EPA's Construction General Permit, the Tribal government, as developer, must prepare a SWPPP to control discharge of pollutants in storm water. This plan would be kept on-site and would be available for review by the EPA upon request. The plan would incorporate appropriate BMP's, such as those listed in the Indiana Storm Water Quality Manual Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality (IDEM 2007). The plan would also include an inspection and monitoring section consistent with the requirements of the NPDES program. Implementation of the SWPPP would ensure that pollutants in storm water runoff from the construction site would be reduced to the greatest extent practicable.

The following BMP's could be incorporated into the SWPPP: silt fences, vegetated swales, inlet protection, temporary seeding, erosion control blankets, energy dissipaters, sediment traps, dust control procedures and crushed aggregate construction entrances and exits.

Operational Surface Water Quality

The goal for post construction water quality is to reduce the discharge of pollutants from storm water runoff to the MEP using structural BMPs such as detention basins and nonstructural BMPs such as increased street sweeping and low impact fertilizer application management practices.

Initially, the site would not be regulated by the NPDES as a small Municipal Separate Storm Sewer System because it is not in an urbanized area as determined by the U.S. Census Bureau per 40 CFR 122.32 (a)(1), however, it would be regulated under the NPDES Phase II General Permit. If in future years, the area near the site develops, it would most likely be added to the urbanized area of Elkhart and then would be required to meet the NPDES requirements for the MS4 water quality program.

In addition to meeting all requirements of the NPDES Phase II General Permit, the Band would also comply with requirements set forth in Section 438 of the Energy Independence and Security Act which mandates that federal development projects design, construct and maintain stormwater management strategies to maintain or restore to the maximum extent technically feasible, the predevelopment hydrology.

The proposed design includes the implementation of vegetative swales throughout the site for storm water conveyance and water quality purposes to direct flows into detention basins. If the site allows for proper design which includes proper soils, channel design, adequate slopes, a low groundwater table and specific vegetation, according to the IDEM Storm Water Manual, the average removal efficiencies by pollutant by vegetated swales are shown in the Table 4.3-1. In more urban developments, the amount of land required is high to design to appropriate standards to achieve the listed percent removal efficiencies. Removal efficiencies anticipated through the conceptual vegetative swale designs shown for Alternative B would likely be lower than those listed in Table 4.3-1 and final removal efficiencies can be determined through water quality modeling software packages as this project moves through the design process.

The proposed site layout includes structural BMP designs, such as vegetative swales and detention basins, in series or in parallel to reach the targeted TSS removal efficiency for Alternative B. Wet detention basins, including retention ponds and wet extended detention ponds as defined by IDEM's Storm Water Quality Manual, incorporate a permanent pool allowing contaminated sediments to settle and remain in the pond, while also providing flood storage for peak flow attenuation. The sedimentation process removes particulates, while additional nutrients are removed through biological uptake with emergent aquatic vegetation. A higher level of pollutants can be removed using wet detention basins rather than extended dry detention or infiltration basins (IDEM 2007). Dry detention and infiltration basins can effectively treat storm water; however, IDEM guidance suggests at least 10 acres of surface area should be available to prevent outlet clogging. The final detention pond layout and selection for Alternative B may include a combination of wet and dry detention to accommodate project site constraints.

During the final design stages of this project, the permanent pool surface area and outlet configuration would be designed to achieve the remaining TSS removal efficiencies not captured through the vegetative swales or additional nonstructural BMP practices. Water quality models, such as WinSLAMM or P8, can be used to model overall TSS removal and other pollutant removal

efficiencies for the entire proposed development in order to meet the objectives of the local, state, and federal standards.

To verify control measures and ensure the appropriate reduction of contaminants in surface water runoff, the EPA's NPDES permit program requires surface water quality monitoring on a regular basis. The site- specific surface water quality program would identify the water quality objectives, source reduction measures, and record keeping protocol, and include an annual review of the surface water quality program to identify any necessary changes or additions that need to be made to the program to ensure that the surface water quality objectives are being met.

Groundwater Management

Dewatering may be required throughout the site during construction and may also impact the final structural BMP configurations. The ground water table would be identified through a geotechnical analysis, and site dewatering measures would be determined and outlined in the erosion control, construction sequencing, and dewatering plans of the final design plan set and specifications.

Groundwater Quality

A possible impact to shallow ground water exists from the potential accidental release of contaminants during construction. Potential sources of such spills would be from equipment used during construction (haul trucks, backhoes and front end loaders). BMPs would mitigate any potential impacts from accidental releases during construction and would be determined further in the design process.

Alternative B does not include permanent refueling services, or temporary refueling services for construction purposes. Alternative B would not be expected to store significant amounts of hazardous materials during operation of facilities; with the exception of the emergency generators. Small amounts of petroleum products would be stored landscaping and maintenance equipment. If the emergency generators are powered by diesel approximately 8,000 gallons of fuel would be needed to accommodate a 48 hour emergency. Any petroleum products stored on-site would be retained in areas with secondary containment or would be kept in secured areas with impermeable floors. If diesel emergency generators are utilized it would require the preparation of a SPCC plan as administered by the EPA.

A watershed's storm water runoff characteristics are altered when impervious surfaces replace natural vegetation. Storm water runoff can carry contaminants including sediment, fertilizer and pesticides and petroleum pollutants from vehicle parking lots. Structural and nonstructural BMPs for Alternative B discussed above include detention basins and vegetative swales. The vegetative swales and dry detention basin options would provide infiltration benefits. Depending on the height of the groundwater table based on the geotechnical analysis that would be conducted further along in the design process, pretreatment or non-infiltration specific BMPs such as wet detention

basins may be used in the final design for Alternative B. The decision on what exact types of detention basins to utilize would be determined based on water quality modeling results, cost, site constraints, and design efficiency. Infiltration specific BMPs are best suited for treating storm water runoff from small residential and commercial developments. Infiltration BMPs are not recommended in areas with higher contamination land uses typically associated with chemical storage, areas of high pesticide use, waste storage or vehicle maintenance areas. To determine whether infiltration BMPs could be implemented, a full geotechnical analysis would be conducted further along in the design process. A storm water pollution prevention plan would be developed before construction since it is required for all developments and would include groundwater contamination prevention processes and mitigation measures.

Groundwater Quantity

The development of Alternative B would not significantly affect aquifer levels based on data provided in Sections 3.9 and 4.9. The current water extraction for the City of Elkhart is 15 MGD with a peak extraction capacity of 25 MGD (Mike Machlan, City Engineer, pers. comm.). Based on water demand estimates discussed in Section 3.9 and 4.9, the additional 0.5 MGD that would be needed for the development of Alternative B is within the provision capacity of the City of Elkhart, without adversely impacting current service or aquifer levels.

4.3.5 Alternative C – South Bend Site Tribal Village With Commercial Development

4.3.5.1 Storm Water Management

Based on the FEMA Flood Insurance Rate Maps for the area shown on **Figures 3.3-5 and 3.3-6**, no Special Flood Hazard Areas are identified on-site. To avoid adversely affecting downstream floodplains and maintain existing peak flow drainage conditions, any increase in peak storm water flows from the proposed design's change in land use would be mitigated by the inclusion of several BMPs that would be determined further in the design process.

Construction of Alternative C would create impervious surfaces over approximately 14 acres of the project site, thereby preventing precipitation from infiltrating into the soil in those areas. This equates to about 8.5 percent additional impervious surface on the property. The site's main drainage channel that carries runoff during rainstorms would remain in place and a detention basin would be placed at the end of the channel prior to reaching the Prairie Street Culvert.

To reduce the project's potential to increase surface runoff, storm water would be managed on-site, and impervious surfaces would be minimized to the greatest extent practical. Where practical, all areas outside of the buildings, parking lots and roads would be kept as permeable surfaces. Vegetated swales instead of traditional curb and gutter would be used as practical to decrease

runoff velocities, improve water quality through nutrient uptake by plants, increase sedimentation, and increase infiltration.

The proposed residential development would be situated along the eastern portion of the property. Approximately 5.5 acres of the residential development would drain north. Detention Basin A, as displayed on **Figure 2.3-2**, would be designed to meet the objectives of local, state, and federal water quantity standards and provide flood storage capacity during the base flood, 100-year, 24-hour storm event, used in determining FEMA floodplain maps. The increase in storm water volume from existing to proposed conditions calculated for the 100-year, 24-hour peak storm, would be retained in Detention Pond A to maintain existing drainage peak flows released from the site. Detention Pond A was sized using Hydraflow software and the approximate design capacity of the pond would be 21,000 cubic feet or 0.48 acre-feet. Hydraflow hydrographs output and drainage area maps can be found in **Appendix H**.

Detention Basin B would collect surface drainage from the southern portion of the residential development and the community center. Using the same software, the proposed Detention Basin B was sized to provide additional on-site flood storage capacity during the 100-year, 24-hour storm event. A size of 46,000 cubic feet is proposed to reduce the peak storm flows to existing storm flow discharges. Detention Basin B's outlet structure would be designed to limit release rates to meet the objectives of local, state, and federal discharge standards and improve water quality.

The remainder of the development, including a gas station, shopping center, activity center, parking lots, remaining residential units, community building and roads, are oriented on the western portion of the property. Existing drainage flows westerly towards the Prairie Avenue Culvert. To manage the increase in peak flows from existing conditions to proposed development for the 100-year, 24-hour storm event, vegetative swales and multiple detention basins have been proposed (for aesthetics and site layout design) as opposed to one large detention pond.

Storm water would flow from Detention Basin B towards Detention Basin C, located near the Prairie Street Culvert, along with direct runoff from the community center and associated roadways and parking. Detention Basin C would have a capacity of approximately 87,210 cubic feet.

Runoff from the gas station would be directed to Detention Basin D. The basin would have a capacity of approximately 87,000 cubic feet and would discharge flows into Detention Basin C.

Direct runoff from the shopping and activity center would be directed to Detention Basin E. The basin would have a capacity of approximately 109,000 cubic feet and would discharge to into Detention Basin C.

The Prairie Street Culvert would receive storm water flows from all detention basins, as well as direct runoff from 24 acres of undeveloped land that would not pass through any detention basins. The basins would allow for a controlled release of storm water runoff so that downstream runoff

during the peak period is not increased from existing conditions. The peak discharge through the Prairie Street Culvert during a 100-year, 24-hour storm event under the proposed conditions would be equal to or less than the peak flow discharge experienced during existing storm conditions; therefore possibly improving current storm flow conditions downstream of the project site.

4.3.5.2 Water Quality

Construction Surface Water Quality

Potential effects to surface water quality can result from both construction and operational activities from the proposed facilities. Construction activities on the project site would be regulated by EPA's NPDES storm water program and require coverage under EPA's NPDES Phase II General Permit for Storm Water Discharges from Construction Activities. To receive project authorization under the EPA's Construction General Permit, the Band, as developer, must prepare a Storm Water Pollution Prevention Plan (SWPPP) to control discharge of pollutants in storm water. This plan would be kept on-site during construction and would be available for review by the EPA upon request. The plan would incorporate temporary BMPs including those listed in the Indiana Storm Water Quality Manual Planning and Specification Guide for Effective Erosion and Sediment Control and Post-Construction Water Quality (IDEM 2007). The plan would also include an inspection and monitoring section consistent with the requirements of the NPDES program. Implementation of the SWPPP would ensure that pollutants in storm water runoff from the construction site would be reduced to the greatest extent practicable.

The following BMP's could be incorporated into the SWPPP: silt fences, vegetated swales, inlet protection, temporary seeding, erosion control blankets, energy dissipaters, sediment traps, dust control procedures and crushed aggregate construction entrances and exits.

Operational Surface Water Quality

The goal for post construction water quality is to reduce the discharge of pollutants from storm water runoff to the MEP using structural BMPs such as detention basins and nonstructural BMPs such as increased street sweeping and low impact fertilizer application management practices. The site would be regulated by the NPDES as a small Municipal Separate Storm Sewer System as defined in 40 CFR 122.26 (b)(16)(i). Currently, the Pokagon Band of Potawatomi is not a NPDES authorized permitting authority, and therefore the site's NPDES MS4 permit would be reviewed and issued by the EPA Regional Office (40 CFR 122.33 (a)). The Band would be required to implement a storm water program to protect local water quality, and satisfy water quality requirements of the Clean Water Act including public education and outreach on storm water impacts, illicit discharge detection and elimination, construction site storm water runoff control, post-construction storm water management, and pollution prevention through an operation and maintenance program. Additionally, through practices that would be outlined in the NPDES MS4 permit application, the Band would comply with all requirements of Section 438 of the Energy

Independence and Security Act, which mandates that federal development projects design, construct and maintain stormwater management strategies to maintain or restore, to the METF, the predevelopment hydrology.

The proposed design of Alternative C would include the implementation of vegetative swales throughout the site to both convey storm water into the detention basins, and enhance water quality by providing filtration opportunities. If the South Bend site allows for proper design according to the IDEM Storm Water Manual (includes proper soils, channel design, adequate slopes, a low groundwater table and specific vegetation), the average removal efficiencies by pollutant by vegetated swales are shown above in Table 4.3-1. Final removal efficiencies would be determined through water quality modeling software packages, should the project move through the design process.

The proposed site layout includes structural BMP designs, such as vegetative swales and detention basins, situated in series and in parallel to reach the targeted TSS removal efficiency for Alternative C. Wet detention basins, including retention ponds and wet extended detention ponds as defined by IDEM's Storm Water Quality Manual, incorporate a permanent pool allowing contaminated sediments to settle and remain in the pond, while providing flood storage for peak flow attenuation. The sedimentation process removes particulates, while additional nutrients are removed through biological uptake with emergent aquatic vegetation. A higher level of pollutants can be removed using wet detention basins over extended dry detention or infiltration basins (IDEM 2007). Dry detention and infiltration basins can effectively treat storm water; however, IDEM guidance suggests at least 10 acres of surface area be available to prevent outlet clogging. The final detention pond layout and selection for Alternative C may include a combination of wet and dry detention to accommodate project site constraints.

During the final design stages of this project, the permanent pool surface area and outlet configuration would be designed to achieve the remaining TSS removal efficiencies not captured through the vegetative swales or additional nonstructural BMP practices. Water quality models, such as WinSLAMM or P8, can be used to model overall TSS removal and other pollutant removal efficiencies for the entire proposed development to meet the objectives of local, state, and federal standards.

To verify control measures and ensure the appropriate reduction of contaminants in surface water runoff, the EPA's NPDES permit program requires surface water quality monitoring on a regular basis. The site-specific surface water quality program would identify the water quality objectives, source reduction measures, and record keeping protocol, and include an annual review of the surface water quality program to identify any necessary changes or additions to the program to ensure the surface water quality objectives are met.

Groundwater Management

Dewatering may be required throughout the site during construction and may also impact the final structural BMP configurations. The ground water table would be identified through a geotechnical analysis, and site dewatering measures would be determined and outlined in the erosion control, construction sequencing, and dewatering plans of the final design plan set and specifications.

Groundwater Quality

In general, if a shallow ground water table exists, there is greater potential for groundwater contamination from accidental spills during construction or from post construction operations. One potential source of such spills could come from haul trucks, backhoes, front end loaders or other equipment's refueling and maintenance processes occurring during construction. Spill prevention is addressed in the EPA's NPDES permitting process through the good housekeeping and materials management requirements. These practices can help mitigate and reduce the frequency of accidental spills during and after construction- related activities.

Alternative C does include refueling services for the gas station component of the proposed action and would store significant amounts of hazardous materials. Any additional petroleum products stored on-site would be retained in areas with secondary containment or would be kept in secured areas with impermeable floors. The volume of products stored on-site may require the preparation of a SPCC plan as administered by the EPA. The proposed development would need to have an above ground storage capacity of greater than 1,320 gallons or a completely buried storage capacity of greater than 42,000 gallons before an SPCC plan is required.

In general, a watershed's storm water runoff characteristics are altered when impervious surfaces replace natural vegetation. Storm water runoff can carry contaminants including sediment, fertilizer and pesticides, and petroleum pollutants from vehicle parking lots. Structural and nonstructural BMPs for Alternative C discussed above include detention basins and vegetative swales. The vegetative swales and dry detention basin options would provide infiltration benefits. Depending on the height of the groundwater table based on the geotechnical analysis that would be conducted further along in the design process, pretreatment or non-infiltration specific BMPs such as wet detention basins may be used in the final design for Alternative C. Infiltration BMPs are best suited for treating storm water runoff from small residential and commercial developments. Infiltration BMPs are not recommended in areas with higher contamination land uses typically associated with chemical storage, areas of high pesticide use, waste storage or vehicle maintenance areas. To determine whether infiltration BMPs could be implemented, a full geotechnical analysis would be conducted further along in the design process. A storm water pollution prevention plan (SWPPP) would be developed before construction since it is required for all developments and would be include groundwater contamination prevention processes and mitigation.

Ground Water Quantity

The development of Alternative C would not adversely affect groundwater tables and the volume of the aquifer because the additional drawdown of the aquifer in this location would help mitigate localized flooding issues. Current groundwater mitigation projects are ongoing near the South Bend site location to reduce the water table (Mike Mecham, City Engineer, pers. comm.). A large ethanol plant that once required large quantities of groundwater has recently closed, causing the water table to rise and initiate localized flooding. During the plant's operational years, residential developments were designed based on existing groundwater conditions and built in the vicinity. These residents are now experiencing regular basement flooding, and the city has negotiated with the current owners of the non-operational plant to continue pumping water to partially alleviate and mitigate the neighborhood's flooding issues.

4.3.6 Alternative D – No Action

4.3.6.1 Surface Water Quantity

No new development is proposed under Alternative D. Thus, the existing drainage both at the South Bend Site and the Elkhart Site would continue to flow through existing main drainage channels and discharge off-site, unimpeded. Under this alternative, there would be no effect on storm water peak flow drainage.

4.3.6.2 Surface Water Quality

No new development is proposed under Alternative D. Thus, the existing water quality at both the South Bend Site and the Elkhart Site would remain at current levels. Under this alternative, there would be no significant adverse effect on water quality at the South Bend site location. At the Elkhart site, agricultural processes would likely continue. As agricultural runoff is typically laden with nitrogen and phosphorus from fertilizer applications, adverse effects to downstream water quality can occur if runoff is not properly mitigated with adequate buffer zones between agricultural lands and nearby streams, moderate fertilizer application techniques, or other management practices. The current nutrient management plan for the Elkhart site is unknown; therefore, the No Action Alternative could negatively affect downstream water quality at the Elkhart site.

4.3.6.3 Groundwater Quality and Quantity

No new development is proposed under Alternative D. Thus, existing groundwater conditions would be maintained at the South Bend and Elkhart sites. Implementation of Alternative D could result in the continuation of localized flooding issues near the South Bend site, as the groundwater table would remain high without groundwater extractions.

4.4 AIR QUALITY

4.4.1 Significance Criteria

For the purposes of this analysis, potential air quality impacts were considered significant if construction or operation of a proposed alternative would prevent compliance with regulations promulgated under the Clean Air Act. More specifically, air quality impacts were considered significant if:

- Project emissions result in an exceedance of the National Ambient Air Quality Standards.
- The alternative produces particulate matter or ozone emissions that would contribute significantly to Regional Haze.
- Hazardous Air Pollutants (HAPs) emissions that would significantly impact public health.
- The alternative fails to make a demonstration of conformity with the State Implementation Plan and therefore fail to conform to the requirements imposed by the FIP for the protection of the environment.
- Annual emissions of Greenhouse gases (GHG) would be reasonably expected to substantially exceed 25,000 metric tons of CO_2-equivalent GHGs, a presumptive threshold set in CEQ's memorandum dated February 18, 2010, on Draft NEPA Guidance on Considering Climate Change and GHG Emissions;

4.4.2 Comparative Analysis

The President's Council on Environmental Quality calls for this comparative assessment in its NEPA regulations in 40 CFR 1502.14, first paragraph. The regulations say Chapter 4 Environmental Consequences should present impacts of the proposals in comparative form, thus sharply defining the issues and providing a clear basis for BIA's choice among the alternatives. This section provides a discussion of the air quality impacts associated with the No Action, the Preferred Alternative A and Alternatives B and C. It addresses impacts relative to the inventory of air emissions for the South Bend-Elkhart Area which is a part of the South Bend-Elkhart (Indiana)-Benton Harbor (Michigan) Interstate Air Quality Control Region. As discussed in Section 3.4, for air quality monitoring and planning purposes, the EPA relies on the designation of nonattainment areas for air pollutants within the boundaries of geographical planning units. Because of the locations of the proposed alternatives and for consistency with the EPA's designations, the South Bend-Elkhart Area was selected as the appropriate area for consideration of the potential air quality impacts of the proposed alternatives. The impact assessment in Sections 4.4.4-4.4.7 found that none of the alternatives would have significant impacts on the surrounding air quality. All alternatives except the No Action Alternative would result in short-term construction related effects and long-term effects from operation of the casino or commercial development. In order to comply with the Tribal New Source Review of the Clean Air Act, all alternatives except the No Action Alternative would either register their source and levels of pollution with the EPA or apply for a permit before

building the proposed facilities, if the proposed emissions are at or above any of the thresholds included in this rule. The primary air contaminant emissions would be from construction activities, emissions from the operation of the proposed development, and secondary emissions resulting from increased vehicular traffic. Mitigation measures are described in Chapter 5.0 for each of the potential non-significant increases in the various constituents.

This portion of the comparative analysis in Chapter 4 helps respond to 40 CFR 1502.14 but because the alternatives, except No Action, similarly lack significant impacts, does not help sharply define issues and thus provide a clear basis for BIA's choice among the options. Because the purpose and need for the proposal are principally socioeconomic in nature, it will be the socioeconomic impacts that are the most sharply defining issues for BIA to consider. The remainder of Section 4.4 explains why the air quality impacts of the development alternatives would not be significant.

4.4.2.1 Greenhouse Gas Emissions and Global Climate Change

None of the development alternatives would have significant impacts with regard to greenhouse gas emissions or global climate change. The president's Council on Environmental Quality issued a memorandum, dated February 18, 2010, for heads of federal departments and agencies on the subject of Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions. CEQ's website that contains this memorandum explains that the intent is to provide assessment guidance for federal decision makers that are proposing actions that would be reasonably anticipated to cause direct emissions 25,000 metric tons or more of CO_2-equivalent GHG emissions on an annual basis. The CEQ guidance refers to "applicability Tools" available at an EPA website. The tool helps determine whether a particular facility exceeds the emissions threshold and therefore the facility would need to annually report GHG emissions to EPA.

The tool categorizes GHG sources by industry. The three development alternatives would be categorized as stationary fuel combustion sources. The tool indicates that GHG emissions from emergency generators, emergency equipment, portable equipment and flares should not be included. The alternatives are assumed to burn only natural gas, not coal or fuel oil. Then because the alternatives would each have maximum rated heat input capacity for all stationary fuel combustion units at the facilities of less than 50 million British thermal units (Btu) per hour, none of the alternatives would exceed the 25,000 metric ton threshold to trigger reporting to EPA of GHG emissions.

The CEQ memorandum also indicates the Federal Government is committed to the goals of energy conservation, reducing energy use, eliminating or reducing GHG emissions and promoting deployment of renewable energy technologies that are cleaner and more efficient. All three of the development alternatives would generate GHG emissions from stationary combustion units. The Preferred Alternative would likely have the greatest emissions by a narrow margin or equivalent emissions to the other alternatives. The Preferred Alternative would be designed to meet the 2012 International Building Code requirements for energy conservation that would help minimize

energy costs and thereby contribute to the goal of reducing GHG emissions. The Band supports the use of energy efficient and environmentally sustainable building materials and reducing overall emissions from building construction and operation. The Band also supports the use of Leadership in Energy and Environmental Design (LEED) standards in building construction, as set forth in the by Titles III, IV and V of the Energy Independence Security Act of 2007, and Executive Order 13514.

4.4.3 Methodology

The evaluation of impacts to air quality was based on the identification of air contaminants and estimated emission rates associated with each alternative. The air contaminants considered are those covered by the NAAQS, except for lead (Pb), which is not relevant to project emissions, including carbon monoxide (CO), ozone (O_3), nitrogen oxide (NO_x), particulate matter with diameters less than 10 microns (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and sulfur dioxides (SO_2). Air emissions for the proposed development were considered for construction and operating emission sources as well as emissions from on-road vehicular traffic associated with the project. It is not within the scope of this analysis to perform the refined dispersion modeling necessary to predict concentrations for each contaminant and alternative. Rather, the impact of emissions from the preferred alternative was analyzed relative to the existing inventory of air contaminant emissions in the South Bend-Elkhart Area.

In general, the estimated air contaminant emissions, except ozone, for each of the Alternatives A, B, and C were compared to the 2008 emissions inventory for the South Bend-Elkhart Area. Although 2011 data has been collected, it is not publicly available; therefore, the 2008 emissions inventory was used to compare the results of the Alternatives. Assuming an increase in air emissions will result in a corresponding increase in the ambient air concentration for that air contaminant, the ratio of the estimated emissions for each alternative to the existing 2008 emissions for that contaminant provided a relative indication of the potential increase in ambient concentrations for the air contaminant relative to the NAAQS. As discussed in Section 3.4 of this document, the South Bend-Elkhart Area is designated as being in attainment or unclassifiable by the EPA. Because air emissions are generally dispersed with distance and time, a relatively small increase in emissions from the preferred alternative may be assumed to cause a correspondingly small increase in ambient air quality concentrations for that air contaminant, and it is therefore, expected that the increase in emissions would not cause an exceedance of the NAAQS.

The basis for emissions included the following:

- Preliminary project description and other information, as provided by the project sponsor.
- The EPA NONROAD model was used to predict emissions resulting from construction equipment with inputs for assumed equipment usage developed using the Urban Emissions (URBEMIS) 2007 model. The NONROAD model may be used to predict air emissions for off-road construction equipment based on information including geographic location, equipment type, and fuel use for specific years that may be selected. It provides an estimate

of emissions for different equipment based on equipment population, load factor, available horsepower, deterioration and applicable standards.

- Emissions resulting from operation of the proposed development were estimated using the URBEMIS 2007 model. This model is useful in approximating emissions for land use development projects based on land-use type and size when minimal project specific information is available.

Emissions summary tables for construction and operation of each alternative based on the use of the URBEMIS model are included in **Appendix I**.

4.4.4 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

Implementation of Alternative A would result in short-term construction related effects, and long-term effects related to operation of the project. The primary air contaminant emissions from this Alternative would be from construction activities, emissions from the operation of the proposed development, and secondary emissions resulting from increased vehicular traffic. The basis and methodology for evaluation of the potential air emissions impact of this alternative is discussed in Section 4.4.3.

4.4.4.1 Construction Activities

Emissions from the construction activities would include VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Some estimation models do not differentiate between PM_{10} and $PM_{2.5}$ since $PM_{2.5}$ is a subset of smaller particles within PM_{10} emissions. In these cases, the estimated $PM_{2.5}$ emission rate was assumed to be equivalent to that of PM_{10} as a means of conservatively estimating the emissions for this subset since the $PM_{2.5}$ emission levels will always be lower than overall PM_{10} levels, but these smaller particles are potentially more damaging to human health. The construction emissions were estimated for emission sources associated with the construction of the proposed gaming facility, adjacent parking lot, and residential development. Emissions from construction activities would be primarily combustion products from the use of earth-moving equipment, such as excavators, graders, bulldozers, scrapers, loaders, rollers, tractors/backhoes, cranes, watering trucks, and paving equipment. Fugitive dust emissions would also result from land clearance and material handling. Paving of surfaces and architectural coatings would also result in VOC emissions during construction.

A summary of the estimated emissions resulting from construction related activities is presented in Table 4.4-1.

Table 4.4-1
Estimated Annual Air Emissions – Construction Related Activities
Alternative A (tpy)

Activity	VOC	PM_{10}	$PM_{2.5}$	CO	NOx	SO_2	CO_2
Mass Grading	0.108	11.186	1.767	0.546	1.157	0.002	214.23
Paving	0.017	0.008	0.008	0.092	0.147	0.0001	30.33
Building Construction	1.162	0.653	0.544	16.259	8.865	0.025	3272.40
Architectural Coating	23.37	0	0	0	0	0	0
TOTALS	24.66	11.85	2.32	16.90	10.17	0.03	3516.95

The construction emissions from the proposed project were compared to the South Bend-Elkhart Area emissions inventory as described in Section 3.4. The comparison is presented in Table 4.4-2.

Table 4.4-2
Comparison of Estimated Annual Construction Emissions with
South Bend-Elkhart Area Emissions Inventory (2008), Alternative A

Air Contaminant	Estimated Maximum Annual Construction Emissions (tpy)	South Bend-Elkhart Area Emissions* (tpy)	% of South Bend-Elkhart Area Emissions
VOC	24.66	56,395	0.044%
PM_{10}	11.85	47,593	0.025%
$PM_{2.5}$	2.32	10,606	0.022%
CO	16.90	156,383	0.011%
NO_X	10.17	38,928	0.026%
SO_2	0.03	18,202	0.00015%

*Source: EPA, 2013

As shown in Table 4.4-2, air contaminant emissions from construction of this alternative are estimated to contribute less than 1 percent to the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. These emissions would result primarily from operation of off-road construction equipment and fugitive dust emissions from land clearance and construction activities. HAPs emissions would be expected to be a nominal percentage of VOC, for organic HAPs, and a nominal percentage of $PM_{2.5}$, for inorganic HAPs. Possible mitigation measures that could be implemented to reduce potential impacts during construction are outlined in Chapter 5.0.

4.4.4.2 Commercial Operation

It is assumed that construction activities will end with the start of operation of the proposed alternative and therefore, there would be no emissions from construction activities after the opening date. Emissions that may affect ambient air quality during operation of the proposed alternative would be from area sources and vehicular sources. Potential impacts associated with vehicular sources are discussed separately from those associated with area sources.

Area sources are sources of emissions that are similar in type but are not generally located at a single emission point. It is anticipated that area source emissions during operation of the proposed alternative would result primarily from the combustion of natural gas for cooking and heating and the combustion of fuel used in landscaping equipment.

The annual area source emissions estimated for this alternative were compared to the baseline emissions inventory for the South Bend-Elkhart Area emissions inventory as described in Section 3.4. The results are presented in Table 4.4-3.

Table 4.4-3
Comparison of Estimated Operating (Area Source) Emissions with
South Bend-Elkhart Area Emissions Inventory, Alternative A

Air Contaminant	Estimated Area Source Emissions (tpy)	South Bend-Elkhart Area Emissions Inventory* (tpy)	% of South Bend-Elkhart Area Emissions Inventory
VOC	3.27	56,395	0.01%
PM_{10}	0.28	47,593	0.001%
$PM_{2.5}$	0.27	10,606	0.003%
CO	4.56	156,383	0.003%
NO_X	1.86	38,928	0.005%
SO_2	0.01	18,202	0.0001%

*Source: EPA, 2013

As shown in Table 4.4-3, the area source emissions for this alternative are estimated to contribute less than 1 percent to the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. HAPs emissions are expected to be a nominal percentage of VOC, for organic HAPs, and a nominal percentage of $PM_{2.5,}$ for inorganic HAPs. In addition, impacts on visibility would be minimal because of the nominal contribution of particulate from the area sources. Possible mitigation measures that could be implemented to reduce emissions from the combustion of fuel during operation of the proposed alternative are outlined in Chapter 5.0.

4.4.4.3 Vehicle Emissions

The majority of the emissions associated with this alternative were estimated to be from the additional vehicle trip generation in the area resulting from the project. Vehicular traffic emissions are a function of trip generation to the proposed gaming facility, both from customers and workers. Air emissions due to the vehicular traffic resulting from this alternative were estimated using the URBEMIS model.

Table 4.4-4 provides a comparison of the estimated annual vehicle emissions for Alternative A to the South Bend-Elkhart emissions inventory for 2008.

Table 4.4-4
Comparison of Operational (Vehicle) Emissions Estimates with
South Bend-Elkhart Emissions Inventory (2008), Alternative A

Air Contaminant	Estimated Operating (Vehicle) Emissions (tpy)	South Bend-Elkhart Area Emissions Inventory* (tpy)	% of South Bend-Elkhart Area Emissions Inventory
VOC	74.54	56,395	0.13%
PM_{10}	186.29	47,593	0.39%
$PM_{2.5}$	35.98	10,606	0.34%
CO	923.18	156,383	0.59%
NO_X	116.01	38,928	0.30%
SO_2	1.01	18,202	0.01%

*Source: EPA, 2013

As shown in Table 4.4-4, the emissions resulting from vehicular traffic for this alternative are estimated to contribute less than 1 percent to the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. HAPs emissions are expected to be a nominal percentage of VOC, for organic HAPs, and a nominal percentage of $PM_{2.5}$, for inorganic HAPs.

4.4.4.4 Air Quality Impacts – NAAQS/Regional Haze

Based on the comparison of estimated emissions to the existing emissions inventory for the South Bend-Elkhart Area, it is expected that air contaminant emissions from construction activities would result in minor short-term impacts on air quality in the immediate vicinity of the project site, including increased levels of particulate matter and vehicular exhaust emissions. These activities are considered one-time activities; i.e., the construction activities would not continue past the date of completion. Particulate matter emissions from construction operations may impact visibility on a short-term basis. This is typical of construction projects, and affects the immediate vicinity of the project site. However, due to the anticipated short-term duration of construction activities, there would be no long-term impacts and therefore, emissions from the construction activities are not

expected to contribute to regional haze, adversely impact long-term visibility, or adversely impact the long-term air quality in the area.

Air emissions from project operation and vehicular traffic are also estimated to be less than 1 percent of the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. Because the increase in estimated air emission rates resulting from the operation of the proposed alternative, including the increase in vehicular traffic, is small compared to existing emissions for the South Bend-Elkhart Area, the incremental increase would not be expected to cause an exceedance of the NAAQS.

4.4.4.5 Air Quality Impacts – HAPs

Organic HAPs emissions are expected to be a nominal percentage of VOC emissions and inorganic HAPs a nominal percentage of $PM_{2.5}$ emissions for this alternative. Because air emissions from project construction and operation are estimated to be less than 1 percent of the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant, the increase in HAPs emissions from this alternative would not be expected to significantly impact public health.

4.4.4.6 General Conformity

A general conformity determination is required for each pollutant where the total of direct and indirect emissions in a nonattainment area would exceed emission thresholds as specified in the General Conformity Rules (40 CFR § 51.853(b) (1)). Direct emissions are caused by the action itself, such as the emissions from the construction of a gaming project. Indirect emissions are also caused by the action but are removed from the action in either time or space. For indirect emissions, the emissions must be of the type that "the agency can practically control" and for which "the agency has continuing program responsibility." A continuing program responsibility means that the agency has an oversight role over the activities generating the emissions or has the ability to limit the emissions.

St. Joseph County is designated as being in attainment or unclassifiable for all National Ambient Air Quality Standards and is subject to a maintenance plan for ozone. Under the General Conformity Rules, the exemption thresholds for ozone precursor pollutants in a maintenance area are 100 tpy of VOC or of NO_X. If the estimate of air emissions for the construction of this alternative results in air emissions of less than 100 tpy for either of these air contaminants, the General Conformity rules do not require a General Conformity Determination to demonstrate that such action conforms to the SIP.

In evaluating the applicability of the General Conformity rules to the Project, it is assumed that the BIA would have program responsibility over the construction of the project as a basis for approval of the Application to Acquire Land in Trust, but would not have ongoing responsibility over the

operation of the gaming project. Therefore, only the estimated construction emissions are compared to the general conformity thresholds for a maintenance area.

As shown in Table 4.2-1, air contaminant emissions from construction of this alternative are estimated to be less than 100 tpy of NOx or of VOC; less than the general conformity thresholds. Therefore, a General Conformity Determination would not be required for this alternative.

4.4.5 Alternative B – Elkhart Site Tribal Village and Casino

The primary air contaminant emissions from this Alternative would be from construction activities, emissions from the operation of the proposed alternative, and secondary emissions resulting from increased vehicular traffic. The basis and methodology for evaluation of the potential air emissions impact of this alternative is discussed in Section 4.4.3.

4.4.5.1 Construction Activities

Emissions from the construction activities would include VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ from emission sources associated with the construction of the proposed gaming facility, adjacent parking lot, and residential development. Some estimation models do not differentiate between PM_{10} and $PM_{2.5}$ since $PM_{2.5}$ is a subset of smaller particles within PM_{10} emissions. In these cases, the estimated $PM_{2.5}$ emission rate was assumed to be equivalent to that of PM_{10} as a means of conservatively estimating the emissions for this subset since the $PM_{2.5}$ emission levels will always be lower than overall PM_{10} levels, but these smaller particles are potentially more damaging to human health. Emissions from construction activities would be primarily combustion products from the use of earth-moving equipment, such as excavators, graders, bulldozers, scrapers, loaders, rollers, tractors/backhoes, cranes, watering trucks, and paving equipment. Fugitive dust emissions would also result from land clearance and material handling. Paving of surfaces and architectural coatings would also result in VOC emissions during construction.

A summary of the estimated emissions resulting from construction related activities is presented in Table 4.4-5.

Table 4.4-5
Estimated Annual Air Emissions – Construction Related Activities
Alternative B (tpy)

Activity	VOC	PM_{10}	$PM_{2.5}$	CO	NOx	SO_2	CO_2
Mass Grading	0.108	11.186	1.767	0.546	1.157	0.002	214.23
Paving	0.017	0.008	0.008	0.092	0.147	0.0001	30.33
Building Construction	1.162	0.653	0.544	16.259	8.865	0.025	3272.40
Architectural Coating	23.37	0	0	0	0	0	0
TOTALS	24.66	11.85	2.32	16.90	10.17	0.03	3516.95

The construction emissions from the proposed project were compared to the South Bend-Elkhart Area emissions inventory as described in Section 3.4. The comparison is presented in Table 4.4-6.

Table 4.4-6
Comparison of Estimated Annual Construction Emissions with
South Bend-Elkhart Area Emissions Inventory (2008), Alternative B

Air Contaminant	Estimated Maximum Annual Construction Emissions (tpy)	South Bend-Elkhart Area Emissions* (tpy)	% of South Bend-Elkhart Area Emissions
VOC	24.66	56,395	0.044%
PM_{10}	11.85	47,593	0.025%
$PM_{2.5}$	2.32	10,606	0.022%
CO	16.90	156,383	0.011%
NO_X	10.17	38,928	0.026%
SO_2	0.03	18,202	0.00015%

*Source: EPA, 2013

As shown in Table 4.4-6, air contaminant emissions from construction of this alternative are estimated to contribute less than 1 percent to the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. These emissions would result primarily from operation of off-road construction equipment and fugitive dust emissions from land clearance and construction activities. HAPs emissions are expected to be a nominal percentage of VOC, for organic HAPs, and a nominal percentage of $PM_{2.5}$, for inorganic HAPs. Possible mitigation measures that could be implemented to reduce potential impacts during construction are discussed in Chapter 5.0.

4.4.5.2 Commercial Operation

It is assumed that construction activities would end with the start of operation of the proposed alternative and therefore, there would be no emissions from construction activities after the opening date. Emissions that may affect ambient air quality during operation of the proposed alternative would be from area sources and vehicular sources. Potential impacts associated with vehicular sources are discussed separately from those associated with area sources.

Area sources are sources of emissions that are similar in type but are not generally located at a single emission point. It is anticipated that area source emissions during operation of the proposed gaming facility would result primarily from the combustion of natural gas for cooking and heating and the combustion of fuel used in landscaping equipment.

The annual area source emissions estimated for this alternative were compared to the baseline emissions inventory for the South Bend-Elkhart Area emissions inventory as described in Section 3.4. The results are presented in Table 4.4-7.

Table 4.4-7
Comparison of Estimated Gaming Operation (Area Source) Emissions
with to South Bend-Elkhart Area Emissions Inventory, Alternative B

Air Contaminant	Estimated Area Source Emissions (tpy)	South Bend-Elkhart Area Emissions Inventory* (tpy)	% of South Bend-Elkhart Area Emissions Inventory
VOC	3.27	56,395	0.01%
PM_{10}	0.28	47,593	0.001%
$PM_{2.5}$	0.27	10,606	0.003%
CO	4.57	156,383	0.003%
NO_X	1.86	38,928	0.005%
SO_2	0.01	18,202	0.0001%

*Source: EPA, 2013

As shown in Table 4.4-7, the area source emissions of for this alternative are estimated to contribute less than 1 percent to the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. HAPs emissions are expected to be a nominal percentage of VOC, for organic HAPs, and a nominal percentage of $PM_{2.5}$, for inorganic HAPs. In addition, impacts on visibility would be minimal because of the nominal contribution of particulate from the area sources. Possible mitigation measures that could be implemented to reduce emissions from the combustion of fuel during operation of the proposed alternative are outlined in Chapter 5.0.

4.4.5.3 Vehicle Emissions

The majority of the emissions associated with this alternative were estimated to be from the additional vehicle trip generation in the area resulting from the project. Vehicular traffic emissions are a function of trip generation to the proposed gaming facility, both from customers and workers. Air emissions due to the vehicular traffic resulting from this alternative were estimated using the URBEMIS model.

Table 4.4-8 provides a comparison of the estimated annual vehicle emissions for Alternative B to the South Bend-Elkhart emissions inventory for 2008.

As shown in Table 4.4-8, the emissions resulting from vehicular traffic for this alternative are estimated to contribute less than 1 percent to the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. HAPs emissions are expected to be a nominal percentage of VOC for organic HAPs, and a nominal percentage of $PM_{2.5}$ for inorganic HAPs.

Table 4.4-8
Comparison of Operational (Vehicle) Emissions Estimates with
South Bend-Elkhart Emissions Inventory (2008), Alternative B

Air Contaminant	Estimated Operating (Vehicle) Emissions (tpy)	South Bend-Elkhart Area Emissions Inventory* (tpy)	% of South Bend-Elkhart Area Emissions Inventory
VOC	74.58	56,395	0.13%
PM_{10}	186.37	47,593	0.39%
$PM_{2.5}$	35.99	10,606	0.34%
CO	923.61	156,383	0.59%
NO_X	116.06	38,928	0.30%
SO_2	1.01	18,202	0.01%

*Source: EPA, 2013

4.4.5.4 Air Quality Impacts – NAAQS/Regional Haze

Based on the comparison of estimated emissions to the existing emissions inventory for the South Bend-Elkhart Area, it is expected that air contaminant emissions from construction activities would result in minor short-term impacts on air quality in the immediate vicinity of the project site, including increased levels of particulate matter and vehicular exhaust emissions. These activities are considered one-time activities; i.e., the construction activities would not continue past the date of completion. Particulate matter emissions from construction operations may impact visibility on a short-term basis. This is typical of construction projects, and affects the immediate vicinity of the project site. However, due to the anticipated short-term duration of construction activities, there would be no long-term impacts and therefore, emissions from the construction activities are not expected to contribute to regional haze, adversely impact long-term visibility, or adversely impact the long-term air quality in the area.

Air emissions from project operation and vehicular traffic are also estimated to be less than 1 percent of the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. Because the increase in estimated air emission rates resulting from the operation of the proposed gaming facility including the increase in vehicular traffic is small compared to existing emissions for the South Bend-Elkhart Area, the incremental increase would not be expected to cause an exceedance of the NAAQS.

4.4.5.5 Air Quality Impacts – HAPs

Organic HAPs emissions are expected to be a nominal percentage of VOC emissions and inorganic HAPs a nominal percentage of $PM_{2.5}$ emissions for this alternative. Because air emissions from project construction and operation are estimated to be less than 1 percent of the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant, the increase in HAPs emissions from this alternative would not be expected to significantly impact public health.

4.4.5.6 General Conformity

Elkhart County is designated as being in attainment or unclassifiable for all National Ambient Air Quality Standards and is subject to a maintenance plan for ozone. Under the General Conformity Rules, the exemption thresholds for ozone precursor pollutants in a maintenance area are 100 tpy of VOC or of NO_X. In evaluating the applicability of the General Conformity rules to the Project, it is assumed that the BIA would have program responsibility over the construction of the project as a basis for approval of the Application to Acquire Land in Trust, but would not have ongoing responsibility over the operation of the gaming project. Therefore, only the estimated construction emissions are compared to the general conformity thresholds for a maintenance area.

As shown in Table 4.4-6, air contaminant emissions from construction of this alternative are estimated to be less than 100 tpy of NOx or of VOC; less than the general conformity thresholds. Therefore, a General Conformity Determination would not be required for this alternative.

4.4.6 Alternative C – South Bend Site Tribal Village With Commercial Development

The primary air contaminant emissions from this Alternative would be from construction activities, emissions from the operation of the proposed alternative and secondary emissions resulting from increased vehicular traffic. The basis and methodology for evaluation of the potential air emissions impact of this alternative is discussed in Section 4.4.3.

4.4.6.1 Construction Activities

Emissions from the construction activities would include VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ from emission sources associated with the construction of the proposed family entertainment center, travel center, and strip shopping center. Some estimation models do not differentiate between PM_{10} and $PM_{2.5}$ since $PM_{2.5}$ is a subset of smaller particles within PM_{10} emissions. In these cases, the estimated $PM_{2.5}$ emission rate was assumed to be equivalent to that of PM_{10} as a means of conservatively estimating the emissions for this subset since the $PM_{2.5}$ emission levels will always be lower than overall PM_{10} levels, but these smaller particles are potentially more damaging to human health. Emissions from construction activities would be primarily combustion products from the use of earth-moving equipment, such as excavators, graders, bulldozers, scrapers, loaders, rollers, tractors/backhoes, cranes, watering trucks, and paving equipment. Fugitive dust emissions would also result from land clearance and material handling. Paving of surfaces and architectural coatings would also result in VOC emissions during construction.

A summary of the estimated emissions resulting from construction related activities is presented in Table 4.4-9.

Table 4.4-9
Estimated Annual Air Emissions – Construction Related Activities
Alternative C (tpy)

Activity	VOC	PM_{10}	$PM_{2.5}$	CO	NOx	SO_2	CO_2
Mass Grading	0.039	1.55	0.26	0.19	0.41	0.001	79.61
Paving	0.011	0.010	0.009	0.07	0.10	0.0001	17.02
Building Construction	0.40	0.26	0.24	2.35	2.729	0.003	523.16
Architectural Coating	1.40	0	0	0	0	0	0
TOTALS	1.85	1.82	0.51	2.61	3.24	0.00	619.80

The construction emissions from the proposed project were compared to the South Bend-Elkhart Area emissions inventory as described in Section 3.4. The comparison is presented in Table 4.4-10.

Table 4.4-10
Comparison of Estimated Annual Construction Emissions with
the South Bend-Elkhart Area Emissions Inventory (2008), Alternative C

Air Contaminant	Estimated Maximum Annual Construction Emissions (tpy)	South Bend-Elkhart Area Emissions* (tpy)	% of South Bend-Elkhart Area Emissions
VOC	1.85	56,395	0.003%
PM_{10}	1.82	47,593	0.004%
$PM_{2.5}$	0.51	10,606	0.005%
CO	2.61	156,383	0.002%
NO_X	3.24	38,928	0.008%
SO_2	0.004	18,202	0.00002%

*Source: EPA, 2013

As shown in Table 4.4-10, air contaminant emissions from construction of this alternative are estimated to contribute less than 1 percent to the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. These emissions would result primarily from operation of off-road construction equipment and fugitive dust emissions from land clearance and construction activities. HAPs emissions are expected to be a nominal percentage of VOC, for organic HAPs, and a nominal percentage of $PM_{2.5}$, for inorganic HAPs.

Possible mitigation measures that could be implemented to reduce potential impacts during construction are outlined in Chapter 5.0.

4.4.6.2 Commercial Operation

It is assumed that construction activities would end with the start of operation of the proposed alternative and therefore, there would be no emissions from construction activities after the opening date. Emissions that may affect ambient air quality during operation of the proposed alternative would be from area sources and vehicular sources. Potential impacts associated with vehicular sources are discussed separately from those associated with area sources.

Area sources are sources of emissions that are similar in type but are not generally located at a single emission point. It is anticipated that area source emissions during operation of the proposed alternative would result primarily from the combustion of natural gas for cooking and heating and the combustion of fuel used in landscaping equipment.

The annual area source emissions estimated for this alternative were compared to the baseline emissions inventory for the South Bend-Elkhart Area emissions inventory as described in Section 3.4. The results are presented in Table 4.4-11.

Table 4.4-11
Comparison of Estimated Operating (Area Source) Emissions with South Bend-Elkhart Area Emissions Inventory, Alternative C

Air Contaminant	Estimated Area Source Emissions (tpy)	South Bend-Elkhart Area Emissions Inventory* (tpy)	% of South Bend-Elkhart Area Emissions Inventory
VOC	0.93	56,395	0.002%
PM_{10}	0.28	47,593	0.001%
$PM_{2.5}$	0.27	10,606	0.003%
CO	2.90	156,383	0.002%
NO_X	0.20	38,928	0.001%
SO_2	0.01	18,202	0.0001%

*Source: EPA, 2013

As shown in Table 4.4-7, the area source emissions of for this alternative are estimated to contribute less than 1 percent to the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. HAPs emissions are expected to be a nominal percentage of VOC for organic HAPs, and a nominal percentage of $PM_{2.5}$ for inorganic HAPs. In addition, impacts on visibility would be minimal because of the nominal contribution of particulate from the area sources.

Possible mitigation measures that could be implemented to reduce emissions from the combustion of fuel during operation of the proposed alternative are discussed in Chapter 5.0.

4.4.6.3 Vehicle Emissions

The majority of the emissions associated with this alternative were estimated to be from the additional vehicle trip generation in the area resulting from the project. Vehicular traffic emissions are a function of trip generation to the proposed development, both from customers and workers. Air emissions due to the vehicular traffic resulting from this alternative were estimated using the URBEMIS model.

Table 4.4-12 provides a comparison of the estimated annual vehicle emissions for Alternative C to the South Bend-Elkhart emissions inventory for 2008.

Table 4.4-12
Comparison of Operational (Vehicle) Emissions Estimates with
South Bend-Elkhart Emissions Inventory (2008), Alternative C

Air Contaminant	Estimated Operating (Vehicle) Emissions (tpy)	South Bend-Elkhart Area Emissions Inventory* (tpy)	% of South Bend-Elkhart Area Emissions Inventory
VOC	13.38	56,395	0.02%
PM_{10}	34.23	47,593	0.07%
$PM_{2.5}$	6.61	10,606	0.06%
CO	169.78	156,383	0.11%
NO_X	21.32	38,928	0.05%
SO_2	0.19	18,202	0.001%

*Source: EPA, 2013

As shown in Table 4.4-12, the emissions resulting from vehicular traffic for this alternative are estimated to contribute less than 1 percent to the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. HAPs emissions are expected to be a nominal percentage of VOC, for organic HAPs, and a nominal percentage of $PM_{2.5}$, for inorganic HAPs.

Possible mitigation measures that could be implemented to reduce emissions from the combustion of fuel during operation of the proposed alternative are discussed in Chapter 5.0.

4.4.6.4 Air Quality Impacts – NAAQS/Regional Haze

Based on the comparison of estimated emissions to the existing emissions inventory for the South Bend-Elkhart Area, it is expected that air contaminant emissions from construction activities would result in minor short-term impacts on air quality in the immediate vicinity of the project site, including increased levels of particulate matter and vehicular exhaust emissions. These activities are considered one-time activities; i.e., the construction activities would not continue past the date of completion. Particulate matter emissions from construction operations could impact visibility on a short-term basis. This is typical of construction projects, and affects the immediate vicinity of the

project site. However, due to the anticipated short-term duration of construction activities, there would be no long-term impacts and therefore, emissions from the construction activities are not expected to contribute to regional haze, adversely impact long-term visibility, or adversely impact the long-term air quality in the area.

Air emissions from project operation and vehicular traffic are also estimated to be less than 1 percent of the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. Because the increase in estimated air emission rates resulting from the operation of the proposed alternative including the increase in vehicular traffic is small compared to existing emissions for the South Bend-Elkhart Area, the incremental increase would not be expected to cause an exceedance of the NAAQS.

4.4.6.5 Air Quality Impacts – HAPs

Organic HAPs emissions are expected to be a nominal percentage of VOC emissions and inorganic HAPs a nominal percentage of $PM_{2.5}$ emissions for this alternative. Because air emissions from project construction and operation are estimated to be less than 1 percent of the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant, the increase in HAPs emissions from this alternative would not be expected to significantly impact public health.

4.4.6.6 General Conformity

St. Joseph County is designated as being in attainment or unclassifiable for all National Ambient Air Quality Standards and is subject to a maintenance plan for ozone. Under the General Conformity Rules, the exemption thresholds for ozone precursor pollutants in a maintenance area are 100 tpy of VOC and NO_X. If the alternatives result in air emissions of less than 100 tpy for either of these air contaminants, the General Conformity rules do not require a General Conformity evaluation and no further analysis is required to demonstrate that such actions conform to the SIP.

As shown in Table 4.4-10, air contaminant emissions from construction of this alternative are estimated to be less than 100 tpy of NOx or of VOC; less than the general conformity thresholds. Therefore, a General Conformity Determination would not be required for this alternative.

4.4.7 Alternative D – No Action

The No Action Alternative does not include the construction of a project, therefore the potential for impacts corresponding to air emissions increases from the construction and operation of the proposed development would not occur. Any effect on air quality would be that consistent with planned growth in the area. Air emissions related to any future development would be required to comply with any federal or state requirements related to air quality.

4.5 BIOLOGICAL RESOURCES

4.5.1 Significance Criteria

4.5.1.1 Wildlife and Habitats (terrestrial, aquatic, ecosystems, biological communities)

For the purposes of this analysis, potential impacts to wildlife and habitats were considered significant if construction or operation of an alternative would:

- result in loss of habitat to the extent that the carrying capacities in the remaining habitat are exceeded, and wildlife populations and habitat(s) may be negatively impacted; or
- result in the loss of wildlife habitat that is special or unique to the area.
- Non-compliance with Migratory Bird Act as regulated by the USFWS.

4.5.1.2 Federally Listed Species (threatened/endangered)

For the purposes of this analysis, potential impacts to federally listed species regulated by the USFWS were considered significant if construction or operation of an alternative would:

- jeopardize the continued existence of a federally listed species or result in destruction or adverse modification of listed species defined critical habitat: not compliant with Section 7 of the Endangered Species Act.

4.5.1.3 Vegetation (terrestrial, aquatic, riparian)

For the purposes of this analysis, potential impacts to vegetation were considered significant if construction or operation of an alternative would:

- result in the destruction or damage of vegetation that is special or unique to the area; or
- result in complete removal of vegetation eliminating the existing habitat and eliminating wildlife habitat

4.5.1.4 Wetlands

Wetlands can be defined using the USACE Wetland Delineation manual that considers the presence of hydric soils, wetland plants and hydrology. For the purposes of this analysis, potential impacts to wetlands were considered significant if construction or operation of an alternative would:

- not comply with Section 404 of the Clean Water Act regulations designed to avoid, minimize, and mitigate impacts to wetlands;
- not comply with Executive Order 11990 Protection of Wetlands, including for non-jurisdictional wetlands.

4.5.2 Comparative Impact Assessment of Alternatives

The impact assessment for Alternatives A, B, C and D (Sections 4.5.3-4.5.5) found that there would be no significant impacts on wildlife, habitat, federally listed species, vegetation or wetlands. Alternative A and C would result in direct and indirect impacts to habitat and subsequently wildlife but due to the previously impacted nature of the site and the overall size of the South Bend site, it has been determined to not have a significant effect on the diversity or quantity of local wildlife populations. From an ecological standpoint, impacts to the habitat and wildlife for Alternative B has been determined to be beneficial through the conversion of agricultural land to native prairies. In contrast, the potential conversion of prime farmland is a loss of vital farmland possessing the ideal combination of physical and chemical characteristics needed to produce crops. The Section 7 consultation looked at both the South Bend site (Alternative A and C) and the Elkhart site (Alternative B) and concluded that the proposed project on both sites is not likely to adversely affect the indicated endangered, threatened, and candidate species. Alternative A and C would result in direct and indirect impacts to jurisdictional wetlands. These impacts are not considered significant because the impacts will be minimized and mitigated for compliance with Section 404 of the Clean Water Act and Executive Order 11990. Alternative B does not have direct wetland impacts but could potentially impact wetlands if the existing hydrological modifications within the row crop fail and these areas return to wetlands prior to development.

4.5.3 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

4.5.3.1 Wildlife and Habitats

Loss of habitat and mortality of displaced wildlife is not likely to have a significant effect on the diversity or quantity of local wildlife populations. The habitats to be impacted have been largely degraded by previous human activity, are isolated by existing roads, and are not locally or regionally unique or rare habitat types. The surrounding lands have been impacted primarily by agriculture and secondarily by residential and commercial development. The proposed siting of the development on the western portion of the property results in the preservation of the highest quality habitat types which is the woodlands along US 31. Remnant forest habitats surrounding the property are fragmented by residential properties and have been cut several times in the past, resulting in third or fourth growth forest species and characteristics. Direct impacts to the different habitat types are summarized in Table 4.5-1.

The loss of habitat which would occur, primarily the former agricultural old field/meadow, younger woodland/scrub and hedgerows, would result in a loss of foraging and breeding habitats for resident and migratory wildlife species and the permanent displacement of some wildlife to other onsite and offsite habitats. Birds, including migratory birds, which are protected under the

Table 4.5-1
Anticipated Effects of Vegetative Types – Alternative A

Vegetative Type	Existing Acreage	Acreage Affected Casino	Acreage Affected Housing	Percent of Affected Area
Oak - Hickory Woods	54.78	8.36	0.0	**15.2**
Shrub/Tree - Tilled/Pastured	23.40	7.32	5.30	**53.93**
Old Field, Eurasian Meadow	44.16	33.60	3.53	**83.94**
Wet Mesic	2.26	0.0	0.0	**0.0**
Fence row trees/shrubs	15.35	10.13	2.16	**80.07**
Homestead landscape	25.86	2.22	8.10	**44.09**
Total	**165.81**	**61.63**	**19.09**	

Source: Conservation Design Forum, Inc. 2013

Migratory Bird Treaty Act of 1918, could be directly affected if habitat areas are cleared during the Spring/Summer nesting and fledging period. The Migratory Bird Treaty Act protects the nest and eggs of migratory bird species, therefore, this Act would prohibit the clearing of trees containing specific species nests during nesting and fledging season. Construction that occurs outside this season would be in compliance with this Act.

Adult birds and more mobile terrestrial wildlife species would likely be displaced, while some smaller mammals as well as reptiles and amphibians may suffer direct mortality from construction activity. Some displaced wildlife mortality may occur through increased competition and predation in onsite and offsite habitats. An increase in traffic could lead to an increase in wildlife being killed by vehicles while trying to migrate on and off site. This mortality is not anticipated to significantly increase due to the existing traffic levels on the surrounding roads. The creation of the 5.52 acres of detention ponds would provide habitat for waterfowl feeding and loafing as well as potential habitat for some common species of frogs and toads.

4.5.3.2 Federally Listed Species

Alternative A would have no significant impacts to threatened or endangered species or their critical habitats as evidenced by the written comment provided by the USFWS under Section 7 of the endangered species act identified that the site is within the range of these federally listed species but concluded that "…the proposed project is not likely to adversely affect these endangered, threatened, and candidate species" (USFWS 2013; USFWS 2016b). The USFWS letters are included in **Appendix D**.

The site is within the range of four federally listed species: the candidate eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*); the federally threatened northern copperbelly watersnake (*Nerodia erythrogaster neglecta*); the federally endangered Indiana bat (*Myotis sodalis*); and the federally threatened Northern long-eared bat (*Myotis septentrionalis*). The two snake

species are typically associated with wetland habitats and surface water features. Given the very limited amount and low quality of their preferred habitat on the site, no impacts to these species are expected.

Indiana bats are a migratory species that is known to typically hibernate in caves from mid-autumn until early spring. The upland forests of the site provide some potential habitat for Indiana bat and potential Indiana bat roost trees were identified onsite, primarily located in the more mature wooded areas along US 31. Given the available habitat is not ideal because of the lack of preferred forested riparian habitat, no impacts to the Indiana bat are expected.

As the main threat to the Northern long-eared bats' existence is white nose syndrome, and not habitat loss, the most vulnerable life stages of the northern long-eared bat (i.e., while in hibernacula or in maternity roost trees) are used to evaluate impacts to the species. As there are no known northern long-eared bat occurrences documented near the project area (Indiana DNR 2016), no impacts to the northern long-eared bat are expected. Concurrence with this no effect determination was received on February 19, 2016 (USFWS 2016b) (see **Appendix D**).

4.5.3.3 Vegetation

Implementation of Alternative A would result in the removal and disturbance of the low quality vegetative communities within the project area (refer to vegetative community types in Section 3.5). The project development area direct impacts to the plant communities are provided in Table 4.5-1. As shown in this table, Alternative A would affect a total of approximately 78.9 acres of existing vegetative community. Most of the removal and disturbance would occur in old field, Eurasian meadow, shrub/tree, and fence row trees/shrub.

4.5.3.4 Wetlands

There are no significant impacts to wetlands because Section 404 permits would be obtained from USACE and wetland mitigation provided for the final design of this alternative. This alternative would also comply with Executive Order 11990 Protection of Wetlands because existing wetlands were avoided to the greatest extent possible, storm water design is protective and wetland mitigation, if needed, shall occur with USACE. The wetland areas to be impacted have historically been altered by human activity. Alterations include direct impacts such as filling or indirect effects caused by altered hydrology and invasive species. On-site replacement of some existing functions can be achieved through storm water management while habitat functions can be mitigated through compensatory wetland mitigation activities.

For direct impacts to jurisdictional wetlands, USACE requires compensatory wetland mitigation typically in the form of wetland restoration and/or the purchase of credits from an approved wetland mitigation bank. Compensatory wetland mitigation is preferred to be in-kind with the habitat types to be impacted and within the same watershed. USACE wetland mitigation ratios are

typically four acres of forested wetland mitigation for each acre of forested wetland impact and two acres of emergent wetland mitigation for each acre of emergent wetland impact. Direct wetland impacts for the proposed development include 0.96 acre of forested wetland and 0.71 acre of emergent wetland, resulting in a 5.26-acre compensatory wetland mitigation requirement comprised of 3.84 acres of forested wetland and 1.42 acres of emergent wetland. In addition, direct impacts to riverine wetlands total 0.67 acre over approximately 3,300 linear feet. Compensatory wetland mitigation for riverine wetland is typically provided through the relocation or restoration of stream channels at a minimum ratio of one foot of relocated or restored stream channel for each foot of impact.

Some impacted wetland functions, such as water conveyance, flood flow attenuation, and water quality improvement would be addressed through the implementation of proposed on-site best management practices for storm water management. These practices, described in Section 4.3.2 would be used to separate development storm water for storage and treatment prior to discharge to remaining wetlands.

The delineated wetland areas are subject to regulation by the USACE under the Clean Water Act. The proposed impacts to these wetlands would require a USACE permit. Proposed areas of direct wetland impacts are shown in **Figure 4.5-1** and the acreage totals and calculations are provided in Table 4.5-2.

Table 4.5-2
Anticipated Direct Effects to Jurisdictional Wetland Areas – Alternative A

Wetland Area / Wetland Type	Existing Acreage	Acreage Affected Casino	Acreage Affected Housing	Total Acreage of Wetland Affected
A / Riverine Intermittent Streambed	0.83	0.32	0.14	0.46
A / Palustrine Forested	1.50	0.09	0.06	0.15
A/ Palustrine Emergent	0.85	0.00	0.00	0.00
B / Palustrine Forested	2.42	0.81	0.00	0.81
B / Palustrine Emergent	0.10	0.10	0.00	0.10
C / Palustrine Emergent	0.22	0.00	0.00	0.00
C / Palustrine Open Water	0.27	0.00	0.00	0.00
E / Palustrine Forested	0.05	0.00	0.00	0.00
F / Palustrine Forested	0.16	0.00	0.00	0.00
G / Palustrine Forested	2.38	0.00	0.00	0.00
G / Palustrine Emergent	0.31	0.00	0.00	0.00
G / Palustrine Open Water	1.03	0.00	0.00	0.00
H / Palustrine Open Water	0.34	0.00	0.00	0.00
I / Palustrine Emergent	0.07	0.00	0.00	0.00

K / Palustrine Emergent	0.20	0.00	0.00	0.00
K / Palustrine Open Water	0.24	0.00	0.00	0.00
L / Palustrine Scrub-Shrub	0.01	0.00	0.00	0.00
M / Palustrine Emergent	0.04	0.00	0.00	0.00
U / Palustrine Emergent	0.04	0.00	0.00	0.00
V/ Palustrine Emergent	0.11	0.11	0.00	0.11
W / Palustrine Emergent	0.52	0.32	0.00	0.32
X / Palustrine Emergent	0.18	0.18	0.00	0.18
Y / Riverine Intermittent Streambed	0.21	0.21	0.00	0.21
Z / Palustrine Forested	0.17	0.00	0.00	0.00
Z / Palustrine Emergent	0.44	0.00	0.00	0.00
Total	**12.69**	**2.14**	**0.20**	**2.34**

Source: Wightman & Associates, Inc. 2016

The proposed direct wetland impacts represent approximately 19% of the total 12.69 acres of jurisdictional wetlands on the site, thus avoiding impacts to 10.35 acres of wetlands.

Wetland A impacts total approximately 2,000 linear feet of the riverine wetland portion of Wetland A which currently conveys existing surface water through the site. Where possible, Wetland A is planned to be relocated around proposed development as an open channel which would continue to provide water conveyance but with a diminished habitat value as it passes through areas of development.

Wetland A forested wetland impacts are proposed for road access and the community center development. These impacts occur in two locations at the margins of the forested wetland portion, with the majority of the Wetland A forested wetland remaining as an intact wetland area.

Wetland B, V, W, X and Y impacts are associated with the casino and access road development. Included in these impact areas are approximately 1,300 linear feet of riverine Wetland Y. Surface water carried by this stream is planned to be routed around the proposed development in an open channel to the culvert under Prairie Avenue where its flows currently leave the site.

4.5.4 Alternative B – Elkhart Site Tribal Village and Casino

4.5.4.1 Potential Effects to Wildlife and Habitats

Loss of habitat and mortality of displaced wildlife is not likely to have a significant effect on the diversity or quantity of local wildlife populations. Direct impacts are largely confined to existing agricultural areas which make up the majority of the site. The habitat to be impacted is not locally or regionally unique or rare and is not important habitat for protected species. Wildlife use in development areas is largely foraging activities with very limited breeding or nesting potential.

4.5.4.2 Wildlife and Habitats

Impacts to wildlife and habitats are not predicted to be significant because development of this site is almost entirely within active agricultural fields with the exception of a small area of previous residential use. During construction, the limited amount of wildlife which uses this site for feeding or travel to other habitats would be displaced to other onsite and offsite habitats where competition and predation may result in some mortality. The proposed establishment of native prairie landscape in the non-developed portions of the property would result in a substantial increase, approximately 86 acres, in the amount of wildlife habitat and future wildlife use of the site particularly by mammals, ground nesting birds, and snakes. The creation of the 7.20 acres of detention ponds would provide habitat for waterfowl feeding and loafing as well as potential habitat for some common species of frogs and toads.

4.5.4.3 Federally Listed Species

Given the very limited amount of habitat on the subject property, no direct impacts to federally listed species is expected from Alternative B. Comment provided by the USFWS under Section 7 of the endangered species act identified that the site is within the range of these federally listed species but concluded that "…the proposed project is not likely to adversely affect these endangered, threatened, and candidate species" (USFWS 2013).

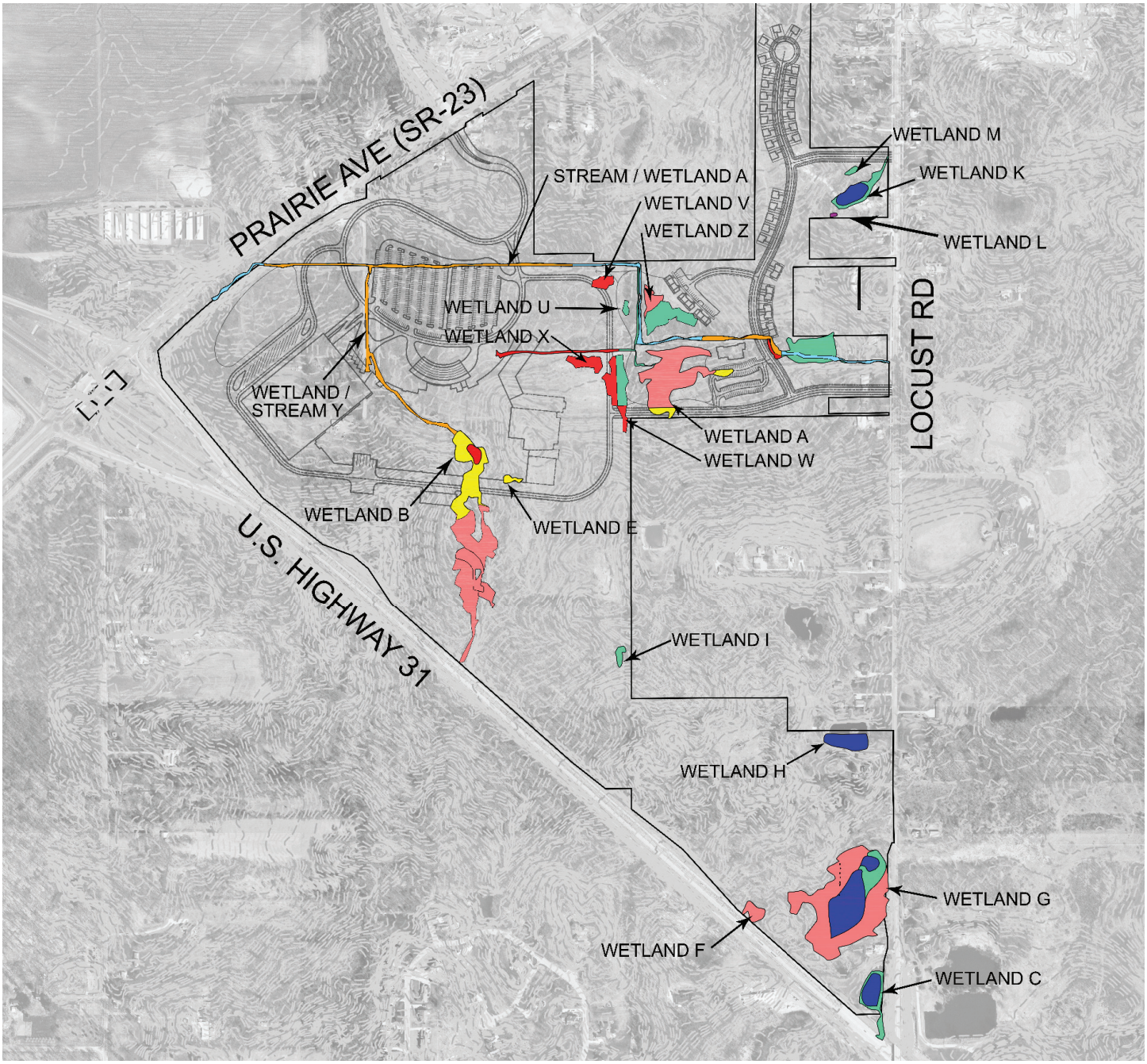
4.5.4.4 Vegetation

Implementation of Alternative B would result in the removal and disturbance of low quality vegetative communities within the project area (refer to vegetative community types in Section 3.5). The project development area direct impacts to the plant communities are provided in Table 4.5-3. As shown in this table, Alternative B would affect a total of approximately 171.8 acres of existing vegetative community. Most of the removal and disturbance occurs in the existing row crop.

Table 4.5-3
Anticipated Effects of Vegetative Types – Alternative B

Vegetative Type	Total Acreage	Acreage Affected	Percent of Affected Area
Row Crop	167.50	167.50	100
Hedgerow	2.39	0.0	0.0
Wetland	.024	0.0	0.0
Homestead Landscape	1.69	1.69	100
Total	171.82	171.82	

Source: Conservation Design Forum, Inc. 2013



RIS (RIVERINE INTERMITTENT STEAMBED)

PFO (PALUSTRINE FORESTED)

PEM (PALUSTRINE EMERGENT)

POW (PALUSTRINE OPEN WATER)

PSS (PALUSTRINE SCRUB-SHRUB)

AFFECTED RIS 0.67 acres

AFFECTED PFO 0.96 acres

AFFECTED PEM 0.71 acres

0 750 1125 1500

1 inch = 750 ft.

Pokagon South Bend EIS /August 2015

Source: St. Joseph County GIS

Figure 4.5-1

South Bend Site Alternative A Wetlands Impact Map

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4.5.4.5 Wetlands

No unavoidable adverse impacts are anticipated to the small area of wetland located along the eastern property line in the southern portion of the site (**Figure 4.5-2**). This wetland is located several hundred feet away and up-gradient from the proposed development.

The areas of hydric soil which are currently being farmed represents a potential for unavoidable adverse impacts should existing hydrological modifications fail and these areas return to wetlands prior to development. Of the 18 acres of hydric soil on the site, approximately 13 acres are included within the limits of the proposed development. Given the expected future maintenance of existing conditions prior to development, no wetland impact is anticipated in these areas.

4.5.5 Alternative C – South Bend Site Tribal Village With Commercial Development

4.5.5.1 Potential Effects to Wildlife and Habitats

The habitats to be impacted by Alternative C have been largely degraded by previous human activity, are isolated by existing roads, and are not locally or regionally unique or rare habitat types. Loss of habitat and mortality of displaced wildlife is not likely to have a significant effect on the diversity or quantity of local wildlife populations.

Direct impacts to the different habitat types are summarized in **Table 4.5-4**. The development is proposed in the western portion of the site therefore the highest quality wildlife habitat, represented by the woodlands along US 31, would be preserved. Most of the habitats to be impacted have been disturbed by previous human activities and are isolated from surrounding habitats by Prairie Avenue and US 31. The loss of habitat that would occur, primarily the former agricultural old field / meadow, younger woodland/scrub and hedgerows, would result in a loss of

Table 4.5-4
Anticipated Effects of Vegetative Types – Alternative C

Vegetative Type	Existing Acreage	Acreage Affected Commercial	Acreage Affected Housing	Percent of Affected Area
Oak - Hickory Woods	54.78	4.48	0.0	**8.16**
Shrub/Tree - Tilled/Pastured	23.40	4.65	5.30	**42.52**
Old Field, Eurasian Meadow	44.16	8.63	3.53	**27.49**
Wet Mesic	2.26	0.0	0.0	**0.0**
Fence row trees/shrubs	15.35	4.49	2.16	**43.40**
Homestead landscape	25.86	2.09	8.10	**39.34**
Total	**165.81**	**24.34**	**19.09**	

Source: Conservation Design Forum, Inc. 2013

foraging and breeding habitats for resident and migratory wildlife species and the permanent displacement of some wildlife to other onsite and offsite habitats. Birds, including migratory birds which are protected under the Migratory Bird Treaty Act of 1918, could be directly affected if habitat areas are cleared during the spring/summer nesting and fledging period. Adult birds and more mobile terrestrial wildlife species would likely be displaced while some smaller mammals as well as reptiles and amphibians may suffer some mortality from construction activity or increased traffic levels on site access roads. Some displaced wildlife mortality may occur through increased competition and predation in onsite and offsite habitats. The creation of the 6.85 acres of detention ponds would provide habitat for waterfowl feeding and loafing as well as potential habitat for some common species of frogs and toads.

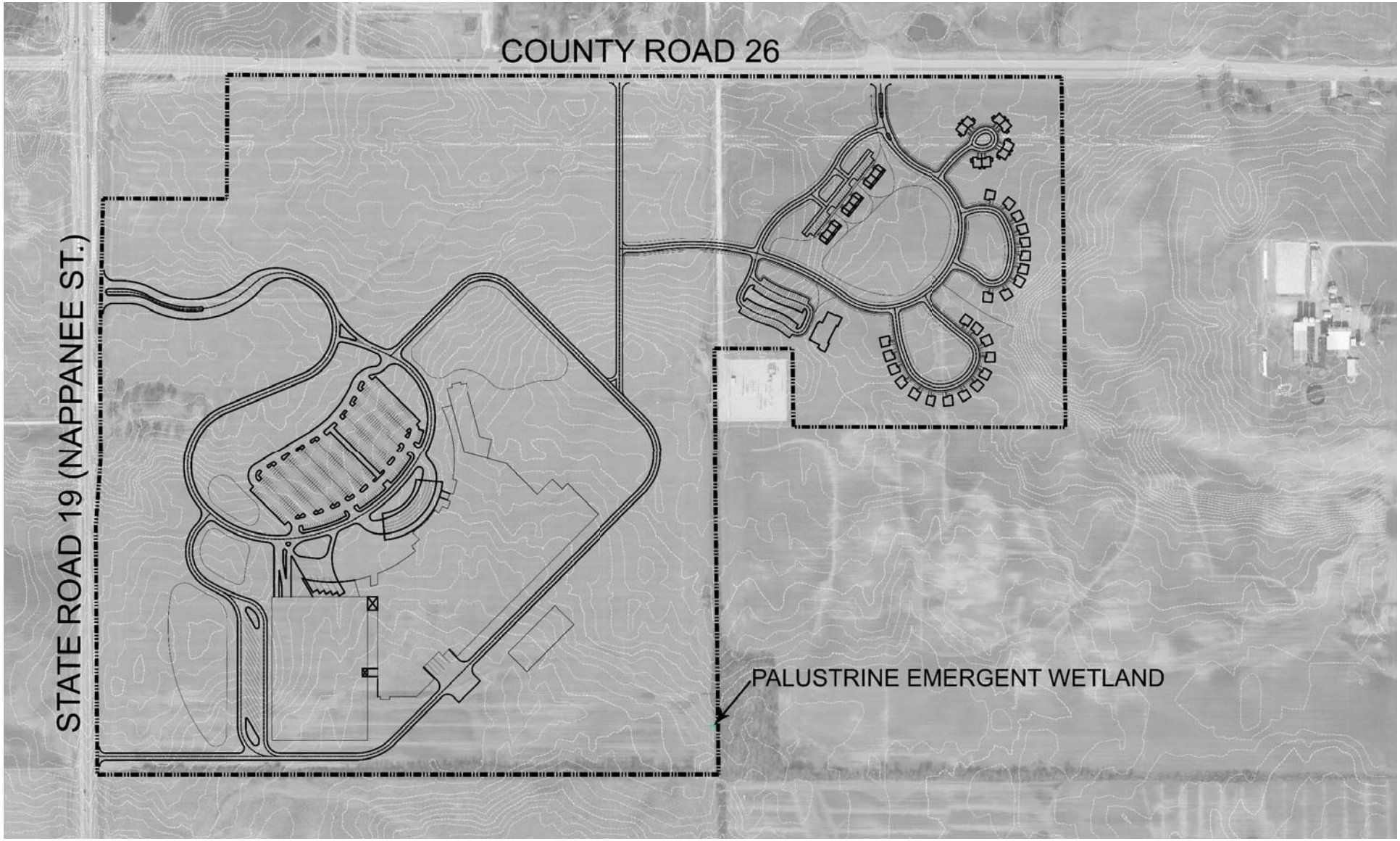
4.5.5.2 Federally Listed Species

Alternative C does not significantly impact threatened or endangered species or their critical habitat as documented by comment provided by the USFWS under Section 7 of the endangered species act identified that the site is within the range of these federally listed species but concluded that "…the proposed project is not likely to adversely affect these endangered, threatened, and candidate species" (USFWS 2013; USFWS 2016b). Copies of the USFWS letters are included in **Appendix D**.

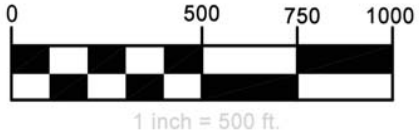
The site is within the range of four federally listed species: the candidate eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*); the federally threatened northern copperbelly watersnake (*Nerodia erythrogaster neglecta*); the federally endangered Indiana bat (*Myotis sodalis*); and the federally threatened northern long-eared bat (*Myotis septentrionalis*). The two snake species are typically associated with wetland habitats and surface water features. Given the very limited amount and low quality of their preferred habitat on the site, no impacts to these species are expected.

Indiana bats are a migratory species that is known to typically hibernate in caves from mid-autumn until early spring. The upland forests of the site provide some potential habitat for Indiana bat and potential Indiana bat roost trees were identified onsite, primarily located in the more mature wooded areas along US-31. Given the available habitat is not ideal because of the region's fragmented landscape and the lack of preferred forested riparian habitat, no impacts to the Indiana bat are expected.

As the main threat to the Northern long-eared bats' existence is white nose syndrome, and not habitat loss, the most vulnerable life stages of the northern long-eared bat (i.e., while in hibernacula or in maternity roost trees) are used to evaluate impacts to the species. As there are no known northern long-eared bat occurrences documented near the project area (Indiana DNR 2016), no impacts to the northern long-eared bat are expected. Concurrence with this no effect determination was received on February 19, 2016 (USFWS 2016b) (see **Appendix D**).



Palustrine Emergent Wetland (.017 acres)



Source: Elkhart County GIS

Figure 4.5-2
Elkhart Site Alternative B Wetland Map

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4.5.5.3 Vegetation

Implementation of Alternative C would result in the removal and disturbance of low quality vegetative communities within the project area (refer to vegetative community types in Section 3.5). The project development area direct impacts to the plant communities are provided in Table 4.5-4. As shown in this table, Alternative C would affect a total of approximately 42.56 acres of existing vegetative community. Most of the removal and disturbance occurs in oak-hickory woods, old field, Eurasian meadows, shrub/tree and homestead landscape.

4.5.5.4 Wetlands

Alternative C would have no significant impacts to wetlands because Section 404 permit(s) would be obtained from USACE and wetland mitigation provided for the final design of this alternative. This alternative would also comply with Executive Order 11990 Protection of Wetlands because existing wetlands were avoided to the greatest extent possible, stormwater design is protective and wetland mitigation, if needed, shall occur with USACE jurisdiction.

The delineated wetland areas are subject to regulation by the USACE under the Clean Water Act. The proposed impacts to these wetlands would require a USACE permit. Proposed areas of direct wetland impacts are shown in **Figure 4.5-3** and the acreage totals and calculations are provided in **Table 4.5-5**.

Table 4.5-5
Anticipated Direct Effects to Jurisdictional Wetland Areas – Alternative C

Wetland Area / Wetland Type	Existing Acreage	Acreage Affected Casino	Acreage Affected Housing	Total Acreage of Wetland Affected
A / Riverine Intermittent Streambed	0.83	0.28	0.18	0.46
A / Palustrine Forested	1.50	0.19	0.00	0.19
A/ Palustrine Emergent	0.85	0.00	0.00	0.00
B / Palustrine Forested	2.42	0.00	0.00	0.00
B / Palustrine Emergent	0.10	0.00	0.00	0.00
C / Palustrine Emergent	0.22	0.00	0.00	0.00
C / Palustrine Open Water	0.27	0.00	0.00	0.00
E / Palustrine Forested	0.05	0.00	0.00	0.00
F / Palustrine Forested	0.16	0.00	0.00	0.00
G / Palustrine Forested	2.38	0.00	0.00	0.00
G / Palustrine Emergent	0.31	0.00	0.00	0.00
G / Palustrine Open Water	1.03	0.00	0.00	0.00
H / Palustrine Open Water	0.34	0.00	0.00	0.00
I / Palustrine Emergent	0.07	0.00	0.00	0.00

K / Palustrine Emergent	0.20	0.00	0.00	0.00
K / Palustrine Open Water	0.24	0.00	0.00	0.00
L / Palustrine Scrub-Shrub	0.01	0.00	0.00	0.00
M / Palustrine Emergent	0.04	0.00	0.00	0.00
U / Palustrine Emergent	0.04	0.00	0.00	0.00
V/ Palustrine Emergent	0.11	0.11	0.00	0.11
W / Palustrine Emergent	0.52	0.33	0.00	0.33
X / Palustrine Emergent	0.18	0.18	0.00	0.18
Y / Riverine Intermittent Streambed	0.21	0.00	0.00	0.00
Z / Palustrine Forested	0.17	0.00	0.00	0.00
Z / Palustrine Emergent	0.44	0.00	0.00	0.00
Total	**12.69**	**1.09**	**0.18**	**1.27**

Source: Wightman & Associates, Inc. 2016

The proposed direct wetland impacts represent approximately 10% of the total 12.69 acres of jurisdictional wetlands on the site, thus avoiding impacts to 11.42 acres of wetlands.

Wetland A impacts total approximately 2,000 linear feet of the riverine wetland portion of Wetland A which currently conveys existing surface water through the site. Where possible, Wetland A is planned to be relocated around proposed development as an open channel which would continue to provide water conveyance but with a diminished habitat value as it passes through areas of development. Wetland A forested wetland impacts are proposed for road access and the community center development. These impacts occur in two locations at the margins of the forested wetland portion, with the majority of the Wetland A forested wetland remaining as an intact wetland area.

Wetland V, W and X impacts are associated with road development for access to the community center and housing.

For direct impacts to jurisdictional wetlands, USACE requires compensatory wetland mitigation typically in the form of wetland restoration and/or the purchase of credits from an approved wetland mitigation bank. Compensatory wetland mitigation is preferred to be in-kind with the habitat types to be impacted and within the same watershed. USACE wetland mitigation ratios are typically four acres of forested wetland mitigation for each acre of forested wetland impact and two acres of emergent wetland mitigation for each acre of emergent wetland impact. Direct wetland impacts for the proposed development include 0.19 acre of forested wetland and 0.62 acre of emergent wetland, resulting in a 2.0-acre compensatory wetland mitigation requirement comprised of 0.76 acre of forested wetland and 1.24 acres of emergent wetland. In addition, direct impacts to riverine wetlands total 0.46 acre over approximately 2,000 linear feet. Compensatory wetland mitigation for riverine wetland is typically provided through the relocation or restoration of stream

channels at a minimum ratio of one foot of relocated or restored stream channel for each foot of impact.

4.5.6 Alternative D – No Action

4.5.6.1 Potential Effects to Wildlife and Habitats

No significant adverse effects to wildlife and habitat would occur with No Action Alternative at the proposed South Bend site. The site would continue to support the existing wildlife species and habitat until management practices of the property change or other future development might potentially occur.

4.5.6.2 Federally Listed Species

The No Action Alternative does not affect current protections afforded to federally listed species. Given the limited potential habitat present for federally listed species at the sites, this alternative would have no significant impacts to federally listed species or their critical habitat.

4.5.6.3 Vegetation

Under the No Action Alternative, no existing vegetation is proposed to be removed and therefore there would be no significant impacts to vegetation.

4.5.6.4 Wetlands

Under the No Action Alternative, no existing jurisdictional wetlands are proposed to be directed or indirectly impacted and therefore there would be no significant impacts to wetlands.

4.6 CULTURAL RESOURCES

4.6.1 Significance Criteria

For the purposes of this analysis, potential impacts to cultural resources were considered significant if construction or operation of a proposed alternative would result in adverse effects to historic properties listed in or eligible for listing in the NRHP through the:

- Physical destruction or damage to all or part of a property; or
- Alteration of a property not consistent with the Secretary of Interior's Standards for the Treatment of Historic Properties; or
- Removal of a property from its historic location; or
- Change of the character of a property's use or of physical features within the property's setting that contribute to its historic significance; or
- Isolation from or alteration of the property's surrounding environment (setting); or

- Introduction of visual, audible, or atmospheric elements that diminish the integrity of the property's historic significance

According to 40CFR1508.8, effects to cultural resources can be both direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

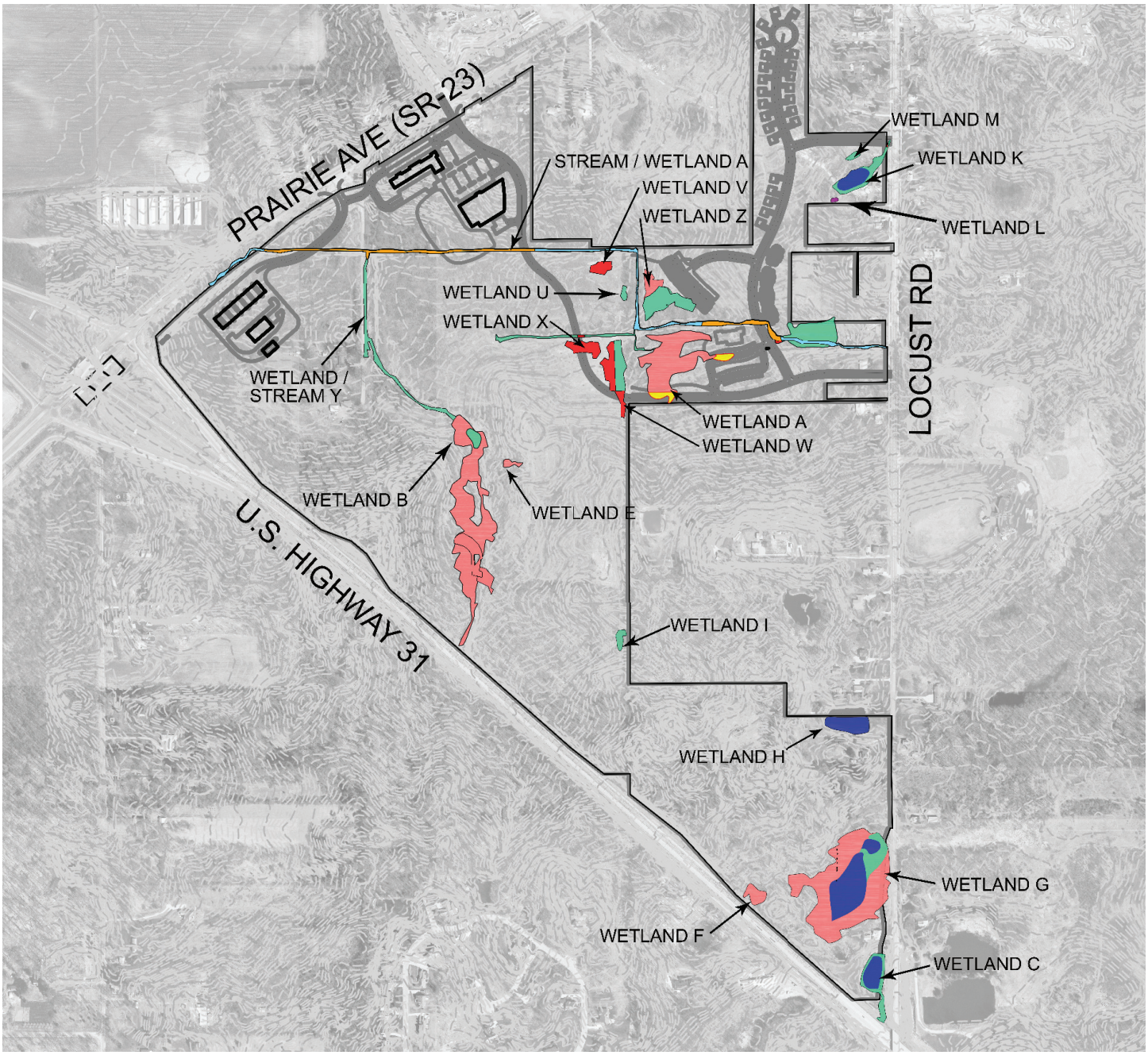
4.6.2 Comparative Impact Assessment of Alternatives-Cultural

The impact assessment in 4.6.3 to 4.6.4 found that none of the alternatives would have a significant impact on cultural resources including archeological sites and non-archeological historic-age resources. Although three archeological sites were identified within the South Bend site and one site was identified within the Elkhart site, these resources are not listed in or eligible for inclusion in the NRHP. Therefore, there are no direct effects to archeological resources. Four non-archeological, historic-age resources were identified by Atkins within the South Bend site. Of these, one resource was determined eligible for inclusion in the NRHP, but no direct impact to the resource is anticipated. Therefore, there are no significant impacts to non-archeological historic-age resources on the South Bend site. No potentially historic-age resources were identified by the BIA within the Elkhart Site. Finally, according to the DHPA, no historic properties listed in or eligible for inclusion in the NRHP were identified within the visual area of potential effects (VAPE) for the South Bend or Elkhart sites. Therefore, no historic properties are affected within the VAPE for either site.

4.6.3 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

Prior to the development of this EIS, the South Bend site was comprised of 19 parcels that were surveyed in which 5 newly recorded archeological sites were identified. Following the conclusion of the archeological survey, Parcel 0 (located south of U.S. Highway 20/31) was removed from consideration in the development of the Alternatives. Therefore, effects to archeological sites 12-Sj-483 and 12-Sj-484 identified on Parcel 0 are not being assessed as part of this EIS. Similarly, BIA Structure 9 is a non-historic-age garage and Structures 8, 11, 12, 19, and 24 have no extant structures at those locations. Therefore, effects to these resources are not being assessed as part of this EIS.

A small additional area of the South Bend site was not initially identified on maps received by the BIA, and therefore, was not initially assessed for archaeological resources or non-archaeological historic resources (**Figure 4.6-1**). Further consultation with BIA determined that no further archeological investigations were required in this area and that no historic buildings, structures,



RIS (RIVERINE INTERMITTENT STREAMBED)

PFO (PALUSTRINE FORESTED)

PEM (PALUSTRINE EMERGENT)

POW (PALUSTRINE OPEN WATER)

PSS (PALUSTRINE SCRUB-SHRUB)

AFFECTED RIS 0.46 acres

AFFECTED PFO 0.19 acres

AFFECTED PEM 0.62 acres

0 700 1050 1400

1 inch = 700 ft.

Pokagon South Bend EIS / August 2015

Source: St. Joseph County GIS

Figure 4.5-3

South Bend Site Alternative C Wetlands Impact Map

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districts, or objects listed in or eligible for inclusion in the NRHP are within this area (Rosen, 2013a).

The BIA and THPO, concurred with Atkins (Russell, 2013) findings (Rosen, 2013b; Zimmerman, 2013b) and Andrews (2013a) findings (Rosen, 2013; Winchester, 2013) (see **Appendix E**).

For the proposed undertaking, the area of potential effect (APE) is defined as the South Bend site, while the visual area of potential effects was defined to include specific structures identified by the BIA in consultation with the DHPA in the vicinity of the APE. The area of direct effects coincides with areas in which construction activities would be occurring as part of a Preferred Alternative.

4.6.3.1 Direct Effects within the APE

Andrews (2013a) concluded none of the debris/dump archeological sites identified were significant and none of the historic material/debris had significant interpretive value. Additionally, Andrews did not recommend further archaeological investigations for any of the parcels associated with the project.

Although archeological sites (12-Sj-485, 12-Sj-486 and 12-Sj-487) were identified within the South Bend site and would be impacted by Alternative A (**Figure 4.6-2**), according to Andrews (2013), these sites are not listed in or likely eligible for inclusion in the NRHP under Criteria D. Therefore, there are no archeological sites that would be directly affected by Alternative A, and no mitigation of impacts to archeological sites would be required.

Although 4 potentially historic-age resources were identified by the BIA (4 [Atkins Resource 01], 5 [Atkins Resource 02], 6 [Atkins Resource 03] and 10 [Atkins Resource 04]) within the South Bend site, only BIA Structures 4, 5 and 6 would be directly impacted by Alternative A (**Figure 4.6-2**). These resources are not eligible for inclusion in the NRHP. Therefore, there would be no direct effects to non-archeological historic-age resources by Alternative A and no mitigation of impacts to these resources would be required.

4.6.3.2 Direct Effects within the VAPE

Although 16 potentially historic-age resources were identified by the BIA (1, 2, 3, 7, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, and 24) within the VAPE of the South Bend site (**Figure 4.6-2**), according to the DHPA, no historic properties listed in or eligible for inclusion in the NRHP were identified within the VAPE for Alternative A (Smith, 2013). Therefore, no historic properties would be affected within the VAPE by Alternative A.

4.6.4 Alternative B – Elkhart Site Tribal Village and Casino

For the proposed undertaking, the area of potential effect is defined as the Elkhart site, while the visual area of potential effects was defined to include specific structures identified by the BIA in

consultation with the DHPA in the vicinity of the APE. The area of direct effects coincides with areas in which construction activities would be occurring as part of a proposed Alternative B.

4.6.4.1 Direct Effects within the APE

Andrews (2013a) identified one newly recorded historic archeological site (12-E-450) along with at least three additional scatters of structural debris and contemporary household items associated during a Phase I archeological survey of Alternative B. Because the farm building foundations associated with 12-E-450 were pushed into one of more debris piles, any historic subsurface deposits in the vicinity of 12-E-450 were destroyed. Therefore, the BIA recommended no further work at 12-E-450 and determined 12-E-450 not eligible for inclusion in the NRHP (Rosen, 2013).

Additionally, the BIA did not identify any potentially historic-age resources within the Elkhart site.

Although archeological site 12-E-450 was identified within the Elkhart site (**Figure 4.6-3**) and would be impacted by Alternative B, the site is not listed in or eligible for inclusion in the NRHP. Therefore, there would be no archeological sites or non-archeological historic-age resources directly affected by Alternative B and no mitigation of effects would be required.

4.6.4.2 Direct Effects within the VAPE

Although 14 potentially historic-age resources were identified by the BIA within the VAPE of the Elkhart site (**Figure 4.6-3**), according to the DHPA, no historic properties listed in or eligible for inclusion in the NRHP were identified within the VAPE for Alternative B (Smith, 2013). Therefore, no historic properties would be affected within the VAPE by Alternative B.

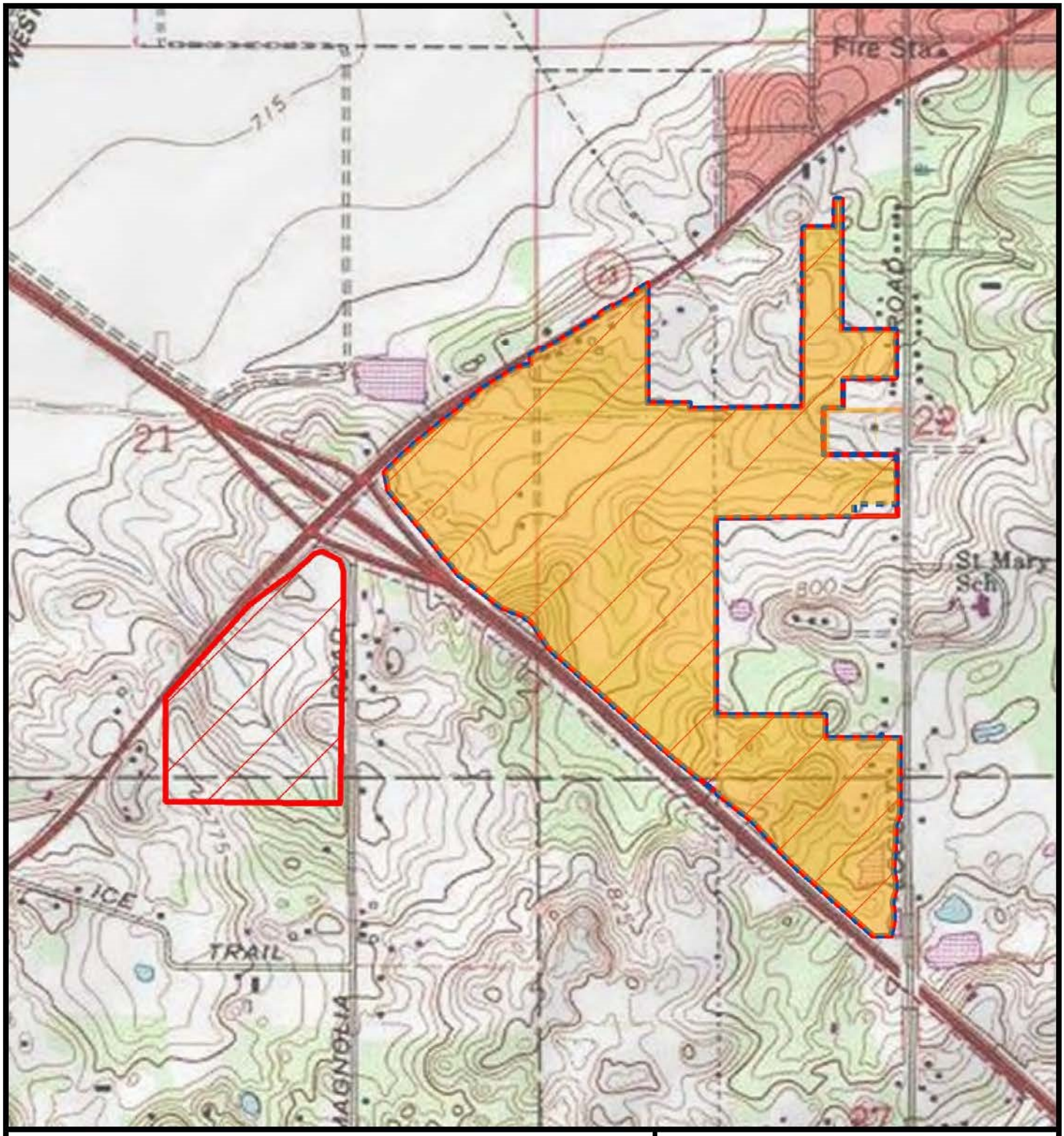
4.6.5 Alternative C – South Bend Site Tribal Village With Commercial Development

For the proposed undertaking, the area of potential effect is defined as the South Bend site, while the visual area of potential effects was defined to include specific structures identified by the BIA in consultation with the DHPA in the vicinity of the APE. The area of direct effects coincides with areas in which construction activities will be occurring as part of a proposed Alternative C.

4.6.5.1 Direct Effects within the APE

Andrews (2013a) concluded none of the debris/dump archeological sites identified are significant and none of the historic material/debris had significant interpretive value. Additionally, Andrews did not recommend further archaeological investigations for any of the parcels associated with the project.

Although archeological sites (12-Sj-485, 12-Sj-486 and 12-Sj-487) were identified within the South Bend site, only archeological sites 12-Sj-485 and 12-Sj487 would be impacted by Alternative C (**Figure 4.6-4**). According to Andrews (2013), these sites are not listed in or likely eligible for



Andrews, 2011 and 2012

Russell, 2013

Current Site Boundary

0 500 1,000

Feet

Figure 4.6-1
South Bend Site Boundary Changes

Prepared By: 19910	Scale: 12,000
Job No.: 100020904	Date: 27 Jun 2013

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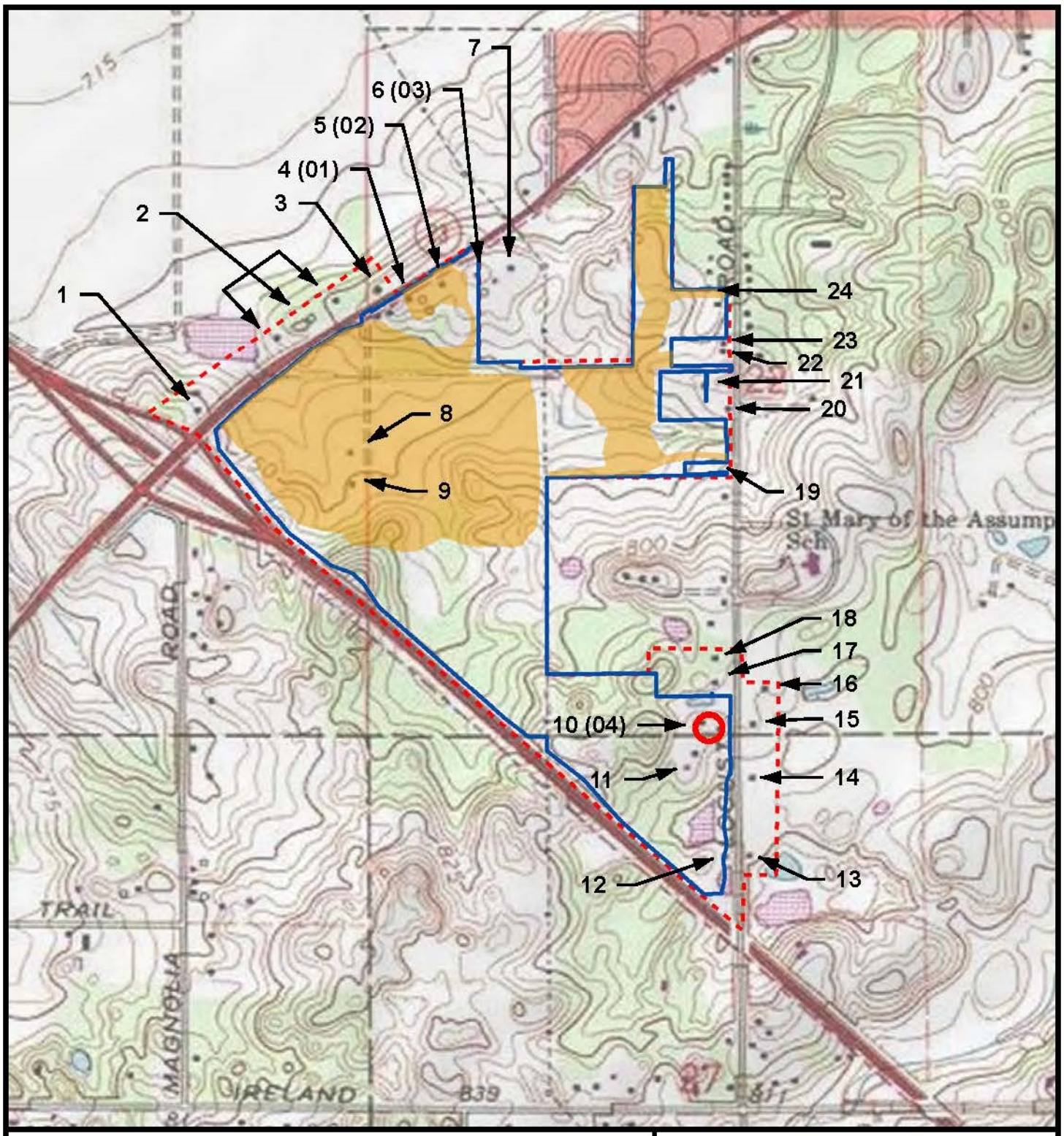

NRHP Eligible Resource

Area of Direct Effect

South Bend Site/Area of Potential Effect

VAPE

4 (01) → Historic-age Resource

Atkins Documented Historic-Age Resource

BIA Previously Identified Historic-Age Resource

0 500 1,000

Feet

Figure 4.6-2
Alternative A
Areas of Effect

Prepared By: 19910	Scale: 12,000
Job No.: 100020904	Date: 14 Oct 2013

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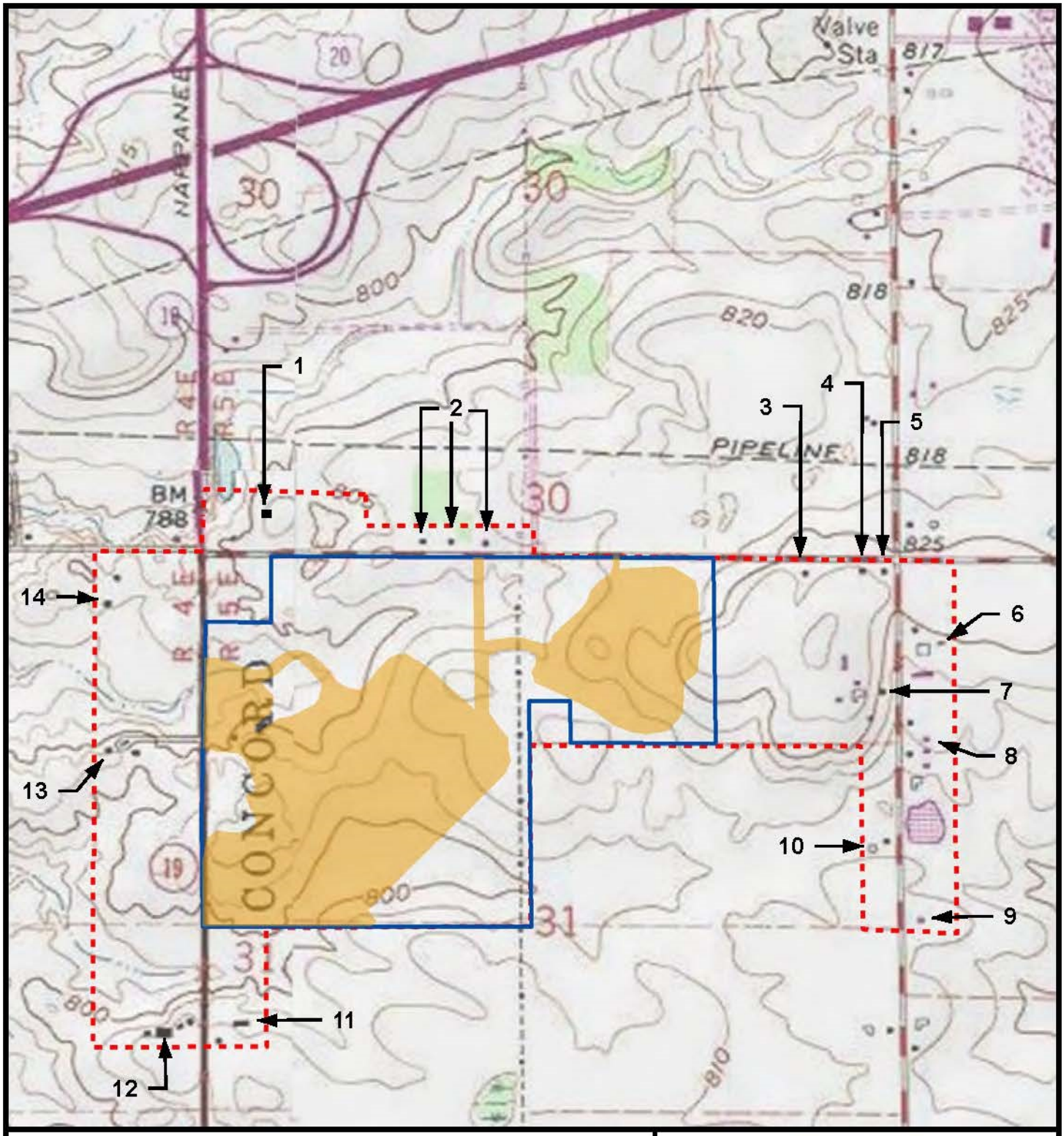

Area of Direct Effect

Elkhart Site/Area of Potential Effect

VAPE

10 → Historic-age Resource

0 500 1,000
Feet

Figure 4.6-3
Alternative B
Areas of Effect

Prepared By: 19910	Scale: 12,000
Job No.: 100020904	Date: 14 Oct 2013

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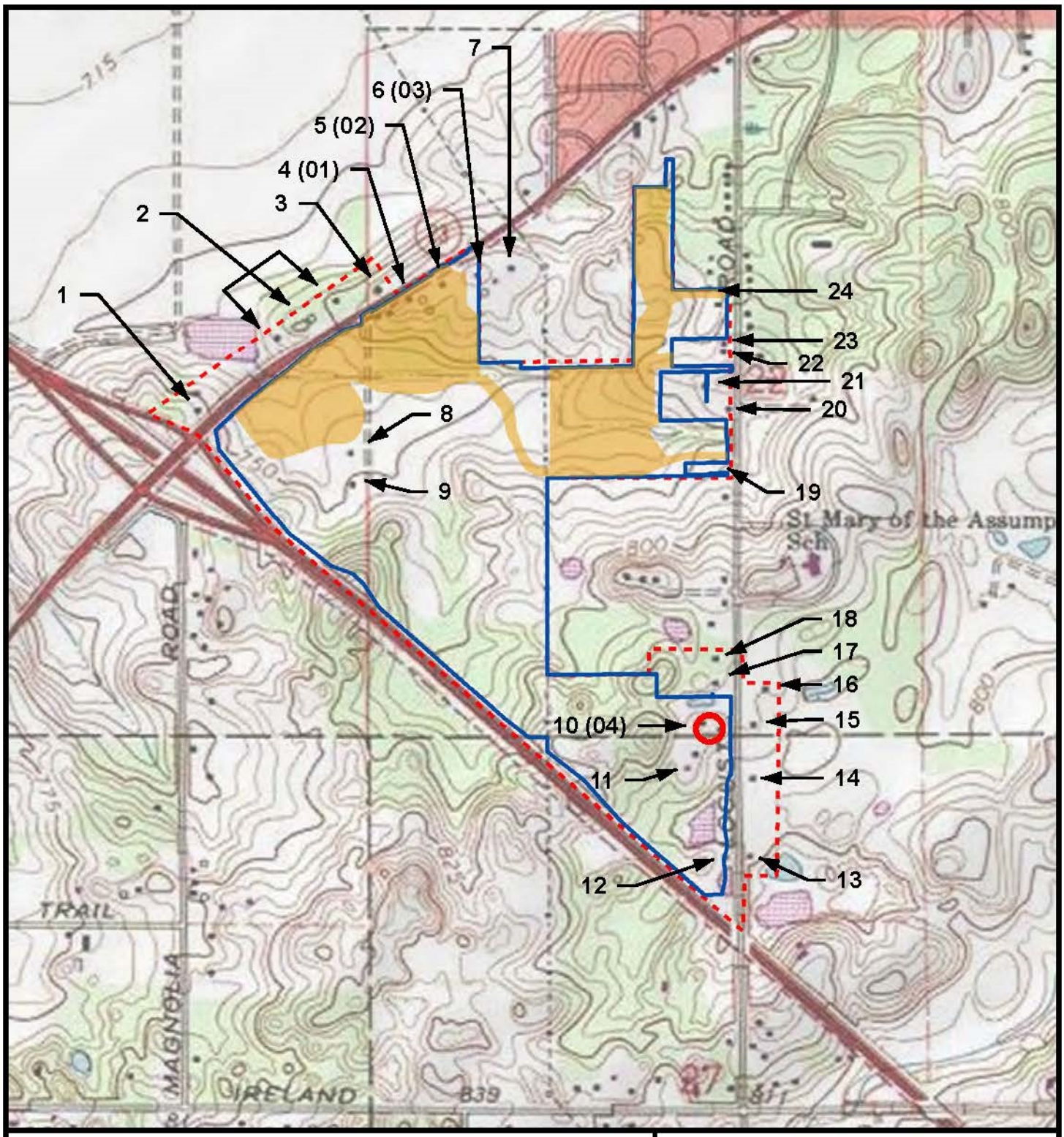

NRHP Eligible Resource

Area of Direct Effect

South Bend Site/Area of Potential Effect

VAPE

4 (01) → Historic-age Resource

Atkins Documented Historic-Age Resource

BIA Previously Identified Historic-Age Resource

0 500 1,000

Feet

Figure 4.6-4
Alternative C
Areas of Effect

Prepared By: 19910	Scale: 12,000
Job No.: 100020904	Date: 14 Oct 2013

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inclusion in the NRHP under Criteria D. Therefore, no archeological sites would be directly affected by Alternative C and no mitigation of impacts to archeological sites would be required.

Direct effects within the APE to non-archeological historic-age resources resulting from Alternative C would be similar to those described above in Alternative A.

4.6.5.2 Direct Effects within the VAPE

Direct effects within the VAPE to historic properties resulting from Alternative C would be similar to those described above in Alternative A.

4.6.6 Alternative D – No Action

Under Alternative D, there would be no ground disturbing activities, changes in landscape or impacts to structures as no construction activities would occur. Therefore, there would be no direct or indirect effect to archeological resources or non-archeological historic-age resources within the APE or VAPE as a result of Alternative D.

4.7 SOCIOECONOMIC CONDITIONS

4.7.1 Significance Criteria

4.7.1.1 Effects to the Pokagon Band

This section provides analyses of the effects of each of the defined alternatives on output, employment, earnings, housing, community infrastructure, social costs, fiscal impacts and tribal impacts. For the purposes of this analysis, potential effects to the Pokagon Band were considered significant if construction or operation of an alternative would be:

- substantially unresponsive to the purpose and need for this proposal as expressed in CHAPTER 1, PURPOSE AND NEED; inalienable lands for residences and community services for Band members living in northwest Indiana; and a substantial revenue source to fund Pokagon Band government services to Band members;
- substantially alter tribal attitudes, expectations, lifestyle, or cultural values.

4.7.1.2 Employment and Income

For the purposes of this analysis, potential effects to employment and income were considered significant if construction or operation of an alternative would:

- create or eliminate a substantial number of jobs, either directly or indirectly, for Band members and within the Project Area Communities; or
- substantially increase or decrease employment and income to surrounding businesses within the county.

4.7.1.3 Housing

For the purposes of this analysis, potential effects to housing were considered significant if construction or operation of an alternative would:

- cumulatively displace a substantial number of existing housing units, including low-income, affordable housing, thus necessitating the construction of replacement housing elsewhere.

4.7.1.4 Community Infrastructure

For the purposes of this analysis, potential effects to community infrastructure (including schools, libraries and parks) were considered significant if construction or operation of a proposed alternative would:

- cumulatively substantially increase enrollment or occupancy to existing community services facilities, exceeding their current capacity and thereby resulting in the need for new or expanded facilities;
- cumulatively substantially impact access to surrounding community services facilities; or
- directly or indirectly result in negative effects on the operation of community service resources, particularly cumulative exceedance of capacity without mitigation.

4.7.1.5 Potential Social Costs Associated with Gambling

For the purposes of this analysis, potential effects to societal issues (including alcoholism, problem gambling and associated indices such as bankruptcy, divorce, domestic violence, suicide, and crime) were considered significant if construction or operation of a proposed alternative would result in a:

- Cumulatively exceed impact-area capacity for counseling for compulsive gaming and related behavioral problems.

4.7.1.6 Fiscal Effects to the County

For the purposes of this analysis potential fiscal effects to the County were considered significant if construction or operation of a proposed alternative would result in:

- cumulative substantial increase or decrease in County revenue; or
- cumulative substantial increase or decrease in County expenditures.
- cumulative costs to other governmental units not covered by a local governmental agreement or otherwise mitigated.

4.7.2 Comparative Impact Assessment of Alternatives Socioeconomic

The socioeconomic impacts of the various alternatives are the most important resource area impacts when evaluating the actions in terms of the purpose and needs statement. As highlighted in

Chapter 1.0 and Section 3.7.3, the purpose of acquiring the South Bend site in trust is to establish a land base for the tribal members that reside in Indiana. Currently, the tribal members in Indiana are in need of housing, governmental and health services and employment as identified during several workshops. Alternative A, B and C all provide the necessary tribal village and community space to fulfill part of the purpose and need. The No Action Alternative would be significantly adverse to the Indiana Band citizens that are currently without the necessary housing and community services. The profits generated by the economic activities in Alternative C would yield significantly smaller amounts of additional income for tribal government and programs than the Preferred Alternative and Alternative B. It is clear that when revenue generation is examined that the preferred alternative best meets the purpose and needs statement. In order to meet this need both Alternatives A and B include a class III casino. The project net economic impact from a class III casino in St. Joseph County for Alternative A is approximately $620,420,000 in contrast to $414,251,000 in Elkhart County for Alternative B. The commercial development included in Alternative C has a projected net revenue of $9,358,000.

When the other socioeconomic factors are compared it becomes evident that the Preferred Alternative A most clearly satisfies the purpose and need statement. The casino development provides significantly more income and job opportunities then the other commercial development or the no action alternative.

Table 4.7-1
Comparative Impact Analysis

	Alternatives			
	A Preferred	**B**	**C**	**D**
Net economic impact	$620,420,000	$414,251,000	$9,358,000	0
Construction Cost	480 mil	480 mil	16.5 mil	0
Construction Job Creation	1,470/ two years	1,470/ two years	102/ one year	0
Employment	3,256	2,547	49	0
Housing	0.3% increase	0.4% increase	0.04% increase	0
School age children	0.4% increase	0.5% increase	0	0
Inalienable land base	165.81	0.00[1]	165.81	0.00

[1] There is no pending trust land application for the Elkhart site.

As discussed below, Alternatives A, B and C would not result in significant fiscal impacts including property tax, sales and related taxes and governmental expenditures. Increases in governmental expenditures by some local agencies are expected for all build alternatives. Social costs associated with the casino would not be significant and would decrease overtime. These costs can be mitigated for through funding for treatment programs and employee training. More details are provided in Section 5.0.

Alternatives A and B both provide a land base in Indiana for the Indiana tribal members that includes the necessary housing and governmental services as well as the revenue base needed to develop and support these services. Alternative A, the preferred alternative, best meets the purpose

and need from an economic standpoint because at this location the casino generates significantly more revenue and job opportunities.

4.7.3 Alternative A –South Bend Site Tribal Village and Casino (Preferred Alterative)

4.7.3.1 Direct Economic Effects of the Preferred Alternative

Methodology

Direct economic impacts from each alternative include the revenue (output), payroll (earnings), employment, taxes or payments in lieu of taxes, and expenditures for goods and services from on-going operations, as well as the expenditures and payroll from the construction process. Induced impact reflects changes in spending from households as wages paid cycle through the economy. Indirect impact reflects changes in inter-industry purchases, effectively measuring the impact of expenditures for other goods and services by the relevant alternative as they too cycle through the economy. Three levels of indirect and induced impact have been calculated: output - equivalent to GDP, employment, and earnings - equivalent to personal income.

Estimates of indirect and induced impacts were prepared using the IMPLAN (IMpact Analysis for PLANing) economic model originally developed for the United States Department of Agriculture Forest Service in cooperation with the Federal Emergency Management Agency and the United States Department of the Interior Bureau of Land Management. The IMPLAN model was developed at the University of Minnesota and is maintained by Minnesota IMPLAN Group in Stillwater. The IMPLAN model has been in use since 1979. The IMPLAN model accounts closely follow the conventions used in the "Input-Output Study of the U.S. Economy" by the Bureau of Economic Analysis and the rectangular format recommended by the United Nations. IMPLAN estimates impact at the county or state level. Estimates for St. Joseph County and Elkhart County are provided directly by the IMPLAN model. Estimates for the cities of South Bend and Elkhart were calculated by Klas Robinson Q.E.D. in relation to the proportion of total retail and service business sales contributed by each city to the county totals as provided by Nielsen Claritas. Because the South Bend site is located in the City of South Bend, a factor of 100 percent of the relevant ratio was used. Because the Elkhart site is not located in the City of Elkhart, a factor of 90 percent of the relevant ratio was used. All information presented in this section was prepared by KlasRobinson Q.E.D. unless otherwise noted.

Construction

The total development cost of the Preferred Alternative, including the tribal village and facilities for revenue generation, is estimated to equal approximately $480.0 million. Approximately 65.0 percent of the total development cost would be comprised of hard construction and site work expenditures, including an estimated $135.5 million in construction payroll. The remaining 35 percent would include

furnishings, fixtures, equipment, fees, working capital, pre-opening costs and construction interest. Based on an annual average construction wage of $46,000, which is consistent with state averages, that equates to more than 1,470 full-time equivalent construction jobs, assuming a 24-month construction period.

Ongoing Operations

The full projected impacts of the Preferred Alternative on the economies of the City of South Bend and St. Joseph County are presented in **Table 4.7-2** below. Figures are presented for the third year of operation, after the new gaming portion of the facilities would have established their position in the competitive marketplace. Figures for St. Joseph County include figures for the City of South Bend.

Table 4.7-2
Projected Full Economic Impact – Alternative A

	South Bend	St. Joseph County
OUTPUT:		
Direct	$427,690,000	$427,690,000
Indirect	$49,579,000	$96,330,000
Induced	$49,615,000	$96,400,000
TOTAL OUTPUT	$526.884,000	$620,420,000
EMPLOYMENT:		
Direct	2,065	2,065
Indirect	416	808
Induced	446	866
TOTAL EMPLOYMENT	2,927	3,739
EARNINGS:		
Direct	$68,108,000	$68,108,000
Indirect	$18,034,000	$35,040,000
Induced	$17,834,000	$34,650,000
TOTAL EARNINGS	$103,834,000	$137,798,000

Source: KLASROBINSON Q.E.D

The figures in the Table 4.7-2 represent the full impact of the Preferred Alternative without regard to the degree to which on-going operations achieve the projected figures due to spending substituted from other businesses in the same geographic area. Portions of the spending that would occur at Alternative A would come from spending by area residents and visitors that would have occurred at some other business in the area anyway. To the extent that this would occur, the spending and associated impacts on output, employment and earnings would not represent new economic activity for the area, but a substitution of the source of the activity from one business to the other. This is commonly referred to as the substitution effect.

There are no casinos in the City of South Bend or St. Joseph County. As a result, a large proportion of the total spending by customers at Preferred Alternative would represent new spending for the city

and county. However, there are existing hotels, restaurants and other recreational businesses from which spending at the Preferred Alternative could be diverted. Based upon a market analysis by KlasRobinson Q.E.D., 87.3 percent of total visits to the Preferred Alternative would originate from outside St. Joseph County. An estimated 92.5 percent of their spending is projected to be new spending due to the Preferred Alternative. Due to the lack of a casino in St. Joseph County, 50 percent of spending at Alternative A by county residents is estimated to be new spending within the county. Based upon these estimates, the total proportion of spending at Alternative A substituted from other St. Joseph County businesses is projected to equal 12.9 percent, with the remaining 87.1 percent of spending representing new economic activity for the county. Table 4.7-3 shows the economic activity generated by Alternative A in the City of South Bend and St. Joseph County net of substitution effects.

Table 4.7-3
Projected Net Economic Impact – Alternative A

	South Bend	St. Joseph County
OUTPUT:		
Direct	$372,438,000	$372,438,000
Indirect	$43,174,000	$83,885,000
Induced	$43,205,000	$83,946,000
TOTAL OUTPUT	$458,817,000	$540,269,000
EMPLOYMENT:		
Direct	1,798	1,798
Indirect	362	704
Induced	388	754
TOTAL EMPLOYMENT	2,548	3,256
EARNINGS:		
Direct	$59,309,000	$59,309,000
Indirect	$15,704,000	$30,513,000
Induced	$15,530,000	$30,174,000
TOTAL EARNINGS	$90,543,000	$119,996,000

Source: KLASROBINSON Q.E.D

4.7.3.2 Employment

The Preferred Alternative would have significant, beneficial impacts on employment, both during construction and then later during operation of the gaming portion of the project. Employment projections for the gaming portion of the Preferred Alternative from on-going operations, net of substitution effects, are presented in Table 4.7-2 above. Construction employment would be considered to be new employment due to the short-term and project-specific nature of construction employment. The projected employment impact from on-going operations at the Preferred Alternative would represent an increase of nearly 2.9 percent over the current number of jobs in St. Joseph County.

4.7.3.3 Housing

The new housing units included in the tribal village portion of the Preferred Alternative are not projected to have a cumulatively significant effect on the housing market in the area. The tribal village portion of the Preferred Alternative would include the construction of 44 housing units. The new units would primarily accommodate the needs of Pokagon Band members living in Indiana, the number of whom increased by 134 from 2011 to 2016 and now total 592. The 44 housing units would represent an increase of 0.1 percent in the number of units in South Bend and 0.04 percent in the number of housing units in St. Joseph County.

The new demand for housing due to the gaming portion of the Preferred Alternative is not projected to have a cumulatively significant effect on the housing market in the area. The addition of 2,548 jobs in the City of South Bend and a total of 3,256 jobs throughout St. Joseph County is likely to result in an increase in housing demand over time as workers seek to relocate closer to their place of employment. The demand for housing would be expected to be dispersed throughout South Bend and St. Joseph County. Given the level of unemployment in the city and county, and the number and locations of existing casino operations in the region, the total amount of new housing demand due to relocation is projected to be approximately 350 units. This equates to an increase of 0.3 percent in total housing units over current levels.

4.7.3.4 Community Infrastructure

Schools

The Preferred Alternative would not significantly increase the number of school-age children on a cumulative basis to exceed existing enrollment capacities in the City of South Bend and St. Joseph County schools. St. Joseph County averages one school-age child for every 2.2 households (Public School Review 2013). The average for the new households that would be anticipated to result from the economic activity generated by the Preferred Alternative, is likely to be similar and may be higher than that level. Using an average of one school age child for every 2.2 households, the new housing demand is estimated to result in no more than 159 additional school age children in St. Joseph County. As noted in Section 3.7.2, South Bend schools have a total enrollment of 19,478. Even if all of the new students would reside in South Bend, which is unlikely, the total impact would increase the total student body by only 0.8 percent, which is not considered to be a significant amount. According to the website Public School Review, there are an estimated total of nearly 41,000 students in St. Joseph County as a whole. Spread over the entire county, the estimated increase in students equates to less than 0.4 percent, not a significant amount of increase in students that would cumulatively exceed existing school capacities.

The exact number of school age children that would live in the new housing units included in the tribal village of the Preferred Alternative cannot be determined at this time. Tribal census data indicate that approximately 40 percent of the tribal population in Indiana is under the age of 18,

equating to approximately 237 individuals. It is possible that a portion of the families to which these children belong would relocate to the 44 new housing units, although many of the multi-family units are likely to house seniors and other families, or individuals without children. Hay Primary School, the closest primary school to the project area had an enrollment of 351 students in 2015/2016, according to the South Bend Community School Corporation. Greene Intermediate School, the closest such public facility, had an enrollment of 217 students for the same period. Riley High School, the closest public high school, had an enrollment of 1,311 for the same period. Spread across a total enrollment of over 1,879, even a large proportion of school children amongst the new residents in the tribal village of the Preferred Alternative would not be likely to have a significant impact on school capacity. However, the possibility exists that if sufficient children live in the housing units, a new or relocated school bus stop may be required.

Libraries and Parks

The tribal village component of the Preferred Alternative will not have cumulatively significant impacts to exceed the capacities of nearby libraries and parks in the City of South Bend or St. Joseph County. As noted in section 3.7.2, the closest library to the tribal village of the Preferred Alternative is the Tutt Branch of the St. Joseph County public library system. The closest park is Rum Village Park. Given the sizes of these entities, the drawing areas they cover, the number of housing units in the Preferred Alternative (and potential age ranges of their residents), and the dispersed nature of the new housing demand generated by the economic activity caused by the Preferred Alternative, no significant impacts on the functional capacities of Tutt Library or Rum Village Park are anticipated due to the Preferred Alternative.

4.7.3.5 Potential Social Costs

The cumulative social costs associated with the opening of the gaming portion of the Preferred Alternative would not be significant and would decrease over time. Typical methods for mitigating any costs that may arise include increased funding for compulsive gambling therapy treatment programs, training for casino employees, participation in self-exclusion programs and increased funding for local emergency services agencies that would handle calls at the subject facility.

As gambling opportunities have expanded across the country over the past 20 years, concerns among social professionals were raised over the possible social costs associated with gambling. With actual records available from multiple jurisdictions where gambling has now been available for many years, it is now apparent that the actual social costs are much lower than some historic speculations.

The January 2006 study by Policy Analytics for the Indiana Legislative Council and the Indiana Gaming Commission estimated that the total positive economic impacts of riverboat gaming in the state outweighed the costs of negative impacts by a ratio of over eight to one, yielding a net positive impact of at least $717,290,000 for Indiana (National Indiana Gaming Commission 2013). Even that

figure was based upon estimates of an additional 0.39 percent of Indiana adults becoming problem or pathological gamblers and estimates of increased crime and bankruptcy due to riverboats.

More recently, Howard J. Shaffer, a Harvard professor and expert on pathological gambling, along with Ryan Martin, found that the lifetime rate of problem gambling in the U.S. has, if anything, decreased from the mid-1970s to the mid-2000s (Shaffer and Martin 2011), despite the assertion by Sheldrake et al. (2006) that there has been a proliferation of gambling opportunities across the nation. The analysis by Shaffer and Martin suggests that exposure to new gambling opportunities does not result in a long-term increase in gambling disorders, but at most a brief, short-term spike that disappears as the novelty effect wears off and residents in the area adapt to the new exposure (Shaffer &Ryan 2011). Their analysis also found that even individuals with more severe gambling problems improve and adapt just as those with lesser or no gambling problems.

According to statistics published by the Indiana Council on Problem Gambling, a total of 11,158 people have called the State Problem Gambling Help line over the past ten years--a cumulative total of approximately 0.2 percent of the current adult population. The highest number of calls in any given year during that period was 1,385 in 2007, representing only 0.03 percent of the current adult population. Some counties in Indiana with casinos, such as Lake, Vanderburgh and LaPorte have a higher number of calls than average. However, others such as Switzerland and Ohio, did not have more than five calls in any of the past ten years--the minimum threshold to appear in the report. At the same time, counties such as Marion and St. Joseph, that do not have casinos, have higher than average call rates. In the past two years, there have been more calls from Marion County (no casino) than from Lake County (casino).

Uniform Crime Report data published by the FBI is available for the City of Hammond, proximate to all of the Lake Michigan casinos, from 1995, before the casinos were open, to 2011. According to those reports, the number of serious crimes (murder, sexual assault, robbery, burglary, assault, larceny and auto theft) reported to authorities in the City of Hammond has decreased by a dramatic 39.2 percent from 1995 to 2011, rather than increasing. The rate of decrease is more than two and a half times the decline for the State of Indiana as a whole at 15.3 percent (FBI 2013).

The city of South Bend Police Department or St. Joseph County Sheriff's Department may notice an increase in the absolute number of petty crimes per time period, but only because more people are concentrated at the gaming facility, as is the case for any crowd even at a non-gaming event. But the rates of specific crimes per thousand people appear to remain constant whether the crowd-gathering event is either gaming or non-gaming. The types of crimes near gaming facilities may tend to shift over time to petty misdemeanors involving forgery and fraud, such as writing bad checks. While other types of crime such as domestic abuse and non-payment of debt or other financial stress for people residing near gaming facility might tend to diminish due to increased availability of desirable employment opportunities.

The year before the opening of gaming in Indiana, 1995, was a year of relative prosperity across the country. In contrast, 2012 was a year of continuing slow recovery from the "Great Recession." Not surprisingly, the percentage of the population filing for bankruptcy in Indiana and the U.S. as a whole was higher in 2012 than in 1995. In 1995, approximately 0.4 percent of the population in Indiana filed for personal bankruptcy, compared to approximately 0.5 percent in 2012. By comparison, approximately 0.3 percent of the total U.S. population filed for bankruptcy in 1995, compared to 0.4 percent in 2012. As a practical matter, it is difficult to make comparisons over time for bankruptcy filings due to the law changes that occurred in 2005.

The evidence indicates that the cumulative social costs associated with the opening of Alternative A will be marginal at worst and will decrease over time as summarized above and referenced in the Uniform Crime Report data (FBI 2013). Typical methods for mitigating any costs that arise include increased funding for compulsive gambling programs, training for casino employees, participation in self-exclusion programs and increased funding for local emergency services agencies that would handle calls at the subject facility.

4.7.3.6 Fiscal Effects

Property Tax

The Preferred Alternative's impact on the City of South Bend's property tax revenues would not be significant. Local governments cannot impose property taxes on tribal trust lands. According to the Comprehensive Annual Financial Report of the City of South Bend, the 2014 total tax levy, payable in 2015, on the proposed fee-to-trust parcels was $30,984.92, approximately 0.07% of the city's total property tax revenue in 2014. The amount of the 2014 tax levy represents an approximate amount that would be lost by all taxing entities combined from the removal of the subject parcels from the tax rolls as part of the Preferred Alternative. The housing demand associated with job creation from Alternative A was calculated through the IMPLAN model, and additionally calculated was the increased amount of property taxes associated with building new homes throughout St. Joseph County. The loss of property tax revenue from the site being put into trust land could potentially be mitigated by the indirect impact of increased property taxes throughout St. Joseph County from the demand for 350 new housing units in response to new jobs created by the Preferred Alternative (previously described in 4.7.3.3).

Sales and Related Taxes

The Preferred Alternative would not have an adverse impact on the current magnitude of State of Indiana sales and related taxes and will have a beneficial effect on state sales tax revenues compared to the No Action Alternative. Sales at the Preferred Alternative would be subject to the various point–of-sale taxes assessed by the State of Indiana except the small percentage of transactions with the Band or Band citizens. In general, states cannot impose sales and related taxes on transactions with Indian tribes or their members that occur on tribal trust land. On an

indirect basis, the Preferred Alternative would generate or induce sales of taxable items that would generate sales or related tax revenue of approximately $1.3 million per year elsewhere in South Bend, St. Joseph County, and in larger geographic areas and that economic activity would generate additional indirect sales and related tax revenue for the state. KlasRobinson Q.E.D. has estimated that total additional sales and related tax revenue from indirect and induced output would approximate $1.3 million per year.

Governmental Expenditures

The Preferred Alternative would not have significant effects on expenditures for governmental services by other governmental units in the project area. Expenditures by various levels of government would be likely to change due to the economic impact of the Preferred Alternative. Increased expenditures may be necessary by emergency services agencies, agencies that deal with transportation infrastructure, problem gambling programs and possibly schools or other community services, although those amounts are likely to be small as previously noted. Decreased expenditures may occur for social service agencies as additional employment and economic activity occur. Increases in expenditures by some agencies may be mitigated by increases in sales and income tax revenue due to the increased economic activity. Decreases in expenditures for some agencies would also provide some overall balance for any increases in expenditures for other agencies, but the offsets would not necessarily be direct.

4.7.3.7 Effects to the Pokagon Band

This portion of the assessment of significance of impacts focuses on the purpose and need for the proposal, as stated in Chapter 1 and Section 3.7.3. The Preferred Alternative would establish an inalienable land base for the Pokagon Band from which to provide tribal government services to Band members living in northwest Indiana. The housing and community center in the tribal village component of the Preferred Alternative would benefit the Pokagon Band members living in the area by providing them with clustered and enhanced housing options and a focal point for community functions. Band members living in the area and those willing to relocate to the area would also have access to the employment opportunities created directly by the casino and ancillary facilities, and indirectly by the economic activity they would initiate. The profits generated by the economic activities of the Preferred Alternative would yield millions of dollars annually for the Pokagon Band. Tribal attitudes, expectations, lifestyle and culture would be enhanced by the community building benefits of the new tribal housing and community center, and by the income generated to support community programs.

4.7.4 Alternative B – Elkhart Site Tribal Village and Casino

4.7.4.1 Direct Economic Effects of the Project

Construction

The total development cost of Alternative B is estimated to equal approximately $480.0 million. Approximately 65.0 percent of the total development cost would be comprised of hard construction and site work expenditures, including an estimated $135.5 million in construction payroll. The remaining 35 percent would include furnishings, fixtures, equipment, fees, working capital, pre-opening costs and construction interest. Based on an annual average construction wage of $46,000, which is consistent with state averages, that equates to more than 1,470 full-time equivalent construction jobs, assuming a 24-month construction period.

On-going Operations

The full projected impact of Alternative B on the economies of the City of Elkhart and Elkhart County are presented in Table 4.7-4 below. Figures are presented for the third year of operation, after the new facilities would have established their position in the competitive marketplace. Figures for Elkhart County include figures for the City of Elkhart.

Table 4.7-4
Projected Full Economic Impact – Alternative B

	Elkhart City	Elkhart County
OUTPUT:		
Direct	0	$374,910,000
Indirect	$27,977,000	$60,165,000
Induced	$20,847,000	$44,833,000
TOTAL OUTPUT	$48,824,000	$479,908,000
EMPLOYMENT:		
Direct	0	1,935
Indirect	278	598
Induced	194	418
TOTAL EMPLOYMENT	473	2,951
EARNINGS:		
Direct	$0	$63,913,000
Indirect	$10,510,000	$22,603,000
Induced	$6,657,000	$14,315,000
TOTAL EARNINGS	$17,167,000	$100,831,000

Source: KLASROBINSON Q.E.D

The figures in Table 4.7-4 represent the full impact of Alternative B without regard to the degree to which on-going operations achieve the projected figures due to spending substituted from other businesses in the same geographic area. Portions of the spending that would occur at Alternative B would come from spending by area residents and visitors that would have occurred at some other business in the area anyway. To the extent that this would occur, the spending and associated impacts on output, employment and earnings would not represent new economic activity for the

area, but a substitution of the source of the activity from one business to the other. This is commonly referred to as the substitution effect.

There are no casinos in Elkhart County. As a result, a large proportion of the total spending by customers at Alternative B would represent new spending for the county. However, there are existing hotels, restaurants and other recreational businesses from which spending at Alternative B could be diverted. Based upon a market analysis by KlasRobinson Q.E.D., 89.3 percent of total visits to Alternative B would originate from outside Elkhart County. An estimated 92.5 percent of their spending is projected to be new spending due to Alternative B. Due to the lack of a casino in Elkhart County, 35 percent of spending at Alternative B by county residents is estimated to be new spending within the county. Based upon these estimates, the total proportion of spending at Alternative B substituted from other Elkhart County businesses is projected to equal 13.7 percent, with the remaining 86.3 percent of spending representing new economic activity for the county. The Table 4.7-5 shows the economic activity generated by Alternative B in the City of Elkhart and Elkhart County net of substitution effects.

Table 4.7-5
Projected Net Economic Impact – Alternative B

	Elkhart City	Elkhart County
OUTPUT:		
Direct	$0	$323,618,000
Indirect	$24,149,000	$51,934,000
Induced	$17,995,000	$38,699,000
TOTAL OUTPUT	$42,144,000	$414,251,000
EMPLOYMENT:		
Direct	0	1,670
Indirect	240	516
Induced	168	361
TOTAL EMPLOYMENT	408	2,547
EARNINGS:		
Direct	$0	$55,169,000
Indirect	$9,073,000	$19,511,000
Induced	$5,746,000	$12,357,000
TOTAL EARNINGS	$14,819,000	$87,037,000

Source: KLASROBINSON Q.E.D

4.7.4.2 Employment

Alternative B would have significant beneficial impacts on employment, both during construction and then later during operation of the gaming portion of the project. Employment projections from the gaming portion of Alternative B from on-going operations, net of substitution effects, were presented in the **Table 4.7-4** above. Construction employment would be considered to be new employment due to the short-term and project specific nature of construction employment. The projected employment impact from on-going operations at Alternative B would represent an increase of nearly 2.5 percent over the current number of jobs in Elkhart County.

4.7.4.3 Housing

Alternative B would include the construction of 44 tribal housing units, not a cumulatively significant impact to the housing stock or housing market in the impact area. The new units would primarily accommodate the needs of Pokagon Band members living in Indiana, the number of whom increased by 134 from 2011 to 2016 and now total 592 in June of 2016. The 44 housing units would represent an increase of 0.06 percent in the number of housing units in Elkhart County.

Alternative B would not have a cumulatively significant impact on housing due to creation of additional demand for housing in the area. Alternative B would create an additional 2,547 jobs throughout Elkhart County that would likely result in an increase in housing demand over time as workers seek to relocate closer to their place of employment. The demand for housing is expected to be dispersed throughout Elkhart County. Given the level of unemployment in the county and the number and locations of existing casino operations in the region, the total amount of new housing demand due to relocation is projected to be approximately 325 units. This equates to an increase of 0.4 percent in total housing units over current levels.

4.7.4.4 Community Infrastructure

Schools

Alternative B would not have cumulatively significant impacts to the school system in Elkhart County by exceeding the student capacities of the existing schools. Elkhart County averages one school-age child for every 1.8 households. The average for the new households that would be anticipated to result from the economic activity generated by Alternative B is likely to higher than that level. Using an average of one school age child for every 2.0 households, (lower than the average assumed for Alternative A), the new housing demand is estimated to result in no more than 163 additional school age children in Elkhart County. According to the website Public School Review, there are an estimated total of approximately 36,000 students in Elkhart County as a whole. Spread over the entire county, the estimated increase in students equates to less than 0.5 percent, not a significant amount.

The exact number of school age children that would live in the new tribal housing units included in Alternative B cannot be determined at this time. Tribal census data indicate that approximately 40 percent of the tribal population in Indiana are under the age of 18, equating to approximately 237 individuals using 2016 population figures. It is possible that a portion of the families to which these children belong would relocate to the 44 new housing units, although many of the multi-family units are likely to house seniors and other families, or individuals without children. West Side Elementary School, the closest public primary school, has an enrollment of 437 students according to Public School Review. Concord Intermediate School, the closest such public facility, has an enrollment of 769 students. Concord Junior High School, the closest such public facility, has an enrollment of 782 students. Concord High School, the closest public high school, has an enrollment

of 1,499 according to Public School Review. Spread across a total enrollment of over 3,485 students, even a large proportion of school children amongst the new residents in the tribal housing component of Alternative B would not likely have a significant impact on school capacity. However, the possibility exists that if sufficient children live in the housing units, a new or relocated school bus stop may be required.

Libraries and Parks

The tribal village component of Alternative B would not have cumulatively significant impacts to exceed the capacities of the libraries and parks located in the City of Elkhart or Elkhart County. As noted in section 3.7.2, there are no parks located in the vicinity of the Alternative B site. The City of Elkhart has numerous community and neighborhood parks located to the north of the site of the tribal village. The closest library to the Alternative B site is also in the City of Elkhart. No need for changes to the existing park and library systems in the area would be anticipated.

4.7.4.5 Potential Social Costs

Alternative B would not have cumulative significant impacts regarding the potential additional social costs associated with gaming. Background information on the potential social costs of gambling was provided above in Section 4.7.1.5. The evidence indicates that the cumulative social costs associated with the opening of Alternative B would be marginal at worst and would decrease over time. Typical methods for mitigating any costs that would arise due to Alternative B include increased funding for compulsive gambling programs, training for casino employees, participation in self-exclusion programs and increased funding for local emergency services agencies that would handle calls at the subject facility.

4.7.4.6 Fiscal Effects to the County

Property Tax

Alternative B would not have cumulative significant impacts to the property tax revenues for the county. In general, local governments cannot impose property taxes on tribal trust lands. The 2014 total tax levy, payable in 2015, on the proposed parcels was $8,363, approximately 0.3% of the $28,396,912 total property tax collected in 2012 by Elkhart County, according to the 2013 Annual Statistical Report of Elkhart County. The amount of the 2014 tax levy represents an approximate amount that would be lost by all taxing entities combined from the removal of the subject parcels from the tax rolls. The housing demand associated with job creation from Alternative B was calculated through the IMPLAN model, and additionally calculated was the increased amount of property taxes associated with building new homes throughout Elkhart County. The loss of revenue if the land at the Elkhart site is taken into trust could potentially be mitigated by the indirect impact of increased property taxes throughout Elkhart County from the demand for 325 new housing units in response to new jobs created by Alternative B (previously described in 4.7.4.3).

Sales and Related Taxes

Alternative B would not have cumulative significant impacts to sales and related tax revenues for the State of Indiana. As explained above for the Preferred Alternative, sales at Alternative B would not be subject to the various point–of-sale-taxes assessed by the State of Indiana except the small percentage of transactions with the Band or Band citizens. Sales of taxable items generated elsewhere in Elkhart County and in larger geographic areas on an indirect and induced basis by the economic activity at Alternative B would generate additional tax revenue. KlasRobinson Q.E.D. has estimated that total additional sales and related tax revenue from indirect and induced output would approximate $0.6 million per year.

Governmental Expenditures

Alternative B would not have significant adverse effects on the magnitude of revenues available to local governmental units that they use to provide governmental services. Expenditures by various levels of government would be likely to change due to the economic impact of Alternative B. Increased expenditures may be necessary by emergency services agencies, agencies that deal with transportation infrastructure, problem gambling programs and possibly schools or other community services, although those amounts are likely to be small as previously noted. Decreased expenditures may occur for social service agencies as additional employment and economic activity occur. Increases in expenditures by some agencies may be mitigated by increases in sales and income tax revenue due to the increased economic activity. Decreases in expenditures for some agencies would also provide some overall balance for any increases in expenditures for other agencies, but the offsets would not necessarily be direct.

4.7.4.7 Effects to the Pokagon Band

This portion of the assessment of significance of impacts focuses on the purpose and need for the proposal, as stated in Chapter 1 and Section 3.7.3. Alternative B would establish an inalienable land base for the Pokagon Band from which to provide tribal government services to Band members living in northwest Indiana. The tribal village housing and community center components of Alternative B would benefit the Pokagon Band members living in the area by providing them with clustered and enhanced housing options and a focal point for community functions. Band members living in the area and those willing to move to the area would also have access to the employment opportunities created directly by the casino and ancillary facilities, and indirectly by the economic activity they would initiate. The profits generated by the economic activities in Alternative B would yield millions of dollars annually for the Pokagon Band more than the No Action Alternative, but less than the net revenues generated by the Preferred Alternative. This is the single issue that helps most sharply compare the alternatives for BIA's decision making in this EIS process. Tribal attitudes, expectations, lifestyle and culture would be enhanced by the community building benefits of the new housing and community center, and by the income produced to support community programs.

4.7.5 Alternative C – South Bend Site Tribal Village With Commercial Development

4.7.5.1 Direct Economic Effects of the Project

Construction

The total development cost of Alternative C is estimated to equal approximately $16.5 million. Approximately 65.0 percent of the total development cost would be comprised of hard construction and site work expenditures, including an estimated $4.7 million in construction payroll. The remaining 35 percent would include furnishings, fixtures, equipment, fees, working capital, pre-opening costs and construction interest. Based on an annual average construction wage of $46,000, which is consistent with state averages, approximately 102 full-time equivalent construction jobs would be created assuming a 12-month construction period.

On-going Operations

The full projected impact of Alternative C on the economies of the City of South Bend and St. Joseph County are presented in the Table 4.7-6 below. Figures are presented for the third year of operation, after the new non-gaming commercial portion of Alternative C would have established their position in the competitive marketplace. Figures for St. Joseph County include figures for the City of South Bend.

Table 4.7-6
Projected Full Economic Impact – Alternative C

	South Bend	St. Joseph County
OUTPUT:		
Direct	$24,672,000	$24,672,000
Indirect	$2,626,000	$5,103,000
Induced	$3,731,000	$7,250,000
TOTAL OUTPUT	$31,029,000	$37,025,000
EMPLOYMENT:		
Direct	72	72
Indirect	24	46
Induced	38	73
TOTAL EMPLOYMENT	134	192
EARNINGS:		
Direct	$1,399,000	$1,399,000
Indirect	$1,123,000	$2,182,000
Induced	$1,510,000	$2,933,000
TOTAL EARNINGS	$4,032,000	$6,514,000

Source: KLASROBINSON Q.E.D

The figures in Table 4.7-6 represent the full impact of Alternative C without regard to the degree to which on-going operations achieve the projected figures due to spending substituted from other businesses in the same geographic area. Portions of the spending that would occur at Alternative C would come from spending by area residents and visitors that would have occurred at some other

business in the area anyway. To the extent that this would occur, the spending and associated impacts on output, employment and earnings would not represent new economic activity for the area, but a substitution of the source of the activity from one business to the other. This is commonly referred to as the substitution effect.

Unlike Alternatives A and B, there are numerous other businesses in South Bend and greater St. Joseph County that cater to the same customer base as the components of Alternative C. As a result, a large proportion of the total spending by customers at Alternative C would be substituted from existing businesses. Based upon a market analysis by Klas Robinson Q.E.D., the total proportion of spending at Alternative C substituted from other St. Joseph County businesses is projected to equal 74.7 percent, with the remaining 25.3 percent of spending representing new economic activity for the county. **Table 4.7-7** shows the economic activity generated by Alternative C in the City of South Bend and St. Joseph County net of substitution effects.

Table 4.7-7
Projected Net Economic Impact, Alternative C

	South Bend	St. Joseph County
OUTPUT:		
Direct	$6,236,000	$6,236,000
Indirect	$664,000	$1,290,000
Induced	$943,000	$1,832,000
TOTAL OUTPUT	$7,843,000	$9,358,000
EMPLOYMENT:		
Direct	18	18
Indirect	6	12
Induced	10	19
TOTAL EMPLOYMENT	34	49
EARNINGS:		
Direct	$354,000	$354,000
Indirect	$284,000	$552,000
Induced	$381,000	$741,000
TOTAL EARNINGS	$1,019,000	$1,647,000

Source: KLASROBINSON Q.E.D

4.7.5.2 Employment

Alternative C could have positive but not significant impacts on employment, both during construction and long term operation of the non-gaming commercial businesses. Employment projections from on-going operations, net of substitution effects, were presented in **Table 4.7-6** above. Construction employment would be considered to be new employment due to the short-term and project specific nature of construction employment. The projected employment impact from on-going operations at Alternative C would represent an increase of 0.04 percent over the current number of jobs in St. Joseph County.

4.7.5.3 Housing

The new housing units included in the tribal village portion of Alternative C are not projected to have a cumulative significant effect on the housing market in the area. The tribal village portion of Alternative C would include the construction of 44 tribal housing units. The new units would primarily accommodate the needs of Pokagon Band members living in Indiana, the number of whom increased by 134 from 2011 to 2016 and now total 592 in June of 2016. The 44 housing units would represent an increase of 0.1 percent in the number of units in South Bend and 0.04 percent in the number of housing units in St. Joseph County. The new housing units are not projected to have a significant effect on the housing market in the area. The addition of 34 jobs in the City of South Bend and a total of 49 jobs throughout St. Joseph County would not be expected to result in an increase in housing demand for either jurisdiction.

4.7.5.4 Community Infrastructure

Schools

Alternative C would not have a cumulatively significant increase in the number of school age children that might exceed enrollment capacities in the schools in the City of South Bend and St. Joseph County. The exact number of school age children that would live in the new tribal housing units included in Alternative C cannot be determined at this time. Tribal census data indicate that approximately 40 percent of the tribal population in Indiana are under the age of 18, equating to approximately 237 individuals using 2016 population figures. It is possible that a portion of the families to which these children belong would relocate to the 44 new housing units, although many of the multi-family units are likely to house seniors and other families or individuals without children. Hay Primary School, the closest primary school had an enrollment of 505 students in 2011/2012, according to the South Bend Community School Corporation. Greene Intermediate School, the closest such public facility, had an enrollment of 351 students for the same period. Riley High School, the closest public high school, had an enrollment of 1,365 for the same period (Public School Review 2013). Spread across a total enrollment of over 2,220, even a large proportion of school children amongst the new residents in the housing component of Alternative C would not be likely to have a significant impact to exceed existing school capacities. However, the possibility exists that if sufficient children live in the housing units, a new or relocated school bus stop may be required.

Libraries and Parks

The tribal village component of Alternative C would not cumulatively significantly exceed the capacities of the libraries and parks in the City of South Bend or St. Joseph County. As noted in section 3.7.2, the closest library to Alternative C is the Tutt Branch of the St. Joseph County public library system. The closest park is Rum Village Park. Given the sizes of these entities, the drawing areas they cover, and the number of housing units in Alternative C (and potential age ranges of their

residents), no significant impacts on the functional capacities of Tutt Library or Rum Village Park are anticipated due to Alternative C.

4.7.5.5 Potential Social Costs

The facilities planned under Alternative C are not expected to generate enough supplemental activity in the surrounding area to create any significant increases in social costs caused by Alternative C.

4.7.5.6 Fiscal Effects to the County

Property Tax

Alternative C's impacts on City of South Bend's and St. Joseph Counties property tax revenues are not likely to be cumulatively significant. The 2014 total tax levy, payable in 2015, on the proposed fee-to-trust parcels was $30,984.92, approximately 0.07% of the city total, according to the Comprehensive Annual Financial Report of the City of South Bend. The amount of the 2014 tax levy represents an approximate amount that would be lost by all taxing entities combined from the removal of the subject parcels from the tax rolls.

Sales and Related Taxes

Alternative C would not have a cumulatively significant impact on the sales and related tax revenues for the State of Indiana. Sales at Alternative C would not be subject to the various point-of-sale taxes assessed by the State of Indiana. However, sales of taxable items generated elsewhere in South Bend, St. Joseph County and larger geographic areas on an indirect and induced basis by the economic activity at Alternative C, would generate additional tax revenue. KlasRobinson Q.E.D. has estimated that total additional sales and related tax revenue from indirect and induced output would approximate $13,400 per year.

Governmental Expenditures

The scale of development and level of economic activity under Alternative C are not expected to have a cumulatively significant impact on expenditures by relevant governmental entities.

4.7.5.7 Effects to the Pokagon Band

This portion of the assessment of significance of impacts focuses on the purpose and need for the proposal, as stated in Chapter 1 and Section 3.7.3. Alternative C would establish an inalienable land base for the Pokagon Band from which to provide tribal government services to Band members living in northwest Indiana. The inalienable land base created by Alternative C would be the same as for the Preferred Alternative, and greater than the land base created by Alternative B and the No Action Alternative. The housing and community center components of Alternative C would benefit the Pokagon Band members living in the area by providing them with clustered and enhanced

housing options and a focal point for community functions in similar quantities to the Preferred Alternative and Alternative B, but in significantly greater amounts than the No Action Alternative. Band members living in the area and those willing to relocate to the area would also have access to the employment opportunities created directly by the other components of Alternative C. The profits generated by the economic activities in Alternative C would yield significantly smaller amounts of additional income for tribal government and programs than the Preferred Alternative and Alternative B, but greater tribal government revenues than the No Action Alternative. Tribal attitudes, expectations, lifestyle and culture would be enhanced by the community building benefits of Alternative C with the new housing and community center, and by the modest non-gaming income produced to support community programs.

4.7.6 Alternative D – No Action

Alternative D would contribute nothing to the purpose and need for the proposal, as stated in Chapter 1 and Section 3.7.3. Alternative D would establish no inalienable land base for the Pokagon Band from which to provide tribal government services to Band members living in northwest Indiana. Under Alternative D, the subject parcels would not be taken into trust for the Pokagon Band. Tribal members living in Indiana would not have access to the proposed housing or community center. Tribal government would not have access to the additional income from the proposed tribal business development on the site. City and county government would not lose the property taxes currently levied on the parcels, but they would also not benefit from the increased employment and indirect and induced economic activity projected to be generated under Alternatives A, B or C.

4.8 RESOURCE USE PATTERNS

4.8.1 Significance Criteria

4.8.1.1 Transportation/Circulation

For the purposes of this analysis, potential transportation/circulation effects were considered significant if during intersection capacity analyses, it was determined that construction or operation of an alternative would result in:

- a lane group that is forecast to operate at LOS E or F with the addition of project traffic and without any roadway or traffic control improvements; or
- a lane group that is operating at LOS E or F under the Do Nothing conditions (see Methodologies section below for descriptions of conditions) and the project traffic causes an increase in delay of 50 seconds or greater. In determining these acceptable LOS ratings and need for mitigation, INDOT and St. Joseph County were consulted because INDOT has jurisdiction by law (see 40 CFR 1508.15) and special expertise (see 40 CFR 1508.26) for state highways and St. Joseph county has jurisdiction by law and special expertise for county highways.

4.8.1.2 Land Use

For the purposes of this analysis, potential impacts to land use were considered significant if construction or operation of an alternative would:

- directly displace residences or businesses;
- create or induce incompatible adjacent designated or proximate land uses, thereby impeding effective local and regional planning efforts;
- increase new development and related growth in a manner inconsistent with land uses, zoning and land use plans as applicable. The cities currently have special expertise and jurisdiction by law for land use regulation at the sites in South Bend and Elkhart. But if BIA approves Alternative A, B or C, then the role of special expertise and jurisdiction by law will shift the Pokagon Band of Potawatomi Indians.

4.8.1.3 Agriculture

For the purposes of this analysis, potential impacts to agriculture were considered significant if implementation of an alternative would:

- not include BIA's compliance with Farmland Protection Policy Act (FPPA). The USDA Natural Resources Conservation Service (NRCS) has special expertise for the FPPA as it has statutory responsibility to review impacts to prime and unique farmland. Coordination with the NRCS through filing of a Farmland Conversion Impact Rating form and inclusion of their results in this document fulfills FPPA requirements.

4.8.2 Comparative Impact Assessment of Alternatives – Resource Use

A traffic analyses presented in this section summarize and compare the future conditions for all the alternatives with and without roadway improvements (i.e., potential mitigation measures). Alternative A, B and C analysis shows that with mitigation measures all previously unacceptable intersection and lane groups would operate adequately (no significant impact) during both the Opening Year (2020) and the Horizon Year (2035). Alternative D would not alter traffic patterns and therefore mitigation measures are not necessary. Land use alterations associated with each of the alternatives would not be considered significant impacts. Alternatives A, B, and C would all cause impacts to prime farmlands. The preferred alternative would impact less prime farmland than Alternative B. Coordination with the NRCS in regard to FPPA concerns has been completed regarding the evaluation of the prime farmland at both South Bend and Elkhart sites.

4.8.3 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

4.8.3.1 Transportation/Circulation

This section summarizes the analysis of traffic impacts for Alternative A – South Bend Site Tribal Development (Preferred Alternative) on the surrounding transportation network. The Preferred Alternative with the mitigation measures in **Figure 4.8-4** would operate adequately with no significant impact during both the Opening Year (2020) and the Horizon Year (2035). Note that some of the mitigation features are assumed to be implemented by 2020 and other features by 2035.

The detailed traffic analyses presented in this section summarize and compare the future conditions for Alternative A both with and without roadway improvements (i.e., potential mitigation measures). For the purposes of comparing the Alternative A conditions to baseline scenarios, the results of the existing conditions analysis and the No Action Alternative conditions analysis for the South Bend site are also presented in this section. The study methods presented in this section are applicable to all Alternatives.

Methodology

This section presents the study methodology for determining the traffic impacts of the Preferred Alternative. The methods presented below were followed for the analysis of all Alternatives.

- Existing (Year 2013): The existing conditions analysis methods and results were summarized in Section 3.8.
- No Action Alternative (Year 2020): Discussions with the project development team revealed that the site could be constructed by 2020. Therefore, this year was selected as the "Opening Year" scenario. Background traffic growth was determined by consulting with the local Metropolitan Planning Organization, the Michiana Area Council of Governments (MACOG). In a phone call with MACOG, GIS Modeling Manager John-Paul Hopman on February 13, 2013 (see **Appendix F**), background growth was discussed and it was agreed that a 1 percent annual growth rate (linear) would be appropriate. This growth rate accounts for any reasonably foreseeable local or regional projects which may contribute to increases in traffic volumes and this information is required for the cumulative impact analysis 40 CFR 1508.7. Any planned roadway capacity improvements are addressed in the cumulative impacts Section 4.13. The existing traffic volumes were increased by seven percent, and intersection capacity analyses were conducted and summarized for the South Bend site intersections.
- No Action Alternative (Year 2035): The MACOG Long Range Transportation Plan depicts a "Horizon Year" of 2035 for the purposes of planning roadway improvements in the region (MACOG 2010). It was determined that this year is an appropriate benchmark to compare the future impact of the Preferred Alternative A. The existing traffic volumes were increased

by twenty-two percent, and the no action (2035) intersection capacity analyses were conducted and summarized for the South Bend site intersections.

- Preferred Alternative A without Road Improvements (Year 2020): Trip generation, distribution, and assignment for Alternative A were performed, and the traffic was added to the 2020 No Action traffic volume projections for the South Bend project site. No roadway or traffic control improvements (i.e., mitigation) were assumed to be implemented in order to assess the relative effect of the Preferred Alternative A traffic by itself. Proposed Alternative A without Road Improvements (2020) intersection capacity analyses were conducted and summarized for the South Bend site intersections and project driveways. Intersection lane groups which meet the criteria for significant impacts were identified.
- Preferred Alternative A with Road Improvements (Year 2020): Mitigation measures required to be implemented in order for the study intersections to fall below the significance criteria were determined. This was performed through capacity analyses, signal warrant analyses, and auxiliary lane warrant analyses. Preferred Alternative A with Road Improvements (2020) intersection capacity analyses were conducted and summarized for the South Bend site intersections and project driveways.
- Preferred Alternative A without Road Improvements (Year 2035): Trip generation, distribution, and assignment for Alternative A were performed, and the traffic was added to the 2035 No Build traffic volume projections for the South Bend project site. No roadway or traffic control improvements (i.e., mitigation) were assumed to be implemented in order to assess the relative effect of the proposed Alternative A traffic by itself. Proposed Alternative A without Road Improvements (2035) intersection capacity analyses were conducted and summarized for the South Bend site intersections and project driveways. Intersection lane groups which meet the criteria for significant impacts were identified.
- Preferred Alternative A with Road Improvements (Year 2035): Mitigation measures required to be implemented in order for the study intersections to fall below the significance criteria were determined. This was performed through capacity analyses, signal warrant analyses, and auxiliary lane warrant analyses. Preferred Alternative A with Road Improvements (2035) intersection capacity analyses were conducted and summarized for the St. Joseph County site intersections and project driveways.

For purposes of this EIS, the analysis presented within this discussion would address the potential transportation effects resulting from the Preferred Alternative A in the Opening Year (2020) of the proposed development and in the future Horizon Year (2035).

Project Study Area

To evaluate potential impacts to transportation network resulting from Alternative A, analyses were conducted for the following intersections:

- SR-23 at Ireland Road
- SR-23 at US 31/20 (Eastbound Ramps)
- SR-23 at US 31/20 (Westbound Ramps)

- SR-23 at New Energy Drive
- SR-23 at Prairie Avenue
- SR-23 at Locust Road
- SR-23 at Ewing Avenue
- Ireland Road at Locust Road
- SR-23 at Mayflower Road

These intersections were identified in the project study area and were predetermined as intersections of interest for the analyses. Patrons, employees, vendors, and residents are likely to utilize the primary roadways such as US 31/20, SR-23, and Locust Road as they provide direct access to the casino and tribal village. SR-23, classified by the Indiana Department of Transportation (INDOT), is a two-lane minor arterial and Locust Road is a two-lane major collector street (MACOG 2010). SR-23 is anticipated to have higher traffic volumes due to the proximity to US 31/20, however Locust Road could experience higher than anticipated traffic volumes as patrons and employees could use the site's proposed driveways. However, the use of Locust Road is likely to be limited. Other roads that would connect probable origin or destination sites for casino patrons and employees are Mayflower Road and Ewing Avenue.

Significance Criteria

Peak hour intersection capacity analyses for the scenarios listed above were conducted following the methodology described in Section 3.8. The minimum level of service rating deemed acceptable by Indiana Department of Transportation and St. Joseph County for planning purposes in the study area is LOS D. Level of service is a measure used by traffic engineers to determine the effectiveness of elements of transportation infrastructure. LOS is most commonly used to analyze highways by categorizing traffic flow with corresponding safe driving conditions. Note that INDOT has jurisdiction by law (see 40 CFR 1508.15) and special expertise (see 40 CFR 1508.26) for state highways and St. Joseph County has jurisdiction by law and special expertise for county highways. So these governmental units have a statutory and an approval/veto role in assessing the significance of impact to LOS on state and county roadways from the alternatives and to help determine adequate mitigation for impacts from alternatives.

For the intersections analyzed, "significant" effects were determined as follows: if a lane group is forecast to operate at LOS E or F with the addition of project traffic and without any roadway or traffic control improvements, the project effect is deemed to be significant. If the lane group is operating at LOS E or F under the no action conditions, and the project traffic causes an increase in delay of 50 seconds of greater, the project effect is deemed to be significant. If the lane group is forecast to operate at LOS D or better, the effect of the project is not considered significant. For intersections or lane group movements with significant impacts caused by site generated traffic,

mitigation measures would be considered that could provide an acceptable LOS (i.e., impacts are not significant). These measures could include offsite roadway or traffic control improvements.

Project Trip Generation

Based on a site plan developed for Alternative A, the proposed land uses include a 500-room hotel with amenities including a spa and meeting/banquet space, a casino with gaming areas and several attached restaurants and bars, as well as a small amount of retail and administration space. A separate area of the development consists of the Pokagon Tribal Village, which includes residential uses such single-family housing, duplex apartments, and a quadraplex apartment. A community center is also planned near the residential uses which would serve various purposes for the Pokagon Band community (see **Figure 2.3-1** for Alternative A site plan).

Estimates for the volume of traffic generated by Alternative A were developed based on a market study performed for the non-residential component of the site plan and estimates from trip generation rates published in the Institute of Transportation Engineers (ITE) publication, Trip Generation, 9th Edition for the Tribal Village residential uses (ITE 2013).

The market study analysis for Alternative A was developed by KlasRobinson QED (see **Appendix F**) based on demographic information and revenue projections. The information from the market study provides the daily number of patrons visiting the hotel and casino uses on the site and also includes all associated restaurants, lounges, and meeting space ancillary to the hotel/casino uses. The daily patron data from the market study was converted to peak hour inbound and outbound trip estimates based on data measured from a similar project, the Four Winds Casino and Resort in New Buffalo, Michigan. Employee and vendor trips were also estimated from established counts at the New Buffalo facility. The alternate mode trip reductions (i.e., reduction in vehicular trips on area roads due to charter or shuttle bus use) and pass by trip reductions (i.e., reductions to account for drivers already traveling on project area roads that make an interim stop at the new facilities) were established based on the estimates from the market study. Table 4.8-1 shows daily patron to peak hour patron conversion rates and vehicle occupancy rates used in estimating the peak hour trips. See **Appendix F** for more information on how the market study information was converted to peak hour trip estimates for the hotel/casino uses and the employee traffic from the Four Winds Casino site.

Table 4.8-1
Peak Hour Conversion Rates

Factor Description	AM Peak Hour	PM Peak Hour
Casino Daily Patron Trips to Peak Hour Trips Conversion Rate	4.55 %	8.40%
Passenger Car (New Trip) Occupancy Rate	1.65 patrons / vehicle	
Passenger Car (Pass-By Trip) Occupancy Rate	1.20 patrons / vehicle	

Bus Occupancy Rate	40 patrons / vehicle

The ITE Trip Generation Manual is a compilation of national traffic data surveys which estimated inbound and outbound peak hour traffic volumes for various land uses and is the industry standard reference for trip generation estimates of common land uses. In order to develop trip generation estimates for the Tribal Village land uses, representative ITE Land Use Codes (LUCs) Single-Family Detached Housing (210), Residential Condominium/Townhouse (230), and Apartment (220) were selected to represent the single-family housing, duplex apartments, and quadraplex apartments, respectively (Institute 2012). For the proposed community center, an even split of the ITE LUCs for Day Care Center (565) and General Office Building (710) were selected for use as the activities described for these LUCs are believed to be the closest to the actual activities anticipated at the community center (ITE 2012).

The trips generated by all land uses shown on the Alternative A site plan are provided in Table 4.8-2. See **Appendix F** for detailed trip generation calculations and supporting information.

Table 4.8-2
Alternative A Trip Generation

Land Use	ITE Land Use Code	Units	Weekday Total	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Casino Resort Patrons	-	-	15,646	290	219	509	607	583	1,190
Casino Resort Employees	-	-	1,918	151	80	231	92	146	238
Casino Resort Vendors	-	-	40	3	2	5	2	3	5
Single Family	210	24 units	277	7	20	27	8	22	30
Duplex Apartment	230	8 units	72	1	6	7	6	2	8
Quad Apartment	220	12 units	80	2	8	10	16	9	25
Community Center	565/710	4 ksf	217	21	13	34	13	20	33
Subtotal Trips			**18,250**	**475**	**348**	**823**	**744**	**785**	**1,529**
Alternate Mode Reduction – Casino Patrons (4.4%)			638	12	9	21	25	24	49
Subtotal Driveway Trips			**17,612**	**463**	**339**	**802**	**719**	**761**	**1,480**
Pass-by Reduction - Casino Patrons (8.6%)			1,350	25	19	44	53	50	103
Total New Trips			**16,262**	**438**	**320**	**758**	**666**	**711**	**1,377**

The market study estimated that pass-by traffic would comprise approximately 8.6 percent of the casino/hotel patron traffic, and that 4.4% of the total hotel/casino patron generated trips should be eliminated due to the use of alternative modes of transportation, primarily buses.

Therefore, the "New Trips" shown in Table 4.8-2 are the total additional trips generated by the development above the traffic volumes already on the road network without the proposed development. As shown in Table 4.8-1, at full build-out, Alternative A is expected to generate 758 new trips (438 inbound, 320 outbound) during the weekday AM peak hour and 1,377 trips (666

inbound, 711 outbound) during the weekday PM peak hour. On a daily basis, the development is expected to generate 16,262 total trips.

Project Trip Distribution and Assignment

The directions that traffic would travel to and from the site were derived by using a combination of existing traffic patterns and the market study data for the area. The directional distribution utilized for Alternative A is shown in Table 4.8-3.

The assignment of traffic to the roadway network is based upon the directional distribution shown in Table 4.8-3, the locations of the traffic generating uses on the site plan, and the proximity to project driveways. The weekday AM and PM peak hour traffic assignment for Alternative A is shown in **Figure 4.8-1.**

Table 4.8-3
Alternative A Trip Distribution

Direction	AM Peak Hour Percent (%) Trips		PM Peak Hour Percent (%) Trips	
	To	From	To	From
North on SR 23	9	3	4	5
North on Locust Rd	11	3	5	5
North on New Energy Dr	0	0	1	1
North on Mayflower Rd	2	2	2	3
South on Locust Rd	1	2	1	1
South on Mayflower Rd	1	3	1	1
East on Ireland Rd	4	2	4	4
East on Ewing Ave	4	2	3	2
East on US 20/31	33	35	34	38
West on SR 23	2	7	6	2
West on Ewing Ave	2	1	1	1
West on US 20/31	31	40	38	37
Total	**100**	**100**	**100**	**100**

In order to develop the Opening Year (2020) traffic forecast including site generated traffic, the volumes shown in **Figure 4.8-1** were added to the 2020 No Action peak hour traffic volumes shown in **Figure 4.8-13**. The total Alternative A 2020 build conditions peak hour traffic volumes are shown in **Figure 4.8-2**.

In order to develop the Horizon Year (2035) traffic forecast including site generated traffic, the volumes shown in **Figure 4.8-1** were added to the 2035 No Action peak hour traffic volumes shown in **Figure 4.8-14**. The total Alternative A 2035 build conditions peak hour traffic volumes are shown in **Figure 4.8-3**.

Peak Hour Intersection Effects

This section documents the Opening Year (2020) and Horizon Year (2035) conditions in the project site vicinity with traffic generated by Alternative A. The base conditions for this analysis are the roadway and traffic control conditions modeled in the existing conditions capacity analysis summarized in Section 3.8. The SYNCHRO model for the existing conditions was updated with the traffic volumes shown in **Figure 4.8-2** for the 2020 conditions and the traffic volumes shown in **Figure 4.8-3** for the 2035 conditions (see **Appendix F**). These projected traffic volumes also take into account increases due to general background growth, which was identified by MACOG as a 1 percent per year increase (see **Appendix F**). Through a comparison in the resulting change in delay and level of service at the study intersections, the effects of the site generated traffic can be identified. The results are shown in **Table 4.8-4**.

As shown in **Table 4.8-4**, without roadway or traffic control improvements, four intersections would operate at unacceptable overall LOS under the 2020 conditions, resulting in a significant impact. The same four intersections would operate at unacceptable LOS under the 2035 conditions, only with increased delay. The following list documents lane groups under Alternative A that would operate at unacceptable LOS during the AM or PM peak hours without further roadway or traffic control improvements (See **Appendix F** for detailed SYNCHRO reports).

- SR-23 & EB US 31/20 off ramp – Eastbound Left/Thru/Right (LOS F - 2020 and 2035)
- SR-23 & WB US 31/20 off ramp – Westbound Left/Thru/Right (LOS F - 2020 and 2035)
- SR-23 & New Energy Drive/Driveway A – Eastbound Left/Thru/Right (LOS F – 2020 and 2035)
- SR-23 & New Energy Drive/Driveway A – Westbound Left Turn (LOS F – 2020 and 2035)
- SR-23 & Ewing Avenue – Westbound Left/Thru/Right (LOS F – 2020 and 2035)
- SR-23 & Ewing Avenue - Eastbound Left/Thru/Right (LOS E/F – 2035)

In order to accommodate Alternative A, mitigation measures would need to be implemented at the above intersections. These mitigation measures (outlined on **Figure 4.8-4** and in Section 5.0) would bring the LOS in these areas to a minimum of D, which is the minimum rating deemed acceptable by INDOT and St. Joseph County. The implementation of mitigation measures leading to LOS D would result in a less than significant impact at these intersections and lane groups.

Summary of Alternative A Impacts

Without the implementation of potential roadway improvements (i.e. mitigation measures), four overall intersections and six lane groups in the study area would have significant impacts due to the traffic generated by the Preferred Alternative A.

However, with implementation of the potential improvements (i.e., mitigation measures-see **Figure 4.8-4**) discussed in Section 5.0, the analysis shows that for the Preferred Alternative, all

previously unacceptable intersection and lane groups would operate adequately and with no significant impact during both the Opening Year (2020) and the Horizon Year (2035).

4.8.3.2 Land Use

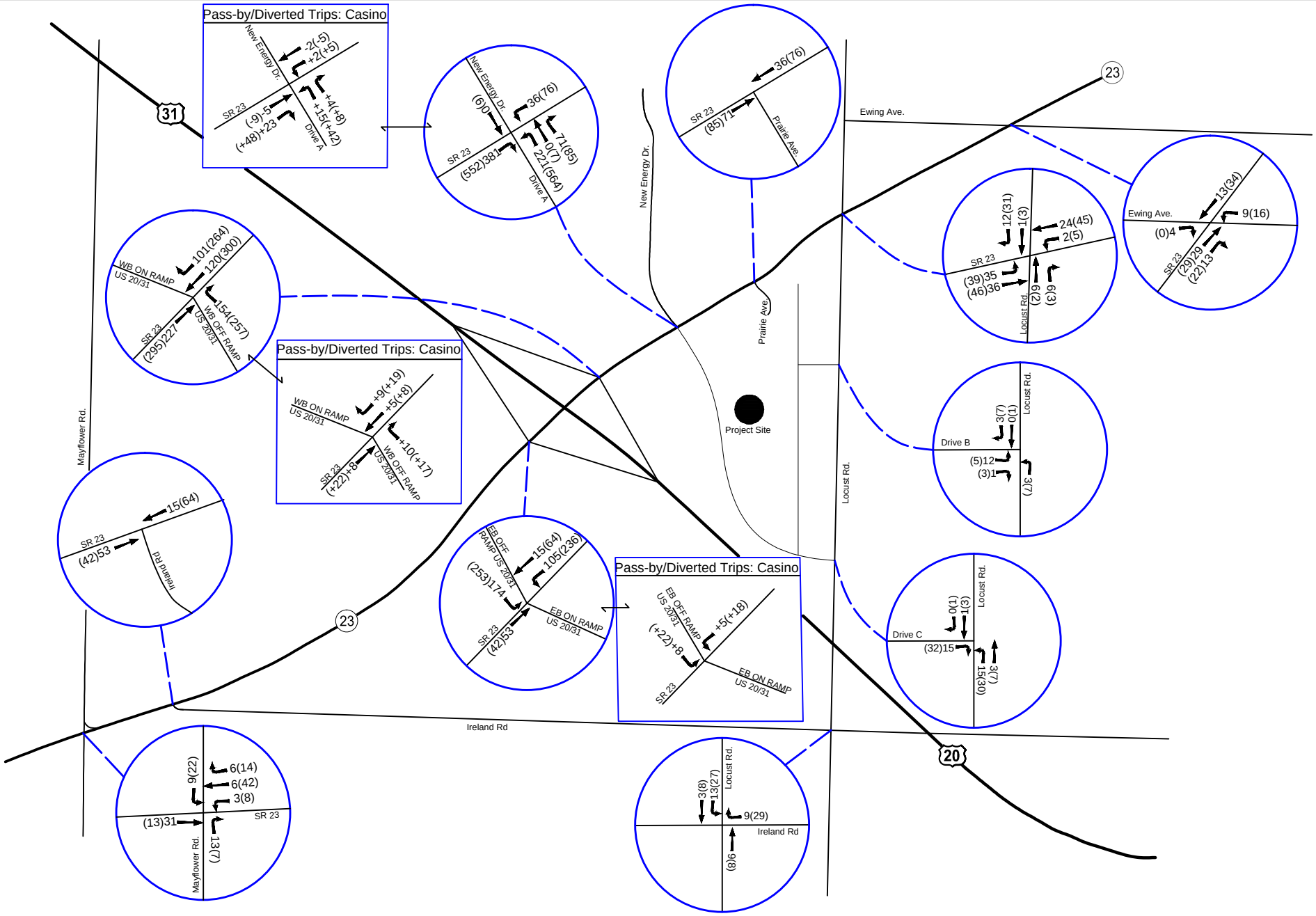
The Preferred Alternative, including the tribal village, tribal government facilities and revenue generating developments, would not result in significant land use related impacts. Alternative A would not have significant effects to land use administration at the site in the City of South Bend.

The Preferred Alternative would result in a shift of which governmental unit would have jurisdiction by law and special expertise for land use jurisdiction for the project site. The City of South Bend currently has land use jurisdiction. If BIA selects the Preferred Alternative, then land use jurisdiction would shift to the Pokagon Band of Potawatomi Indians and the federal government. In general, local governments like the city or county do not have jurisdiction on federal lands. Subsequent to the proposed trust acquisition, the only applicable land use regulations on the South Bend site are those of the Pokagon Band and the federal government. The Band's Tribal Government relies upon the Tribal Council, the governing body of the Tribal Government, to guide and regulate land use on tribal lands. The Tribal Council has approved these parcels for a gaming facility and previously described tribal village. The Tribal Government desires to work cooperatively with local and State authorities on matters related to land use jurisdiction of adjoining governmental units. This is not unlike any two adjoining governmental units working cooperatively on land use, just that in this case one of the governmental units happens to be a tribal government with jurisdiction on federal trust lands. Land use regulations and project effects are assessed below.

The Preferred Alternative would also be subject to Federal Aviation Administration regulations regarding building height and distance from local airports. Pursuant to the Code of Federal Regulations Part 77.9, the FAA requires notice of construction proposals if they a) exceed 200 feet in height above ground level, or b) occur within 20,000 feet of an airport runway or 5,000 feet of a heliport. Based on preliminary research, the Preferred Alternative is over 20,000 feet from the edge of the closest runway at the South Bend Regional Airport. The site is therefore outside of the distance requirements for FAA notification. The project is also below the 200 foot FAA height requirement. The highest portion of the proposed development is a 13 story hotel, which is estimated to be no more than 150 feet high, based on national standards (CTBUH, 2013).

Effects to the Project Area

The Preferred Alternative would moderately impact land use by increasing land use intensity but would not significantly impact land use based on the significance criteria outlined at the beginning of this section.



LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-1: Alternative A Site Traffic Volumes

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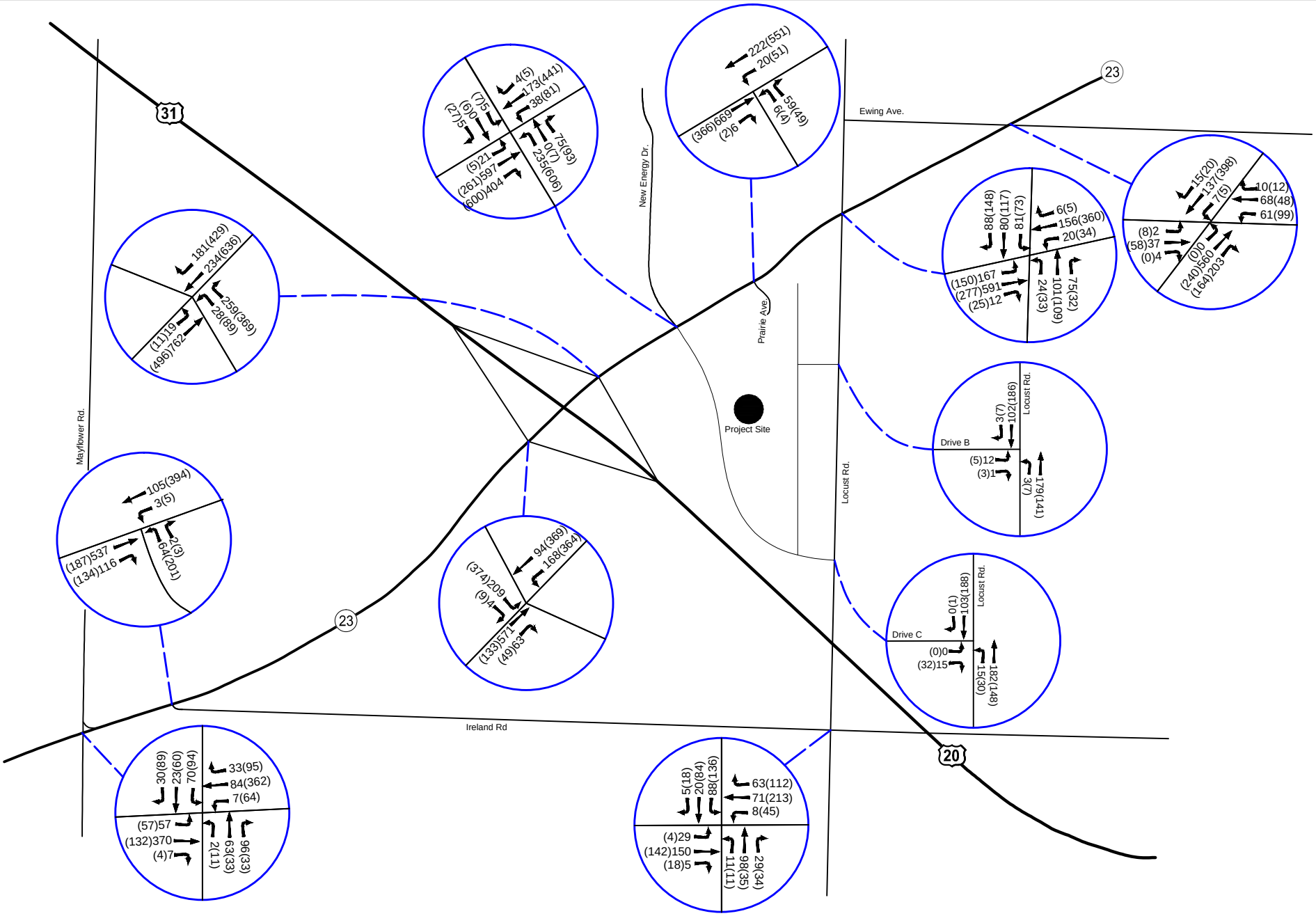

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-2 Alternative A 2020 Total Peak Hour Traffic Volumes

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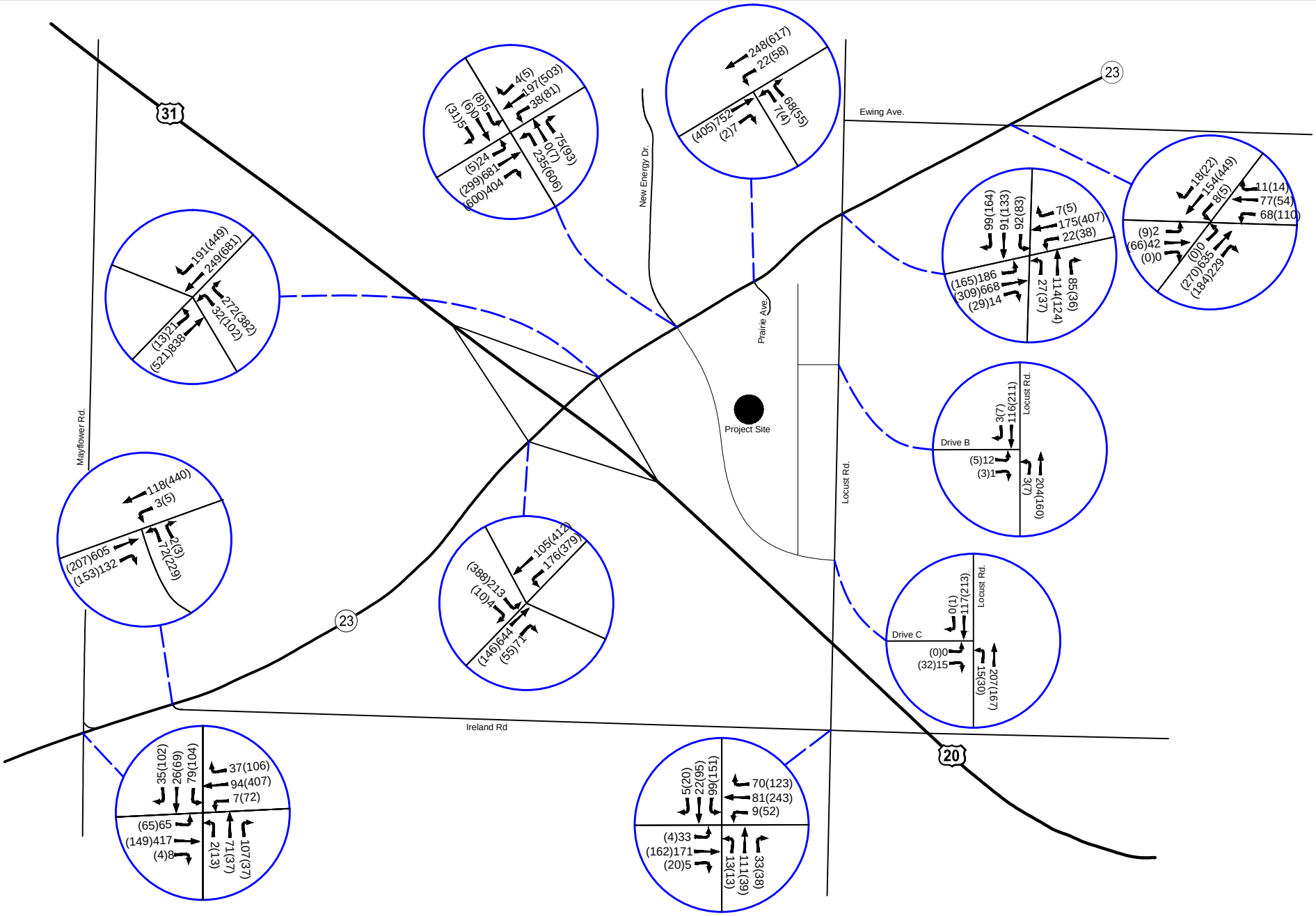

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-3 Alternative A 2035 Total Peak Hour Traffic Volumes

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TABLE 4.8-4: ALTERNATIVE A PEAK HOUR INTERSECTION CONDITIONS

AM Peak Hour

				Opening Year (2020)							Horizon Year (2035)						
Intersection	**Existing Traffic Control**	**Existing Conditions LOS**	**Existing Conditions Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**
SR-23 at Mayflower Road	Signal	B	11.2	B	11.8	B	12.4	N.C			B	13.0	B	14.4	N.C		
SR-23 at Ireland Road	OWSC	B	14.0	B	14.9	C	16.3	N.C			C	16.9	C	18.7	N.C		
SR-23 at US 31/20 (Eastbound Ramps)	OWSC	C	16.5	C	17.6	**F**	**564.6**	Signal	C	20.5	C	21.2	**F**	**845.4**	Signal	B	15.7
SR-23 at US 31/20 (Westbound Ramps)	OWSC	C	16.2	C	17.9	**F**	**134.2**	Signal	B	15.0	C	22.9	**F**	**236.0**	Signal	B	15.0
SR-23 at New Energy Drive/Proposed Driveway A	OWSC	C	18.6	C	20.5	**F**	**535.4**	Signal	C	20.2	C	24.4	**F**	**778.8**	Signal	B	18.4
SR-23 at Prairie Avenue	OWSC	C	15.5	C	16.8	C	18.9	N.C			C	20.2	C	22.3	N.C		
SR-23 at Locust Road	Signal	B	11.8	B	12.9	B	13.5	Signal	C	24.4	B	15.0	B	15.8	Signal	C	22.6
SR-23 at Ewing Avenue	TWSC	D	34.1	**E**	**49.0**	**F**	**83.2**	Signal	B	13.5	**F**	**159.5**	**F**	**316.1**	Signal	B	18.4
Ireland Road and Locust Road	Signal	B	11.3	B	11.5	B	11.9	N.C			B	11.9	B	12.3	Signal	B	12.3
Locust Road at Proposed Driveway B						B	10.3	OWSC					B	10.6	OWSC		
Locust Road at Proposed Driveway C						A	8.9	OWSC					A	9.0	OWSC		

PM Peak Hour

				Opening Year (2020)							Horizon Year (2035)						
Intersection	**Existing Traffic Control**	**Existing Conditions LOS**	**Existing Conditions Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**
SR-23 at Mayflower Road	Signal	A	9.3	A	9.7	B	11.1	N.C			B	11.0	B	12.3	N.C		
SR-23 at Ireland Road	OWSC	C	16.7	C	18.7	C	23.7	N.C			C	24.4	D	34.0	N.C		
SR-23 at US 31/20 (Eastbound Ramps)	OWSC	C	21.9	D	25.4	**F**	*******	Signal	C	22.8	**E**	**37.6**	**F**	*******	Signal	C	22.7
SR-23 at US 31/20 (Westbound Ramps)	OWSC	B	14.2	C	15.3	**F**	**373.9**	Signal	B	14.5	C	18.5	**F**	**503.9**	Signal	B	17.0
SR-23 at New Energy Drive/Proposed Driveway A	OWSC	B	12.6	B	13.2	**F**	*******	Signal	D	38.2	B	14.4	**F**	*******	Signal	C	30.4
SR-23 at Prairie Avenue	OWSC	C	11.4	B	12.1	B	13.6	N.C			B	13.0	B	14.7	N.C		
SR-23 at Locust Road	Signal	B	10.5	B	11.0	B	11.9	Signal	B	16.5	B	12.1	B	13.8	Signal	B	18.3
SR-23 at Ewing Avenue	TWSC	D	26.0	D	33.0	**F**	**53.6**	Signal	B	13.3	**F**	**64.4**	**F**	**140.8**	Signal	B	13.8
Ireland Road and Locust Road	Signal	B	13.2	B	13.8	B	15.9	Signal	B	15.9	B	15.5	B	18.1	Signal	B	18.3
Locust Road at Proposed Driveway B						B	10.3	OWSC					B	10.6	OWSC		
Locust Road at Proposed Driveway C						A	9.5	OWSC					A	9.7	OWSC		

NOTE: *** Indicates delay exceeded 999.9 seconds
For minor stop-controlled intersection, LOS and Delay listed are for critical lane group
For all-way stop-controlled or signal controlled intersections, LOS and Delay are for overall intersectior
One-Way Stop-Controlled (OWSC), Two-Way Stop-Controlled (TWSC), No Change (N.C)

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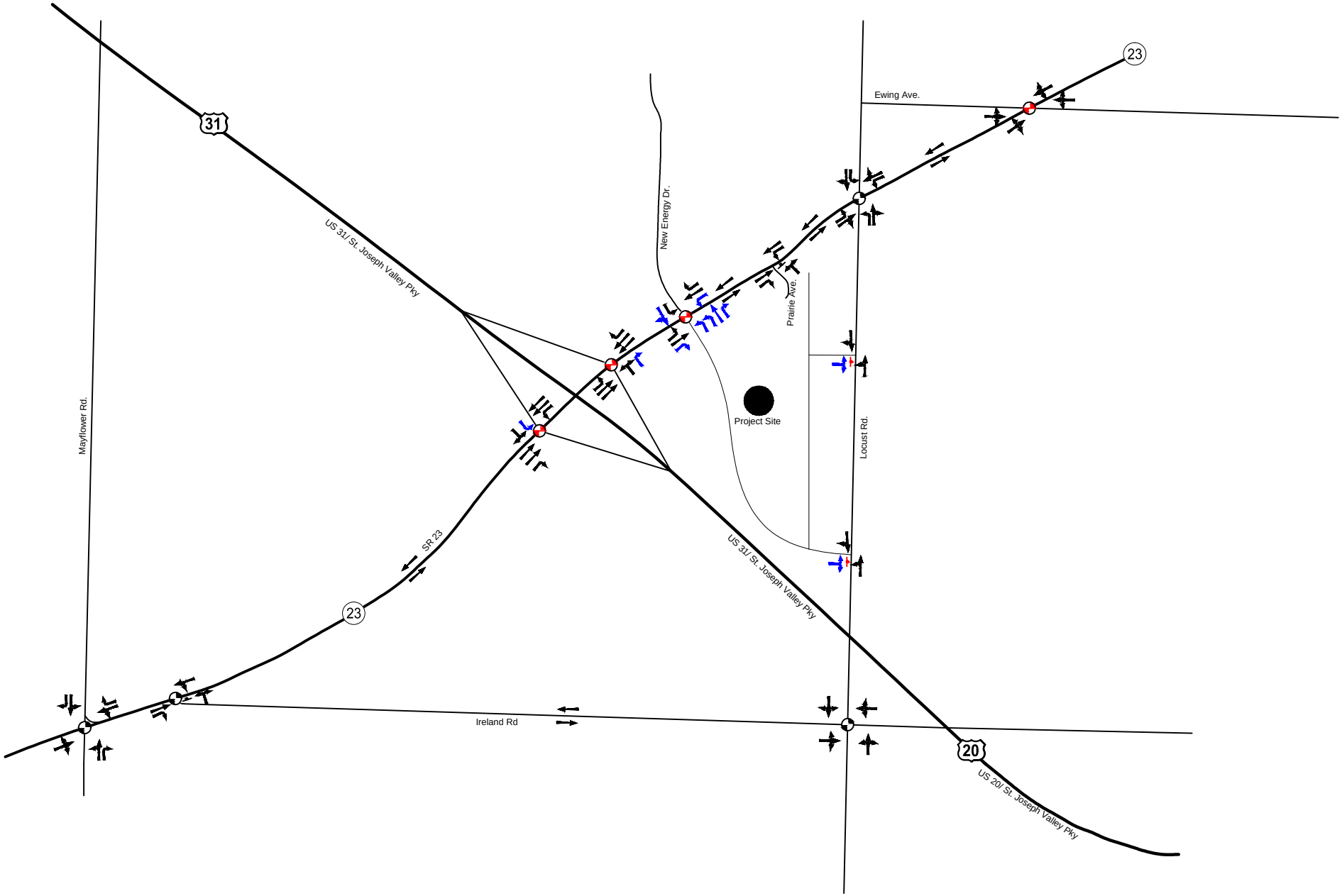

LEGEND

- Existing Lanes
- Existing Traffic Signal
- Existing Stop Sign
- 2020 New Lanes
- 2035 New Lanes
- 2020 Proposed Traffic Signal
- Proposed Stop Sign

Figure 4.8-4: Alternative A Potential Mitigation Measures

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Under this alternative, the casino, access roads, and mixed use development would be constructed on the South Bend site. The Tribal Council has approved the casino and mixed use development in this area as evident in the fee-to-trust application. As a sovereign nation, the Pokagon Band has identified this as an acceptable use.

Proposed land uses for the South Bend site include the casino, parking facilities, community center and medium density residential. These parcels are currently zoned by the City of South Bend as Single Family and Two Family District under the South Bend zoning regulations (St. Joseph County 2013). See **Appendix F** for City of South Bend Zoning Map. However, adjacent and proximate parcels are zoned as "Light Industrial District" and "General Industrial District" (See **Appendix F**). Nearby businesses within the City Limits include Noble Americas South Bend Ethanol, Shrader Tire & Oil, Bruno's Original Pizza, Phillips 66 gas station, Steve & Gene's Auto & Truck, Bulldog Auto Parts, and Coca-Cola Enterprises Inc. Outside of the City Limits businesses include Great Lakes Mini Max Storage and Great Lakes Heating and Air Conditioning. The northwest and western boundaries of the site are along the City of South Bend zoning limits (see **Appendix F**).

Existing businesses would not be displaced by the proposed action, but some homes would be removed for the development of The Preferred Alternative. It was concluded that the majority of the subject property is currently vacant, unoccupied property as further described in the 2016 Phase I Environmental Site Assessment completed by Wightman and Associates, Inc. The only occupied structure is the Pokagon Band of Potawatomi Indians South Bend office along the west side of Locust, which is not slated for removal **(see Appendix G)**.

Proposed development for parcels along the eastern edge of the property would feature tribal housing, and thus be generally consistent with its applicable designation as Single Family and Two Family District zoning. Existing homes along Locust Street to the east of the site, would have neighboring houses as portrayed in the project design of the Preferred Alternative. To avoid potential conflicts with adjacent land uses along the eastern property boundary along Locust Street, the casino entrance would be located along the north western property edge along Prairie Street. Any deliveries to the casino would use the main entrance.

Considering the current function of the South Bend site, the Preferred Alternative would moderately impact land use by increasing land use intensity. However, since no occupied structures would be removed for the development of the Preferred Alternative and adjacent/proximate parcels indicate a variety of land uses, including numerous businesses in relatively close vicinity, the proposed development would not significantly impact land use based on the significance criteria outlined at the beginning of this section.

4.8.3.3 Agriculture

The Preferred Alternative would have impacts to 109 acres of "Prime" and "Unique" farmland designated soils. The significance of Alternative A's impacts to these designated soils is determined

through the FPPA's AD 1006 process which involves a rating system created and analyzed by the NRCS. This process involving consultation with the NRCS and submission of required forms has been completed (see forms in **Appendix F**).

Through the consultation process and Form AD-1006, site rating scores were evaluated by both the BIA and the NRCS. The BIA used the results of this process to consider alternative sites. Based on the results of Form AD-1006, site rating scores did not indicate an exceedance of the recommended allowable level of farmland conversion. Follow-up communication with NRCS confirmed that no further consultation is necessary (Lisa Bolton, Executive Assistant, pers. comm.).

The Farmland Protection Policy Act was created to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Compliance with the FPPA requires the federal decision maker to analyze actions on federal land that converts prime and unique farmland to non-agricultural purposes. The FPPA doesn't authorize government regulation of private or nonfederal land; however, if the land were put into trust, it would be considered federal assistance, which would require compliance with FPPA. Based on Form AD-1006 and consultation with NRCS there is a less than significant impact to farmland or other agriculture considerations.

4.8.4 Alternative B – Elkhart Site Tribal Village and Casino

4.8.4.1 Transportation/Circulation

This section summarizes the analysis of traffic impacts for Alternative B – Elkhart Site Tribal Development on the surrounding transportation network. Alternative B, including implementation of potential roadway improvement mitigation measures shown in **Figure 4.8-8,** would have no significant cumulative impacts due to additional or cumulative traffic generated or circulation.

The detailed traffic analyses presented in this section summarize and compare the future conditions for Alternative B with and without roadway improvements (i.e., potential mitigation measures). For the purposes of assessing significant of the cumulative impacts of Alternative B, the results of the existing conditions analysis and the No Action Alternative analysis for the Elkhart site are also presented in this section.

Methodology

The study methods used for the analysis of Alternative B are the same as described in Section 4.8.1.1 – Methodology, except that they apply to the Elkhart site.

For purposes of this EIS, the analysis presented within this discussion would address the potential transportation effects resulting from development of Alternative B in the Opening Year (2020) of the proposed development and in the future Horizon Year (2035). The intersection capacity analyses were conducted using SYNCHRO following the methods defined in Section 3.8.

Project Study Area

To evaluate potential impacts to transportation networks resulting from Alternative B, analyses were conducted for the following intersections:

- SR-19 at County Road 28
- SR-19 at County Road 26
- SR-19 at US 20 (Eastbound Ramps)
- SR-19 at US 20 (Westbound Ramps)
- County Road 28 at County Road 7
- County Road 26 at County Road 7

These intersections were identified in the project study area and were predetermined as intersections of interest for the analyses. Patrons, employees, vendors, and residents are likely to utilize the primary roadways such as US 31/20, SR-19, and County Road 26 as they provide direct access to the casino and tribal village. SR-19 is anticipated to have higher traffic volumes due to the connection with US 20. Other roads that would connect probable origins or destinations for casino patrons and employees are County Road 28 and 7.

Analysis of Significance

The significance criteria used for the analysis of Alternative B is the same as used for Alternative A presented in Section 4.8.1.1.

Project Trip Generation

The proposed development under Alternative B has the same land use characteristics and unit sizes as Alternative A. However, given that there may be differences in the market area for the Elkhart site compared to the South Bend site, the market study performed by Klas Robinson QED (Attached in **Appendix F**) showed slightly less trip generation potential for Alternative B compared to Alternative A. The Tribal Village component of the site, consisting of residential uses and a community center, is exactly the same as proposed for Alternative A and the same ITE Trip Generation estimates are used for this component of the site. The trips generated by the land uses shown on the Alternative B site plan are shown in **Table 4.8-5**. See **Appendix F** for detailed trip generation calculations.

Table 4.8-5
Alternative B Trip Generation

Land Use	ITE Land Use Code	Units	Weekday Total	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Casino Resort Patrons	-	-	13,678	254	191	445	530	510	1,040
Casino Resort Employees	-	-	1,918	151	80	231	92	146	238

Land Use	ITE Land Use Code	Units	Weekday Total	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Casino Resort Vendors	-	-	40	3	2	5	2	3	5
Single Family	210	24 units	277	7	20	27	8	22	30
Duplex Apartment	230	8 units	72	1	6	7	6	2	8
Quad Apartment	220	12 units	80	2	8	10	16	9	25
Community Center	565/710	4 ksf	217	21	13	34	13	20	33
Subtotal Trips			**16,282**	**439**	**320**	**759**	**667**	**712**	**1,379**
Alternate Mode Reduction – Casino Patrons (5.0%)			638	12	9	23	25	24	49
Subtotal Driveway Trips			**15,644**	**427**	**311**	**736**	**642**	**688**	**1,330**
Pass By Reduction - Casino Patrons(9.7%)			1,330	25	18	43	52	49	101
Total New Trips			**14,314**	**402**	**293**	**695**	**590**	**639**	**1,229**

The market study estimated that pass-by traffic would comprise approximately 9.7 percent of the casino/hotel use patron traffic. The market study also determined that 5.0 percent of the total hotel/casino generated patron trips should be eliminated due to the use of alternative modes of transportation, primarily buses.

Therefore, the "New Trips" shown in **Table 4.8-5** are the total trips generated by the development. As shown in **Table 4.8-5**, at full build-out, Alternative B is expected to generate 695 new trips (402 inbound, 293 outbound) during the weekday AM peak hour of adjacent street traffic and 1,229 trips (590 inbound, 639 outbound) during the weekday PM peak hour of adjacent street traffic. On a daily basis, the development is expected to generate 14,314 total trips.

Project Trip Distribution and Assignment

The directions that site traffic would travel to and from the site are derived by using a combination of existing traffic patterns and the market study data for the area. The directional distribution utilized for Alternative B is shown in **Table 4.8-6**.

The assignment of traffic to the roadway network is based upon the directional distribution shown in **Table 4.8-6**, the locations of the traffic generating uses on the site plan, and the proximity to project driveways. The weekday AM and PM peak hour traffic assignment for the Alternative B is shown in **Figure 4.8-5.**

Table 4.8-6
Alternative B Trip Distribution

	AM Peak Hour Percent (%) Trips		PM Peak Hour Percent (%) Trips	
Direction	**To**	**From**	**To**	**From**
North on SR 19	20	17	13	23
North on CR 7	4	3	2	3
South on SR 19	16	16	16	14
South on CR 7	1	2	1	1
East on CR 28	1	1	1	2
East on CR 26	5	4	5	5
East on US 20	19	28	23	24
West on CR 26	1	4	3	1
West on CR 28	1	2	1	1
West on US 20	32	23	35	26
Total	**100**	**100**	**100**	**100**

In order to develop the Opening Year (2020) traffic forecast including site generated traffic, the volumes shown in **Figure 4.8-5** were added to the 2020 No Action peak hour traffic volumes shown in **Figure 4.8-15.** The total Alternative B 2020 build conditions peak hour traffic volumes are shown in **Figure 4.8-6**.

In order to develop the Horizon Year (2035) traffic forecast including site generated traffic, the volumes shown in **Figure 4.8-5** were added to the 2035 No Action peak hour traffic volumes shown in **Figure 4.8-16**. The total Alternative B 2035 build conditions peak hour traffic volumes are shown in **Figure 4.8-7**.

Peak Hour Intersection Effects

This section documents the Opening Year (2020) and Horizon Year (2035) conditions in the project site vicinity with traffic generated by Alternative B. The base conditions for this analysis are the roadway and traffic control conditions modeled in the existing conditions capacity analysis summarized in Section 3.8. The SYNCHRO model for the existing conditions was updated with the traffic volumes shown in **Figure 4.8-6** for the 2020 conditions and the traffic volumes shown in **Figure 4.8-7** for the 2035 conditions (see **Appendix F**). These projected traffic volumes also take into account increases due to general background growth, which was identified by MACOG as a 1 percent per year increase (see **Appendix F**). Through a comparison in the resulting change in delay and level of service at the study intersections, the effects of the site generated traffic can be identified.

As shown in **Table 4.8-7**, without roadway or traffic control improvements, three intersections would operate at unacceptable overall LOS under the 2020 conditions, resulting in a significant

impact. The same three intersections would operate at unacceptable LOS under the 2035 conditions, only with increased delay. The following list documents lane groups under Alternative B that would operate at unacceptable LOS during the AM or PM peak hours without further roadway or traffic control improvements (see **Appendix F** for detailed HCM reports).

- SR-19 & US 20 Westbound Ramps – Northbound Left Turn (LOS F – 2020 and 2035)
- SR-19 & CR 28 – Eastbound Left/Thru/Right (LOS F – 2020 and 2035)
- SR-19 & CR 28 – Westbound Left/Thru/Right (LOS F – 2020 and 2035)
- SR-19 & Driveway A – Westbound Left Turn (LOS F – 2020 and 2035)
- SR-19 & Driveway A – Westbound Right Turn (LOS F – 2020 and 2035)

Alternative B would require mitigation measures at the three intersections listed above. These mitigation measures (outlined on **Figure 4.8-8** and in Section 5.0) would bring the LOS to a minimum of D, which is the minimum rating deemed acceptable by INDOT and Elkhart County. The implementation of mitigation measures leading to LOS D would result in a less than significant impact at these intersections.

Summary of Alternative B Impacts

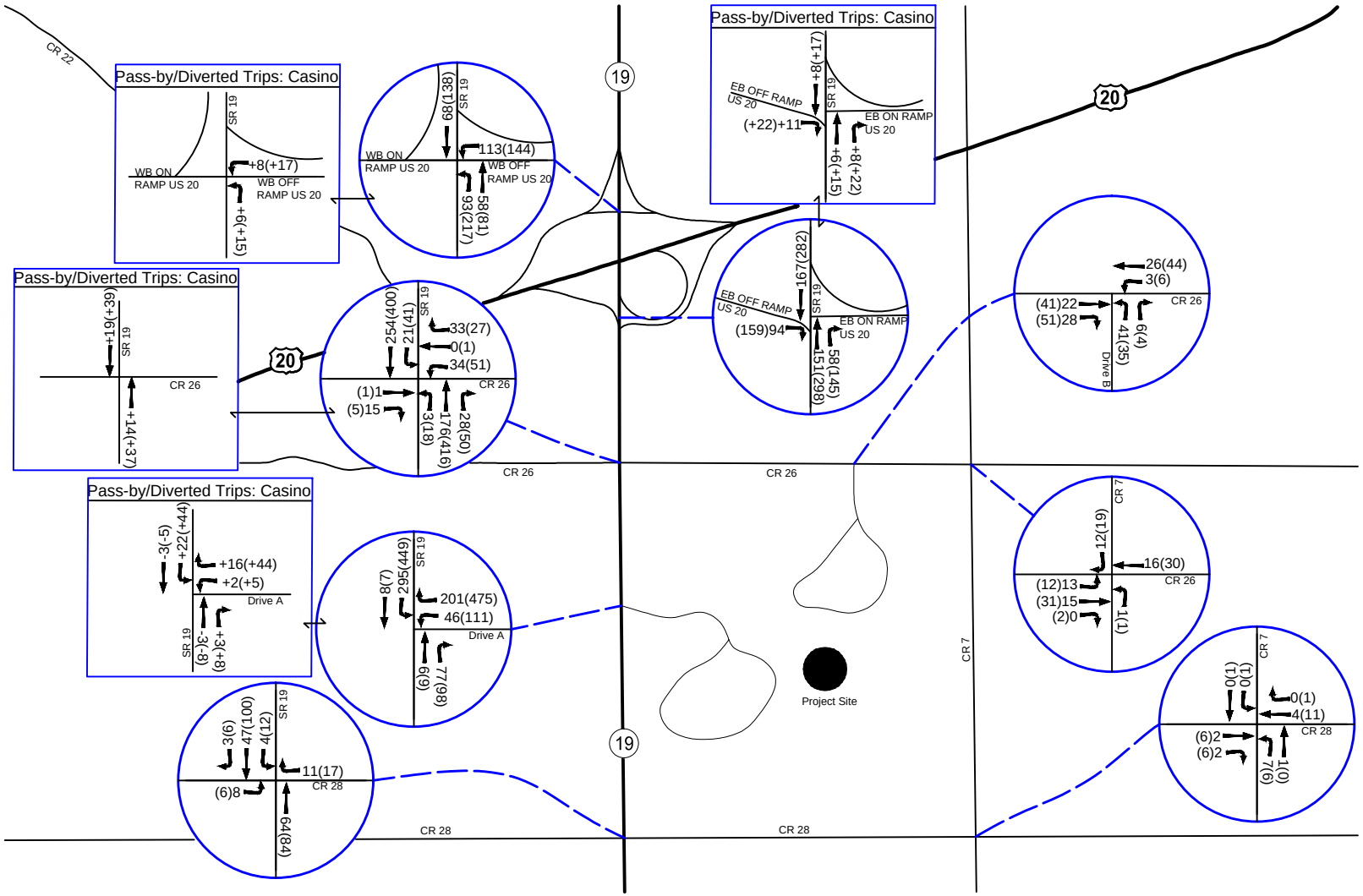
Without the implementation of potential roadway improvements (i.e. mitigation measures-see **Figure 4.8-8**), three overall intersections and five lane groups in the study area would have significant impacts due to the traffic generated by Alternative B.

However, with implementation of the potential improvements (i.e., mitigation measures) discussed in Section 5.0, the analysis shows that all previously unacceptable intersections and lane groups would operate adequately, with no significant impact, during both the Opening Year (2020) and the Horizon Year (2035).

4.8.4.2 Land Use

The site for Alternative B is currently outside of the City limits of Elkhart, therefore the County of Elkhart has land use jurisdiction. . Although, the County currently has special expertise and jurisdiction by law for land use regulation at the site in Elkhart, but if BIA approves Alternative B then the role of special expertise and jurisdiction by law could shift the Pokagon Band of Potawatomi Indians. However, there are no plans at this time to put the Elkhart site into trust. Land use regulations and project effects are assessed below.

Alternative B at the Elkhart site would not be subject to Federal Aviation Administration regulations regarding building height and distance from local airports. Pursuant to the Code of Federal Regulations Part 77.9, the FAA requires notice of construction for federal proposals if they a) exceed 200 feet in height above ground level, or b) occur within 20,000 feet of an airport runway or 5,000 feet of a heliport. Because the Band has no intention of putting the Elkhart site into trust, there is no need to comply with FAA requirements for Alternative B.



LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-5: Alternative B Site Traffic Volumes

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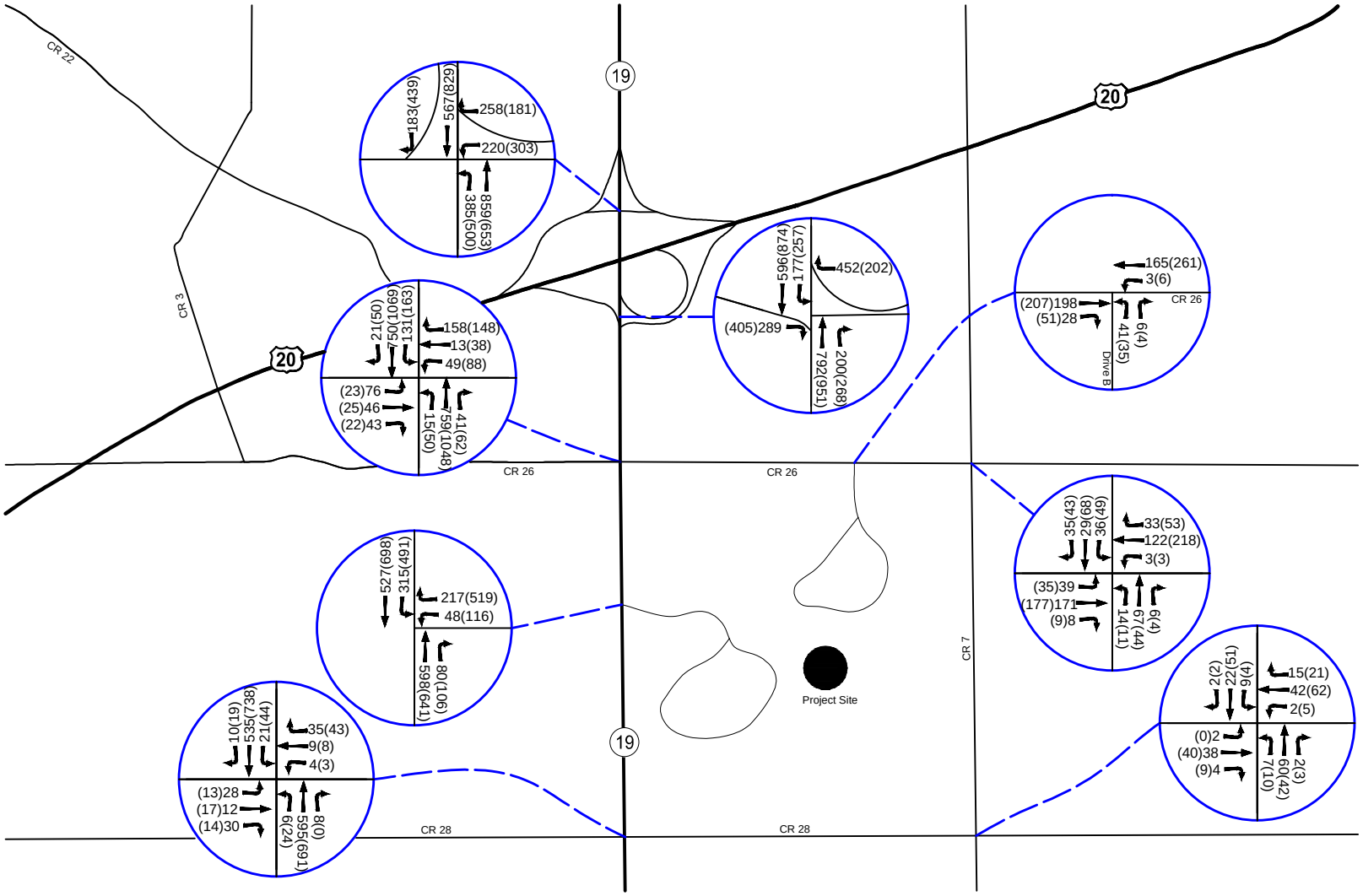

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-6: Alternative B 2020 Total Peak Hour Traffic Volumes

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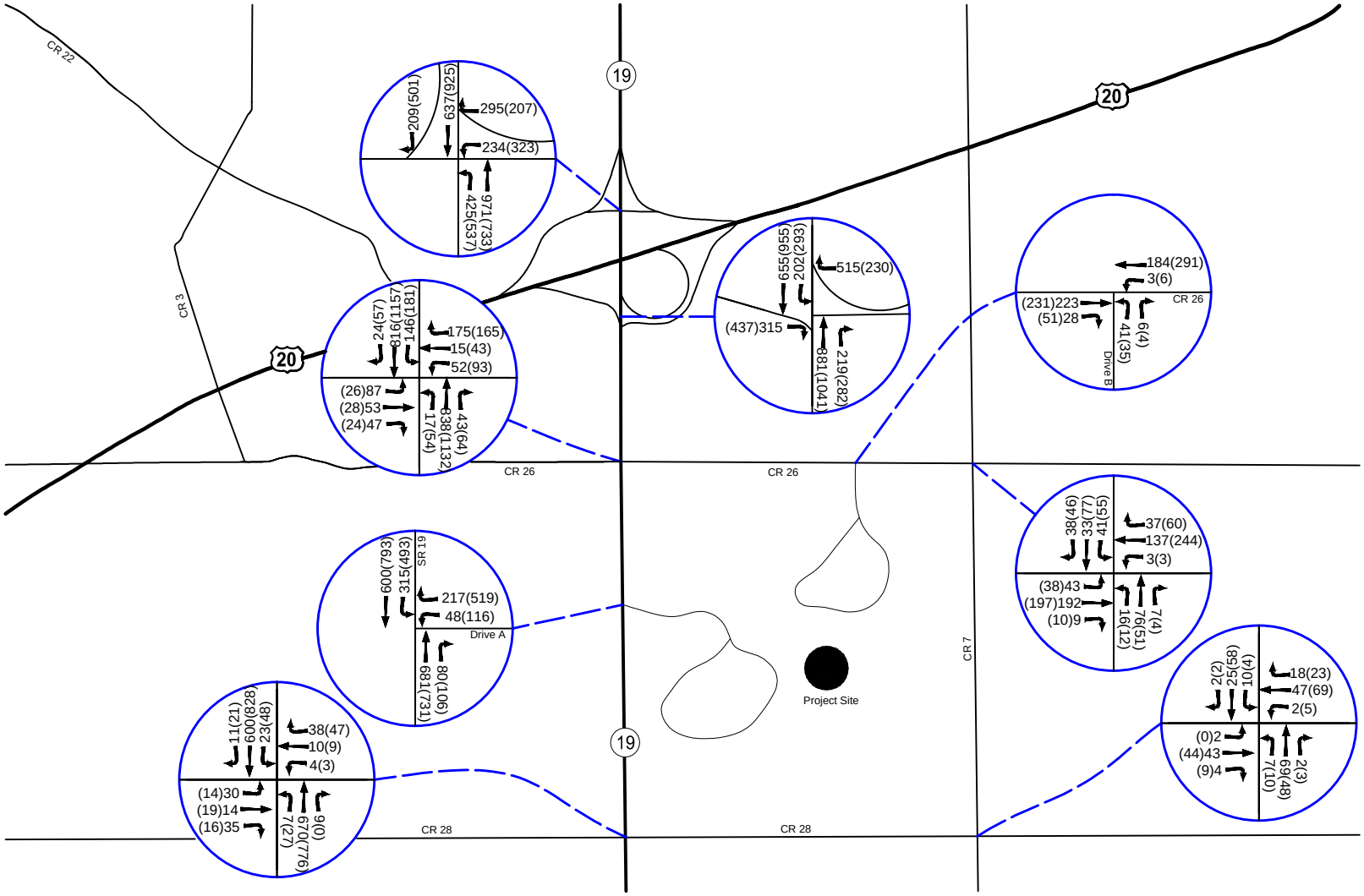

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-7: Alternative B 2035
Total Peak Hour Traffic Volumes

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TABLE 4.8-7: ALTERNATIVE B PEAK HOUR INTERSECTION CONDITIONS

AM Peak Hour

				Opening Year (2020)							Horizon Year (2035)						
Intersection	**Existing Traffic Control**	**Existing Conditions LOS**	**Existing Conditions Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**
SR-19 at US 20 (Westbound Ramps)	Signal	B	11.8	B	13.6	C	20.3	N.C			C	20.7	D	38.9	Signal	B	18.6
SR-19 at US 20 (Eastbound Ramps)	Uncontrolled	B	11.2	B	11.8	B	13.8	N.C			B	13.4	C	16.2	N.C		
SR-19 at County Road 26	Signal	C	20.2	C	20.7	C	24.5	N.C			C	23.2	C	27.0	N.C		
SR-19 at County Road 28	TWSC	D	33.3	**E**	**46.1**	**F**	**129.8**	Signal	A	9.6	**F**	**104.5**	**F**	**328.8**	Signal	B	11.0
County Road 26 at County Road 7	AWSC	A	9.1	A	9.4	A	9.9	N.C			B	10.2	B	10.7	N.C		
County Road 28 at County Road 7	TWSC	B	10.1	B	10.2	B	10.6	N.C			B	10.5	B	10.9	N.C		
SR-29 at Proposed Driveway A						**F**	**930.5**	Signal	A	9.9			**F**	*******	Signal	B	10.1
SR-19 at Proposed Driveway B						B	10.9	OWSC					B	11.2	OWSC		

PM Peak Hour

				Opening Year (2020)							Horizon Year (2035)						
Intersection	**Existing Traffic Control**	**Existing Conditions LOS**	**Existing Conditions Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**
SR-19 at US 20 (Westbound Ramps)	Signal	A	9.1	A	9.6	D	40.7	Signal	C	25.2	B	11.6	**E**	**57.9**	Signal	C	31.1
SR-19 at US 20 (Eastbound Ramps)	Uncontrolled	B	11.4	B	12.1	C	18.1	N.C			B	14.2	C	24.8	N.C		
SR-19 at County Road 26	Signal	B	18.5	C	20.2	C	28.6	N.C			C	21.4	C	31.2	N.C		
SR-19 at County Road 28	TWSC	**E**	**49.1**	**F**	**73.7**	**F**	**342.3**	Signal	B	12.3	**F**	**188.5**	**F**	**880.1**	Signal	B	15.3
County Road 26 at County Road 7	AWSC	A	9.2	B	9.6	B	10.4	N.C			B	10.4	B	11.4	N.C		
County Road 28 at County Road 7	TWSC	B	10.4	B	10.6	B	11.2	N.C			B	10.9	B	11.6	N.C		
SR-29 at Proposed Driveway A						**F**	*******	Signal	B	14.7			**F**	*******	Signal	B	15.8
SR-19 at Proposed Driveway B						B	11.7	OWSC					B	12.1	OWSC		

NOTE: *** Indicates delay exceeded 999.9 seconds

For minor stop-controlled intersection, LOS and Delay listed are for critical lane group

For all-way stop-controlled or signal controlled intersections, LOS and Delay are for overall intersection

One-Way Stop-Controlled (OWSC), Two-Way Stop-Controlled (TWSC), All-Way Stop-Controlled (AWSC), No Change (N.C)

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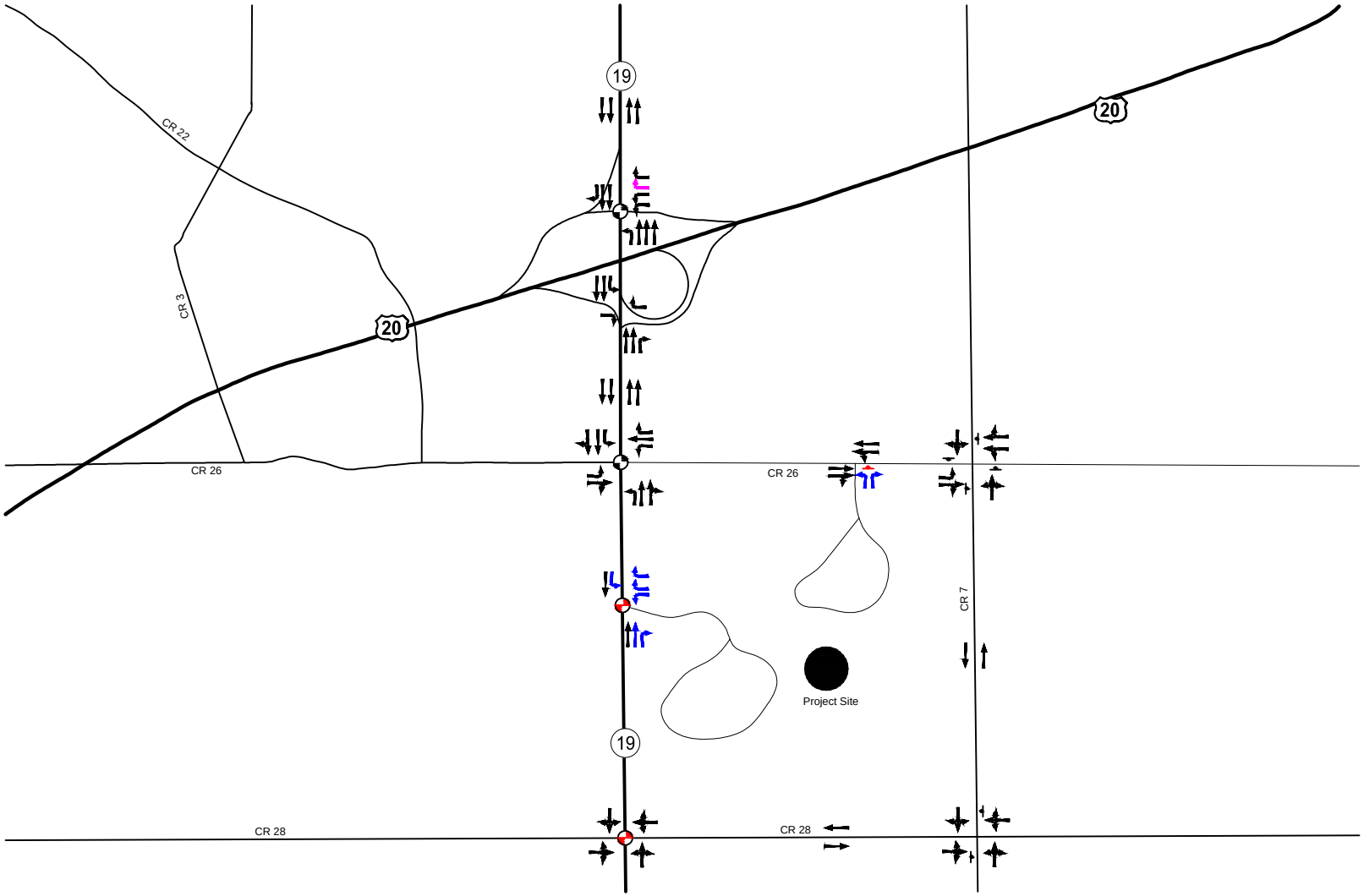

LEGEND

- Existing Lanes
- Existing Traffic Signal
- Existing Stop Sign
- 2020 New Lanes
- 2035 New Lanes
- 2020 Proposed Traffic Signal
- Proposed Stop Sign

Figure 4.8-8 Alternative B
Potential Mitigation Measures

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Effects to the Project Area

Under this alternative, the casino, access roads, and mixed use development would be constructed on the Elkhart site. Alternative B would moderately impact land use intensity and land use compatibility based on the significance criteria outlined at the beginning of this section.

No existing homes or businesses would be displaced by the construction of Alternative B. Nearby areas zoned as agricultural could feel an induced growth of incompatible land use due to the development of Alternative B.

Proposed land uses for the Elkhart Site includes the casino, mixed residential, parking facilities and a community center. These parcels are currently zoned A1 for Agriculture (Deb Britton, Administrative Manager, pers. comm.) under the Elkhart County zoning regulations (see Appendix F for county zoning map). Alternative B would result in noticeable increases in land use intensity on these parcels. Surrounding land uses in this area are also zoned agricultural, but some are zoned as general planned unit development and detailed planned unit development. Alternative B would be incompatible with agricultural land use, but would be compatible with adjacent land uses of general/detailed planned unit development because Alternative B is designed to have mixed uses of business/governmental development central to the site and residential housing along the northern portion of the site adjacent to these areas. Therefore Alternative B would have a less than significant impact based on Elkhart County zoning districts; additionally, throughout the county it is not uncommon to have other commercial and mixed residential land uses abutting agricultural lands.

4.8.4.3 Agriculture

Alternative B would have impacts to 172 acres "Prime Farmland if drained" designated soils which is greater than the impact to soils from Alternative A and C. The significance of Alternative B's impacts to these designated soils is determined through the FPPA's AD 1006 process which involves a rating system created and analyzed by the NRCS. This process involving consultation with the NRCS and submission of required forms has been completed (see forms in **Appendix F**). Through the consultation process and completion of Form AD-1006, site rating scores were evaluated by both the BIA and the NRCS. The BIA used the results of this process to consider alternative sites. Based on the results of Form AD-1006, site rating scores did not indicate an exceedance of the recommended allowable level of farmland conversion. Follow-up communication with NRCS confirmed that no further consultation is necessary (Lisa Bolton, Executive Assistant, pers. comm.).

The Farmland Protection Policy Act was created to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Compliance with the FPPA requires the federal decision maker to analyze actions on federal land that converts prime and unique farmland to non-agricultural purposes. The FPPA doesn't authorize government

regulation of private or nonfederal land; however, if the land were put into trust, it would be considered federal assistance, which would require compliance with FPPA. Based on Form AD-1006 and consultation with NRCS there is a less than significant impact to farmland or other agriculture considerations.

4.8.5 Alternative C – South Bend Site Tribal Village With Commercial Development

4.8.5.1 Transportation/Circulation

BIA's selection of Alternative C, including necessary transportation mitigation features, would have no significant impact to traffic or circulation in the project impact area. This section summarizes the analysis of traffic impacts for Alternative C – South Bend Site with commercial development on the surrounding transportation network. The detailed traffic analyses presented in this section summarize and compare the future conditions for Alternative C with and without roadway improvements (i.e., potential mitigation measures). For the purposes of comparing the Alternative C conditions to baseline scenarios, the results of the existing conditions analysis and the no action conditions analysis for the South Bend site are also presented in this section.

Methodology

The study methods used for the analysis of Alternative C are the same as described in Section 4.8.1.1 – Methodology.

For purposes of this EIS, the analysis presented within this discussion will address the potential transportation effects resulting from development of Alternative C in the Opening Year (2020) of the proposed development and in the future Horizon Year (2035). The intersection capacity analyses were conducted using SYNCHRO following the methods defined in Section 3.8.

Project Study Area

To evaluate potential impacts to transportation networks resulting from Alternative C, analyses were conducted for the following intersections:

- SR-23 at Ireland Road
- SR-23 at US 31/20 (Eastbound Ramps)
- SR-23 at US 31/20 (Westbound Ramps)
- SR-23 at New Energy Drive
- SR-23 at Prairie Avenue
- SR-23 at Locust Road
- SR-23 at Ewing Avenue

- Ireland Road at Locust Road
- SR-23 at Mayflower Road

These intersections were identified in the project study area and were predetermined as intersections of interest for the analyses. Patrons, employees, vendors, and residents are likely to utilize the primary roadways such as US 31/20, SR-23, and Locust Road as they provide direct access to the commercial development and tribal village. SR-23, classified by the Indiana Department of Transportation is a two-lane minor arterial and Locust Road is a two-lane major collector street (Indiana Functional Classification Maps 2013). SR-23 is anticipated to have higher traffic volumes due to the proximity to US 31/20, however Locust Road could experience higher than anticipated traffic volumes as patrons and employees could use the sites proposed driveways. However, the use of Locust Road is likely to be limited. Other roads that would connect probable origin or destinations sites for casino patrons and employees are Mayflower Road and Ewing Avenue.

Analysis of Significance

The significance criteria used for the analysis of Alternative C is the same as used for Alternative A presented in Section 4.8.1.1.

Project Trip Generation

Based on a site plan developed for Alternative C, the commercial component of the site includes a gas station with 24-fueling positions, convenience store, and car wash, a 30,000 square foot family entertainment facility, 15,000 square feet of retail shopping space. A separate area of the development consists of the Pokagon Tribal Village, which constitutes the exact same size residential units and community center as described for Alternatives A and B. For detailed site plan uses see **Figures 2.3-1, 2.4-1,** and **2.5-1.**

Estimates for the volume of traffic generated by Alternative C were developed based on trip generation rates published in the ITE Trip Generation Manual. See section 4.8.1.1 – Project Trip Generation for an explanation of the ITE publication. ITE Land Use Codes for Gasoline/Service Station with Convenience Market and Car Wash (946), Multipurpose Recreational Facility (435), and Specialty Retail Center (826) were selected for study (Institute 2012). For the Tribal Village land uses, refer to Section 4.8.1.1 – Project Trip Generation for more information. The trips generated by the land uses shown on the Alternative C site plan are shown in Table 4.8-8 (ITE 2012). See **Appendix F** for detailed trip generation calculations.

An estimate for pass-by traffic was determined by the ITE Trip Generation Manual for the Gas Station/Convenience Market. Pass-by rates of 62 percent and 56 percent were used for AM and PM peak hours, respectively. A 59 percent daily pass by reduction was assumed, which is an interpolation of the AM and PM rates. There is not expected to be any alternative transportation

modes (i.e., busses) proposed for Alternative C, and therefore an alternative mode trip reduction was not applied.

Table 4.8-8
Alternative C Trip Generation

Land Use	ITE Land Use Code	Units	Weekday Total	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Gas Station with Car Wash and Convenience Market	946	24 fueling positions	3,669	145	140	285	170	163	333
Family Entertainment	435	30 ksf	2,712	---	---	---	59	49	108
Retail Outlets	826	15 ksf gla	679	---	---	---	91	99	190
Single Family	210	24 units	277	7	20	27	8	22	30
Duplex Apartment	230	8 units	72	1	6	7	6	2	8
Quad Apartment	220	12 units	80	2	8	10	16	9	25
Community Center	565/710	4 ksf	217	21	13	34	13	20	33
Subtotal Trips			**7,706**	**176**	**187**	**363**	**363**	**364**	**727**
Pass-By Reduction - Gas Station/Convenience Market AM/PM (62%/56%)			2,162	90	87	177	95	91	186
Total New Trips			**5,544**	**86**	**100**	**186**	**268**	**273**	**541**

Therefore, "New Trips" are the total trips generated by the development not including pass-by trips. As shown in Table 4.8-8, the development is expected to generate 186 new trips (86 inbound, 100 outbound) during the weekday AM peak hour of adjacent street traffic and 541 trips (268 inbound, 273 outbound) during the weekday PM peak hour of adjacent street traffic. On a daily basis, the development is expected to generate 5,544 total trips.

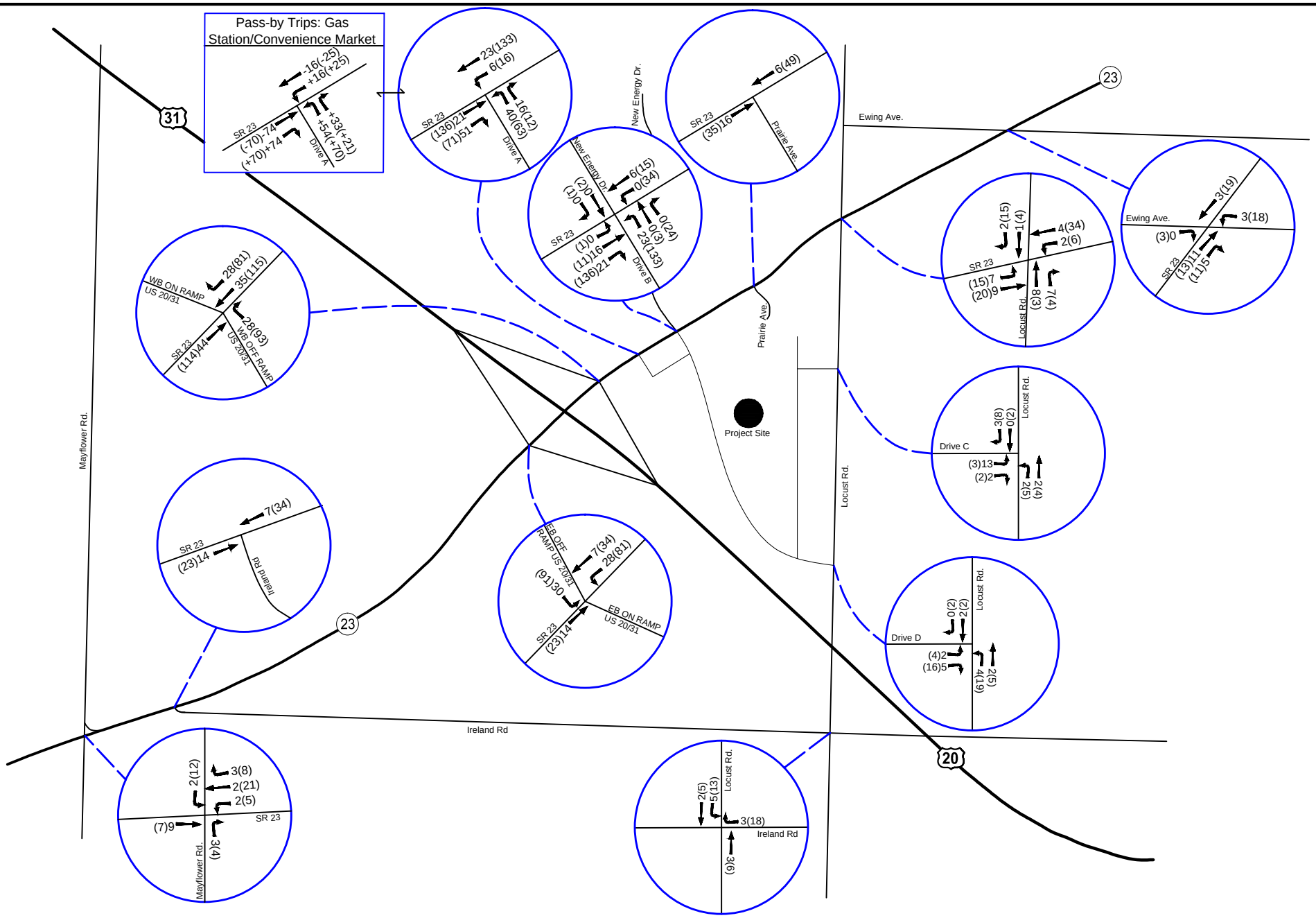
Project Trip Distribution and Assignment

The directions that site traffic would travel to and from the site are derived by using existing traffic patterns in the study area. The directional distribution utilized for Alternative C is shown in **Table 4.8-9**.

The assignment of traffic to the roadway network is based upon the directional distribution shown in Table 4.8-9, the locations of the traffic generating uses on the site plan, and the proximity to project driveways. The weekday AM and PM peak hour traffic assignment for the Alternative C is shown in **Figure 4.8-9**.

In order to develop the Opening Year (2020) traffic forecast including site generated traffic, the volumes shown in **Figure 4.8-9** were added to the 2020 No Action peak hour traffic volumes shown in **Figure 4.8-13**. The total Alternative C 2020 build conditions peak hour traffic volumes are shown in **Figure 4.8-10**.

In order to develop the Horizon Year (2035) traffic forecast including site generated traffic, the volumes shown in **Figure 4.8-9** were added to the 2035 No Action peak hour traffic volumes shown



LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-9: Alternative C Site Traffic Volumes

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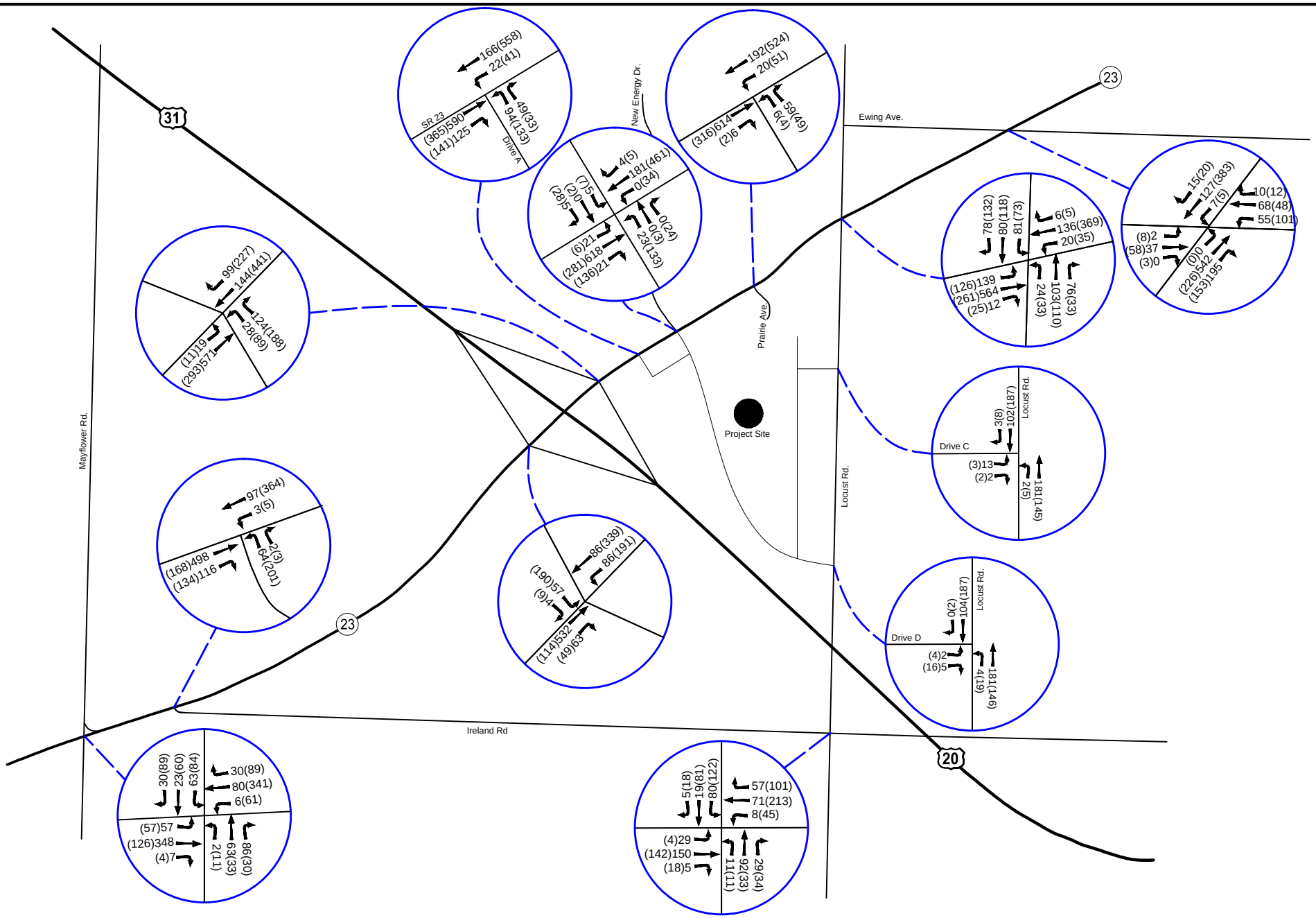

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-10: Alternative C 2020 Total Peak Hour Traffic Volumes

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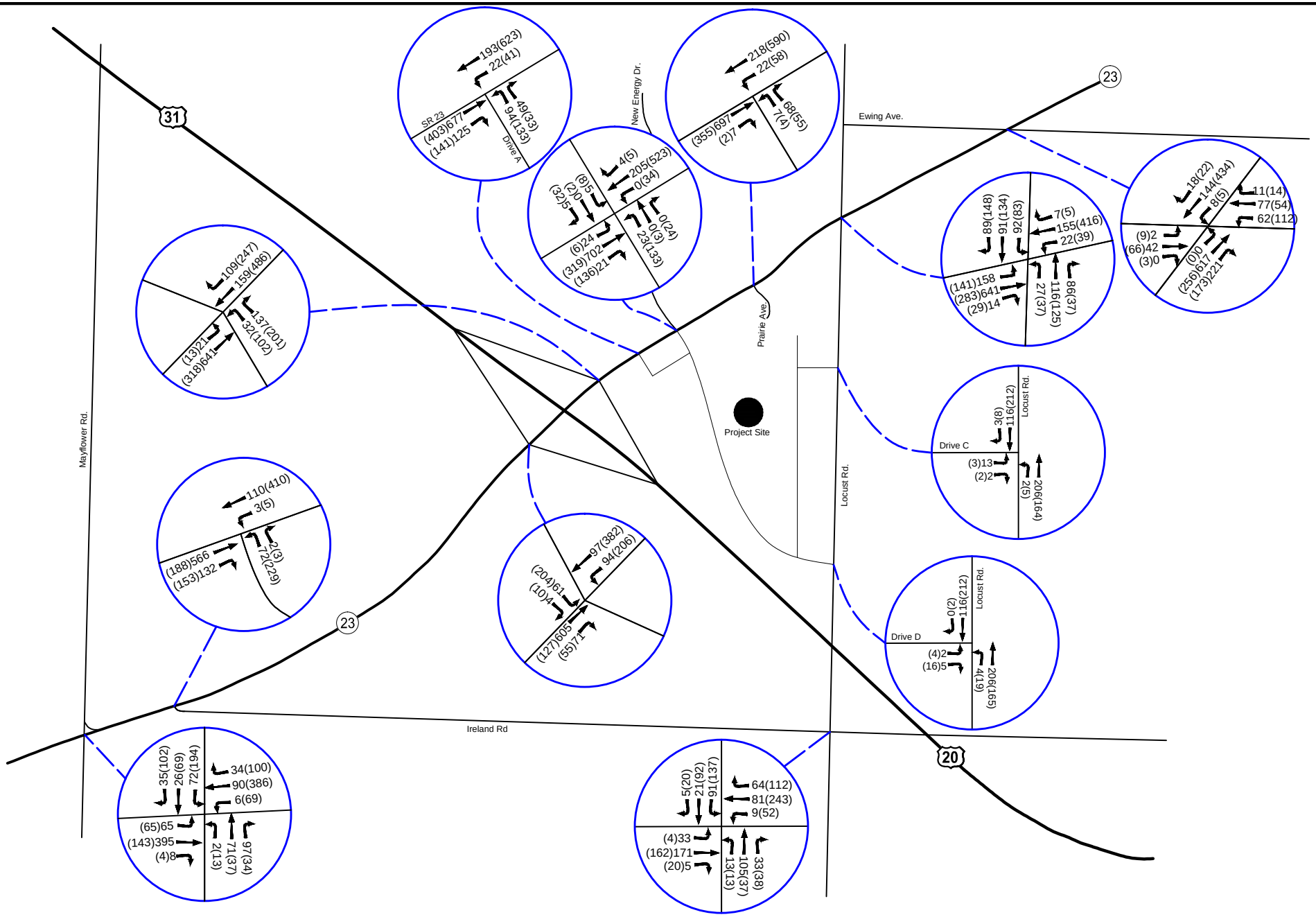

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-11: Alternative C 2035 Total Peak Hour Traffic Volumes

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in **Figure 4.8-14**. The total Alternative C 2035 build conditions peak hour traffic volumes are shown in **Figure 4.8-11.**

Table 4.8-9
Alternative C Trip Distribution

	AM Peak Hour Percent (%) Trips		PM Peak Hour Percent (%) Trips	
Direction	**To**	**From**	**To**	**From**
North on SR 23	11	4	5	7
North on Locust Rd	14	4	6	7
North on New Energy Dr	0	0	1	1
North on Mayflower Rd	3	2	3	4
South on Locust Rd	1	3	2	2
South on Mayflower Rd	1	4	2	1
East on Ireland Rd	5	3	5	6
East on Ewing Ave	5	3	4	3
East on US 20/31	29	31	30	33
West on SR 23	2	10	8	3
West on Ewing Ave	2	1	1	1
West on US 20/31	27	35	33	32
Total	**100**	**100**	**100**	**100**

Peak Hour Intersection Effects

This section documents the Opening Year (2020) and Horizon Year (2035) conditions in the project site vicinity with traffic generated by Alternative C. The base conditions for this analysis are the roadway and traffic control conditions modeled in the existing conditions capacity analysis summarized in Section 3.8. The SYNCHRO model for the existing conditions was updated with the traffic volumes shown in **Figure 4.8-10** for the 2020 conditions and the traffic volumes shown in **Figure 4.8-11** for the 2035 conditions (see **Appendix F**). These projected traffic volumes also take into account increases due to general background growth, identified by MACOG as a 1 percent per year increase (see **Appendix F**). Through a comparison in the resulting change in delay and level of service at the study intersections, the effects of the site generated traffic can be identified. The results are shown in Table 4.8-10.

As shown in Table 4.8-10, without roadway or traffic control improvements, four intersections would operate at unacceptable overall LOS under the 2020 conditions, resulting in a significant impact. The same four intersections would operate at unacceptable LOS under the 2035 conditions, only with increased delay. The following list documents lane groups under Alternative C that would operate at unacceptable LOS during the AM or PM peak hours without further roadway or traffic control improvements. (See **Appendix F** for detailed HCM reports).

- SR-23 & EB US 31/20 off ramp – Eastbound Left/Thru/Right (LOS F - 2020 and 2035)
- SR-23 & WB US 31/20 off ramp – Westbound Left/Thru/Right (LOS F – 2035)
- SR-23 & Driveway B – Westbound Left/Thru/Right (LOS F – 2020 and 2035)
- SR-23 & New Energy Drive/Driveway A – Westbound Left/Thru/Right (LOS F – 2020 and 2035)
- SR-23 & Ewing Avenue – Westbound Left/Thru/Right (LOS F – 2020 and 2035)
- SR-23 and Ewing Avenue – Eastbound Left/Thru/Right (LOS F – 2035)

In order to accommodate Alternative C, mitigation measures would need to be implemented at the above intersections. These mitigation measures (outlined on **Figure 4.8-12** and in Section 5.0) would bring the LOS in these areas to a minimum of D, which is the minimum rating deemed acceptable by INDOT and St. Joseph County. The implementation of mitigation measures leading to LOS D would result in a less than significant impact at these intersections.

Summary of Alternative C Impacts

Without the implementation of potential roadway improvements (i.e. mitigation measures-see **Figure 4.8-12**), four overall intersections and six lane groups in the study area would have significant impacts due to the traffic generated by Alternative C.

However, with implementation of the potential improvements (i.e., mitigation measures) discussed in Section 5.0, the analysis shows that all previously unacceptable intersections and lane groups would operate adequately (no significant impact) during both the Opening Year (2020) and the Horizon Year (2035).

4.8.5.2 Land Use

Alternative C would moderately impact land use by increasing land use intensity but would not significantly impact land use based on the significance criteria outlined at the beginning of this section.

Alternative C would result in a shift of which governmental unit would have jurisdiction by law and special expertise for land use jurisdiction for the project site. The City of South Bend currently has land use jurisdiction. If BIA selects the Alternative C, then land use jurisdiction would shift to the Pokagon Band of Potawatomi Indians and the federal government. In general, local governments like the city or county do not have jurisdiction on federal lands. Subsequent to the proposed trust acquisition, the only applicable land use regulations on the South Bend site are those of the Pokagon Band and the federal government. The Band's Tribal Government relies upon the Tribal Council, the governing body of the Tribal Government, to guide and regulate land use on tribal lands. Under this alternative, the access roads and mixed use development would be constructed on the South Bend site. The Tribal Council has approved the mixed use development in this area as evident in the fee-to-trust application. As a sovereign nation,

TABLE 4.8-10: ALTERNATIVE C PEAK HOUR INTERSECTION CONDITIONS

AM Peak Hour

				Opening Year (2020)							Horizon Year (2035)						
Intersection	**Existing Traffic Control**	**Existing Conditions LOS**	**Existing Conditions Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**
SR-23 at Mayflower Road	Signal	B	11.2	B	11.8	B	11.8	N.C			B	13.0	B	13.7	N.C		
SR-23 at Ireland Road	OWSC	B	14.0	B	14.9	C	15.3	N.C			C	16.9	C	17.4	N.C		
SR-23 at US 31/20 (Eastbound Ramps)	OWSC	C	16.5	C	17.6	D	25.9	Signal	A	5.9	C	21.2	D	34.7	Signal	A	6.4
SR-23 at US 31/20 (Westbound Ramps)	OWSC	C	16.2	C	17.9	C	21.2	Signal	B	11.1	C	22.9	D	29.5	Signal	B	10.6
SR-23 at New Energy Drive/Proposed Driveway A	OWSC	C	18.6	C	20.5	D	25.4	Signal	A	3.8	C	24.4	D	31.4	Signal	A	6.7
SR-23 at Prairie Avenue	OWSC	C	15.5	C	16.8	C	17.2	N.C			C	20.2	C	20.8	N.C		
SR-23 at Locust Road	Signal	B	11.8	B	12.9	B	13.3	Signal	B	11.6	B	15.0	B	15.4	Signal	B	13.6
SR-23 at Ewing Avenue	TWSC	D	34.1	**E**	**49.0**	**F**	**56.4**	Signal	B	10.4	**F**	**159.5**	**F**	**196.9**	Signal	B	12.1
Ireland Road and Locust Road	Signal	B	11.3	B	11.5	B	11.6	N.C			B	11.9	B	12.0	N.C		
SR-23 at Proposed Driveway B						D	26.0	Signal	A	6.8			D	33.8	Signal	A	6.6
Locust Road at Proposed Driveway C						B	10.2	OWSC					B	10.5	OWSC		
Locust Road at Proposed Driveway D						A	9.3	OWSC					A	9.4	OWSC		

PM Peak Hour

				Opening Year (2020)							Horizon Year (2035)						
Intersection	**Existing Traffic Control**	**Existing Conditions LOS**	**Existing Conditions Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**	**Do Nothing LOS**	**Do Nothing Delay (Sec/Veh)**	**Proposed Alternative without Roadway Improvements LOS**	**Proposed Alternative without Roadway Improvements Delay (Sec/Veh)**	**Proposed Traffic Control**	**Proposed Alternative with Roadway Improvements LOS**	**Proposed Alternative with Roadway Improvements Delay (Sec/Veh)**
SR-23 at Mayflower Road	Signal	A	9.3	A	9.7	B	10.6	N.C			B	11.0	B	11.7	N.C		
SR-23 at Ireland Road	OWSC	C	16.7	C	18.7	C	21.1	N.C			C	24.4	D	28.9	N.C		
SR-23 at US 31/20 (Eastbound Ramps)	OWSC	C	21.9	D	25.4	**F**	**274.3**	Signal	A	9.1	**E**	**37.6**	**F**	**470.2**	Signal	A	9.5
SR-23 at US 31/20 (Westbound Ramps)	OWSC	B	14.2	C	15.3	D	30.5	Signal	B	13.6	C	18.5	**F**	**50.7**	Signal	B	12.4
SR-23 at New Energy Drive/Proposed Driveway A	OWSC	B	12.6	B	13.2	**F**	**71.1**	Signal	A	9.5	B	14.4	**F**	**122.3**	Signal	B	12.9
SR-23 at Prairie Avenue	OWSC	C	11.4	B	12.1	B	12.8	N.C			B	13.0	B	13.7	N.C		
SR-23 at Locust Road	Signal	B	10.5	B	11.0	B	11.6	Signal	B	11.8	B	12.1	B	13.0	Signal	B	12.8
SR-23 at Ewing Avenue	TWSC	D	26.0	D	33.0	**F**	**64.1**	Signal	B	11.3	**F**	**64.4**	**F**	**122.2**	Signal	B	11.2
Ireland Road and Locust Road	Signal	B	13.2	B	13.8	B	14.9	N.C			B	15.5	B	16.8	N.C		
SR-23 at Proposed Driveway B						**F**	**57.6**	Signal	A	8.0			**F**	**86.3**	Signal	A	7.8
Locust Road at Proposed Driveway C						B	10.4	OWSC					B	10.7	OWSC		
Locust Road at Proposed Driveway D						A	9.8	OWSC					B	10.0	OWSC		

NOTE: *** Indicates delay exceeded 999.9 seconds
For minor stop-controlled intersection, LOS and Delay listed are for critical lane group
For all-way stop-controlled or signal controlled intersections, LOS and Delay are for overall intersection
One-Way Stop-Controlled (OWSC), Two-Way Stop-Controlled (TWSC), No Change (N.C)

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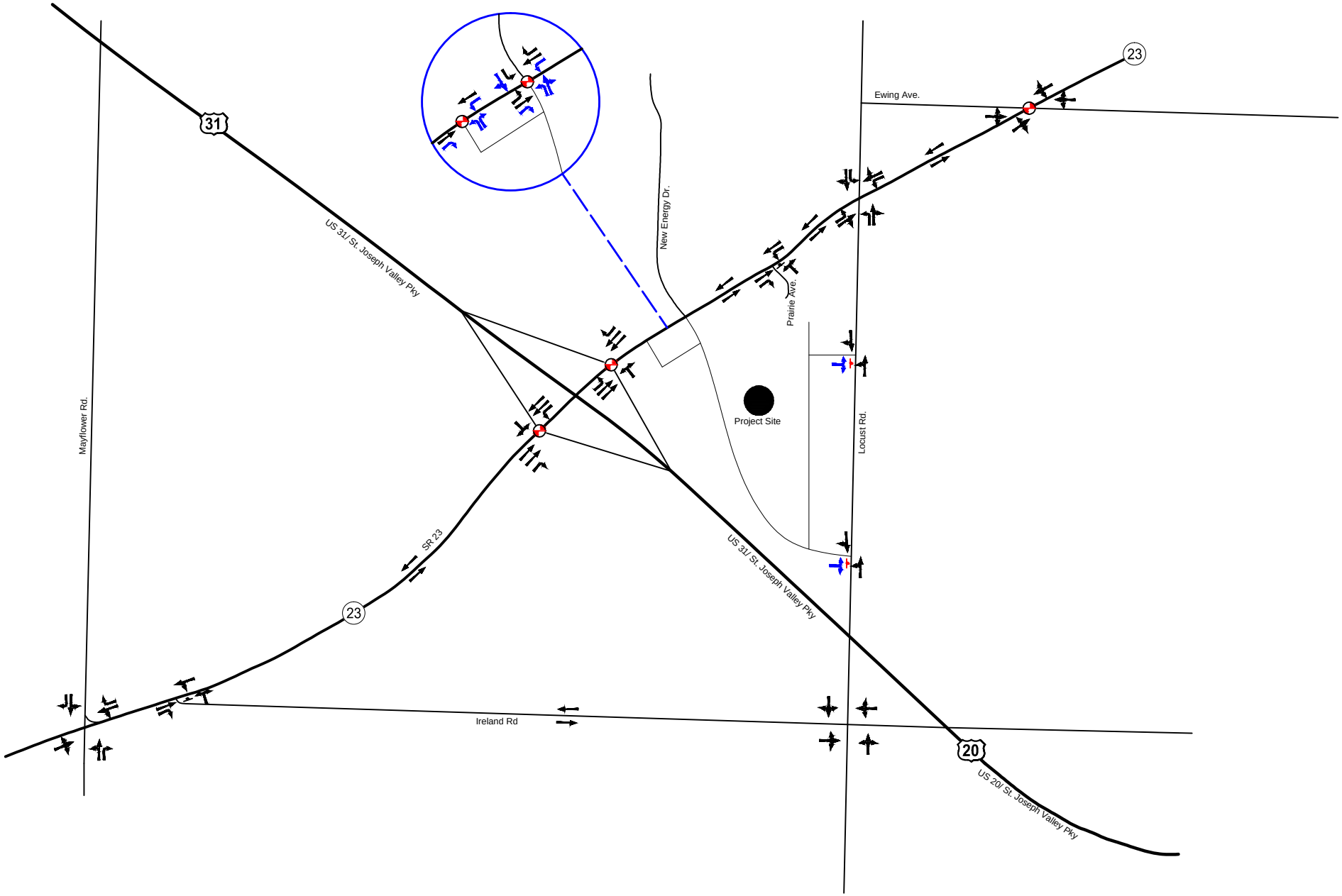

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- Existing Lanes
- Existing Traffic Signal
- Existing Stop Sign
- 2020 New Lanes
- 2035 New Lanes
- 2020 Proposed Traffic Signal
- Proposed Stop Sign

Figure 4.8-12: Alternative C
Potential Mitigation Measures

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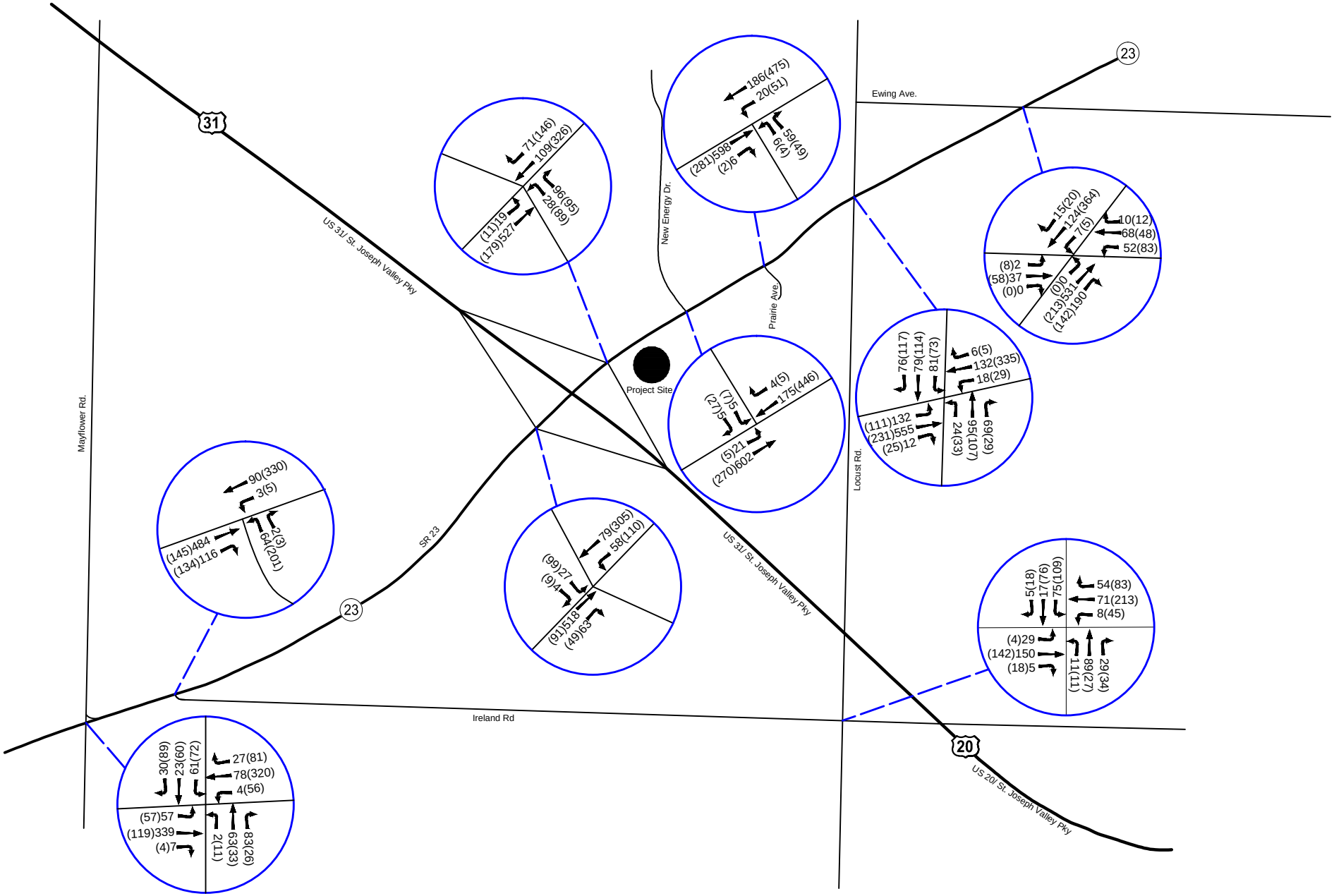

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-13: Alternative D 2020
Total Peak Hour Traffic Volumes
(South Bend Site)

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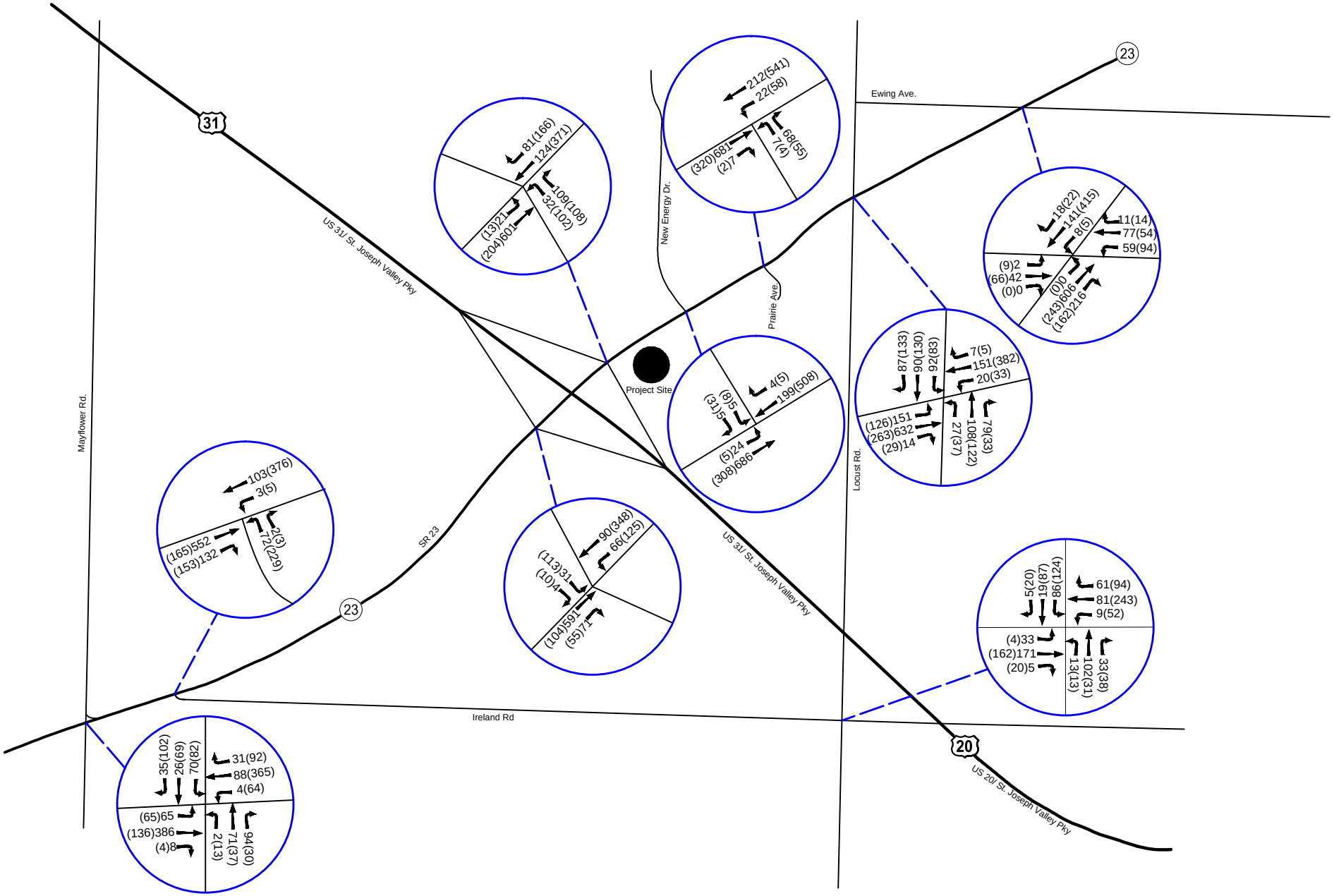

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-14: Alternative D 2035
Total Peak Hour Traffic Volumes
(South Bend Site)

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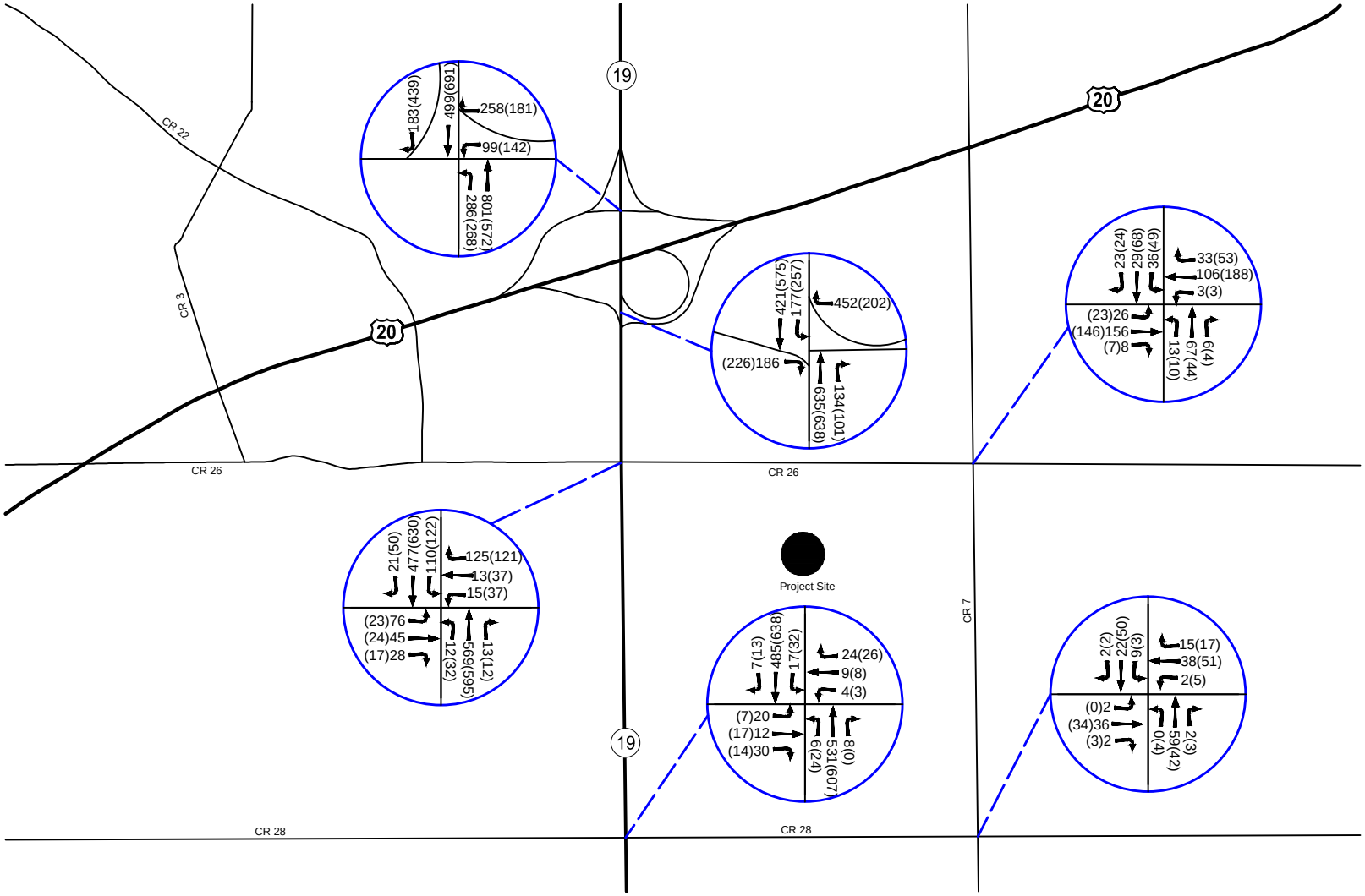

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-15: Alternative D 2020
Total Peak Hour Traffic Volumes
(Elkhart Site)

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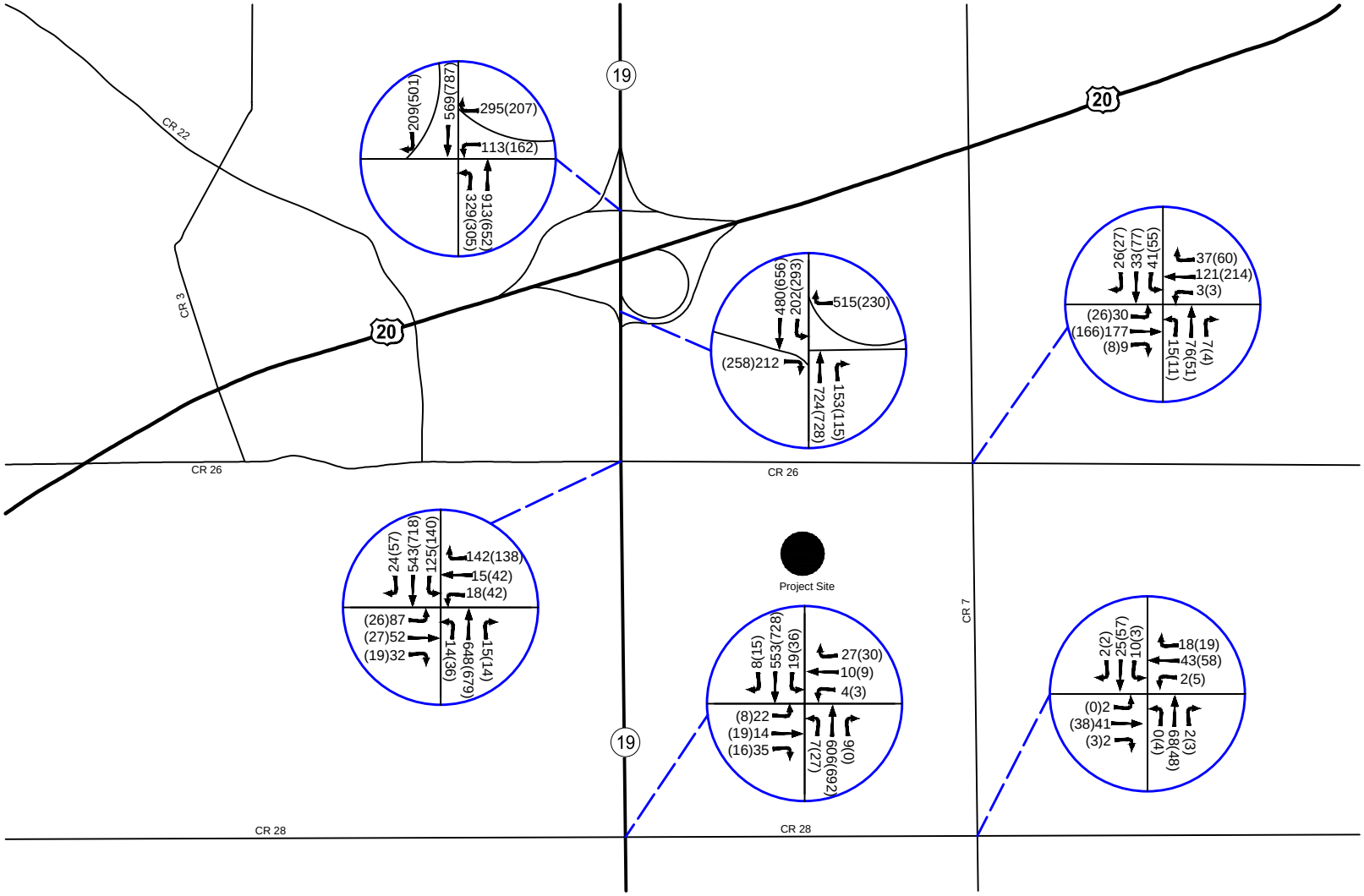

LEGEND	
XX	AM Peak Hour Volumes
(XX)	PM Peak Hour Volumes

Figure 4.8-16: Alternative D 2035
Total Peak Hour Traffic Volumes
(Elkhart Site)

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TABLE 4.8-11: ALTERNATIVE D - SOUTH BEND SITE PEAK HOUR INTERSECTION CONDITIONS

AM Peak Hour

Intersection	Existing Traffic Control	Existing Conditions LOS	Existing Conditions Delay (Sec/Veh)	2020 Conditions LOS	2020 Conditions Delay (Sec/Veh)	2035 Conditions LOS	2035 Conditions Delay (Sec/Veh)
SR-23 at Mayflower Road	Signal	A	9.3	A	9.7	B	13.0
SR-23 at Ireland Road	OWSC	C	16.7	C	18.7	C	16.9
SR-23 at US 31/20 (Eastbound Ramps)	OWSC	C	21.9	D	25.4	C	21.2
SR-23 at US 31/20 (Westbound Ramps)	OWSC	B	14.2	C	15.3	C	22.9
SR-23 at New Energy Drive/Proposed Driveway A	OWSC	B	12.6	B	13.2	C	24.4
SR-23 at Prairie Avenue	OWSC	C	11.4	B	12.1	C	20.2
SR-23 at Locust Road	Signal	B	10.5	B	11.0	B	15.0
SR-23 at Ewing Avenue	TWSC	D	26.0	D	33.0	**F**	**159.5**
Ireland Road and Locust Road	Signal	B	13.2	B	13.8	B	11.9

PM Peak Hour

Intersection	Existing Traffic Control	Existing Conditions LOS	Existing Conditions Delay (Sec/Veh)	2020 Conditions LOS	2020 Conditions Delay (Sec/Veh)	2035 Conditions LOS	2035 Conditions Delay (Sec/Veh)
SR-23 at Mayflower Road	Signal	A	9.3	A	9.7	B	11.0
SR-23 at Ireland Road	OWSC	C	16.7	C	18.7	C	24.4
SR-23 at US 31/20 (Eastbound Ramps)	OWSC	C	21.9	D	25.4	**E**	**37.6**
SR-23 at US 31/20 (Westbound Ramps)	OWSC	B	14.2	C	15.3	C	18.5
SR-23 at New Energy Drive/Proposed Driveway A	OWSC	B	12.6	B	13.2	B	14.4
SR-23 at Prairie Avenue	OWSC	C	11.4	B	12.1	B	13.0
SR-23 at Locust Road	Signal	B	10.5	B	11.0	B	12.1
SR-23 at Ewing Avenue	TWSC	D	26.0	D	33.0	**F**	**64.4**
Ireland Road and Locust Road	Signal	B	13.2	B	13.8	B	15.5

NOTE: For minor stop-controlled intersection, LOS and Delay listed are for critical lane group
For all-way stop-controlled or signal controlled intersections, LOS and Delay are for overall intersection
One-Way Stop-Controlled (OWSC), Two-Way Stop-Controlled (TWSC)

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TABLE 4.8-12: ALTERNATIVE D - ELKHART COUNTY SITE PEAK HOUR INTERSECTION CONDITIONS

AM Peak Hour

Intersection	Traffic Control	Existing Conditions LOS	Existing Conditions Delay (Sec/Veh)	2020 Conditions LOS	2020 Conditions Delay (Sec/Veh)	2035 Conditions LOS	2035 Conditions Delay (Sec/Veh)
SR-19 at US 20 (Westbound Ramps)	Signal	B	11.8	B	13.6	C	20.7
SR-19 at US 20 (Eastbound Ramps)	Stop Sign	B	11.2	B	11.8	B	13.4
SR-19 at County Road 26	Signal	C	20.2	C	20.7	C	23.2
SR-19 at County Road 28	Stop Sign	D	33.3	**E**	**46.1**	**F**	**104.5**
County Road 26 at County Road 7	Stop Sign	A	9.1	A	9.4	B	10.2
County Road 28 at County Road 7	Stop Sign	B	10.1	B	10.2	B	10.5

PM Peak Hour

Intersection	Traffic Control	Existing Conditions LOS	Existing Conditions Delay (Sec/Veh)	2020 Conditions LOS	2020 Conditions Delay (Sec/Veh)	2035 Conditions LOS	2035 Conditions Delay (Sec/Veh)
SR-19 at US 20 (Westbound Ramps)	Signal	A	9.1	A	9.6	B	11.6
SR-19 at US 20 (Eastbound Ramps)	Stop Sign	B	11.4	B	12.1	B	14.2
SR-19 at County Road 26	Signal	B	18.5	C	20.2	C	21.4
SR-19 at County Road 28	Stop Sign	**E**	**49.1**	**F**	**73.7**	**F**	**188.5**
County Road 26 at County Road 7	Stop Sign	A	9.2	B	9.6	B	10.4
County Road 28 at County Road 7	Stop Sign	B	10.4	B	10.6	B	10.9

NOTE: For minor stop-controlled intersection, LOS and Delay listed are for critical lane group
For all-way stop-controlled or signal controlled intersections, LOS and Delay are for overall intersection
One-Way Stop-Controlled (OWSC), Two-Way Stop-Controlled (TWSC)

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the Pokagon Band has identified this as an acceptable use. The Tribal Government desires to work cooperatively with local and State authorities on matters related to land use jurisdiction of adjoining governmental units. This is not unlike any two adjoining governmental units working cooperatively on land use, just that in this case one of the governmental units happens to be a tribal government with jurisdiction on federal trust lands. Land use regulations and project effects are assessed below.

Alternative C would also be subject to Federal Aviation Administration regulations regarding building height and distance from local airports. Pursuant to the Code of Federal Regulations Part 77.9, the FAA requires notice of construction proposals if they a) exceed 200 feet in height above ground level, or b) occur within 20,000 feet of an airport runway or 5,000 feet of a heliport. Based on preliminary research, the Preferred Alternative is over 20,000 feet from the edge of the closest runway at the South Bend Regional Airport. The site is therefore outside of the distance requirements for FAA notification. The project is also below the 200 foot FAA height requirement and is not subject to FAA notifications.

Effects to the Project Area

Proposed land uses for the South Bend site include parking facilities, community center, and medium density residential. These parcels are currently zoned by the City of South Bend as Single Family and Two Family District under the South Bend zoning regulations (St. Joseph County 2013). See **Appendix F** for City of South Bend Zoning Map. However, adjacent and proximate parcels are zoned as "Light Industrial District" and "General Industrial District" (See **Appendix F**), therefore implementation of Alternative C would not create incompatible adjacent land uses. Nearby businesses within the City Limits include Noble Americas South Bend Ethanol, Shrader Tire & Oil, Bruno's Original Pizza, Phillips 66 gas station, Steve & Gene's Auto & Truck, Bulldog Auto Parts, and Coca-Cola Enterprises Inc. Outside of the City Limits, businesses include Great Lakes Mini Max Storage and Great Lakes Heating and Air Conditioning. The northwest and western boundaries of the site are along the City of South Bend zoning limits (see **Appendix F**).

Existing businesses would not be displaced by the proposed action, but some homes would be removed for the development of Alternative C. However, the 2016 Phase I Environmental Site Assessment completed by Wightman and Associates, Inc. concluded that the majority of the subject property is currently vacant, unoccupied property. The only occupied structure is the Pokagon Band of Potawatomi Indians South Bend office along the west side of Locust, which is not slated for removal (see **Appendix G**). Additionally, these homes are directly adjacent to areas zoned for light industrial use west of Prairie Avenue. Proposed development for parcels along the eastern edge of the property would feature tribal housing, and thus be generally consistent with its applicable designation as Single Family and Two Family District zoning. Existing homes along Locust Street to the east of the site, would have neighboring houses as portrayed in the project design of the Alternative C. To avoid potential conflicts with adjacent land uses along the eastern property

boundary along Locust Street, the main entrance would be located along the north western property edge along Prairie Street. Any deliveries to the site would use the main entrance.

Considering the current function of the South Bend site, Alternative C would moderately impact land use by increasing land use intensity. However, since no occupied structures would be removed for the development of Alternative C and adjacent/proximate parcels indicate a variety of land uses, including numerous businesses in relatively close vicinity, the proposed development would not significantly impact land use based on the significance criteria outlined at the beginning of this section.

4.8.5.3 Agriculture

Alternative C has been evaluated within the same site boundary as Alternative A and therefore, would also have impacts to 109 acres of "Prime" and "Unique" designated soils. The significance of Alternative C's impacts to these designated soils is determined through the FPPA's AD 1006 process which involves a rating system created and analyzed by the NRCS. This process involving consultation with the NRCS and submission of required forms has been completed (see forms in **Appendix F**).

Through the consultation process and Form AD-1006, site rating scores were evaluated by both the BIA and the NRCS. The BIA used the results of this process to consider alternative sites. Based on the results of Form AD-1006, site rating scores did not indicate an exceedance of the recommended allowable level of farmland conversion. Follow-up communication with NRCS confirmed that no further consultation is necessary (Lisa Bolton, Executive Assistant, pers. comm.).

The Farmland Protection Policy Act was created to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. Compliance with the FPPA requires the federal decision maker to analyze actions on federal land that converts prime and unique farmland to non-agricultural purposes. The FPPA doesn't authorize government regulation of private or nonfederal land; however, if the land were put into trust, it would be considered federal assistance, which would require compliance with FPPA. Based on Form AD-1006 and consultation with NRCS there is a less than significant impact to farmland or other agriculture considerations.

4.8.6 Alternative D – No Action

4.8.6.1 Transportation/Circulation

The No Action Alternative would have significant impacts on local transportation and circulation primarily because the LOS for key intersections would continue to degrade as traffic levels increased and no mitigative improvements would be constructed to maintain an acceptable LOS. On the other hand, the No Action Alternative also does not include construction of facilities that generate additional traffic as described in Alternatives A, B or C; therefore the potential adverse

impacts on LOS associated with the other alternatives would not occur. In the absence of a viable site development, the direct, indirect, induced growth and cumulative impacts associated with the No Action Alternative are expected to continue consistent with historic trends of the local economy. Furthermore, no other future Band development of the South Bend or Elkhart sites would be reasonably foreseeable with the No Action Alternative.

The No Action Alternative LOS conditions were assessed for the purposes of cumulatively evaluating cumulative transportation network conditions in the estimated Opening Year (2020) and the Horizon Year (2035) without the traffic generated by each of the alternatives. The No Action traffic information is included in the transportation sections for each of Alternatives A, B, and C. Note that under the No Action Alternative, some of the assessed intersections would resulting in failing LOS ratings in future years as traffic increases over the years even without any of the alternatives assessed in this EIS. Thus, some kinds of traffic improvement projects would be need in the future even without any of the alternatives.

As shown in **Tables 4.8-11** and **4.8-12**, without roadway or traffic control improvements, four intersections would operate at failing overall LOS under the 2020 conditions, resulting in a significant impact. The same four intersections would operate at failing LOS under the 2035 conditions, only with increased delay. The following list documents lane group movements under the no action Alternative (Alternative D) that would operate at failing LOS during the AM or PM peak hours under the future conditions without further roadway or traffic control improvements. (See **Appendix F** for detailed HCM reports).

- SR-23 & Eastbound US 31/20 Ramps – Eastbound Left/Thru/Right (LOS E – 2035)
- SR-23 & Ewing Avenue – Westbound Left/Thru/Right (LOS E – 2020, LOS F - 2035)
- SR-23 & Ewing Avenue - Eastbound Left/Thru/Right (LOS F – 2035)
- SR-19 & CR 28 – Eastbound Left/Thru/Right (LOS F – 2020 and 2035)
- SR-19 & CR 28 – Westbound Left/Thru/Right (LOS E – 2020, LOS F – 2035)

No background mitigation measures are planned to correct these failing movements.

Summary of Alternative D Impacts

As discussed above, without the implementation of potential background roadway improvements, and without the impact of any project generated traffic (Alternatives A, B, or C), four overall intersections and five lane groups in the study area are expected to operate unacceptably. The No Action Alternative does not mitigate these impacts and so the No Action Alternative would have significant impacts on transportation.

4.8.6.2 Land Use

The No Action Alternative would have no significant impact on potential land use or jurisdiction issues. Land use designations on these sites would remain unchanged. That is because BIA would not approve fee-to-trust acquisition so would become federal trust property. The result would be that the cities would retain land use jurisdiction for the respective parcels. The Pokagon Band would not attain an inalienable land base in northwestern Indiana for its members located. The purpose and need for the proposal would not be attained for the Pokagon Band and the Band would not have a land base in its jurisdiction from which to provide adequate tribal government services to Band members living in northwest Indiana.

4.8.6.3 Agriculture

The No Action Alternative would have no significant impact on agriculture. Agricultural production would continue on the lands in Elkhart and the Band's use of lands in South Bend would remain non-agricultural with the prime farmland designated soils remaining untouched.

4.9 PUBLIC SERVICES

4.9.1 Significance Criteria

4.9.1.1 Public Services (including water supply, wastewater, electric, natural gas, and telecommunications)

For the purposes of this analysis, potential impacts to public services were considered significant if construction or operation of an alternative, even with standard forms of mitigation provided with each alternative, would:

- exceeds the capacities of service lines, plant or facilities for a given public service or otherwise render the utility providers (water, wastewater, electric, natural gas, and telecommunications) unable to maintain current levels of service to their customers in the area; or
- render solid waste transfer or disposal facilities unable to accommodate cumulative waste projections, including each alternative in turn, at their facilities to meet current life expectancy projections.

4.9.1.2 Public Health and Safety Services (including law enforcement, fire, and EMS)

For the purposes of this analysis, potential impacts to public health and safety were considered significant if construction or operation of an alternative would:

- substantially and cumulatively increase the demand for public services (i.e., court systems, jail facilities, inspection services, police, fire or emergency medical services), such that demand is greater than the available capacity, and mitigation methods, such as paying for

additional facilities or personnel to increase capacity to adequate levels to continue to protect the public, are inadequate.

4.9.2 Comparative Impact Assessment of Alternatives – Public Services

Alternatives A, B and C all will increase demand for drinking and fire water but will not significantly impact the city's public water supply system. All three alternatives include the construction or upgrade of water main. Similarly, with standard mitigation features such as grease traps, Alternatives A, B or C would have no significant impact to the City's wastewater infrastructure. Solid waste transfer or landfill capacity would not be significantly impacted by any of the build alternatives or the No Action Alternative. The following resource areas would also not be significantly impacted by Alternatives A, B, C or D with the implementation of mitigation measures described below and in Chapter 5.0.

- Electricity, natural Gas and/or telecommunications
- Public Health and Safety, including law enforcement and Fire Protection/Emergency Medical Service

4.9.3 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

4.9.3.1 Water Supply

Alternative A would increase demand for drinking and fire protection water, but would not significantly impact the City of South Bend's public water supply system that would supply the facilities of Alternative A. A new water main varying in size between 8-inch and 12-inch would connect to the City of South Bend's existing 12-inch water main service on Locust Road. The new water main would be ductile iron pipe with polyethylene encasement per ASTM A674 and AWWA C105. The water main would be approximately 10,500 feet long, and loop around the gaming facility and connect back into the existing main on Locust Road to increase the system reliability. BIA's no significant impact assessment assumes construction of the looped water main connected to the high-pressure water main along Locust Road, as shown in **Figure 4.9-1**, to help mitigate the effects of Alternative A. Alternative A involves development of a tribal village with housing and tribal government service facilities, plus gaming and related hospitality facilities to generate revenues to fund the tribal village and government services. Estimates of water demand for drinking water and fire protection for the proposed gaming and hospitality sector of the tribal development were generated from historical data from the Four Winds New Buffalo Tribal Development, which has a casino and hotel of similar size to Alternative A. Industry standard accepted water use rates were used to estimate the water demand for elements in the residential sector of the development and for the proposed event center (Metcalf & Eddy, Inc., 1991). A summary of the total daily average water use per month at Four Winds New Buffalo over a 5-year

period is summarized in **Table 4.9-1**. The water demand of Alternative A would not exceed capacities of the City's water mains with the proposed high-pressure on-site loop, or the capacity of the water treatment plant when taken cumulatively with existing community development plus foreseeable growth in water demand.

Table 4.9-1
Alternative A – Four Winds New Buffalo Average Water Meter Readings (Gallons Per Day [GPD])

	2008	2009	2010	2011	2012
January	133,800	133,667	95,031	76,690	84,697
February	130,142	133,000	96,893	83,500	80,414
March	137,281	148,906	98,387	87,871	77,031
April	146,000	127,933	96,222	92,055	74,977
May	158,562	139,703	104,562	89,100	98,384
June	157,248	144,117	110,060	110,123	134,113*
July	172,339	153,048	145,134	151,277	205,413**
August	199,187	157,884	140,300	142,252	150,912
September	140,800	139,810	119,623	123,128	110,433
October	145,240	119,721	105,719	93,161	99,870
November	149,226	107,125	96,720	83,648	106,433
December	125,733	96,433	85,455	83,276	71,709
Average for Year	**149,630**	133,446	107,842	101,340	107,865

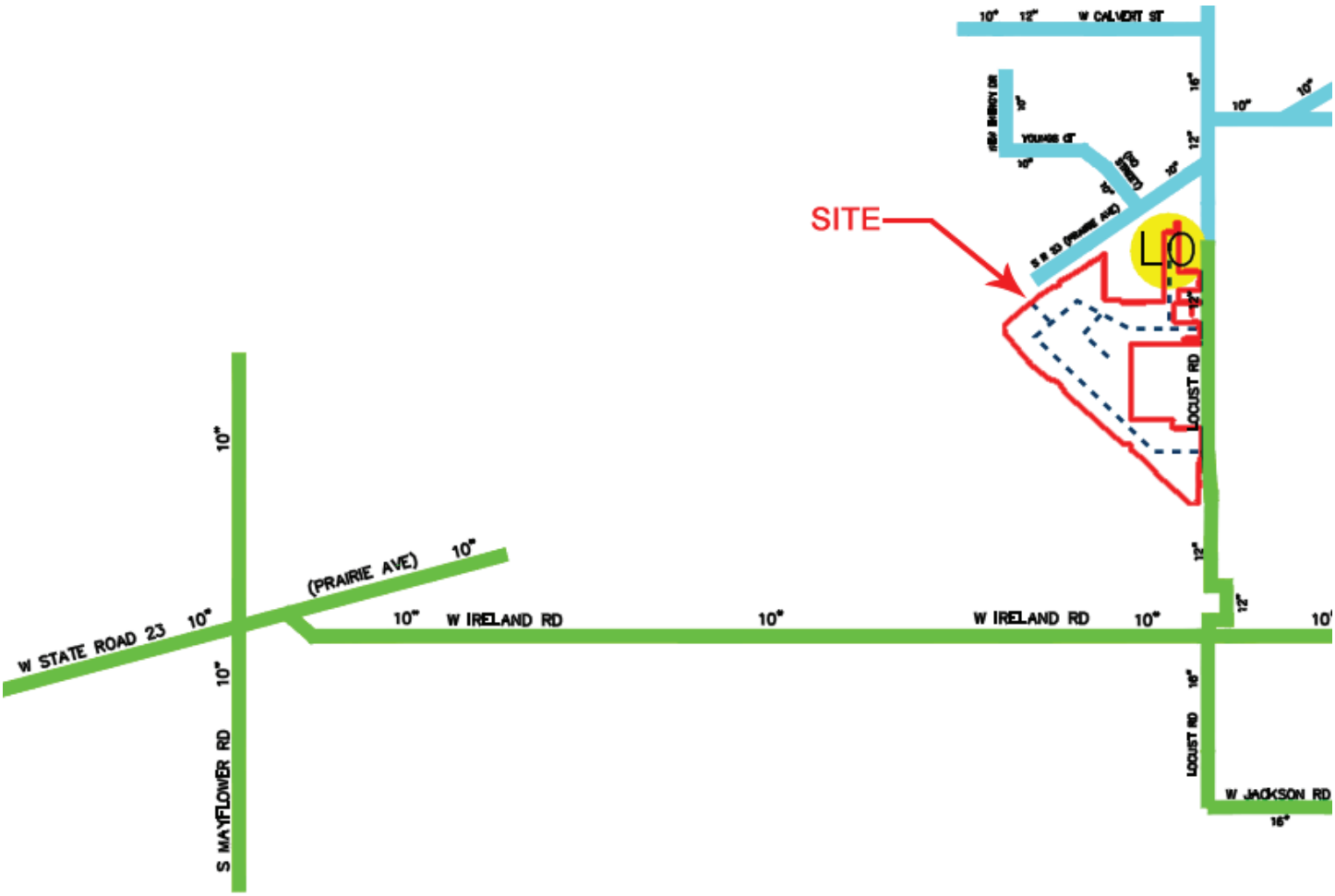
* An additional 251 hotel rooms were put in operation in June 2012
** A 1,500 seat event center opened in July of 2012

As shown in the table, the highest total average daily value out of the years of operation was from 2008 (149,630 GPD). This value was rounded to 150,000 GPD and was used as the basis of design for estimating water usage for the gaming sector at the South Bend Tribal Development. The basis of design flow value (150,000 GPD) was extrapolated to estimate single unit usage values for slot machines and hotel rooms based on the actual number of existing units at Four Winds New Buffalo at that time and are shown below in **Table 4.9-2**.

Table 4.9-2
Alternative A – Average Unit Usage Estimate

Type	Units at New Buffalo	Usage (GPD)	Flow (GPD)
Hotel Room	164	95	15,580
Slot Machine	3000	47	141,000
Total			156,580

The per-unit usage values for banquet seats, dwelling units, and the community center were derived from industry standard accepted rates (Metcalf & Eddy, Inc., 1991). All average unit usage



LO Existing Booster Station

High Pressure District

Low Pressure District

Proposed Water Main Extension

0 250 375 500

1 inch ≈ 250 ft

Source: City of South Bend Department of Public Works

Figure 4.9-1

South Bend Conceptual Water System Layout

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assumptions can be found in **Table 4.9-3**. **Table 4.9-4** displays the final average daily water demand estimates based on these assumptions.

Table 4.9-3
Alternative A – Average Unit Usage Assumptions

Type	Usage (GPD)
Hotel Room	95
Slot Machine	47
Banquet Seat	4
Dwelling Unit	250
Community Center	Equivalent to 5 Dwelling Units

Table 4.9-4
Alternative A – Estimated Average Daily Water Demand (GPD)

Hotel		Casino		Irrigation	Banquet Hall		Residential		Total Design Flow
Rooms	Demand	Slot Machines	Demand	Demand	Seats	Demand	Dwelling Units	Demand	Demand
500	47,500	3,000	141,000	60,000	1,600	6,400	50	12,500	267,400

Water systems would be designed to meet maximum daily demand and fire flow requirements. A multiplier for maximum daily to average daily flow was derived from the existing Four Winds New Buffalo data and is approximately 2.1. Typical multipliers range from 1.5-1.8, but the nature of this development requires a higher multiplier (Lindeburg 2006). The estimated maximum daily water demand for this development was calculated at 495,540 GPD (344 Gallons Per Minute [GPM]). This value does not include a multiplier applied to irrigation.

The required fire flow for Alternative A is estimated at 1,500 GPM. The design flow for the development is the combination of the maximum daily demand plus the fire flow. This is summarized in **Table 4.9-5a**.

Table 4.9-5a
Alternative A – Estimated Peak Water Demand With Fire Flow (GPM)

Hotel		Casino		Irrigation	Banquet Hall		Residential		Fire Flow	Total Design Flow
Rooms	Demand	Slots	Demand	Demand	Seats	Demand	Dwelling Units	Demand	Demand	Demand
500	69	3,000	206	42	1,600	9	50	18	1,500	1,844

The project site is within the City of South Bend's water service boundary. Water service for fire protection and potable water would be provided by the City's existing high pressure system along

Locust Road. To service the various facilities on site, water distribution components would consist of ductile iron pipe varying in size between 8 inches and 12 inches.

The existing off-site piping and water plant have adequate capacity to serve Alternative A and cumulatively with the foreseeable development served by the City's water system.

Regarding drinking water quality, water provided by the City already complies with federal and state water quality drinking water requirements; therefore, no additional treatment would be required. For public safety purposes, the City ensures compliance with water quality standards by testing the quality of its water in compliance with the Safe Drinking Water Act, which also requires reporting of its test results to the State and EPA for compliance verification. The City's 2011 safe drinking water report indicates compliance with federal standards **Table 4.9-5b** (City of South Bend 2011).

After preliminary discussions with city engineering staff and system analysis, the construction of an additional water main along the adjoining Prairie Avenue to complete a distribution loop is not necessary to provide system redundancy and reliability for the tribal development. After a preliminary discussion with city engineering staff, connection to the existing high pressure line as shown in **Figure 4.9-1** along Locust Road and adjoining the project site to the east is the most practical alternative for location of the new main line. A booster station is not recommended at this site because there is adequate flow and pressure from the existing booster stations. On-site water storage would not be anticipated for Alternative A, since South Bend has adequate reserves built in to its supply and distribution system to meet emergency, operational, and fire condition flow needs (Ed Herman, Engineer, pers. comm.). There are an adequate number of booster stations and storage tanks within the higher pressure district to satisfy demands from Alternative A. Therefore, Alternative A would not have a significant effect on the City's water system based on estimated water demand needs and the City of South Bend's water system's ability to continue to serve its customers at the same level of service with foreseeable growth in community demand, plus the additional demands of Alternative A.

The Band has met with the City of South Bend Engineering Department on several occasions to discuss potable water and fire protection service from the City. Field hydrant flow tests have been completed to identify current system capacities. The tests indicate the current water system has capacity to serve the proposed development.

The City completed a regional master plan for utilities to determine the short- and long-term needs so improvements can be coordinated as development occurs. The plan identified the improvements required to serve the development and potential long term expansion of the water distribution system beyond the development area. The Band and City of South Bend have signed a Water Service and Sewer Service Agreement dated March 22, 2016 where the City has agreed to provide service and the Band has agreed to install the improvements in phases to serve the development (see **Appendix A**). No improvements have been completed at this time.

Table 4.9-5b
South Bend 2011 Water Quality Data

Contaminant	MCLG	MCL	Range	Source of Contaminant
Microbial				
Total Coliform	0%	5%	n.d. – 1.88%	Human and animal waste
Regulated Organics				
Total Trihalomethanes	0	80	3.2 – 24	Disinfection by-product
Haloacetic Acids	0	60	n.d. – 3.7	Disinfection by-product
1,2 –Dichloroethylene, cis	70	70	n.d. – 2.7	Discharge from industrial chemical factories
Trichlorothylene	0	5	n.d. – 0.6	Discharge from metal degreasing sites
2,4 D (2010)	70	70	n.d. – 0.1	Run off from herbicide used for row crops
Unregulated Organics				
Bromodichloromethane	n/a	n/a	n.d. – 2.6	Disinfection by-product
Bromoform	n/a	n/a	n.d. – 1.1	Disinfection by-product
Chloroform	n/a	n/a	n.d. – 1.8	Disinfection by-product
Chlorodibromomethane	n/a	n/a	n.d. – 3.9	Disinfection by-product
N-Nitrosodimethylamine (2010)	n/a	n/a	n.d. – 0.0034	Produced and released from industrial sources
1,1 Dichloroethane	n/a	n/a	n.d. – 0.6	Solvent, degreaser, and fumigant
Regulated Inorganics				
Arsenic	0	10	n.d. – 4.1	Erosion of natural deposits
Barium (ppm)	2	2	0.036 – .260	Erosion of natural deposits, discharge from metal refineries
Fluoride (ppm)	4	4	0.1 – 1.4	Erosion of natural deposits
Nickel	n/a	n/a	1.4 – 2.7	Erosion of natural deposits
Nitrate (ppm)	10	10	n.d. – 7.1	Runoff from fertilizer
Unregulated Inorganics				
Sodium	n/a	n/a	8.2 - 60	Erosion of natural deposits
Regulated Radioactive 2006				
Gross alpha emitters (pCi/L)	0	5	n.d.- 3.4	Erosion of natural deposits
Gross beta emitters (pCi/L)	0	50	0.1 – 7.4	Erosion of natural deposits
Radium 228 (pCi/L)	0	5	n.d. – 1.8	Erosion of natural deposits
Uranium	0	30	n.d. - 0.50	Erosion of natural deposits
Copper	1300	1300	n.d. - 980	Corrosion of household plumbing
Lead	0	15	n.d. - 62	Corrosion of household plumbing

Notes: Maximum **C**ontaminant **L**evel- The highest level of a contaminant that is allowed in drinking water.

Maximum **C**ontaminant **L**evel **G**oal - The level of a contaminant in drinking water below which there is no known or expected risk to health.

Action **L**evel **-** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

pCi/L (PicoCuries per liter)

ppm (parts per million

ppb (parts per billion)

n.d. not **d**etected - The lowest level that can be detected with current laboratory technology.

n/a - Not applicable

All units are ppb, unless noted

Total Coliform is expressed as a percentage of the total samples taken for a month. Lead and Copper are measured in the 90th percentile.

4.9.3.2 Wastewater

Alternative A, with standard mitigation features such as grease traps, would have no significant impact to the City of South Bend's wastewater infrastructure. For planning purposes, estimates of wastewater flows for the proposed Alternative A tribal development were based on the potable water demands discussed in the previous section. In theory, wastewater discharge would equate to water supply, not including fire protection or irrigation uses, for the preferred Alternative A. Actual wastewater flows can be affected by system inefficiencies or substantial seasonal increases in wastewater flows caused by inflow and infiltration (I&I). For this assessment, system losses and I&I are assumed negligible beginning in the opening year and extending for some number of years because the wastewater interceptor lines would be new, thus sound for some years. Water demand from irrigation and fire flow was not considered for purposes of predicting wastewater flow calculations because those flows would not enter the wastewater system.

Alternative A would generate an average daily wastewater flow rate of 207,400 gallons per day and a peak wastewater flow of approximately 435,540 gallons per day or 0.435 million gallons per day. The South Bend waste water treatment facility (WWTF) currently has an average daily flow demand of 31.77 million gallons per day with an average daily design flow capacity of 48 MGD (Kim Thompson, Manager of Environmental Compliance, pers. comm.). The calculations in Table 4.9-5c indicate that with Alternative A, the South Bend WWTP would have 15.8 MGD in remaining capacity. Alternative A would not have a significant impact on the capacity of the existing South Bend WWTF.

Table 4.9-5c
Alternative A – Assessment of Adequate Wastewater Capacity

Item	Flow Rate (MGD)
Design Flow Capacity for WWTF	48.00
(Minus) Current Demand	31.77
Subtotal	16.23
(Minus) Alternative A Demand	0.435
Total – Available Capacity with Alternative A	15.80

* Current demand value includes the anticipated decrease in population by 1.2% by 2018 as discussed in Section 3.7, the approximate year of the proposed development. For conservative purposes, this value was not adjusted.

Table 4.9-6 summarizes projected average daily discharge rates for Alternative A. In order to account for variations in wastewater discharge, a peaking factor of four was applied to the average daily rates and converted to peak hourly rates which are summarized in Table 4.9-7 (Wastewater Committee of the Great Lakes 2004).

Table 4.9-6
Alternative A – Estimated Average Daily Wastewater Discharge Rates (GPD)

Hotel		Casino		Banquet Hall		Residential		Total Design Flow
Rooms	Demand	Slot Machines	Demand	Seats	Demand	Dwelling Units	Demand	Demand
500	47,500	3,000	141,000	1,600	6,400	50	12,500	207,400

Alternative A would be implemented within the City of South Bend's service boundary for its wastewater treatment facility. To service the various facilities of Alternative A, new sanitary sewer gravity, lift station, and forced main components would be constructed on-site.

Table 4.9-7
Alternative A - Estimated Peak Hour Wastewater Discharge Rates (GPM)

Hotel		Casino		Banquet Hall		Residential (including Community Center)		Total Peak Hour Flow
Rooms	Demand	Slots	Demand	Seats	Demand	Dwelling Units	Demand	Demand
500	132	3,000	392	1,600	18	50	34	576

Pretreatment of wastewater flows from Alternative A is not anticipated to be needed because the City of South Bend's WWTF has adequate capacity to treat the estimated Pokagon Tribal Development's project wastewater flows (Kim Thompson, Manager of Environmental Compliance, pers. comm.); the city's treatment plant currently has adequate capacity to treat the projected amount of wastewater for Alternative A. However, since the development is currently designed to contain food service facilities, a grease interceptor would need to be installed on-site in Alternative A for grease removal before reaching the City's system.

The initial development, up to 190gpm of peak wastewater flow, could be serviced by an onsite lift station and the existing 8" gravity sewer on Locust Road. The lift station would be located on-site at a central location northwest of the gaming facility parking lot where gravity sewer pipes from the gaming facilities, tribal village and tribal government facilities would converge. The lift station would have two pumps with a capacity of 180 GPM and power of 6.5 hp. The wet well capacity would be approximately 421 cubic feet. The lift station would be powered from the gaming facility and backup power would be provided by the standby generators at the gaming facility. The backup generator would be diesel powered. As with any petroleum products stored on-site, diesel fuel would be retained in areas with secondary containment or would be kept in secured areas with impermeable floors and a Spill Prevention, Control, and Countermeasures Plan (SPCC) will be

completed and administered by the EPA (discussed in later sections). A control system would be installed to control and alternate pumps, with telemetry controls tied to the City of South Bend system. A 6-inch PVC forced main meeting the requirement of ASTM D2241 with a SDR of 21, rated at a working pressure of 200 PSI with reduced wall compact ductile iron fittings, would extend approximately 3,500 feet to an existing manhole on Locust Road where the forced main would connect at an invert elevation of approximately 771 feet.

Once peak flow from the Band's development exceeds 190gpm, the Band would construct the additional 36" gravity sewer from the initial lift station, north under Prairie Avenue to the existing Calvert Street lift station and abandon the onsite lift station and forced main to redirect the discharge from Locust Road to the Calvert Street lift station. The City has a need to increase the capacity of the Calvert Street lift station and is currently planning those improvements. The lift station will be designed to accommodate potential future flows from the Band's development. The Band has agreed to contribute $400,000 to the cost of upgrading or replacing the Calvert Street Lift station at the time the City completes those improvements.

The Band and City of South Bend have signed a Water Service and Sewer Service Agreement dated March 22, 2016 where the City has agreed to provide service and the Band has agreed to install the improvements in phases noted above to serve the development (see **Appendix A**).

The gravity collection sewers, lift station and forced main would be constructed by the Band, but would be owned and operated by the City of South Bend. The Band has complete the design for the initial phase of development and the City of South Bend has reviewed and approved the plans for construction. No improvements have been completed at this time.

4.9.3.3 Solid Waste

Alternative A would not have significant cumulative impacts to the capacity of the existing solid waste transfer system and landfill. The estimated solid waste generated by Alternative A was calculated by evaluating a similar existing development, the Four Winds New Buffalo Tribal development in MI. The waste generation resulting from Alternative A's casino and hotel components are estimated to be 2,325 tons per year or 6.4 tons per day (estimate includes a 10 percent increase in annual yield from waste generation at the Four Winds Tribal Development as a factor of safety) (Jeff Clay, SVP of Project Development and Facilities, pers. comm.). Waste produced from the residential and community center components of Alternative A would be much less than the quantities generated from the casino and hotel and thus were considered incidental to the 6.4 tons per day estimate for the purposes of this analysis. A trash compactor or a streamline compactor could be utilized to reduce the volume of trash being produced.

Construction of Alternative A's project components would be expected to result in a temporary increase in waste generation. Potential solid waste streams from construction are expected to include the following:

- Paper, wood, glass and plastics from packing materials, waste lumber, insulation and empty non-hazardous chemical containers
- Excess concrete from construction practices
- Excess metal, including steel from welding/cutting operations, packing materials, and empty non-hazardous chemical containers, and aluminum from packing materials and electrical wiring

To reduce waste generation at the Alternative A site, recycling of cardboard, office paper, newspaper, glass, some plastics, light bulbs, used fryer oil, and used batteries would be carried out as is done at the Four Winds New Buffalo Tribal development. These are the minimum types of materials that would be recycled, with potential to add others depending on recycling services available.

The City of South Bend only manages residential solid waste and recycling for the city (Andrae Price, City of South Bend Solid Waste Manager, pers. comm.). The city procures these services every several years and Waste Management (WM) currently has this contract. WM currently owns and utilizes Prairie View Landfill for the City of South Bend's waste, which is located in Wyatt, Indiana (Kelly Smith, WM Manager, pers. comm.).

Commercial waste services would be handled by one of several private entities such as WM and Republic Services, which are national companies, or Michiana Recycle and Disposal or Lakeshore Waste and Recycle, which are regional companies. It is anticipated that the Pokagon Band would enter into a contract with one of these companies to provide service to the proposed commercial portion of the development. Companies like WM and Republic Services own and operate their own landfills, whereas Michiana, Lakeshore and other smaller companies contract with the county and other private landfills. **Table 4.9-8** shows the local landfills in the vicinity of the project area, average daily load rates and projected lifespans.

Table 4.9-8
South Bend Local Landfill Capacities

Landfill	Location	Owner	Approximate Load Rate (Tons/Day)	Projected Lifespan (Yrs.)
Southeast Berrien County Landfill	Niles MI	County	500	36
Green Tech Transfer Station	South Bend, IN	Reliable Waste & Disposal	1000	Not Applicable
Prairie View	Wyatt, IN	WM	600	18

Sources: (Sonny Fuller, Landfill General Manager, pers. comm.); (Jill James-Laudeman, Employee at Republic Services, pers. comm.); and (Kelly Smith, WM Manager, pers. comm.)

Alternative A would generate an estimated 6.4 tons per day of solid waste which is approximately 0.3 percent of the total approximate existing loads delivered daily to the three local landfills listed

in the table above. Alternative A's solid waste generation would not have a significant adverse effect to the landfill lifespans of the listed facilities.

4.9.3.4 Electricity, Natural Gas, and Telecommunications

The Indiana811 program provides service to all excavators (contractors, homeowners and others), in Indiana. This simple safety service protects the excavator from personal injury and underground facilities from being damaged. The utility companies would be responsible for the timely removal or protection of any existing utility facilities located within construction areas.

Electricity and Natural Gas

Alternative A would not have significant impacts to the local electricity and natural gas systems. The estimated peak electricity demand load for Alternative A was calculated using the Four Winds New Buffalo Casino and Hotel 13 Month Usage History from February 2012 through February 2013 (Jeff Clay, SVP of Project Development and Facilities, pers. comm.). The estimated usage for the Alternative A commercial facilities is 35,984,550 KWH per 12 months or 2,998,710 KWH per month. Additional elements common to Alternatives A, B, and C include the residential housing and an 8,500 square foot community center. Average electrical demand values for residential and commercial properties within the I&M service area were not readily available; however, another Midwestern company, Madison Gas and Electric (MG&E), was able to provide electrical and natural gas usages per commercial building type per square footage as a guide for comparison. The community center's general electrical gas usage based on building square footage is shown in Table 4.9-9 below based on MG&E's consumer data. The community center's energy demand would be approximately 0.3 percent of the hotel and casino's demand and therefore for the purposes of this report was considered incidental to the electrical demand estimated for the proposed casino and hotel. The residential housing component's energy demand would be even less significant and was also considered incidental for the purposes of this report. A full electrical peak-demand load for each component would be determined later in the project based on the National Electricity Code (NEC) calculations.

Table 4.9-9
Alternative A – Estimated Electrical Demand

Property Type	Size	Average Demand/Size	Estimated Demand	Estimated Demand / Month
Community Center	8,500 Square Feet	13.11 kWh/square foot/year	111,435 kWh/year	9,285 kWh/Month

Source: MG&E

The project site is currently serviced by an I&M circuit via a 12KV cable. Until a full electrical demand calculation is completed, I&M engineer David Kline based the estimated demand for Alternative A on data provided by Four Winds New Buffalo Casino and Hotel data (David Kline,

pers. comm.). I&M would be capable of providing electricity of this scale to the proposed Alternative A development at the South Bend site with the following upgrades in infrastructure:

- New transformer at the station
- New regulator
- New breaker
- Approximately 5,000 feet of wire upgrades

Alternative A would include emergency generators to assure full capacity service to the project area in the event of a loss of service from the I&M grid. Use of the generators would be restricted to emergency purposes only.

The North Indiana Power Service Commission's existing infrastructure should be able to fulfill natural gas needs for Alternative A as estimated using existing data regarding the demand currently generated by the Four Winds New Buffalo Casino and Hotel, with the exception of natural gas generators, should they be used. If natural gas generators are selected to provide emergency power, a more detailed natural gas demand and load analysis would be required. Data provided by Lakeshore Energy Services Annual Report for Four Winds New Buffalo from March 2009 through February 2013 shows an average natural gas usage of 54,072 MMBtus (54,072,000 kBtus) per year with monthly average estimates ranging from 3,011 to 8,332 MMBtus (3011,000 to 8,332,000 kBtus) (Jeff Clay, SVP of Project Development and Facilities, pers. comm.). Based on these values, minimal to no infrastructure enhancements would be anticipated to be required to deliver the natural gas demand required (David Bremer, Account Manager at Northern Indiana Public Service Company, pers. comm.) for Alternative A. The actual mechanical and electrical design components and energy demand needs would be calculated for the Alternative A when more detailed design information is available for structures required for Alternative A.

For the tribal village component of Alternative A, MG&E was able to provide natural gas usages per commercial building type per square footage as a guide for comparison. The community center's approximated natural gas usage is shown in **Table 4.9-10a** below based on averaged MG&E consumer data. The community center's natural gas demand would be approximately 0.7 percent of the hotel and casino's annual demand and therefore for the purposes of this report considered incidental to the natural gas demand estimated for the proposed casino. The residential housing component's natural gas demand would be even less significant and was also considered incidental for the purposes of this report. A full natural gas analysis for each component would be determined with development of more detailed building designs later in the engineering and design process.

Table 4.9-10a
Alternative A – Estimated Natural Gas Demand

Property Type	Size	Average Demand/Size	Estimated Demand/ Year	Estimated Demand / Month
Community Center	8,500 Square Feet	42.65 kBtu/Square Foot/Year	380,290 kBtu/Year	31,690 kBtu/Month

Telecommunications

Alternative A would not have significant impacts to the local telecommunications system. The estimated needs for telecommunication services for Alternative A was determined by comparing the proposed alternative to a similar existing development, the Four Winds New Buffalo Hotel and Casino (New Buffalo) in Harford, MI. Based on communications with Matt Moon, the technology contact at New Buffalo, 500 Megabytes of bandwidth would be suggested for the proposed development.

To accommodate the telecommunication needs and anticipated future needs for the development of Alternative A and the local vicinity, the amount of infrastructure required would include the installation of fiber optics and copper cable from the central office to the demarcation point. The demarcation point is the location off parcel that AT&T would install infrastructure to. All lines installed on the property are the responsibility of the owner to layout and connect into the demarcation point. The length of copper line and fiber optic cable needed for installation on the site would be determined during the final design phase of this project.

Based on telephone correspondence with AT&T service representatives and verified by email correspondence, the South Bend Site would be serviced by AT&T. The requirements of the proposed development are within the capabilities of AT&T to service since this is their core business. AT&T has serviced the New Buffalo casino with similar telecommunication capacities (Matt Moon, Vice President of Information Technology, pers. comm.).

4.9.3.5 Public Health and Safety

The City of South Bend and the County of St. Joseph have civil jurisdiction to provide public health and safety services within City boundaries. The fee-to-trust acquisition of Alternative A would transfer jurisdiction of the designated parcels to the Pokagon Band, but the Band has voluntarily enter into an agreement with the City for it to continue to provide public safety services after the jurisdictional shift occurs. See **Appendix A** for final agreements.

Law Enforcement

With the mitigation described in this subsection, Alternative A would not have significant impacts on available law enforcement capacity or crime rates in the project vicinity. Socioeconomic literature was used to assess the impacts of the gaming facilities of Alternative A on crime rates, in order to extrapolate potential effects to law enforcement from Alternative A. No Tribal gaming

facilities are currently operating in the state of Indiana; therefore, no literature exists documenting the impact of Tribal casinos on crime rates in Indiana. Instead, literature investigating the impact of Tribal casinos on crime rates in other states, and literature investigating the impact of non-tribal casinos on crime only in the state of Indiana, were used to assess potential effects to law enforcement. By comparing socioeconomic outcomes before and after Tribes open casinos, to outcomes over the same period for Tribes that do not adopt gaming facilities, Evans and Topoleski found there was no change in crime rates in casino counties relative to non-casino counties, through the first three years after casino openings. Four years after a casino opens, bankruptcy rates, violent crime, auto thefts and larceny increased by 10 percent in counties with a casino compared to counties without a casino; however, the authors suggest that "a greater concentration of people into small geographical areas generated by the casino opening is the most likely reason for the crime increase" (Evans and Topoleski 2002). Using this rationale, any development activities that would concentrate people into smaller geographic areas, not just casinos, could potentially lead to an increase in the total number of crimes. Also see section 4.7.3.5 in Socioeconomic Effects.

Additionally, using non-tribal casino data from the State of Indiana and creating a model that accounted for tourism, casino volume, and law enforcement, Reece found very limited support for the proposition that new casinos increase local crime rates (Reece 2010). Reece found similar results to Evans and Topoleski in that opening new casinos appears to increase the number of burglaries in the county after a lag period of a few years, but Reece's model also found that opening casinos appears to initially reduce the rate of larceny, motor vehicle left, aggravated assault and robbery. A study by Cornell et al. in 1998 concluded that substantial security measures at Indian gaming facilities (i.e., personnel and surveillance) and regulatory investments made by Tribes under Tribal-State compacts appear to prevent organized crime and could account for initial decreases in criminal activity.

Using the results of the abovementioned studies, there is no definitive evidence suggesting that opening casinos either increases or decreases crime rates (number of crimes per thousand people). With these studies in mind, it is not anticipated that implementation of Alternative A would result in an increase in crime rates. However, an increase in numbers of visitors to the area may increase the number and types of crimes committed and thus increase demands for law enforcement services. Mitigation that is described in Chapter 5 is included as part of Alternative A. The State of Indiana, South Bend Police Department, and St. Joseph County Sherriff's Department would be partially relieved of the burden of providing law enforcement services because the Pokagon Band has a fully-equipped Police Department. Primary law enforcement services would be provided by the Pokagon Band Police Department because Alternative A includes a fee-to-trust acquisition of the site that would result in a jurisdiction shift to the Pokagon Band. In November of 2014, in preparation for jurisdictional changes that would result from the proposed transfer of land owned by the Pokagon Band in South Bend to federal trust status, the St. Joseph County Board of Commissioners unanimously adopted Resolution R-12-C-2014 which approved the local governmental cross deputization agreement for law enforcement with the Pokagon Band of

Potawatomi Indians (see **Appendix A**). The agreement will allow both Tribal Police deputies and Sheriff's deputies to have reciprocal law enforcement jurisdiction and authority throughout St. Joseph County. This includes land that would be held in trust for the Pokagon Band as detailed within this resolution. The Pokagon Band could eventually enter into cross-deputization agreements with other Indiana police agencies (State or City) to improve the ability of these jurisdictions to share enforcement personnel and resources.

In order to reduce and prevent criminal and civil incidents, the Pokagon Band would also implement mitigation measures listed below and outlined in Section 5.0 to reduce potential adverse effects:

- All security guards would carry two-way radios in order to respond to back up and emergency–related calls; this would help prevent criminal activity.
- The Band would adopt a responsible alcohol beverage policy, including but not be limited to verifying patron age and refusing to serve those who appear visibly intoxicated.
- The parking lots and parking garage would be well lit and monitored by parking staff and/or roving security guards during time of operation; this would help prevent auto theft and other related criminal mischief.
- Video surveillance would be installed to monitor the proposed facilities.
- Areas surrounding facilities would be well lit and patrolled regularly by roving security guards; this would help prevent illegal loitering and crimes that relate to or involve loitering.
- The Band would provide traffic control with appropriate and adequate signage; this would help prevent off-site parking, which could create possible security issues.
- In addition to the adoption of Resolution R-12-C-2014 which approved the cross-deputization agreement with St. Joseph County, the Band may enter into an agreement with the State of Indiana or City of South Bend for additional law enforcement services.

An increase in traffic along US Hwy 31/20-St. Joseph Valley Parkway and SR 23 could increase the service demands of the Indiana State Police, South Bend Police Department, and St. Joseph County Sherriff's Department. Potential effects to patrol demands are based upon the ability of the roadways to safely handle traffic. As outlined in the transportation discussion in Section 4.8, Alternative A would result in significant effects to the level of service needed on US Hwy 31/20-St. Joseph Valley Parkway and SR 23. The Band has identified fair-share contributions to traffic and roadway improvements to mitigate effects to US Highway 31/10-St. Joseph Valley Parkway and SR 23 (see Section 5.0). Additionally, a new US Hwy 31/20 upgrade is currently under construction, which would substantially improve traffic capacity along the north-south corridor between Indianapolis and South Bend, and will be completed in phases between 2013 and 2015 (Bureau of Indian Affairs 2012). New highway upgrades and mitigation measures implemented by the Band would assist in reducing traffic congestion and effects of the Tribal development and casino operation, thus potentially reducing the increased demand for patrol services.

Jurisdiction of the South Bend site by the Pokagon Band Police Department, anticipated/agreed upon cross-deputization with Indiana police agencies, and utilization of the abovementioned mitigation measures (as well as those outlined in Section 5.0) would aid in ensuring a less-than-significant effect on law enforcement from implementation of Alternative A.

Fire Protection/ Emergency Medical Service

With some mitigation described below, Alternative A would not have significant impacts to available fire protection and emergency medical services capacities. Construction of the components of Alternative A may introduce potential sources of fire to the South Bend Site, increasing the demand for fire protection services and higher pressure water supply. During grading and construction, equipment and vehicles may create sparks that could accidentally ignite surrounding vegetation. This risk is similar to that found at other construction sites and would be considered potentially significant. Mitigation measures outlined in Section 5.0 would reduce this risk to a less-than-significant level. Operation of the tribal village, tribal government services and gaming facilities would increase long term demand for fire protection services.

Chapter 2 of the Band's Health and Safety Act adopts as Band law the 2012 International Building Code, including all International fire, plumbing, electrical, mechanical and related referenced standards so the proposed facilities in Alternative A would be designed to comply with International Building Codes, and the Pokagon Band would be given a certificate of occupancy by the Tribal Gaming Agency once construction is complete. The Band would work to meet the federal fire codes, including the National Fire Protection Association (NFPA) codes adopted by the State. The Band would also adhere to all mandates and amendments of the Health, Environmental Protection and Building Codes Act enacted by the Band in 2010, which provides a regulatory framework that governs sanitation, activities affecting the environment, and construction on Pokagon Band trust lands. Automatic fire sprinkler systems, stand pipes and smoke detectors would be installed in both commercial and residential facilities according to the current standards of the NFPA, International Building Code, the Health, Environmental Protection and Building Codes Act.

The Local Agreement with the City of South Bend dated April 11, 2016 was approved by City Common Council Resolution No. 4554-16 (see **Appendix A**). Section 10 of the Local Agreement provides, in relevant part: "To the extent needed to secure services, the City shall also use reasonable efforts, subject to the limitations of applicable law, to cause any other appropriate department or agency of the City to enter into, without unnecessary delay, one or more agreements with the Band Parties to provide any other services reasonably requested by the Band or PGA that the City usually and customarily provides to other residential and commercial customers." This agreement also references the Band's Health and Safety Act.

For fire department access, Alternative A would comply with standards that typically require that a minimum 20-foot (6.1 m) wide road be within 150 feet (45 m) of all portions of the exterior wall of

the first story of a building, measured in an approved route around the exterior. Fire department access road dimensions and marking would be provided for Alternative A to meet NFPA requirements. Additionally, the proposed facilities would be constructed to meet adequate fire flow requirements. The water supply would be designed to provide an adequate fire flow, which is expected to be 1,500 gallons per minute with a residual pressure of 20 psi for a minimum duration of 2 hours; the City of South Bend would act as the water supplier. With mitigation as part of Alternative A, the City has an adequate water supply system to provide the required fire flow. But it is premature to determine the exact capacity and location of water storage tanks and pumps to meet fire protection standards at this time. During final design of Alternative A, City engineers will be consulted to ensure system adequacy as the City has jurisdiction by law and special expertise to approve/veto and help fund necessary improvements to their water supply system for fire protection. Lastly, a fire pump would be provided on-site as a feature of Alternative A to maintain the required pressure of the internal sprinkler systems, as specified by NFPA-20, but it is premature to determine the size and location of such features at this stage in the project design.

Use of the proposed casino and hotel by patrons and employees, and the Band member use of tribal village features including tribal housing units and tribal government facilities could result in an increased demand for fire protection services. Fire protection services would be provided by the South Bend Fire Department as part of Alternative A.

Additionally, for Alternative A, use of the proposed casino and hotel by patrons and employees, and the proposed housing units by residents could result in an increased demand for emergency medical services. Memorial Hospital of South Bend and St. Joseph Regional Medical Center are the closest hospitals that could provide emergency medical services to the proposed Tribal development and casino. Emergency air transportation would be provided by Memorial MedFlight. Calls to 911 would be dispatched to the nearest available ambulance, mostly likely to the fleet of EMS vehicles/personnel at the South Bend Fire Department as discussed in Section 3-9.

Due to the Band's formal adoption of all applicable fire/building codes, implementation of mitigation measures (see Section 5.0) and the capacity and locations of the South Bend Fire Department (see Section 3.9), Alternative A would not significantly affect fire protection and emergency medical services.

4.9.4 Alternative B – Elkhart Site Tribal Village and Casino

4.9.4.1 Water Supply

Alternative B would increase demand for drinking and fire protection water, but with development of mitigation in cooperation with the City of Elkhart, would not significantly impact the City of Elkhart's public water supply system that would supply the facilities of Alternative B. Alternative B involves development of a tribal village with housing and tribal government service facilities, plus gaming and related hospitality facilities to generate revenues to fund the tribal village and

government services. BIA's determination that Alternative B would have no significant impact assumes that Alternative B includes construction of water main and a booster station, as shown in **Figure 4.9-2**, to help mitigate the effects of Alternative B to below significance levels. The same methodology for Alternative B was used for Alternative A since they have identical components for both alternatives. Estimates of water demand for the proposed gaming sector of Alternative B were again generated from historical data from the Four Winds New Buffalo Tribal Development. Industry standard accepted water use rates were used to estimate the water demand for elements in the residential sector of the development and for the proposed event center (Metcalf & Eddy, Inc. 1991). The same average unit usage rates shown in **Table 4.9-2** were used for Alternative B to calculate the final average daily water demand estimates shown in **Table 4.9-10b**. The water demand of Alternative B would not exceed capacities of the City's water mains, with the proposed water main extension along Nappanee Street and additional booster station at the north end of the extension, or the capacity of the water treatment plant when taken cumulatively with existing community development plus foreseeable growth in water demand. Approximately 8,000 feet of water main varying in size between 8-inch and 12-inch would be constructed on-site to serve the tribal village and gaming facility and connect to the City of Elkhart's existing water main on County Road 26. An additional 6,700 feet of 12-inch water main would be constructed along Nappanee Street (State Road 19) from County Road 26 extending north to the existing water main approximately 1,500 feet south of County Road 24, where a booster station would be constructed. The water main would be ductile iron pipe with polyethylene encasement per ASTM A674 and AWWA C105.

Table 4.9-10b
Alternative B – Estimated Average Daily Water Demand (GPD)

Hotel		Casino		Irrigation	Banquet Hall		Residential (including Community Center)		Total Design Flow
Rooms	Demand	Slot Machines	Demand	Demand	Seats	Demand	Dwelling Units	Demand	Demand
500	47,500	3,000	141,000	60,000	1,600	6,400	50	12,500	267,400

Water systems must be designed to meet (diurnal is typically the variation within one day) maximum day demand and fire flow requirements. A factor for maximum day to average day flow was derived from the existing Four Winds New Buffalo data and is approximately 2.1. Typical factors range from 1.5-1.8, but the nature of the development requires a higher factor (Lindenburg 2006). Therefore, the estimated maximum daily water demand was found to be 495,540 GPD/344 GPM (peaking factor not applied to irrigation).

The required fire flow for the development is estimated to be 1,500 GPM. The design flow for the development is the combination of the maximum daily demand the fire flow. This is summarized in Table 4.9-5.

Table 4.9-11
Alternative B – Estimated Peak Water Demand With Fire Flow (GPM)

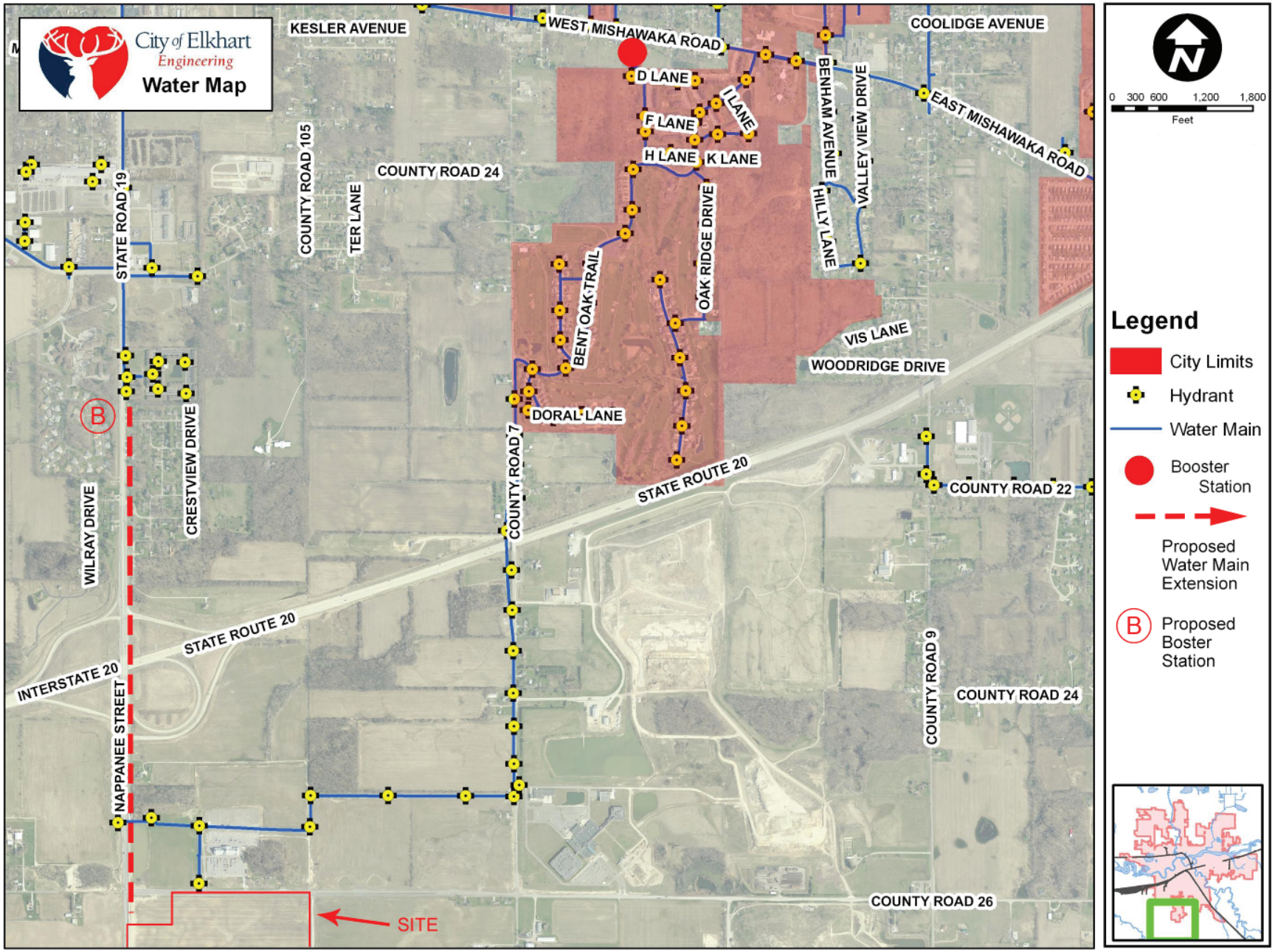
Hotel		Casino		Irrigation	Banquet Hall		Residential (including Community Center)		Fire Flow	Total Design Flow
Rooms	Demand	Slots	Demand	Demand	Seats	Demand	Dwelling Units	Demand	Demand	Demand
500	69	3,000	206	42	1,600	9	50	18	1,500	1,844

The project site for Alternative B is within the City of Elkhart's service boundary. Water service would be provided by the City through existing water mains near the intersection of County Road 26 and Nappanee Street. A preliminary analysis of the water system by Wightman & Associates, Inc. along with consultation with the City of Elkhart, determined an additional water main and a booster station on Nappanee Street would need to be constructed (See **Figure 4.9-2**) to provide adequate flow in an emergency situation. If these upgrades are not made, on-site storage will likely be necessary to meet emergency, operational and fire conditions (Mike Machlan, City Engineer, pers. comm.). The construction of the water main would complete a distribution loop to provide more water service reliability for the tribal development and the surrounding community. Finally, to service the various facilities on-site, approximately 8,000 feet of water main varying in size between 8 inches and 12 inches would be constructed on site to serve the tribal village and gaming facility and connect to the City of Elkhart's existing water main on County Road 26.

It is the intention of the Band that the new water main would be constructed by the Band, but would be owned and operated by the City of Elkhart.

Regarding drinking water quality, water provided by the City already complies with federal and state water quality drinking water requirements; therefore, no additional treatment would be required. For public safety purposes, the City ensures compliance with water quality standards by testing the quality of its water in compliance with the Safe Drinking Water Act, which also requires reporting of its test results to the State and EPA for compliance verification. The City's 2012 safe drinking water report indicates compliance with federal standards Table 4.9-12 (City of Elkhart 2012).

Figure 4.9-2 shows the water main that would complete a distribution loop for purposes of improving water service reliability both for Alternative B and for the surrounding areas.



Source: City of Elkhart Public Works and Utilities Department

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Figure 4.9-2

Elkhart Conceptual Water System Layout

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Table 4.9-12
Elkhart 2011 Water Quality Data

Contaminant	MCLG	MCL	Detected Level	Date Sampled	Range of Detection	Violation	Source
Lead (ppt)	0	AL=15	5.40-90%	9/90/11	ND-8	No	Corrosion of household plumbing systems; erosion of natural deposits
Chlorine (ppm)	MRDLG=4.0	MRDLG=4.0	1.6	12/31/12	1-2.2	No	Water additive used to control microbes
Copper (ppm)	1.3	AL=1.3	0.764-90%	9/30/11	0.0365-0.993	No	Corrosion of household plumbing systems; erosion of natural deposits
Sodium (ppm)	N/A	N/A	97.9	4/21/11	N/A	No	Erosion of natural deposits; added to water during treatment process
Nitrate (as N) (ppm)	10	10	0.180	12/31/12	ND-0.180	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Haloacetic Acids (HAA%)(ppb)	N/A	60	<5	7/16/10	N/A	No	By-products of drinking water disinfection
TTHM (ppb) (total trihalomethanes)	N/A	80	<2	7/16/10	N/A	No	By-products of drinking water disinfection

Note: Contaminants with dates indicate results from the most recent testing done in accordance with regulations.

The exact location and where the main would be connected would be a collaborative decision between the project engineer for Alternative B and the City of Elkhart engineers.

During detailed design of Alternative B, project engineers would consult with Elkhart City water engineers so that Alternative B would be designed in detail in consultation with the City to have a safe, dependable and adequate water supply and not have a significant cumulative impact on the City of Elkhart's water system.

4.9.4.2 Wastewater

Alternative B, with standard mitigation features such as grease traps, would have no significant impact to the City of Elkhart's wastewater infrastructure. For planning purposes, estimates of wastewater flows for Alternative B were based on the potable water demands discussed in the previous section. In theory, wastewater discharge for Alternative B would equate to water supply used, except not including fire protection or irrigation uses. Actual wastewater flows can be affected by system inefficiencies or substantial seasonal increases in wastewater flows caused by inflow and infiltration (I&I). For this assessment, system losses and I&I are assumed negligible beginning in the opening year and extending for some number of years because the wastewater interceptor lines would be new, thus sound for some years. Water demand from irrigation and fire flow was not considered for purposes of predicting wastewater flow calculations because those flows would not enter the wastewater system.

Alternative B is predicted to generate an average daily wastewater discharge rate of approximately 207,400 GPD or 0.207 MGD. This rate coincides with the estimated average daily wastewater rate predicted for Alternative A that was based on the predicted water consumption by Alternative A with adjustments. The same water supply demand flow rate applies to Alternative B due to the identical components of both alternatives. Likewise, Alternative B would generate a peak wastewater flow of approximately 414,800 gallons per day or 0.41 MGD. The City of Elkhart's WWTF currently has an average daily flow demand of 20 MGD with a peak flow capacity of 40 MGD (City of Elkhart 2013). Based on population increases anticipated by 2018, the possible build out year, discussed in Section 3.7, the anticipated average daily flow demand was increased by 0.7 percent. The calculations in **Table 4.9-13** indicate that with Alternative B, the Elkhart WWTP would have 18.19 MGD in remaining capacity. Alternative B would not have a significant impact on the capacity of the existing Elkhart WWTF.

Table 4.9-14 summarizes projected average daily discharge rates for Alternative B. In order to account for variations in wastewater discharge, a peaking factor of four was applied to the average daily rates and converted to peak hourly rates which are summarized in **Table 4.9-15** (Wastewater Committee of the Great Lakes 2004).

Table 4.9-13
Alternative B – Assessment of Adequate Wastewater Capacity

Item	Flow Rate (MGD)
Design Flow Capacity for WWTF	40.00
(Minus) Current Demand	21.4*
Subtotal	18.6
(Minus) Alternative B Demand	0.41
Total – Available Capacity with Alternative B	18.19

* Current demand value includes the anticipated increase in population by 0.7% by 2018 as discussed in Section 3.7, the approximate year of the proposed development.

Table 4.9-14
Alternative B –Estimated Average Daily Wastewater Discharge Rates (GPD)

Hotel		Casino		Banquet Hall		Residential		Total Design Flow
Rooms	Demand	Slot Machines	Demand	Seats	Demand	Dwelling Units	Demand	Demand
500	47,500	3,000	141,000	1,600	6,400	50	12,500	207,400

Table 4.9-15
Alternative B – Estimated Peak Hour Wastewater Discharge Rates (GPM)

Hotel		Casino		Banquet Hall		Residential (including Community Center)		Total Peak Hour Flow
Rooms	Demand	Slots	Demand	Seats	Demand	Dwelling Units	Demand	Demand
500	132	3,000	392	1,600	18	50	34	576

The Alternative B project site is located adjacent to the City of Elkhart service area for wastewater. Service would be provided by the City through a new sewer lift station and forced main discharging to the existing mains near the intersection of County Road 19 to County Road 20 as shown in **Figure 4.9-3**. On-site sewer facility requirements would consist of new gravity sewer mains with lateral connections to service the various on-site facilities. Wastewater treated by the City's system is required to meet federal and state water quality requirements; therefore, no additional pretreatment is required. However, since the development is currently designed to contain food service facilities, a grease interceptor would need to be installed on-site for pre-treatment before reaching the City's system. The City's treatment plant currently has adequate capacity to treat the projected peak flow rate of wastewater from Alternative B (Mike Machlan, City Engineer, pers. comm.).

Alternative B would not have significant impacts to Elkhart's wastewater mains with construction of mitigation features. The final layout and design of the new main lines with mitigation for Alternative B would be a collaborative effort by the project engineer for Alternative B and the City of Elkhart engineers. A preliminary engineering analysis conducted by Wightman & Associates, Inc., along with consultation with the City of Elkhart of the existing sewer mains indicates that mitigation is required with Alternative B to not cumulatively exceed the capacity of the mains near Alternative B. Wastewater mitigation features for Alternative B include construction of a lift station that would be located on-site at a central location north of the gaming facility main parking lot where gravity sewer pipes from the gaming facilities, tribal village and tribal government facilities will converge. The lift station capacity would be implemented in phases as the property develops and initially would have two pumps with a capacity of 400 GPM and power of 40 hp. The initial wet well capacity would be approximately 330 cubic feet. The lift station would be powered by the local electrical grid, with a backup generator. The backup generator would be 100 KW and diesel powered. As with any petroleum products stored on-site, diesel fuel would be retained in areas

with secondary containment or would be kept in secured areas with impermeable floors and a Spill Prevention, Control, and Countermeasures Plan (SPCC) administered by the EPA (discussed in later sections). A control system would be installed to control and alternate pumps, with telemetry controls tied to the City of Elkhart system. A 6-inch PVC forced main meeting the requirement of ASTM D2241 with an SDR of 21, rated at a working pressure of 200 PSI with reduced wall compact ductile iron fittings, would extend approximately 12,500 feet to an existing manhole on West Mishawaka Road (County Road 20) where the forced main would connect at an invert elevation of approximately 754 feet. This would provide adequate wastewater flow capacity for the existing wastewater flows plus future growth plus Alternative B flows so that Alternative B would have no significant impact on the mains of the Elkhart wastewater main system.

It is the intention of the Band that the gravity sewer serving the tribal village, as well as the lift station and forced main would be constructed by the Band, but would be owned and operated by the City of Elkhart. The gravity sewer serving the gaming development would be owned and maintained by the Band.

The Band's engineering consultant, Wightman and Associates, Inc. has met with the City of Elkhart's Public Works and Utilities Department to discuss sanitary sewer service from the City. No improvements have been completed at this time.

4.9.4.3 Solid Waste

Alternative B would not have significant impacts to solid waste transfer or landfill capacities. The estimate of solid waste stream that would be generated by Alternative B was calculated using the same data and approach described under Alternative A. It is estimated that 6.4 tons of solid waste would be generated per day at the Elkhart site from the proposed casino and hotel. Waste produced from the residential and community center components of the tribal village of Alternative B would be much less than the quantities generated from the casino and hotel and thus were considered incidental to the 6.4 tons per day estimate for the purposes of this analysis. A trash compactor or a streamline compactor and recycling of paper and cardboard could be utilized to reduce the volume of trash being produced.

Residential and commercial waste services in Elkhart County can be handled by one of several private entities such as WM and Republic Services, which are national companies, or Himco Borden Waste Away, which is a regional company. It is anticipated that the Pokagon Band would enter into a contract with one of these companies to provide service to the proposed development. Companies like WM and Republic Services own and operate their own landfills whereas Himco Borden Waste Away and other smaller companies contract with the county landfill. Table 4.9-16 shows the local landfills in the vicinity of the project area, average daily load rates and projected lifecycles.

Table 4.9-16
Elkhart Local Landfill Capacities

Landfill	Location	Owner	Approximate Load Rate (Tons/Day)	Projected Lifespan (Yrs.)
Elkhart County Landfill	Elkhart, IN	County	400	50
Earthmovers Landfill	Elkhart, IN	WM	900	10

Sources: (Kim Davis, Elkhart County Site Manager, pers. comm.) and (Kelly Smith, WM Manager, pers. comm.)

The estimated 6.4 tons per day of solid waste for Alternative B is a small addition (0.5 percent) to the approximate loading rates listed in the table above and would have a less than significant effect to the landfill lifespan of the listed facilities.

To reduce waste generation at the Alternative B site, recycling of cardboard, office paper, newspaper, glass, some plastics, light bulbs, used fryer oil, and used batteries would be carried out as is done at the Four Winds New Buffalo Tribal development. These are the minimum types of materials that would be recycled, with potential to add others depending on recycling services available.

4.9.4.4 Electricity, Natural Gas, and Telecommunications

The Indiana811 program provides service to all excavators (contractors, homeowners and others), in Indiana. This simple safety service protects the excavator from personal injury and underground facilities from being damaged. The utility companies would be responsible for the timely removal or protection of any existing utility facilities located within construction areas.

Electricity and Natural Gas

Alternative B would not have a significant impact to the capacities of the local electrical grid and natural gas system. The estimated peak electricity demand load for Alternative B was based on Four Winds New Buffalo Casino and Hotel Usage History. Usage from February 2012 through February 2013 was averaged, and the estimated usage for the proposed casino and hotel would likely be similar to 35,984,550 kilowatt hours (kWh) per 12 months or 2,998,710 kWh per month. A full electrical peak-demand load would be determined later in the project based on the National Electricity Code calculations.

The project site is served by I&M, and infrastructure to the Elkhart site is adequate to meet the peak hourly demand for the proposed casino and hotel. Based on the Four Winds Casino and Hotel electrical demand, it is not likely any infrastructure upgrades would be required (David Kline, Engineer, pers. comm.).

Additional elements common to Alternatives A, B, and C include the residential housing and an 8,500 square foot community center. Average electrical demand values for residential and commercial properties within the I&M service area were not readily available; however, another

Midwestern company, Madison Gas and Electric, was able to provide electrical and natural gas usages per commercial building type per square footage as a guide for comparison. The community center's general electrical gas usage based on building square footage is shown in Table 4.9-17 below based on MG&E's consumer data. The community center's energy demand would be approximately 0.3 percent of the hotel and casino's demand and therefore for the purposes of this report was considered incidental to the electrical demand estimated for the proposed casino and hotel. The residential housing component's energy demand would be even less significant and was also considered incidental for the purposes of this report. A full electrical peak-demand load for each component would be determined later in the project based on the National Electricity Code calculations.

Table 4.9-17
Alternative B – Estimated Electrical Demand

Property Type	Size	Average Demand/Size	Estimated Demand	Estimated Demand / Month
Community Center	8,500 Square Feet	13.11 kWh/square foot/year	111,435 kWh/year	9,285 kWh/Month

Source: MG&E

Alternative B would include emergency generators to assure full capacity service to the project area in the event of a loss of service from the I&M grid. Use of the generators would be restricted to emergency purposes only because of air quality concerns and fuel costs.

The North Indiana Power Service Commission's existing infrastructure should be able to fulfill natural gas needs as compared to the demand currently generated by Four Winds Casino, with the exception of natural gas generators, should they be used. If natural gas generators are selected to provide emergency power, a more detailed natural gas demand and load analysis would be required. Natural gas usage estimates for Alternative B would total 59,480 MMBtu per year or 4955 MMBtus per month. This value was calculated based on the Four Winds New Buffalo hotel and casino monthly usage rates from 2009 through 2013 for Alternative B. Based on this value, minimal to no infrastructure enhancements would be anticipated to be required to deliver the natural gas demand required for Alternative B (David Bremer, Account Manager at Northern Indiana Public Service Company, pers. comm.).

MG&E was able to provide natural gas usages per commercial building type per square footage as a guide for comparison. The community center's approximated natural gas usage is shown in Table 4.9-18 below based on averaged MG&E consumer data. The community center's natural gas demand would be approximately 0.7 percent of the casino's annual demand and therefore for the purposes of this report was considered incidental to the natural gas demand estimated for the proposed casino and hotel. The residential housing component's natural gas demand would be even less significant and was also considered incidental for the purposes of this report. A full natural gas analysis for each component would be determined later in the project.

Table 4.9-18
Alternative B – Estimated Natural Gas Demand

Property Type	Size	Average Demand/Size	Estimated Demand/ Year	Estimated Demand / Month
Community Center	8,500 Square Feet	42.65 kBtu/Square Foot/Year	380,290 kBtu/Year	31,690 kBtu/Month

Telecommunications

Alternative B would not have significant impacts to the telecommunications systems in the project area. The estimated needs for telecommunication services for Alternative B was determined by comparing the proposed alternative to a similar existing development, the Four Winds New Buffalo Hotel and Casino (New Buffalo) in Harford, MI. Based on communications with Matt Moon, the technology contact at New Buffalo, 500 Megabytes of bandwidth would be suggested for the proposed development.

To accommodate the telecommunication needs and anticipated future needs for the development of Alternative A and the local vicinity, the amount of infrastructure required would include the installation of fiber optics and copper cable from the central office to the demarcation point. The demarcation point is the location off parcel that Frontier would install infrastructure to. All lines installed on the property are the responsibility of the owner to layout and connect into the demarcation point. The length of copper line and fiber optic cable needed for installation on the site would be determined during the final design phase of this project.

Based on telephone correspondence with Frontier service representatives and verified by email correspondence, the Elkhart Site would be serviced by Frontier. The requirements of the proposed development are within the capabilities of Frontier to service since this is their core business. Frontier has also serviced the Four Winds Casino Development in Dowagiac, Michigan with similar telecommunication capacities (Matt Moon, Vice President of Information Technology, pers. comm.). Alternative B would not create adverse impacts to the company nor the services they currently provide to other customers within the region.

4.9.4.5 Public Health and Safety

Law Enforcement

The same socioeconomic literature discussed under Alternative A was used to assess the potential law enforcement effects of implementing Alternative B. Similarly, there is no definitive evidence suggesting that opening casinos would increase or decrease crime rates (number of crimes per thousand people). Thus, it is not anticipated that implementation of Alternative B would result in an increase in crime rates. However, an increase in the total number of visitors to the area may increase the total numbers of crime and thus the demands for law enforcement services. Alternative B includes mitigation for potential effects on the total numbers and types of crime. The State of Indiana and the Elkhart County Sherriff's Department would be partially relieved of the

burden of providing law enforcement services, as the Pokagon Band has a fully-equipped Police Department. Primary law enforcement services would be provided by the Pokagon Band Police Department for Alternative B. It is anticipated that the Pokagon Band would eventually enter into cross-deputization agreements with Indiana police agencies, which would facilitate the ability of these jurisdictions to share enforcement personnel and resources.

To reduce and prevent criminal and civil incidents, the Pokagon Band would also implement mitigation measures described in Section 5.0. Additionally, if necessary, the Band may enter into an agreement with the State of Indiana and/or Elkhart County for additional law enforcement services.

An increase in traffic along US Hwy 31/20 St. Joseph Valley Parkway and SR 19 could increase the service demands of the Elkhart County Sherriff's Department and the Indiana State Police. Potential effects to patrol demands are based upon the ability of the roadways to safely handle traffic. As outlined in the transportation discussion in Section 4.8, Alternative B would result in significant effects to the level of service needed on US Hwy 31/20-St. Joseph Valley Parkway and SR 19. The Band has identified fair-share contributions to traffic and roadway improvements to mitigate effects to US Highway 31/20-St. Joseph Valley Parkway and SR 19 (see Section 5.0). These mitigation measures would assist in reducing traffic congestion and effects of Tribal development and casino operation, thus potentially reducing the increased demand for patrol services.

Jurisdiction of the Elkhart site by the Pokagon Band Police Department, anticipated cross-deputization with Indiana police agencies, and utilization of the mitigation measures outlined in Section 5.0 would aid in ensuring a less-than-significant effect on law enforcement from implementation of Alternative B.

Fire Protection/ Emergency Medical Service

Alternative B would not have significant impacts to capacities for fire protection or emergency medical services. Construction and operation of Alternative B may introduce potential sources of fire ignition to the project site similar to those described under Alternative A and thus result in an increased demand for fire protection services. As with Alternative A, all fire prevention measures and building specifications in both commercial and residential facilities would be designed to meet current NFPA, International Building Code, and Building Code Act standards as adopted by the Band. Fire protection services would be provided by the Elkhart Fire Department and water for fire flow would be provided by the City of Elkhart.

Use of the proposed casino and hotel by patrons and employees, and the proposed housing units by residents could result in an increased demand for emergency medical services. Elkhart General Hospital and Indiana University Health Goshen Hospital are the closest hospitals nearby that could provide emergency medical services to the proposed Tribal development and casino. Emergency air transportation would be provided by Indiana University Lifeline. Calls to 911 would be dispatched

to the nearest available ambulance, mostly likely to the fleet of EMS vehicles/personnel at the Elkhart Fire Department.

Due to the Band's commitment to comply with all applicable fire/building codes and implement mitigation measures (see Section 5.0), and the sufficient personnel employed at the Elkhart Fire Department able to accommodate any potential increase in demand for services (see Section 3.9), a less-than-significant effect on fire protection and emergency medical services would be expected from implementation of Alternative B.

Due to the Band's formal adoption of all applicable fire/building codes, implementation of mitigation measures (see Section 5.0) and the capacity and locations of the Elkhart Fire Department (see Section 3.9), Alternative B would not significantly affect fire protection and emergency medical services.

4.9.5 Alternative C – South Bend Site Tribal Village With Commercial Development

4.9.5.1 Water Supply

Alternative C would increase demand for drinking and fire protection water, but would not significantly impact the City of South Bend's public water supply system that would supply the facilities of Alternative C. A new water main varying in size between 8-inch and 12-inch would connect to the City of South Bend's existing 12-inch water main service on Locust Road. The new water main would be ductile iron pipe with polyethylene encasement per ASTM A674 and AWWA C105. The water main would be approximately 10,000 feet long, and loop around the commercial development and connect back into the existing main on Locust Road to increase the system reliability. BIA's determination of no significant impact assumes construction of the looped water main connected to the existing high pressure water main along Locust Road, as shown in **Figure 4.9-1**, to help mitigate the effects of Alternative C. Alternative C involves development of a tribal village with housing and tribal government service facilities, plus non-gaming commercial facilities to generate revenues to fund the tribal village and government services. Alternative C involves the construction of a travel center, a car wash, a shopping center, a family entertainment center, residential duplexes and apartments, single-family homes, a community center, and two parks. Estimates of water demand for the proposed tribal village development were generated from typical rates of water use for commercial facilities from Water Resources and Environmental Engineering (Metcalf & Eddy, Inc. 1991). The estimated number of vehicles and visitors to the development were derived from Section 4.7 of this document. These per-unit usage assumptions are shown below (Table 4.9-19). Table 4.9-20 displays the final estimated average daily water demands based on these assumptions.

Table 4.9-19
Alternative C – Average Unit Usage Assumptions

Type	Usage (GPD)
Travel Center Visitors	6
Car Wash Vehicles	50
Strip Shopping Visitors	2
Entertainment Center Visitors	3
Dwelling Unit	250
Community Center	Equivalent to 5 Dwelling Units

Table 4.9-20
Alternative C – Estimated Average Daily Water Demand (GPD)

Travel Center		Car Wash		Irrigation	Strip Shopping		Entertainment Center		Residential		Total Design Flow
Visitors	Demand	Cars	Demand	Demand	Visitors	Demand	Visitors	Demand	Dwelling Units	Demand	Demand
1,385	8,310	50	2,500	30,000	542	1,084	259	777	50	12,500	55,171

Water systems must also be designed to meet maximum day demand and fire flow requirements. Typical demand multipliers used for determining average annual daily flow can range in value from 1.5 – 1.8 (Lindeburg 2006). The highest factor of 1.8 was used to estimate maximum daily water demand and peak water demand with additional emergency supply. The final value for maximum daily water demand was calculated to be 75,308 GPD. The summary for the peak water demand with a typical emergency fire flow of 1,500 GPM is summarized in Table 4.9-21.

Table 4.9-21
Alternative C – Estimated Peak Water Demand (GPM)

Travel Center		Car Wash		Irrigation	Strip Shopping		Entertainment Center		Residential		Fire Flow	Total Design Flow
Visitors	Demand	Cars	Demand	Demand	Visitors	Demand	Visitors	Demand	Dwelling Units	Demand	Demand	Demand
1,385	10	50	3	38	542	1	259	1	50	16	1,500	1,569

The Alternative C project site is within the City of South Bend's water service boundary. Water service for fire protection and potable water would be provided by the City's existing high pressure system along Locust Road. To service the various facilities on-site, water distribution components would consist of ductile iron pipe varying in size between 8-inch and 12-inch. The existing off-site piping and water plant have adequate capacity to serve Alternative C and cumulatively with the foreseeable development served by the City's water system.

Regarding drinking water quality, water provided by the City already complies with federal and state water quality drinking water requirements; therefore, no additional treatment would be required. For public safety purposes, the City ensures compliance with water quality standards by testing the quality of its water in compliance with the Safe Drinking Water Act, which also requires reporting of its test results to the State and EPA for compliance verification. The City's 2011 safe drinking water report is available on the internet and indicates compliance with federal standards.

After preliminary discussions with city engineering staff and system analysis, the construction of an additional water main along the adjoining Prairie Avenue to complete a distribution loop is not necessary to provide system redundancy and reliability for the tribal development in Alternative C. After a preliminary discussion with city engineering staff, connection to the existing high pressure line as shown in **Figure 4.9-1** along Locust Road and adjoining the project site to the east, is the most practical alternative for the location of the new main line. A booster station is not included in Alternative C at this site because there is adequate flow and pressure from the existing booster stations. On-site water storage would not be anticipated for Alternative A, since South Bend has adequate reserves built in to its supply and distribution system to meet emergency, operational, and fire condition flow needs (Ed Herman, City of South Bend engineer, pers. comm.). There are an adequate number of booster stations and storage tanks within the higher pressure district to satisfy demands from Alternative C. Therefore, Alternative C would not have a significant effect on the City's water system based on estimated water demand needs and the City of South Bend's water system's ability to continue to serve its customers at the same level of service with foreseeable growth in community demand, plus the additional demands of Alternative C.

The Band has met with the City of South Bend Engineering Department on several occasions to discuss potable water and fire protection service from the City. Field hydrant flow tests have been completed to identify current system capacities. The tests indicate the current water system has capacity to serve the proposed development. The City completed a regional master plan for utilities to determine the short and long-term needs so improvements can be coordinated as development occurs. The plan identified the improvements required to serve the development and potential long term expansion of the water distribution system beyond the development area. The Band and City of South Bend have signed a Water Service and Sewer Service Agreement dated March 22, 2016 where the City has agreed to provide service and the Band has agreed to install the improvements in phases to serve the development (see **Appendix A**). No improvements have been completed at this time.

4.9.5.2 Wastewater

Alternative C, with standard mitigation features such as grease traps, would have no significant impact to the City of South Bend's wastewater infrastructure. For planning purposes, estimates of wastewater flows from the proposed Alternative C were based on the potable water demands discussed in the previous section. In theory, wastewater discharge would equate to water supply demand, not including fire protection or irrigation uses. Actual wastewater flows can be affected by

system inefficiencies or substantial seasonal increases in wastewater flows caused by inflow and infiltration (I&I). For this assessment, system losses and I&I are assumed negligible beginning in the opening year and extending for some number of years because the wastewater interceptor lines would be new, thus sound for some years. Water demand from irrigation and fire flow was not considered for purposes of predicting wastewater flow calculations because those flows would not enter the wastewater system.

Alternative C would generate an average daily wastewater flow rate of 25,171 GPD and a peak wastewater flow of approximately 50,342 gallons per day or 0.05 MGD. The City of South Bend's waste water treatment facility currently has an average daily flow demand of 31.77 MGD with an average daily design flow capacity of 48 MGD (Kim Thompson, Manager of Environmental Compliance, pers. comm.). The calculations in **Table 4.9-22** indicate that with Alternative C, the South Bend WWTP would have 16.18 MGD in remaining capacity. Alternative C would not have a significant impact on the capacity of the existing South Bend WWTF.

Table 4.9-23 summarizes projected average daily discharge rates for the development. In order to account for variations in wastewater discharge, a peaking factor of four was applied to the average daily rates and converted to peak hourly rates which are summarized in **Table 4.9-24** (Wastewater Committee, 10-7).

Table 4.9-22
Alternative C – Assessment of Adequate Wastewater Capacity

Item	Flow Rate (MGD)
Design Flow Capacity for WWTF	48.00
(Minus) Current Demand	31.77*
Subtotal	16.23
(Minus) Alternative C Demand	0.05
Total – Available Capacity with Alternative C	16.18

* Current demand value includes the anticipated decrease in population by 1.2% by 2018 as discussed in Section 3.7, the approximate year of the proposed development. For conservative purposes, this value was not adjusted.

Table 4.9-23
Alternative C – Estimated Average Daily Wastewater Discharge Rates (GPD)

Travel Center		Car Wash		Strip Shopping		Entertainment Center		Residential		Total Design Flow
Visitors	Demand	Cars	Demand	Visitors	Demand	Visitors	Demand	Dwelling Units	Demand	Demand
1,385	8,310	50	2,500	542	1,084	259	777	50	12,500	25,171

Table 4.9-24
Alternative C – Estimated Peak Hour Wastewater Discharge Rates (GPM)

Travel Center		Car Wash		Strip Shopping		Entertainment Center		Residential		Total Design Flow
Visitors	Demand	Cars	Demand	Visitors	Demand	Visitors	Demand	Dwelling Units	Demand	Demand
1,385	23	50	7	542	3	259	2	50	7	52

The project site for Alternative C is located within the City of South Bend's service boundary for wastewater. Wastewater disposal service would be provided by the City through a new sewer connection. To service the various facilities on-site, new sanitary sewer, lift station, and forced main components would be constructed on-site.

Pretreatment of wastewater from Alternative C is not anticipated since the WWTF has additional capacity to treat the estimated Pokagon Tribal Development's project wastewater flows (Kim Thompson, Manager of Environmental Compliance pers. comm.); the city's treatment plant currently has adequate capacity to treat the projected amount of wastewater for this alternative. However, since the development is currently designed to contain food service facilities, a grease interceptor would need to be installed on-site for pre-treatment of Alternative C wastewater before reaching the City's system.

The initial development, up to 190gpm of peak wastewater flow, could be serviced by an onsite lift station and the existing 8" gravity sewer on Locust Road. The lift station would be located on-site at a central location northwest of the commercial facility parking lot where gravity sewer pipes from the commercial facilities, tribal village and tribal government facilities would converge. The lift station would have two pumps with a capacity of 180 GPM and power of 6.5 hp. The wet well capacity would be approximately 421 cubic feet. The lift station would be powered from the commercail facility and backup power would be provided by the standby generators at the commercial facility. The backup generator would be diesel powered. As with any petroleum products stored on-site, diesel fuel would be retained in areas with secondary containment or would be kept in secured areas with impermeable floors and a Spill Prevention, Control, and Countermeasures Plan (SPCC) will be completed and administered by the EPA (discussed in later sections). A control system would be installed to control and alternate pumps, with telemetry controls tied to the City of South Bend system. A 6-inch PVC forced main meeting the requirement of ASTM D2241 with a SDR of 21, rated at a working pressure of 200 PSI with reduced wall compact ductile iron fittings, would extend approximately 3,500 feet to an existing manhole on Locust Road where the forced main would connect at an invert elevation of approximately 771 feet.

Once peak flow from the Band's development exceeds 190gpm, the Band would construct the additional 36" gravity sewer from the initial lift station, north under Prairie Avenue to the existing Calvert Street lift station and abandon the onsite lift station and forced main to redirect the discharge from Locust Road to the Calvert Street lift station. The City has a need to increase the

capacity of the Calvert Street lift station and is currently planning those improvements. The lift station will be designed to accommodate potential future flows from the Band's development. The Band has agreed to contribute $400,000 to the cost of upgrading or replacing the Calvert Street Lift station at the time the City completes those improvements.

The Band and City of South Bend have signed a Water Service and Sewer Service Agreement dated March 22, 2016 where the City has agreed to provide service and the Band has agreed to install the improvements in phases noted above to serve the development (see **Appendix A**).

The gravity collection sewers, lift station and forced main would be constructed by the Band, but would be owned and operated by the City of South Bend. The Band has complete the design for the initial phase of development and the City of South Bend has reviewed and approved the plans for construction. No improvements have been completed at this time.

4.9.5.3 Solid Waste

Alternative C would not have a significant impact to the capacities for solid waste transfer and landfills in the area. A waste estimate for Alternative C was not completed due to lack of available data. But it is anticipated that the waste generated from Alternative C would be less than Alternatives A and B because the commercial facilities for Alternative C would have reduced visitation and activity. So Alternative C would result in an even less than significant impact to the local landfills than Alternatives A and B based on the Approximate Load Rates (tons/day) listed in Table 4.9-22 below.

The City of South Bend only manages residential solid waste and recycling for the city (Andrae Price, City of South Bend Solid Waste Manager, pers. comm.). The city procures these services every several years and WM currently has this contract. WM currently owns and utilizes Prairie View Landfill for the City of South Bend's waste, which is located in Wyatt, Indiana (Kelly Smith, WM Manager, pers. comm.). To reduce waste generation at the Alternative C site, recycling of cardboard, office paper, newspaper, glass, some plastics, light bulbs, used fryer oil, and used batteries would be carried out as is done at the Four Winds New Buffalo Tribal development. These are the minimum types of materials that would be recycled, with potential to add others depending on recycling services available.

Commercial waste services can be handled by one of several private entities such as WM and Republic Services, which are national companies, or Michiana Recycle and Disposal or Lakeshore Waste and Recycle, which are regional companies. It is anticipated that the Pokagon Band would enter into a contract with one of these companies to provide service to the proposed development. Companies like WM and Republic Services own and operate their own landfills, whereas Michiana, Lakeshore and other smaller companies contract with the county and private landfills. Table 4.9-25

shows the local landfills in the vicinity of the project area, average daily load rates and projected lifecycles. Based on the anticipated reduced loading rates and the projected lifespan of the local landfill capacities, solid waste produced by Alternative C would not be a significant impact to the area.

Table 4.9-25
South Bend Local Landfill Capacities

Landfill	Location	Owner	Approximate Load Rate (Tons/Day)	Projected Lifespan
Southeast Berrien County Landfill	Niles MI	County	500	36
Green Tech Transfer Station	South Bend, IN	Reliable Waste & Disposal	1000	Not Applicable
Prairie View	Wyatt, IN	WM	900	18

Sources: (Sonny Fuller, Landfill General Manager, pers. comm.), (Jill James-Laudeman, Employee at Republic Services, pers. comm.) and (Kelly Smith, WM Manager, pers. comm.)

4.9.5.4 Electricity, Natural Gas, and Telecommunications

The Indiana811 program provides service to all excavators (contractors, homeowners and others), in Indiana. This simple safety service protects the excavator from personal injury and underground facilities from being damaged. The utility companies would be responsible for the timely removal or protection of any existing utility facilities located within construction areas.

Electricity and Natural Gas

Alternative C would not have a significant impact on the electrical grid or natural gas transmission facilities and supply in the area. The estimated peak electricity demand load for Alternative C was not calculated due to lack of area data. It is anticipated that the electrical needs of Alternative C would be much less than those calculated for Alternative A and therefore not a significant impact to I&M or the community. A full electrical peak-demand load would be determined later in the project based on the National Electricity Code calculations.

As described in full detail under Alternative A, the project site is served by one I&M circuit via a 12-kilovolt cable. Battery backups may be provided for temporary emergency power in the event of a loss of service from the I&M grid. The exact enhancements anticipated to provide service to the proposed development at the South Bend site may still include upgrades to the transformer, regulator, breaker and wiring. (David Kline, Engineer, pers. comm.).

Alternative C would have less natural gas requirements than Alternatives A and B. Northern Indiana Public Service Company's existing infrastructure would be able to meet the current natural gas usage estimates for the proposed development. Based on the estimated natural gas needs, minimal infrastructure enhancements would be required to deliver the natural gas demand required (David

Bremer, pers. comm.). The actual mechanical and electrical design components and energy demand needs would be calculated for the Pokagon Band Alternative C further in the design process.

Telecommunications

Alternative C would not have a significant impact to the telecommunications systems in the project area. The estimated needs for telecommunication services for Alternative C was not specifically determined but would be significantly less than but similar to the requirements of Alternative A.

AT&T would be the service provider to the South Bend site and could adequately handle the telecommunications requirements of Alternative C since these services are their core business lines. AT&T has also serviced the Four Winds Casino Development in Hartford, Michigan with similar telecommunication capacities (Matt Moon, Vice President of Information Technology, pers. comm.). This project would not create adverse impacts to the company nor the services they currently provide to other customers within the region.

4.9.5.5 Public Health and Safety

Law Enforcement

The results of the study by Evans and Topoleski in 2002 described under Alternative A found a 10 percent increase in bankruptcy rates, violent crime, auto thefts and larceny four years after a casino opened as compared to non-casino communities, and suggested that "a greater concentration of people into small geographical areas generated by the casino opening is the most likely reason for the crime increase" (Evans and Topoleski 2002). Using this rationale, any type of development activity could theoretically concentrate people into smaller geographic areas and thus potentially lead to an increase in the total numbers or types of crime. With this study in mind, it could be argued that the development components of Alternative C (none of which include gaming facilities) could cause an increase in visitors to the area, in turn increasing the total numbers and types of crime and so increase the need for law enforcement capacity. However, other researchers posit that mixed-use development, comprised of both commercial and residential components, similar to the Proposed Action of Alternative C (i.e., retail shopping, family entertainment center, outdoor activities center, travel center, and residential areas) may actually have some effect to discourage some criminal behavior. In mixed-use neighborhoods, there are people watching the streets throughout the day from both the ground-floor shops and the apartment buildings/homes in the vicinity, helping to keep criminal activity at bay; this phenomenon is referred to as "eyes on the street" (Jacobs 1961).

As evidenced by the contradictory results of the abovementioned studies, no definitive evidence exists to suggest that commercial/residential development has an effect, positive or negative, on crime rates. Thus, it is not anticipated that implementation of Alternative C would result in an increase in crime rates (numbers of crimes per thousand people). The Pokagon Band recognizes, however, that an increase in visitors to the area may increase demands for law enforcement

services, and is prepared and committed to mitigate potential effects. The State of Indiana, South Bend Police Department, and the St. Joseph County Sherriff's Department would be partially relieved of the burden of providing law enforcement services, as the Pokagon Band has a fully-equipped Police Department. Primary law enforcement services would be provided by the Pokagon Band Police Department because Alternative C includes fee-to-trust acquisition of the site that would result in a shift of jurisdiction to the Pokagon Band. In November of 2014, in preparation for jurisdictional changes that would result from the proposed transfer of land owned by the Pokagon Band in South Bend to federal trust status, the St. Joseph County Board of Commissioners unanimously adopted Resolution R-12-C-2014 which approved the local governmental cross-deputization agreement for law enforcement with the Pokagon Band of Potawatomi Indians (see **Appendix A**). The agreement will allow both Tribal Police deputies and Sheriff's deputies to have reciprocal law enforcement jurisdiction and authority throughout St. Joseph County. This includes land that would be held in trust for the Pokagon Band as detailed within this resolution. The Pokagon Band could eventually enter into cross-deputization agreements with other Indiana police agencies (State or City), which would facilitate sharing enforcement personnel and resources.

To reduce and prevent criminal and civil incidents, the Pokagon Band would also implement mitigation measures described in Section 5.0.

Overall, it is anticipated that the operation of Alternative C would result in law enforcement demands similar to or less than those described under Alternative A (Note: security measures from Alternative A associated with casino operation would not apply for Alternative C). Jurisdiction of the South Bend site by the Pokagon Band Police Department, anticipated/agreed upon cross-deputization with Indiana police agencies, and utilization of the mitigation measures outlined in Section 5.0 would aid in ensuring a less-than-significant effect on law enforcement from implementation of Alternative C.

Fire Protection/ Emergency Medical Service

Alternative C would not have a significant impact on fire protection or emergency medical service capacities. Construction and operation of the Alternative C retail outlets, family entertainment center, outdoor activities center, and residential housing development may introduce potential sources of fire ignition to the project site similar to those described under Alternative A, and thus result in an increased demand for fire protection services. Additionally, the traveler's center could potentially increase the demand for fire protection services since the gas station would possess highly flammable materials. The gas station component of the traveler's center would be constructed to meet NFPA 58: Liquefied Petroleum standards, in order to mitigate risks, ensure safe installations, and prevent tank failures, leaks or tampering that could lead to fires and explosions. Similar to Alternative A, all fire prevention measures and building specifications in both commercial and residential facilities would be designed to meet current NFPA, International Building Code, and Building Code Act standards as adopted by the Band. As with Alternative A, the South Bend Fire

Department would provide fire protection services, and water for fire flow would be provided by the City of South Bend.

Use of the proposed retail outlets, family entertainment center, outdoor activities center, and traveler's center by patrons and employees, and the proposed housing units by residents could result in a potential increased demand for emergency medical services. Nearby emergency medical service providers are the same as those described under Alternative A.

Due to the Band's commitment to comply with all applicable fire/building codes, implementation of mitigation measures (see Section 5.0), and the capacity and locations of the South Bend Fire Department (see Section 3.9), Alternative C would not have a significant effect on fire protection and emergency medical services.

Underground Storage Tanks

Alternative C includes development of a service station that would include storage of gasoline and diesel, regulated substances, in underground storage tanks. EPA regulations would apply subsequent to the fee-to-trust acquisition when jurisdiction would shift to the Pokagon Band and the property would become federal. Alternative C includes USTs that would be compliant with design and operational requirements of 40 CFR 280.

4.9.6 Alternative D – No Action

4.9.6.1 Public Services

The No Action Alternative includes no further development at the South Bend site, including no further development of public utilities. Thus, the No Action Alternative would not result in additional effects to water supply, wastewater, solid waste, electricity, natural gas, telecommunications, law enforcement, fire protection, or emergency medical services. No significant effects would result from implementation of the No Action Alternative.

4.10 OTHER VALUES

4.10.1 Significance Criteria

4.10.1.1 Noise

For the purposes of this analysis, potential noise impacts were considered significant if construction or operation of a proposed alternative would:

- generate noise in exceedance of established noise ordinances;
- result in substantial increases of more than 5 dBA in noise levels above the existing ambient noise levels, particularly to sensitive receptors located within the project vicinity; or
- result in noise levels that approach, equal, or exceed Noise Abatement Criteria.

4.10.1.2 Hazardous Materials

For the purposes of this analysis, potential impacts from hazardous materials were considered significant if construction or operation of a proposed alternative would:

- generate or disturb hazardous materials that could cause health risks to project employees, the general public, or the environment

4.10.1.3 Visual Resources

For the purposes of this analysis, potential impacts to visual resources (including lighting and landscape) were considered significant if construction or operation of a proposed alternative would:

- substantially increase the level of light or glare on surrounding properties;
- substantially alter the landscape and scenic resources (e.g., trees, vistas, scenic highways or corridors).

4.10.2 Comparative Impact Assessment of Alternatives – Other Values

In its NEPA regulations described in 40 CFR 1502.14, the President's CEQ calls for a comparative impact assessment of all proposed Alternatives. It is critical to recognize that comparative impact assessments help sharply define potential issues and provide a clear basis for choice among Alternative options by the BIA and general public. This is because comparative assessments help analyze and determine how well each of the Alternatives addresses the purpose and need for the proposal as described in Section 1 of this EIS.

The analysis of impacts of Alternatives A, B, C, and D on Other Values does not help sharply define issues and will not greatly assist the BIA in selecting an alternative. This is due in part to the fact that none of the Alternatives would have significant impacts in regards to construction noise, site noise or traffic noise. Additionally, with the assumption that all Alternatives would remain in compliance with federal environmental and safety mandates (including CERCLA, RCRA, and OSHA regulations), none of the Alternatives would have significant effects pertaining to hazardous materials, for existing conditions, construction, or facility operations. None of the Alternatives would have significant impacts regarding aesthetic resources, including lighting and landscaping.

Because the purpose and need for this proposal is primarily socioeconomic in nature, the comparative impact assessment in Section 4.7.2 provides the best information for sharply defining the differences between the Alternatives, and is most effective in demonstrating why Alternative A is the Preferred Alternative.

4.10.3 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

4.10.3.1 Noise

Overview

The Preferred Alternative A has the potential to affect the existing ambient noise environment in the immediate project vicinity. The following noise sources are attributable to traffic and site operations:

- Increases in traffic volumes on the local roadway network would result in increases in traffic noise levels along roadways that serve the site.
- Construction activities associated with development would cause short-term increases in the ambient noise environment.
- On-site traffic flow and parking lot activities associated with the development would cause increases in the ambient noise environment.
- Truck deliveries and loading dock activities associated with the ongoing operation of the casino would result in intermittent increases in ambient noise in the immediate vicinity of loading dock areas.
- Mechanical equipment associated with the heating, ventilating, and air conditioning (HVAC) systems as well as refrigeration equipment associated with food cold storage could cause a permanent increase in ambient noise levels in the immediate project vicinity.

Methodology

An environmental noise analysis assessment was conducted to evaluate the noise impacts identified above associated with development of each of the Alternatives. To evaluate potential impacts to the ambient noise environment, a combination of existing literature, noise level measurements, and the application of accepted noise prediction methodologies were used. Noise levels generated by the on-site noise sources described above were compared against existing ambient levels to evaluate the impacts of on-site noise sources relative to existing sensitive noise receptors located in the project area.

Changes in off-site traffic noise levels which would result from the Proposed Alternatives were compared against the FHWA's 5 dBA increase criteria and NAC to evaluate the impacts of traffic at existing sensitive noise receptors located in the project area.

Noise levels generated by construction activities were compared against existing ambient levels to evaluate the impacts of the on-site noise sources relative to existing sensitive noise receptors.

Construction Noise

During the construction phase of the Preferred Alternative A, noise from construction equipment/activities would dominate the noise environment in the immediate area. Construction of the proposed project would result in a temporary increase in the ambient noise level in the vicinity of the project sites. Equipment associated with construction generally includes backhoes, graders, pavers, concrete trucks, compressors, and other miscellaneous heavy equipment.

Equipment used for construction would generate noise levels as indicated in Table 4.10-1 Maximum noise levels from different types of equipment under different operating conditions could range from 80 audible decibels to 90 dBA at a distance of 50 feet.

Construction noise levels would also fluctuate depending on the phase of construction. Table 4.10-2 illustrates typical noise levels relative to construction phase at 50 feet from the noise source. As shown in Table 4.10-2, the excavation and finishing construction phases tend to generate the most noise.

Noise levels decrease as distance from the noise source increases (noise attenuation). As noted in the *Procedures for Abatement of Highway Traffic Noise and Construction Noise*, sound intensity decreases in proportion with the square of the distance from the source (FHWA 2011). Generally, sound levels for a point source would decrease by 6 dBA for each doubling of distance from the source.

Table 4.10-1
Typical Construction Equipment Noise Levels

Type of Equipment	Maximum Noise Level (dBA at 50 feet)
Air Compressor	80
Backhoes	80
Bulldozers	85
Concrete Saw	90
Dump Truck	84
Front End Loader	80
Generator	82
Heavy Trucks	85
Mounted Impact Hammer	90
Pneumatic Tools	85
Scrapers	85

Source: FHWA Roadway Construction Noise Model User's Guide (FHWA-HEP-05-054), February 15, 2006.

It should be noted that these noise levels are for when the construction equipment is actually running, while the L_{eq} measurement is an average noise over a one-hour time period. If the construction equipment does not run continuously for one hour, then the L_{eq} for equipment would

be lower. Therefore, the noise levels noted in Tables 4.10-1 and 4.10-2 likely overstate the dBA for the construction equipment over a one-hour time period.

Table 4.10-2
Typical Construction Site Noise Levels

Construction Phase	Maximum Noise Level (dBA at 50 feet)*
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

*Noise levels are derived with the noisiest piece of equipment located at 50 feet from observer, with all other equipment located at 200 feet.

Source: *U.S. Environment Protection Agency 1971.*

Using the noise attenuation methodology noted above, Table 4.10-3 describes the distance of each Noise Receptor Group from the project site and the anticipated construction noise level for each NRG. As shown in Table 4.10-3, the noise levels at all of the NRGs at some point during construction would increase. The maximum predicted noise levels would be 84 dBA at NRG B. If these worst-case noise levels were to occur, the construction noise levels would violate the St. Joseph County noise ordinance (St. Joseph County Code of Ordinances 2012). The maximum increase expected during construction would be approximately 18.1 dBA. An increase of 10 dBA would be perceived by a receptor to be a doubling of the sound level.

Due to the temporary nature and short duration of the construction noise impacts, no significant environmental consequences are anticipated at this site, provided activities generally occur during the times permitted in the St. Joseph County noise ordinance (St. Joseph County Code of Ordinances 2012). Per the St. Joseph County noise ordinance (St. Joseph County Code of Ordinances 2012), erection, excavation, demolition, alteration, or repair of any building shall occur between 7:00 a.m. and 8:00 p.m., while the operation of any pile driver, steam shovel, pneumatic hammer, hoist, or other appliance shall occur between the hours of 7:00 a.m. and 10:00 p.m.

Site Noise

Noise at the hotel and casino would be generated by mechanical equipment, parking lot activities, and onsite traffic. Mechanical equipment would include chillers, compressors, condensers, pumps, cooling towers, HVAC, etc., while onsite noise would include arriving/departing vehicles and busses, engine starts, door slams, vehicle alarms, etc. Additional onsite noise sources could include verbal communications of patrons entering and leaving the facilities. In order to predict noise levels associated with onsite sources, noise measurements taken as part of the *Final Environmental Impact Statement for the Proposed Nottawaseppi Huron Band of Potawatomi Indians Fee-to-Trust Transfer and Casino, Calhoun County, Michigan* (PBS&J 2006) (Calhoun County EIS) were used. As

part of Calhoun County EIS, noise measurements were taken at the Soaring Eagle Casino in Mt. Pleasant Michigan. Measurements were taken during the PM peak traffic hour to represent a worst-case scenario. The measurements were taken approximately 150 feet from the main entrance, which is approximately 300 feet from the main parking lot. The measurements from the Calhoun County EIS indicated that noise levels at the Soaring Eagle Casino were 51.1 dBA L_{eq} (3:27-3:57 PM) and 50.4 dBA L_{eq} (5:50-6:30 PM).

Table 4.10-3
Construction Noise Impacts

Noise Receptor Group	Distance from Site (feet)	Construction Phase	Existing Noise Levels AM	Existing Noise Levels PM	Predicted Construction Noise Levels (dBA)
A	200	Ground Clearing	71.1	69.2	72
		Excavation			77
		Foundations			66
		Erection			73
		Finishing			77
B	100 to 180	Ground Clearing	69.3	65.9	79-72
		Excavation			84-77
		Foundations			73-66
		Erection			80-73
		Finishing			84-77
C	600 to 1,400	Ground Clearing	69.3	65.9	63-57
		Excavation			68-62
		Foundations			57-51
		Erection			64-58
		Finishing			68-41
D	150 to 1,400	Ground Clearing	63.5	65.6	75-57
		Excavation			80-62
		Foundations			69-51
		Erection			76-58
		Finishing			80-41
E	500 to 1,800	Ground Clearing	63.5	65.6	66-54
		Excavation			71-59
		Foundations			60-48
		Erection			67-55
		Finishing			71-59

Based on the noise measurements taken for the Calhoun County EIS and the distance of the NRGs from potential noise sources, noise levels from Alternative A would be lower than the existing ambient noise levels and would not significantly change existing noise levels. Therefore, no significant noise impacts are anticipated. It should also be noted that noise levels generated by onsite activities are substantially lower than the existing traffic noise levels for the surrounding roadways. Therefore, the NRGs are typically going to be most affected by traffic noise, while noise from the casino site would be negligible in comparison.

Traffic Noise

Traffic noise is the dominant noise source within the project area. Therefore, traffic noise levels were developed using Traffic Noise Model (TNM) Look-Up (Version 2.5) in conjunction with the existing traffic volumes. TNM Look-Up estimates vehicle noise emissions and resulting noise levels based on reference energy mean emission levels. The existing traffic volumes, vehicle mix, average vehicle speeds, and surface type are input into the model. TNM Look-Up uses its acoustic algorithms to predict noise levels at selected distances from the centerline of the roadway by taking into account sound propagation variables such as, atmospheric absorption, divergence, and ground type.

Using TNM Look-up, traffic noise levels were calculated for the Preferred Alternative A. The project area was modeled for AM and PM peak hour traffic conditions. The results are shown in Table 4.10-4. TNM Look-Up input and output files are included as **Appendix F**.

Since the ambient noise measurements taken for the existing conditions also include other non-traffic noise sources, "predicted" existing noise levels were also developed using TNM Look-Up in order to isolate noise generated by existing traffic volumes. These predicted existing noise levels based solely on traffic allow comparison against the noise levels that result with the addition of new traffic due to the implementation of Alternative A.

Traffic noise impacts were identified based on the 23 CFR 772, *Procedures for Abatement of Highway Traffic Noise and Construction* for each activity category (FHWA 2011).

Specifically, predicted noise levels from the TNM Look-Up were reviewed and compared to the NAC for each activity category. Every NRG that approached or exceeded the FHWA NAC was noted as an impact (Table 4.10-4). Additionally, predicted noise levels for Alternative A were compared to predicted existing noise levels to determine whether there was a 5 dBA increase at any receptors.

The NAC for Activity Category B and C is 67 dBA L_{eq}. As shown in **Table 4.10-4**, the noise levels at NRGs D and E would not approach the NAC for Activity Category B and C and, therefore, no impact would be anticipated. At NRGs A, B, and C the NAC would be exceeded. Therefore, noise impacts would occur at NRGs A, B, and C. However, it should be noted that noise conditions at these sites already approach or exceed the NAC criteria, and the construction of the Preferred Alternative would not cause additional significant impacts to noise levels at these locations.

Predicted traffic noise levels for Alternative A would range from 61.8 dBA L_{eq} to 70.4 dBA L_{eq}, resulting in an increase ranging from 0.7 dBA L_{eq} to 4.5 dBA L_{eq}, relative to predicted existing levels. A 3 dBA increase is perceived as barely perceptible by the human ear. No NRG would experience the 5 dBA increase set forth by FHWA. Additionally, these noise levels are below the criteria set forth in the St. Joseph County noise ordinance (*St. Joseph County Code of Ordinances 2012*). Therefore, no noise impacts would occur under this criterion.

Since the overall noise level increases are predicted to remain below the 5dBA threshold set forth by the FHWA, and since the NAC for the NRGs would not be exceeded except in places where the NAC is already approaching or exceeded by existing noise levels, overall noise impacts would be less than significant.

Table 4.10-4
TNM Look-Up Predicted Traffic Noise Levels – Alternative A

	Predicted Existing Traffic Noise Levels		Alternative A Traffic Noise Levels	
Noise Receptor Group	**AM**	**PM**	**AM**	**PM**
A	***66.3***	***65.9***	***69.1***	***70.4***
B	***66.3***	***66.3***	***67.1***	***67.3***
C	***66.3***	***66.3***	***67.1***	***67.3***
D	61.1	62.3	61.8	63.0
E	61.1	62.3	61.8	63.0

*All measurements are dBA L_{eq}
Bold/Italics values indicate impacted receptor based on FHWA NAC.

4.10.3.2 Hazardous Materials

Existing Sources

According to Phase I ESAs, which included review of federal, state, and local regulatory agency records and databases, interviews with pertinent individuals and property owners, site inspections, and review of aerial photography, there is no reportable hazardous materials contamination in the project area. Limited Phase II ESAs were conducted at Parcels 4, 6, and 9 to investigate recognized environmental conditions identified during Phase I assessments; based on the results of these secondary evaluations, no further investigations are warranted and the RECs would be removed from the property and properly disposed of or recycled prior to construction. The 2016 Phase I ESA reported that in the time that elapsed since the original 2009 Phase I ESA was completed, RECs on Parcel 4 were remediated and are no longer present (see **Appendix G**). Review of federal and state agency databases did identify seven (7) regulated facilities within a prescribed distance from the South Bend project site (see Section 3.10.2). Due to the lack of regulated facilities on the South Bend project site, the commitment to remove identified RECs prior to construction, and the fact that the other recorded facilities are outside of the construction footprint and would not be directly impacted; no significant impacts from hazardous materials are anticipated from implementation of the Preferred Alternative A.

Construction

Hazardous materials such as gasoline, diesel fuel, motor oil, hydraulic fluid, solvents, cleaners, sealants, welding flux, paint, lubricants, and paint thinner could be used during grading and construction activities. These materials would be used for operation and maintenance of equipment, and more directly in the construction of facilities. In attempt to reduce the potential for accidental spills of hazardous materials, fuel, oil, and hydraulic fluid would be transferred directly

from a service truck to construction equipment tanks and would not otherwise be stored onsite. Other hazardous materials needed during construction would be stored in locked utility cabinets and placed on impermeable surfaces, handled according to manufacturer's instructions, and replenished only as necessitated by construction.

The most probable potential incidents involving hazardous materials would include dripping of fuels, oil, and/or grease from construction equipment, or accidental spills during handling and transference from one container to another. The small quantities of fuel, oil, and grease that may drip from construction equipment would have a low relative toxicity and be present at low concentrations. Typical management practices required at construction sites limit and often eliminate the effect of such accidental spills. An accident involving a service or refueling vehicle would present the worst-case scenario for the release of hazardous materials. If a spill of significant quantity were to occur, the release could pose a hazard to construction employees and the environment; this effect is potentially significant.

Additionally, equipment used during grading and construction may create sparks that could ignite dry grasses and/or potential drips of fuels, oil or grease on the project site. The use of power tools and acetylene torches may also increase the fire risk. This risk is similar to that found at other construction sites, and is potentially significant.

Please see Section 5.0 for mitigation measures and best management practices that would be utilized during construction of the Preferred Alternative A to reduce the potential of significant effects from hazardous materials.

Operations

The United States Department of Labor Occupational Safety and Health Administration regulations include provisions that require facilities to document the potential risk associated with storage, use and handling of toxic and flammable substances. OSHA regulations are codified in 29 CFR Parts 70-71, 1990, 2200-2205, and 2400.

The majority of wastes produced during operation of the facilities proposed under the Preferred Alternative A would be nonhazardous. The small quantities of hazardous materials that would be produced include motor oil, hydraulic fluid, solvents, cleaners, paint, lubricants, and paint thinner. These substances would be generated from the use and maintenance of the casino, hotel, parking garage, emergency generators, central plant, residential development, and other project facilities. The amount and type of hazardous material that would be generated are similar to those produced by other commercial sites and would not pose unusual storage, handling or disposal issues.

Diesel fuel storage tanks may be needed for the operation of emergency generators necessitated by the casino and hotel. The fuel tanks would be housed above ground within the individual generator units. The largest generators would have storage tanks housing approximately 8,000 gallons of fuel,

which would be estimated to provide approximately 48 hours of emergency power (estimates based upon generator fuel capacity at Four Winds New Buffalo) (Gary Eversole, PE Services Consultant, pers. comm.). The tanks would have double walls and possess integrated leak detection systems. If a leak were to occur within the inner tank, the outer tank could contain the leak, and a pressure sensor would signal the leak on the indicator panel of the generator unit. In the unlikely event of a spill, a hazardous material clean-up company would be contacted immediately to properly and safely contain and clean up the spill. The generators would be located in areas that are easily accessible for maintenance and emergency personnel, near the service entrance and loading docks to the appropriate facilities.

The use of natural gas powered generators may be employed instead of diesel once a review of the economic feasibility and overall reliability of the units are fully evaluated. This option would eliminate the need for above ground storage tanks and subsequently the implementation of a SPCC plan.

Due to the amount and type of hazardous materials what would be stored, used, and generated during the operation of the Preferred Alternative A, environmental and public health effects are considered to be less than significant. Any hazardous materials at the Preferred Alternative A would be managed in compliance with applicable laws, including the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (42 U.S.C § 9601 et seq.) and the Resource Conservation and Recovery Act (42 U.S.C. § 6901 et seq.).

4.10.3.3 Visual Resources

Lighting

The Preferred Alternative A would likely result in increased light source from nighttime traffic compared to the No Action Alternative. Additionally, signage on the outside of the building and lighting at entrances, in parking lots, roadways and along walkways would likely result in increased light source. Lighting for the site has been designed to minimize off-site spillover and glare effects from the proposed lighting pattern sources. There are 168 units in the apartment community along Prairie Avenue to the north of the site; these would be the nearest sensitive receptors. Despite the woodlands surrounding these dwellings, the units on the west and south side of the complex would experience some increased light levels as a result of the Preferred Alternative A. The north site property line south of the apartment community is located approximately 200 feet from the nearest receptor for the casino development; it is almost 50 feet from the village. Along the north-south site property line west of the village housing, the nearest receptor is approximately 200 feet.

The internal site sign along US 31/20 would be shielded from the residences to the north and east by the building complex and the internal woodland vegetation. Residences to the south would receive some shielding from the surrounding woodland vegetation off site. However, during winter months with leaf-off, the surrounding residence to the north would experience some increased light

levels. The parking lot and building lights would be directed downward to minimize adverse effects. The main impact would be from the entrance signs along Prairie Avenue. As a result of incorporating mitigation, including design features to minimize light spillover, the Preferred Alternative A would not have significant impacts on lighting levels in the area.

Landscape

The majority of the interior vegetation impacted from development of the Preferred Alternative A would include the design of both adaptive and native plantings around all new buildings, road development and disturbed areas. This landscape would blend with the existing vegetation. The quality of the remaining emergent and forested wetlands and remnant woods not removed could improve marginally if managed along with moderate improvements from the integrated approach into the overall storm water management plan. This would represent a visible benefit throughout the site.

4.10.4 Alternative B – Elkhart Site Tribal Village and Casino

4.10.4.1 Noise

Overview

See description under Alternative A.

Methodology

See description under Alternative A.

Construction Noise

As shown in Table 4.10-5, the noise levels at NRGs C, D, E, F and G at some point of construction would increase. The maximum increase expected during construction would be approximately 12 dBA. An increase of 10 dBA would be perceived by a receptor to be a doubling of the sound level. The construction noise levels would not violate the Elkhart County noise ordinance (Elkhart County Code of Ordinances 2006).

Construction of the Alternative B would result in a temporary increase in the ambient noise level in the vicinity of the project sites. Equipment associated with construction generally would include backhoes, graders, pavers, concrete trucks, compressors, and other miscellaneous heavy equipment. Due the temporary nature and short duration of the construction noise impacts, no significant environmental consequences are anticipated at this site, provided that activities generally occur between 6:00 am and 9:00 pm per the Elkhart County noise ordinance (Elkhart County Code of Ordinances 2006).

Table 4.10-5
Construction Noise Impacts

Noise Receptor Group	Distance from Site (feet)	Construction Phase	Existing Noise Levels AM	Existing Noise Levels PM	Predicted Construction Noise Levels (dBA)
A	2,200	Ground Clearing	68.4	68.6	51
		Excavation			56
		Foundations			45
		Erection			52
		Finishing			56
B	1,000 to 2,200	Ground Clearing	68.4	68.6	60-51
		Excavation			65-56
		Foundations			54-45
		Erection			61-52
		Finishing			64-56
C	740 to 815	Ground Clearing	70.5	66.2	63-60
		Excavation			68-65
		Foundations			57-54
		Erection			64-61
		Finishing			68-64
D	1,125	Ground Clearing	64.6	56.1	57
		Excavation			62
		Foundations			51
		Erection			58
		Finishing			41
E	1,600	Ground Clearing	64.6	56.1	54
		Excavation			59
		Foundations			48
		Erection			55
		Finishing			59
F	700 to 1,250	Ground Clearing	64.6	56.1	63-57
		Excavation			68-62
		Foundations			57-51
		Erection			64-58
		Finishing			68-41
G	1, 270 to 2,850	Ground Clearing	64.6	56.1	57-51
		Excavation			62-56
		Foundations			51-45
		Erection			58-52
		Finishing			41-56

Site Noise

Based on the noise measurements taken for the Calhoun County EIS and the distance of the NRGs from potential noise sources, noise levels from Alternative B would be lower than the existing ambient noise levels and would not significantly change existing noise levels. Therefore, no noise impacts or violations to the local noise ordinance are anticipated. It should also be noted that noise

levels generated by onsite activities are substantially lower than the existing traffic noise levels for the surrounding roadways. Therefore, the NRGs are typically going to be most affected by traffic noise, while noise from the casino site would be negligible in comparison.

Traffic Noise

Traffic noise impacts were identified based on the FHWA NAC for each activity category. Specifically, predicted noise levels from the TNM Look-Up were reviewed and compared to the NAC for each activity category. Every NRG that approached or exceeded the FHWA NAC was noted as an impact (**Table 4.10-6**). Additionally, predicted noise levels for Alternative B were compared to predicted existing noise levels to determine whether there was a 5 dBA increase at any receptors.

The NAC for Activity Category B and C is 67 dBA $L_{eq.}$ Noise levels that approach (within one dBA) or exceed the NAC would be considered an impact. As shown in **Table 4.10-6**, the noise levels at NRGs B, D, E F and G would not approach the NAC for Activity Category B and C. At NRGs A and C the NAC would be exceeded. Therefore, noise impacts would occur at NRGs A and C. However, it should be noted that noise conditions at these sites already approach or exceed the NAC criteria, and construction of Alternative B would not cause significant impacts to noise levels at these locations.

Predicted traffic noise levels for Alternative B would range from 58.9 dBA L_{eq} to 71.3 dBA L_{eq}, resulting in an increase ranging from 0.6 dBA L_{eq} to 2.4 dBA L_{eq}, relative to predicted existing levels. A 3 dBA increase is perceived as barely perceptible by the human ear. No NRG would experience the 5 dBA increase set forth by FHWA. Additionally, these noise levels are below the criteria set forth in the Elkhart County noise ordinance (*Elkhart County Code of Ordinances 2006*). Therefore, no noise impacts would occur under this criterion.

Overall noise impacts would be less than significant since noise level increases are predicted to remain below the 5 dBA threshold set forth by the FHWA and because the NAC for the NRGs would not be exceeded except in places where the NAC is already approaching or exceeded by existing noise levels.

Table 4.10-6
TNM Look-Up Predicted Traffic Noise Levels – Alternative B

Noise Receptor Group	Predicted Existing Traffic Noise Levels		Alternative B Traffic Noise Levels	
	AM	PM	AM	PM
A	**68.4**	**68.9**	**70.1**	**71.3**
B	60.7	60.4	61.5	61.4
C	**67.4**	**68.2**	**68.7**	**70.2**
D	62.4	63.0	64.0	64.6
E	61.4	62.1	62.3	63.9
F	62.4	63.0	64.0	64.6
G	58.5	58.3	59.0	58.9

*All measurements are dBA L_{eq}
Bold/italics values indicate impacted receptor based on FHWA NAC.

4.10.4.2 Hazardous Materials

Existing Sources

According to Phase I ESAs, which included review of federal, state, and local regulatory agency records and databases, interviews with pertinent individuals and property owners, site inspections, and review of aerial photography, there is no reportable hazardous materials contamination in the project area. Review of federal and state agency databases did identify four (4) regulated facilities within a prescribed distance from the Elkhart project site (see Section 3.10.2). Due to the lack of regulated facilities on the Elkhart project site and the fact that the other recorded facilities are outside of the construction footprint and would not be directly impacted, no significant impacts from hazardous materials are anticipated from implementation of Alternative B.

Construction

Hazardous materials such as gasoline, diesel fuel, motor oil hydraulic fluid, solvents, cleaners, sealants, welding flux, paint, lubricants, and paint thinner could be used during grading and construction activities. These materials would be utilized for operation and maintenance of equipment, and more directly in the construction of facilities. In attempt to reduce the potential for accidental spills of hazardous materials, fuel, oil, and hydraulic fluid would be transferred directly from a service truck to construction equipment tanks and would not otherwise be stored onsite. Other hazardous materials needed during construction would be stored in locked utility cabinets placed on impermeable surfaces, handled according to manufacturer's instructions, and replenished only as necessitated by construction.

The most probable potential incidents involving hazardous materials would include dripping of fuels, oil, and/or grease from construction equipment, or accidental spills during handling and transference from one container to another. The small quantities of fuel, oil, and grease that may drip from construction equipment would have a low relative toxicity and be present at low concentrations. Typical management practices required at construction sites limit and often eliminate the effect of such accidental spills. An accident involving a service or refueling vehicle would present the worst-case scenario for the release of hazardous materials. If a spill of significant quantity were to occur, the release could pose a hazard to construction employees and the environment; this effect is potentially significant.

Additionally, equipment used during grading and construction may create sparks that could ignite dry grasses and/or potential drips of fuels, oil or grease on the project site. The use of power tools and acetylene torches may also increase the fire risk. This risk is similar to that found at other construction sites, and is potentially significant.

These potentially significant effects are the same as those described under Alternative A, as the Proposed Action is similar except for the construction location. Please see Section 5.0 for mitigation

measures and BMPs that would be utilized during construction of Alternative B to reduce the potential of significant effects from hazardous materials.

Operations

Compliance with OSHA regulations would reduce the potential risk associated with the storage, use, and handling of toxic and flammable substances during operation of the facilities included under Alternative B.

The majority of wastes produced during operation of the facilities proposed under Alternative B would be nonhazardous. The small quantities of hazardous materials that would be produced include motor oil, hydraulic fluid, solvents, cleaners, paint, lubricants, and paint thinner. These substances would be generated from the use and maintenance of the, casino, hotel, parking garage and parking lot, emergency generators, central plant, residential development, and other project facilities. The amount and type of hazardous material that would be generated are similar to those produced by other commercial sites and would not pose unusual storage, handling or disposal issues.

Diesel fuel storage tanks may be needed for the operation of emergency generators necessitated by the casino and hotel. The fuel tanks would be housed above ground within the individual generator units. The largest generators would have storage tanks housing approximately 8,000 gallons of fuel which would be estimated to provide approximately 48 hours of emergency power (estimates based upon generator fuel capacity at Four Winds New Buffalo) (Gary Eversole, PE Services Consultant, pers. comm.). The tanks would have double walls and possess integrated leak detection systems. If a leak were to occur within the inner tank, the outer tank could contain the leak, and a pressure sensor would signal the leak on the indicator panel of the generator unit. In the unlikely event of a spill, a hazardous material clean-up company would be contacted immediately to properly and safely contain and clean up the spill. The generators would be located in areas that are easily accessible for maintenance and emergency personnel, near the service entrance and loading docks to the appropriate facilities.

The use of natural gas powered generators may be employed instead of diesel once a review of the economic feasibility and overall reliability of the units are fully evaluated. This option would eliminate the need for above ground storage tanks and subsequently the implementation of SPCC plan.

Due to the amount and type of hazardous materials what would be stored, used, and generated during the operation of Alternative B, environmental and public health effects are considered to be less than significant. Any hazardous materials at Alternative B would be managed in compliance with applicable laws, including the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (42 U.S.C § 9601 et seq.) and the Resource Conservation and Recovery Act (RCRA) (42 U.S.C. § 6901 et seq.).

4.10.4.3 Visual Resources

Lighting

Alternative B would likely result in increased light source from nighttime traffic compared to the No Action Alternative. Additionally, signage on the outside of buildings and lighting at entrances, in parking lots, roadways and along walkways would likely result in increased light source. Lighting for the site has been designed to minimize off-site spillover and glare effects from the proposed lighting pattern sources. There are several farmstead homes surrounding the project area, and a retail market store north of the site that would be the nearest sensitive receptors. These few homes would experience some increased light levels as a result of the Alternative B. The west site property line is located approximately 50 feet from the nearest receptor for the casino development. The north site property line is located approximately 50 feet from the nearest receptor for the village development. The parking lot and building lights would be directed downward to minimize adverse effects. The main impact would be from the entrance signs along Nappanee and Co Road 26. As a result of incorporating mitigation, including design features to minimize light spillover, Alternative B would not have significant impacts on lighting levels in the surrounding area. There would be increased lighting from the proposed casino to the proposed tribal village.

Landscape

The majority of the interior vegetation impacted from development of Alternative B would include the design of both adaptive and native plantings around all new buildings and road development. This landscape would blend with the existing vegetation. The designed landscape with and integrated approach into the overall storm water management plan would represent a visible benefit throughout the site.

4.10.5 Alternative C – South Bend Site Tribal Village With Commercial Development

4.10.5.1 Noise

Overview

See description under Alternative A.

Methodology

See description under Alternative A.

Construction Noise

Construction noise levels under Alternative C would be similar to Alternative A. As shown in **Figures 3.10-3 and 3.10-5**, the scope and size of Alternative C is smaller than Alternative A.

Therefore, the construction schedule and the duration of noise impacts under Alternative C would be reduced when compared to Alternative A.

Site Noise

Based on the noise measurements taken for the Calhoun County EIS and the distance of the NRGs from potential noise sources, noise levels from Alternative C would be lower than the existing ambient noise levels and would not significantly change existing noise levels. Therefore, no noise impacts or violations to the local noise ordinance are anticipated. It should also be noted that noise levels generated by onsite activities are substantially lower than the existing traffic noise levels for the surrounding roadways. Therefore, the NRGs are typically going to be most affected by traffic noise, while noise from the tribal development site would be negligible in comparison.

Traffic Noise

Traffic noise impacts were identified based on the FHWA NAC for each activity category. Specifically, predicted noise levels from the TNM Look-Up were reviewed and compared to the NAC for each activity category. Every NRG that approached or exceeded the FHWA NAC was noted as an impact (**Table 4.10-7**). Additionally, predicted noise levels for Alternative C were compared to predicted existing noise levels to determine whether there was a 5 dBA increase at any receptors.

The NAC for Activity Category B and C is 67 dBA $L_{eq.}$ Noise levels that approach (within one dBA) or exceed the NAC would be considered an impact. As shown in **Table 4.10-7**, the noise levels at NRGs D and E would not approach the NAC for Activity Category B and C. At NRGs A, B and C, the NAC would be exceeded. Therefore, noise impacts would occur at NRGs A, B and C. However, it should be noted that noise conditions at these sites already approach or exceed the NAC criteria, and the construction of Alternative C would not cause significant impacts to noise levels at these locations.

Predicted traffic noise levels for Alternative C would range from 61.8 dBA L_{eq} to 67.9 dBA L_{eq}, resulting in an increase ranging from 0.7 dBA L_{eq} to 2.0 dBA L_{eq}, relative to predicted existing levels. A 3 dBA increase is perceived as barely perceptible by the human ear. No NRG would experience the 5 dBA increase set forth by FHWA. Additionally, these noise levels are below the criteria set forth in the St. Joseph County noise ordinance (*St. Joseph County Code of Ordinances 2012*). Therefore, no noise impacts would occur under this criterion.

Since the overall noise level increases are predicted to remain below the 5 dBA threshold set forth by the FHWA, and since the NAC for the NRGs would not be exceeded except in places where the NAC is already approaching or exceeded by existing noise levels, overall noise impacts would be less than significant.

Table 4.10-7
TNM Look-Up Predicted Traffic Noise Levels – Alterative C

	Predicted Existing Traffic Noise Levels		Alternative C Traffic Noise Levels	
Noise Receptor Group	**AM**	**PM**	**AM**	**PM**
A	***66.3***	***65.9***	***67.4***	***67.9***
B	***66.3***	***66.3***	***66.8***	***67.0***
C	***66.3***	***66.3***	***66.8***	***67.0***
D	61.1	62.3	61.8	62.9
E	61.1	62.3	61.8	62.9

*All measurements are dBA L_{eq}
Bold/italics values indicate impacted receptor based on FHWA NAC.

4.10.5.2 Hazardous Materials

Existing Sources

According to Phase I ESAs, which included review of federal, state, and local regulatory agency records and databases, interviews with pertinent individuals and property owners, site inspections, and review of aerial photography, there is no reportable hazardous materials contamination in the project area. Limited Phase II ESAs were conducted at Parcels 4, 6, and 9 to investigate multiple recognized environmental conditions identified during Phase I assessments; based on the results of these secondary evaluations, no further investigations are warranted and the RECs would be removed from the property and properly disposed of or recycled prior to construction. The 2016 Phase I ESA reported that in the time that elapsed since the original 2009 Phase I ESA was completed, RECs on Parcel 4 were remediated and are no longer present (see **Appendix G**). Review of federal and state agency databases did identify seven (7) regulated facilities within a prescribed distance from the South Bend project site (see Section 3.10.2). Due to the lack of regulated facilities on the South Bend project site, the commitment to remove identified RECs prior to construction, and the fact that the other recorded facilities are outside of the construction footprint and would not be directly impacted, no significant impacts from hazardous materials are anticipated from implementation of Alternative C.

Construction

Hazardous materials such as gasoline, diesel fuel, motor oil hydraulic fluid, solvents, cleaners, sealants, welding flux, paint, lubricants, and paint thinner could be used during grading and construction activities. These materials would be utilized for operation and maintenance of equipment, and more directly in the construction of facilities. In attempt to reduce the potential for accidental spills of hazardous materials, fuel, oil, and hydraulic fluid would be transferred directly from a service truck to construction equipment tanks and otherwise would not be stored onsite. Other hazardous materials needed during construction would be stored in locked utility cabinets placed on impermeable surfaces, handled according to manufacturer's instructions, and replenished only as necessitated by construction.

The most probable potential incidents involving hazardous materials would include dripping of fuels, oil, and/or grease from construction equipment, or accidental spills during handling and transference from one container to another. The small quantities of fuel, oil, and grease that may drip from construction equipment would have a low relative toxicity and be present at low concentrations. Typical management practices required at construction sites limit and often eliminate the effect of such accidental spills. An accident involving a service or refueling vehicle would present the worst-case scenario for the release of hazardous materials. If a spill of significant quantity were to occur, the release could pose a hazard to construction employees and the environment; this effect is potentially significant.

Construction of the travel center component of Alternative C, including a convenience store, gas station, and car wash would require the installation of underground storage tanks for gasoline. Compliance with the EPA's requirements would insure that regulated USTs meet criteria for release detection, spill and overflow prevention and protection, and corrosion protection. Performance standards, notification requirements, operation obligations, release detection, reporting, investigation and confirmation requirements, release response and corrective actions for UST systems containing petroleum or hazardous substances, out of service UST systems and closure mandates, financial responsibility, and lender liability regulations outlined in the Code of Federal Regulations would be followed during construction and operation to reduce potential effects from hazardous materials federal regulations concerning USTs are contained in 40 CFR Parts 280-281, 282.50-282.105, and the list of hazardous substances is in 40 CFR Part 302.4.

Additionally, equipment used during grading and construction may create sparks that could ignite dry grasses and/or potential drips of fuels, oil or grease on the project site. The use of power tools and acetylene torches may also increase the fire risk. This risk is similar to that found at other construction sites, and is potentially significant.

These potentially significant effects are similar to those described under Alternative A. Please see Section 5.0 for mitigation measures and BMPs that would be utilized during construction of Alternative C to reduce the potential of significant effects from hazardous materials.

Operations

Compliance with OSHA regulations would reduce the potential risk associated with the storage, use, and handling of toxic and flammable substances during operation of the facilities included under Alternative C.

The majority of wastes produced during operation of the facilities proposed under Alternative C would be nonhazardous. The small quantities of hazardous materials that would be produced include motor oil, hydraulic fluid, solvents, cleaners, paint, lubricants, and paint thinner. These substances would be generated from the use and maintenance of the retail outlets, family entertainment center, outdoor activities center, emergency generators, residential development,

travel center, and other project facilities. The amount and type of hazardous material that would be generated are similar to those produced by other commercial sites and would not pose unusual storage, handling or disposal issues.

Operation of the gas station component of the travel center would require maintenance of USTs for gasoline. According to the CFR Title 40 Part 280, operators must ensure spill and overfill control, operation and maintenance of corrosion protection, compatibility with storage and handling procedures outlined in publications by the American Petroleum Institute, adherence to requirements for permissible repairs, and compliance with reporting, inspection, and recordkeeping requirements. The Band would adhere to all applicable federal regulations for operation of gasoline USTs.

Additionally, operation of the car wash component of the travel center would utilize cleaning chemicals and produce wastewater potentially containing oil and grease, detergents, phosphates, solvent-based solutions, and sediment-based/organic debris. In order to reduce potential adverse environmental and public health effects and comply with mandates of the Clean Water Act (33 U.S.C. 1251 et seq.), car wash wastewater would either be filtered and routed to water treatment facilities/state-approved drainage facilities, or a National Pollutant Discharge Elimination System permit would be obtained from the EPA for discharge into a surface water body or sanitary sewer system.

Due to the amount and type of hazardous materials what would be stored, used, and generated during the operation of Alternative C, and the Band's committed compliance with all applicable federal laws and guidelines, environmental and public health effects are considered to be less than significant. Any hazardous materials at Alternative C would be managed in compliance with applicable laws, including the Comprehensive Environmental Response Compensation and Liability Act (42 U.S.C § 9601 et seq.). Additionally, the Band would comply with all provisions of the Resource Conservation and Recovery Act (42 U.S.C. § 6901 et seq.) Subtitle I: The Federal Underground Storage Tank Program (*Id.* §§6991-6991i, ELR Stat. RCRA §§9001-9010). This would include adherence to all technical standards for UST design, installation, operation, upgrades, release detection and closure; all reporting and corrective action requirements for UST release; and all financial responsibility requirements for installation and operation of the gasoline USTs proposed under Alternative C (Nagle 2001).

4.10.5.3 Visual Resources

Lighting

Alternative C would likely result in increased light source from nighttime traffic compared to the No Action Alternative. Additionally, signage on the outside of buildings and lighting at entrances, in parking lots, roadways and along walkways would likely result in increased light source. Lighting for the site has been designed to minimize off-site spillover and glare effects from the proposed

lighting pattern sources. There are 168 units in the apartment complex along Prairie Avenue to the north of the site; these would be the nearest sensitive receptors. Despite the surrounding woodlands around these dwellings, the units on the west and south side of the complex would experience some increased light levels as a result of the Alternative C. The east site property line west of the apartment community is located approximately 40 feet from the nearest receptor for the commercial development. The north site property line south of the apartment community is located approximately 50 feet from the nearest receptor for with village development. Along the north-south site property line west of the village housing, the nearest receptor is approximately 200 feet. The internal site sign along US-31/20 would be shielded from the residences to the north and east by the building complex and the internal woodland vegetation. Residences to the south would receive some shielding from the surrounding woodland vegetation off site. However, during winter months with leaf-off, the surrounding residences to the north would experience some increased light levels. The parking lot and building lights would be directed downward to minimize adverse effects. Most light would be generated from the entrance signs along Prairie Avenue. As a result of incorporating mitigation, including design features to minimize light spillover, Alternative C would not have significant impacts on lighting levels in the area.

Landscape

The majority of the interior vegetation impacted from development of Alternative C would include the design of both adaptive and native plantings around all new buildings, road development and disturbed areas. This landscape would blend with the existing vegetation. The quality of the remaining emergent and forested wetlands and remnant woods not removed could improve marginally if managed along with moderate improvements from the integrated approach into the overall storm water management plan. This would represent a visible benefit throughout the site.

4.10.6 Alternative D – No Action

4.10.6.1 Noise

Construction

The No Action Alternative does not include the construction of the proposed casino or tribal village and associated improvements. Therefore, construction noise impacts would not occur.

Site Noise

The No Build Alternative does not include the construction of the proposed casino or tribal village and associated improvements. Therefore, the potential for associated site noise impacts would not occur.

Traffic Noise

The No Build Alternative does not include the construction of the proposed casino or tribal village and associated improvements. Therefore, the potential for associated traffic noise impacts would not occur.

4.10.6.2 Hazardous Materials

According to Phase I and limited Phase II ESAs, which included review of federal, state, and local regulatory agency records and databases, interviews with pertinent individuals and property owners, site inspections, and review of aerial photography, there is no reportable hazardous materials contamination in the South Bend or Elkhart project sites. Existing uses on each site would continue, and since the No Action Alternative does not include construction of any proposed facilities, no significant impacts from hazardous materials are anticipated from implementation of Alternative D.

4.10.6.3 Visual Resources

Lighting

Under the No Action Alternative, there would likely be less traffic in the immediate area, resulting in less light intrusion from traffic. However, light from traffic on US-31/20 would continue to be visible with the No Action Alternative. Currently, this land is zoned SF-1 (Single Family Residential) under Section 21-02.02 of the South Bend Municipal Code (enacted in 2013). SF-1 includes as permitted uses single family dwellings, two-family dwellings, governmental use, and public facilities. If single family homes were to be constructed here in the future, this could result in increased lighting associated with entry signs, roadways and walkways. The No Action Alternative would not have significant impacts on lighting levels in the area.

Landscape

The No Build Alternative does not include the construction of the proposed casino or tribal village and associated improvements. Therefore, the potential for associated vegetation impacts would not occur.

4.11 ENVIRONMENTAL JUSTICE (EJ)

4.11.1 Significance Criteria

According to the CEQ's Environmental Justice (EJ) Guidance Under NEPA, low-income populations in an affected area should be identified with the poverty thresholds from the Census Bureau. Additionally, minorities are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black; not of Hispanic Origin; or Hispanic. Minority populations should be identified where either: (a) the minority population of the affected area

exceeds 50 percent 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.

For the purposes of this analysis, potential environmental justice impacts were considered significant if construction or operation of a proposed alternative would:

- cause disproportionately high and adverse human health or environmental effects to a minority and/or low-income group; or
- prevent or inhibit a minority population from improving its status or ameliorating existing disproportionate effects.

4.11.2 Comparative Impact Assessment of Alternatives

In its NEPA regulations described in 40 CFR 1502.14, the President's CEQ calls for a comparative impact assessment of all proposed alternatives. It is critical to recognize that the EJ comparative impact assessment, along with the socioeconomic comparative impact assessment (please see Section 4.7) are most effective and appropriate for sharply defining potential issues and providing a clear basis for choice among alternative options by the BIA and general public. This is primarily because the EJ and socioeconomic comparative impact assessments most directly address the purpose and need of the proposal as described in Section 1 of this EIS.

The Preferred Alternative, Alternative A, would provide the greatest beneficial EJ effects. Alternatives B and C would also provide beneficial EJ impacts, although fewer. The No Action Alternative would not provide beneficial EJ impacts, and would instead result in significant adverse EJ impacts, as opportunities to improve conditions for Band members and other low income or minority populations would be lost. More specifically:

- The Preferred Alternative would generate the greatest net revenue for the Band, which would be utilized to fund the proposed tribal village, including recovery of land acquisition investments. Increased net revenue would result in the ability to provide a greater variety of governmental services to Band members, representing a beneficial EJ impact. The No Action Alternative would have the greatest significant adverse EJ effect of all alternatives because it would eliminate the opportunity to generate revenue, thus preventing the creation of the tribal village and eliminating the opportunity to provide EJ benefits to low income and minority Band members.
- The Preferred Alternative would generate the greatest number of temporary construction and permanent operational jobs; these positions would be partially filled by low income or minority individuals, representing a beneficial EJ impact.
- Alternatives A, B, and C would all create an inalienable land base for the Band, allowing for the provision of tribal government services to Band members; the No Action Alternative would not permit the creation of these much needed services.

- Alternatives A, B, and C would have substantial beneficial EJ effects because the proposed action would include construction of a tribal village comprised of 44 housing units, a community center and government offices, thus fulfilling the current needs of Band members. Conversely, implementation of the No Action Alternative would have significant adverse EJ impacts because no tribal village would be constructed, rendering the Band unable to provide housing, a community center and much needed tribal services such as a medical facilities, education and job placement to its Band members.

4.11.3 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

In order to determine whether the Preferred Alternative is likely to have disproportionately high and adverse effects, a geographic scale for which to obtain demographic census data must be determined. For Alternative A, St. Joseph County Census Tract 34 was selected, as this area is most closely associated with the affected area, and all necessary socioeconomic data were available at this geographic scale. Data for Block Group 2 were also obtained, but were incomplete and could only be utilized for calculating minority percentages.

The population at the South Bend site would be considered an EJ population because based on 2010 Census data, minority groups comprise 31.4 percent of the one-race residents in the affected area (i.e., Census Tract 34), while the same minority groups only account for 15.5 percent of the St. Joseph County population. Minority groups at a smaller geographic level (i.e., Block Group 2) comprise 42 percent of one-race residents, which is almost three times that of the minority groups in the County. Additionally, the median household income in the affected area (i.e., Census Tract 34) is lower, the poverty rate is higher, and the percent of the labor force that is unemployed is higher than St. Joseph County as a whole (USCB 2011a).

American Indians make up 1.1 percent of the population in Block Group 2 and Census Tract 34, and 0.4 percent in St. Joseph County. It is unknown what portion of this American Indian population consists of members of the Band, although approximately 165 Band members (which is over one-third of the total number of Band members living in Indiana) live within a 10-mile radius of the South Bend Site (Bureau of Indian Affairs 2012).

4.11.3.1 Direct Impacts

The Preferred Alternative would have no significant adverse EJ impacts on minority and low-income populations. Rather, the Preferred Alternative would have substantial beneficial impacts for minority and low-income populations, particularly members of the Band living in the vicinity of the project area. The beneficial effects of the Preferred Alternative would contribute substantially to fulfilling the purpose and need of the proposal as described in Section 1 of this EIS. More precisely, the Band has proposed Alternative A specifically to create these beneficial opportunities for its Band members living in Indiana.

BIA's selection of the Preferred Alternative would result in the creation of an inalienable land base in northwestern Indiana held in trust by the United States for the beneficial use of the Band. The Band would use the trust land to satisfy specific needs of its members living in Indiana, particularly those members living within an approximate 10-mile radius of South Bend.

Currently, many Band members in the South Bend vicinity live in substandard housing or are homeless. The Preferred Alternative would fulfill a large portion of this housing need. The proposal would provide a tribal village complex including 44-housing units comprised of one 12-unit apartment building, 4 duplex homes, and 24 single-family homes. The tribal village would also include a multi-purpose community facility that would serve as a community-gathering place, provide educational facilities, tribal government office spaces, and health service offices. The Band members could use the community center to gather and strengthen their traditional cultural relationships. Additionally, there is an underserved and growing need among the Band's Indiana members for medical services, education, language training, and cultural enrichment, and the creation of community center would help fulfill these needs.

Currently, the Band does not have an adequate revenue source to capitalize its current investment in fee lands in Indiana. Revenues generated from two Pokagon casinos in Michigan are required to help fund tribal government services for Band members living in Michigan. Similarly, in Indiana, the Band needs a sustainable revenue stream to fund the proposed tribal village and provide much needed social and governmental services to its members. The Preferred Alternative, which includes a casino, hotel and other hospitality-based businesses, would generate this necessary revenue, while also creating employment opportunities and income for Band members.

Some minority and low-income individuals may benefit from employment opportunities created by the Preferred Alternative. The Preferred Alternative would create approximately 1,470 temporary construction positions needed for a period of 24-months, and 3,256 permanent positions with benefits related to operation of the hotel and casino (including 1,798 direct jobs, 704 indirect jobs, and 754 induced jobs). All of these available positions could lead to a higher median income and a lower unemployment rate. As stated in the socioeconomic baseline (see Section 3.11), a small percentage of the project communities are living below the federal poverty line and have higher unemployment rates; these communities could be positively impacted by the casino and hotel's revenue generation and job creation. Band members who live in the vicinity and/or relocate to the area could fill some jobs, although a high percentage of the direct jobs could be filled by local hires, and an even higher percentage of the indirect jobs could be filled by local hires due to the significant number of new jobs that would be created. According to the 2010 Census, there are currently 6,516 individuals (or 5.3 percent of the civilian employed population 16 years of age and older) employed in the construction industry, and 10,871 individuals (8.9 percent) employed in the arts/entertainment/recreation/accommodation/food services industries in St. Joseph County (USCB 2011a); these individuals represent the local qualified labor force that could aid in construction and operation of the casino and hotel (this does not include Band members or non-

tribal individuals whom would relocate to the area and could fill additional job openings). Hence, the Preferred Alternative would benefit non-tribal low income and minority populations in St. Joseph County and wider geographic areas, while also providing employment opportunities for Band members who live in or move to the area. To facilitate local hiring, the Band may host a local community job fair and work with local employment agencies to fill vacancies for these positions (see proposed mitigation measures in Section 5.0).

In addition to job creation, implementation of Preferred Alternative would have additional direct beneficial economic impacts for non-tribal residents within the project vicinity, possibly including minority or low-income individuals. As discussed in Section 3.11, the South Bend project area is characterized by low median household income, high poverty rates, and a high percentage of the labor force that is unemployed (see Table 3.11-2). The casino and hotel would create a substantial level of commercial activity through the utilization of local and regional vendors who would provide services and materials needed for daily operation of the facilities. According to Klas Robinson's Economic Impact Report (2013), it is estimated that the casino and hotel complex would spend more than $69 million annually to purchase goods and services for on-going operation, including almost $42 million to in-state vendors. Additionally, the Band consistently spends substantial portions of its annual budget in the communities located in the vicinity of Band lands to obtain goods and services (Bureau of Indian Affairs 2012). The considerable level of commercial activity and significant expenditure of tribal revenues by the Band would provide direct economic benefit to local economies and local governments. Additionally, a variety of federal and state grant, contract, and other funds, including inter-governmental agreements between the Band and local governments, could also be available to offset any impacts to the local communities after land acquisition (see **Appendix A** for local agreement made on April 11, 2016). Construction of the Preferred Alternative would boost local economies and increase the level of local government revenue, potentially raising the median annual household income and lowering the percentage of people living below the poverty level.

As discussed in Section 3.11, citizens at the September 27, 2012 scoping meeting expressed concerns regarding increased alcoholism potentially resulting from operation of the proposed project facilities. While correlations exist between co-morbidity of problem gambling and alcohol dependence (Petry et al. 2005), there is no definitive directional relationship indicating that gambling causes alcoholism; some research suggests that gambling may initiate higher alcohol consumption (Stewart et al. 2002), while other studies suggest the opposite and posit that alcohol use may promote gambling behavior (Smart and Ferris 1996). Alternatively, other studies suggest that societal factors and socioeconomic status may not increase the susceptibility of developing either addiction, and that both may result from neurobiological, genetic, and/or environmental factors (Grant et al. 2002). In addition, it has been suggested that unemployment may increase the risk for alcoholism, as bingeing and excessive consumption can be utilized as a means for coping with the financial stress of job loss (Forcier 1988). Similar to the association between alcoholism and gambling discussed above, research has not determined a definitive directional causal

relationship between employment status and the incidence of alcohol dependence; long-term unemployment may put individuals as risk for alcoholism (Khan et al. 2002), or problem drinking may lead to reduced employment (Mullahy and Sindelar 1996). Lastly, many ethnic minorities in the United States report higher rates of heavy drinking and alcohol-related problems than do whites (Caetano and Clark 1998). However, a multitude of reasons (not exclusively casino development and gambling) stemming from acculturative stress, socioeconomic stress, and mental health issues can account for this discrepancy, and current literature has just begun to explore these stressors in minority populations (Caetano et al. 1998). With these studies in mind, it is not anticipated that operation of the proposed casino would cause a direct increase in alcoholism in the population of South Bend. However, as stated in Section 3.11, low-income individuals and minority populations may have a higher susceptibility of developing alcohol addictions, regardless of any association with gambling, therefore this may represent a concern for EJ populations in South Bend.

To help mitigate any potential effects from alcoholism on EJ populations, the Band would adopt a responsible alcoholic beverage policy that would include but not be limited to verifying patron age and refusing to serve those who appear visibly intoxicated. Additionally, there are fourteen facilities located within 20 miles of the proposed South Bend site that could provide treatment services for individuals suffering from substance abuse, gaming addictions, and mental health issues (SAMHSA 2013a). Lastly, implementation of the Preferred Alternative could in and of itself reduce the risk of alcoholism in the community, as operation of the proposed facilities would create over 1,000 temporary jobs and over 3,000 permanent jobs that could help to reduce potential alcohol dependence related to levels of unemployment. Due to a lack of directional causal relationships between gambling and alcoholism, and unemployment and alcoholism, the mitigation measures that would be utilized by the Band, and the proximity of numerous treatment facilities, no significant adverse impacts to EJ populations as a result of alcoholism are anticipated to result from the Preferred Alternative.

Additional concerns that were raised during the scoping meeting included problem gambling and related issues such as bankruptcy, divorce, domestic violence, suicide and crime as potential consequences of the casino development. As discussed in Section 3.11, current literature indicates that casino introduction does result in an increase in problem gambling and related consequences such as bankruptcy, divorce, domestic violence, suicide, and crime, but that most of the increase in problem gambling (and associated indices) occurs after the initial introduction of gaming and progressively declines over the life of the casino (Williams et al. 2011). Additionally, many of these negative effects tend to be offset by the positive impacts generated from casino operation, such as increased employment, local economic boosts, and increased government revenues and associated enhancement of public services (Goss and Morse 2005; Williams et al 2011). With these studies in mind, it is possible that implementation of the Preferred Alternative may temporarily adversely affect EJ populations in the project area through increases in problem gambling and associated issues (i.e., bankruptcy, divorce, domestic violence, suicide, and crime), but effects would likely be short-term and could be offset by positive impacts resulting from casino development; thus,

adverse effects may occur temporarily, but are not anticipated to be significant over the lifetime of the proposed casino.

The Preferred Alternative would not likely have an adverse impact on the gaming revenues of other tribal casinos, as none currently exist in the State of Indiana. If there were other tribal governments located in the same competitive gaming market area (or will be in the future), those tribes would similarly use gaming revenues to provide EJ benefits for its members. A competitive decrease in other tribal gaming revenues could have an adverse EJ impact for their members. There are two tribal casinos within a 50-mile radius of the South Bend site, the Four Winds Casino Resort in New Buffalo, Michigan, and the Four Winds Casino in Hartford, Michigan, but negative effects to the Band resulting from competition with these casinos are not anticipated because they are also operated by the Pokagon Band of Potawatomi Indians.

In summary, the facilities proposed under the Preferred Alternative would generate the highest amount of revenue and create the greatest number of employment opportunities for both Band members and non-tribal residents of St. Joseph County. The proposed facilities would also create desperately needed residential and governmental space, which would greatly benefit Band members. Therefore, the construction and operation of facilities proposed under the Preferred Alternative would provide substantial EJ benefits to both Band members and non-tribal South Bend residents; implementation of Preferred Alternative would not be expected to have disproportionately high and adverse effects on low-income or minority populations or prevent/inhibit minority populations from improving their status or ameliorating existing disproportionate effects. Accordingly, no significant impacts on EJ are reasonably expected, as the Preferred Alternative would not result in long-term exposures to environmental hazards and would provide benefits to low-income and minority populations in the South Bend area through increased economic benefits and job creation.

4.11.4 Alternative B – Elkhart Site Tribal Village and Casino

In order to determine whether Alternative B is likely to have disproportionately high and adverse effects, a geographic scale for which to obtain demographic census data must be determined. For Alternative B, Elkhart County Census Tract 22 was selected, as this area is most closely associated with the affected area, and all necessary socioeconomic data were available at this geographic scale. Data for Block Group 4 were also obtained, but were incomplete and could only be utilized for calculating minority percentages.

The population at the Elkhart Site satisfies the criteria used to define an EJ population because based on 2010 Census data, minority groups account for 20.4 percent of the one-race residents in the affected area (i.e., Census Tract 22), while the same minority groups only account for 7.3 percent of the Elkhart County population. Minority groups at a smaller geographic level (i.e., Block Group 4) comprise 10.9 percent of one-race residents, which also exceeds the minority group

percentage of Elkhart County. Additionally, the median household income in the affected area (i.e., Census Tract 22) is lower, the percentage of individuals living below the poverty level is higher, and the percent of the labor force that is unemployed is higher than Elkhart County as a whole.

American Indians make up 0.3 percent of the population in Block Group 4, 0.7 percent of the population in Census Tract 22 and 0.4 percent in Elkhart County. It is unknown what portion of this American Indian population consists of members of the Band, but Elkhart County is within the Band's Service Area, therefore Band members could live in the vicinity of the Elkhart site.

4.11.4.1 Direct Impacts

Alternative B would have substantial beneficial EJ impacts for Band members, although benefits would be less than those created by the Preferred Alternative. Beneficial consequences that are anticipated to result from Alternative B are similar to those described for the Preferred Alternative A. The facilities proposed under Alternative A and Alternative B are identical (i.e., tribal village and revenue-generating commercial facilities), and the socioeconomic conditions at the Elkhart site are similar to those characterizing the South Bend location, therefore, no significant adverse impacts to minority and low-income populations are expected to occur from implementation of Alternative B.

During public involvement, citizen concerns regarding casino development (i.e., increases in alcoholism, problem gambling, bankruptcy, divorce, domestic violence, suicide, and crime) listed under Alternative A also apply to Alternative B. As with Alternative A, the Band would implement mitigation measures to reduce potential increases in alcoholism in EJ populations. The Band would adopt a responsible alcoholic beverage policy that would include but not be limited to verifying patron age and refusing to serve those who appear visibly intoxicated. Additionally, there are nineteen facilities located within 20 miles of the proposed Elkhart site that could provide treatment services for individuals suffering from substance abuse, gaming addictions, and mental health issues (SAMHSA 2013b). Lastly, implementation of Alternative B could in and of itself reduce the risk of alcoholism in the community, as operation of the proposed facilities would create over 1,000 temporary construction jobs and over 2,500 permanent jobs that could help to reduce potential alcohol dependence related to levels of unemployment. As with Alternative A, no significant adverse impacts to EJ populations as a result of alcoholism are anticipated to result from Alternative B, since there are no definitive causal relationships between gambling and alcoholism or unemployment and alcoholism, mitigation measures would be utilized by the Band, and there are numerous treatment facilities in close proximity to the Elkhart site. It is possible that implementation of Alternative B may temporarily adversely affect EJ populations in the project area through increases in problem gambling and associated issues (i.e., bankruptcy, divorce, domestic violence, suicide, and crime), but effects would likely be short-term and could be offset by positive impacts resulting from casino operation (i.e., increased employment, government revenue, and availability of public services, as well as boosts to local economies); thus, adverse effects to EJ populations are not anticipated to be significant over the lifetime of the proposed casino.

As with Alternative A, facilities proposed under Alternative B would generate revenue and create employment opportunities for both Band members and non-tribal residents of the City of Elkhart. According to the 2010 Census, there are currently 4,146 individuals (or 4.5 percent of the civilian employed population 16 years of age and older) employed in the construction industry, and 6,877 individuals (7.4 percent) employed in the arts/entertainment/recreation/accommodation/food services industries in Elkhart County (USCB 2011b); these individuals represent the local qualified labor force that could aid in construction and operation of the casino and hotel (this does not include Band members or non-tribal individuals whom would relocate to the area and could fill additional job openings). The casino and hotel would be expected to create approximately 1,470 temporary construction positions needed for a period of 24-months, and 2,547 permanent positions related to operation of the hotel and casino (including 1,670 direct jobs, 516 indirect jobs, and 361 induced jobs). All of these available positions could lead to a higher median income and a lower unemployment rate. Additionally, the proposed residential facilities would also create desperately needed housing units and governmental space, which would greatly benefit Band members.

In summary, the facilities proposed under Alternative B would generate revenue and create employment opportunities for both Band members and non-tribal residents of Elkhart County, although these beneficial impacts would be less than the benefits created by the Preferred Alternative. Implementation of Alternative B would not be expected to have disproportionately high and adverse effects on low-income or minority populations or prevent/inhibit minority populations from improving their status or ameliorating existing disproportionate effects. Accordingly, no significant impacts on EJ are reasonably expected, as Alternative B would not result in long-term exposures to environmental hazards and would provide benefits, albeit fewer, to low income and minority populations in and around the Elkhart site through increased economic benefits and job creation.

4.11.5 Alternative C – South Bend Site Tribal Village With Commercial Development

The population at the South Bend site would be considered an EJ population due to a higher percentage of the population characterized by minority groups, lower median household income, higher percentage of people living below the poverty level, and higher unemployment rate at Census Tract 34 compared to St. Joseph County. Please see descriptions under the Preferred Alternative A for further details, as Alternative A and Alternative C utilize the same proposed location.

4.11.5.1 Direct Impacts

Alternative C would have substantial beneficial EJ impacts for Band members, although benefits would be less than those created by the Preferred Alternative. Beneficial impacts resulting from

implementation of Alternative C are similar to those described for Alternative A, therefore no significant adverse impacts to minority and low-income populations would be expected. The differences would occur in how revenue would be generated, the amount of revenue that would be generated, and the number of new jobs that would be created. As there is no gaming facility/hotel accommodations proposed under Alternative C, revenue would be generated through operation of the proposed travel center (including a convenience store, gas station and car wash), retail shopping outlets, outdoor activities center, and family entertainment center. These facilities would generate income for the Band, but not to the extent that the casino/hotel facilities included in Alternatives A and B would produce funds. The revenue from Alternative C in St. Joseph County would be approximately $530,911,000 less (includes direct, indirect, and induced output) than the casino/hotel facilities proposed under the Preferred Alternative. Monies generated through operation of the commercial development components of Alternative C would be utilized by the Band to fund the construction and operation of the proposed tribal village (including residential housing, a community center, and tribal government services) thus fulfilling the Band's housing needs while also providing a location for Band members to obtain much needed medical services, education, language training, and cultural enrichment.

Additionally, construction and operation of Alternative C would create approximately 102 temporary construction positions needed for a period of 12-months, and 49 permanent positions related to operation of the proposed facilities (including 18 direct jobs, 12 indirect jobs, and 19 induced jobs). Please see discussion under Alternative A for statistics regarding the current labor force in St. Joseph County that would be available for specialized hire (this does not include Band members or non-tribal individuals whom would relocate to the area and could fill additional job openings). Therefore, new jobs would still be created from Alternative C, but employment opportunities for Band members and St. Joseph County residents would be significantly less.

Citizen concerns raised during the scoping meeting on September 27, 2012 regarding societal issues stemming from casino construction would not directly apply to Alternative C, as none of the proposed facilities would serve alcohol to patrons and no gaming facilities would be constructed (and thus no issues regarding problem gambling and associated issues such as bankruptcy, divorce, domestic violence, suicide, and crime). The proposed travel center and gas station would be permitted by the State of Indiana to sell warm alcohol Monday through Saturday if desired, but specific operational details of the facility have not been finalized at this stage of project development, therefore decisions regarding alcohol sales have not yet been confirmed. Potential sales of alcohol at the travel center could affect rates of alcoholism in EJ populations in the South Bend project area by increasing the availability of alcohol; however, the Band would adopt a responsible alcohol beverage policy to help mitigate any effects from alcoholism on EJ populations. This policy would include but not be limited to verifying patron age, only selling warm alcohol which could deter consumption on the South Bend project site, prohibiting sales on Sundays, and refusing to sell alcohol to those who appear visibly intoxicated (as per Indian Code 7.1-5-10). Due to a lack of proposed facilities that would serve alcohol, and the responsible alcohol beverage policy

that would be followed for sales at the gas station, no significant adverse impacts from alcoholism on EJ populations would be anticipated from Alternative C. Similarly, no significant adverse effects pertaining to increased problem gambling and related societal issues would occur, as these issues are associated with gaming facilities, none of which are proposed under Alternative C.

In summary, the facilities proposed under Alternative C would generate revenue and create employment opportunities for both Band members and non-tribal residents of St. Joseph County, although these beneficial impacts would be substantially less than the benefits created by the Preferred Alternative. The proposed facilities would also create desperately needed residential and governmental space, which would benefit Band members. Implementation of Alternative C would not be expected to have disproportionately high and adverse effects on low-income or minority populations or prevent/inhibit minority populations from improving their status or ameliorating existing disproportionate effects. Accordingly, no significant impacts on EJ are reasonably expected, as Alternative C would not result in long-term exposures to environmental hazards and would provide benefits, albeit fewer, to low-income and minority populations in the South Bend area through increased economic benefits and job creation.

4.11.6 Alternative D – No Action

The No Action Alternative would have significant adverse EJ impacts. That is because the No Action Alternative would not result in any of the beneficial effects that would be created by the Preferred Alternative or other alternatives. Consequently, the essential needs of the Band, as described in Section 1-Purpose and Need, would remain unmet. The No Action Alternative would not create an increased tribal land base and the Band's first land base in Indiana; no suitable and healthy housing would be provided to Band members; no community-focused spaces would be created; tribal governmental services would not be delivered; and no economic or employment opportunities would be created. Additionally, the No Action Alternative would prevent the creation of increased employment opportunities and economic benefits for non-tribal minorities and low-income populations as well.

4.12 GROWTH-INDUCING EFFECTS

NEPA requires that an EIS identify growth-inducing effects. Growth-inducing effects foster economic and/or population growth by directly or indirectly encouraging such growth or removing impediments to such growth. An example of a direct inducement to population growth would be the construction of new housing, such as the housing components of Alternatives A, B and C. An example of indirect inducement to economic growth would be a project that created significant new employment or spending, such as the casino components of Alternatives A and B.

4.12.1 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

Alternative A includes the construction of 44 housing units. The new units would primarily accommodate the needs of Pokagon Band members living in Indiana, the number of whom increased by more than 50 from 2011 to 2012 and now total over 500. The 44 housing units would represent an increase of 0.1 percent in the number of units in South Bend and 0.04 percent in the number of housing units in St. Joseph County. The new housing units are not projected to have a significant effect on the housing market in the area. They are also not projected to have a significant effect on the capacity of nearby schools, the library or park system.

Alternative A is projected to add 2,548 jobs to the City of South Bend and 3,256 jobs to St. Joseph County in total, net of substitution effects. The addition of that number of jobs in the City of South Bend and throughout St. Joseph County is likely to result in an increase in housing demand over time as workers seek to relocate closer to their place of employment. The demand for housing would be expected to be dispersed throughout South Bend and St. Joseph County. Given the level of unemployment in the city and county and the number and locations of existing casino operations in the region, the total amount of new housing demand due to relocation is projected to be approximately 350 units. This equates to an increase of 0.3 percent in total housing units over current levels. According to Nielsen Claritas data, the number of housing units in St. Joseph County equals 114,778 as of 2013, with a vacancy rate of 10.3 percent (Nielsen Claritas 2013). The new demand is not projected to have a significant effect on the housing market in the area. It is also not projected to have a significant impact on the school systems of South Bend or St. Joseph County.

Alternative A is projected to result in indirect and induced growth in the economic output of St. Joseph County of $167.8 million, net of substitution effects. The total economic output of the South Bend/Mishawaka Metropolitan Statistical Area in 2011, measured in terms of Gross Domestic Product [GDP], equaled nearly $12.8 billion (U.S. Bureau of Economic Analysis 2013). The total projected indirect and induced growth in output for St. Joseph County amounts to 1.3 percent of the GDP for the South Bend/Mishawaka MSA. Since the growth in output would be spread across multiple industries throughout the county, it is not anticipated to result in any disorder in commercial growth patterns.

4.12.2 Alternative B – Elkhart Site Tribal Village and Casino

Alternative B includes the construction of 44 housing units. The new units would primarily accommodate the needs of Pokagon Band members living in Indiana, the number of whom increased by more than 50 from 2011 to 2012 and now total over 500. The 44 housing units would represent an increase of 0.06 percent in the number of housing units in Elkhart County. The new housing units are not projected to have a significant effect on the housing market in the area. They

are also not projected to have a significant effect on the capacity of nearby schools, the library or park system.

Alternative B is projected to add 2,547 jobs to Elkhart County, net of substitution effects. The addition of that number of jobs throughout Elkhart County would likely result in an increase in housing demand over time as workers seek to relocate closer to their place of employment. The demand for housing would be expected to be dispersed throughout Elkhart County. Given the level of unemployment in the county and the number and locations of existing casino operations in the region, the total amount of new housing demand due to relocation is projected to be approximately 325 units. This equates to an increase of 0.4 percent in total housing units over current levels. According to Nielsen Claritas data, the number of housing units in the County of Elkhart equals 78,728 as of 2013, with a vacancy rate of 9.6 percent. The new demand is not projected to have a significant effect on the housing market in the area. It is also not projected to have a significant effect on Elkhart County school systems.

Alternative B is projected to result in indirect and induced growth in the economic output of Elkhart County of $90.6 million, net of substitution effects. The total economic output of the Elkhart/Goshen MSA in 2011, measured in terms of GDP, equaled over $9.1 billion (U.S. Bureau of Economic Analysis 2013). The total projected indirect and induced growth in output for Elkhart County amounts to 1.0 percent of the GDP for the Elkhart/Goshen MSA. Since the growth in output would be spread across multiple industries throughout the county, it is not anticipated to result in any disorder in commercial growth patterns.

4.12.3 Alternative C – South Bend Site Tribal Village With Commercial Development

Alternative C includes the construction of 44 housing units. The new units would primarily accommodate the needs of Pokagon Band members living in Indiana, the number of whom increased by more than 50 from 2011 to 2012 and now total over 500. The 44 housing units would represent an increase of 0.1 percent in the number of units in South Bend and 0.04 percent in the number of housing units in St. Joseph County. The new housing units are not projected to have a significant effect on the housing market in the area. They are also not projected to have a significant effect on the capacity of nearby schools, the library or park system.

Alternative C is projected to add 34 jobs to the City of South Bend and 49 jobs to St. Joseph County in total, net of substitution effects. This amount of employment would not be expected to generate additional housing demand or population growth for the city or county.

Alternative C is projected to result in indirect and induced growth in the economic output of St. Joseph County of $3.1 million, net of substitution effects. The total projected indirect and induced growth in output for St. Joseph County under Alterative C amounts to 0.02 percent of the GDP for

the South Bend/Mishawaka MSA. Since the growth in output would be spread across multiple industries throughout the county, it is not anticipated to result in any disorder in commercial growth patterns.

4.12.4 Alternative D – No Action

No changes in existing land uses would occur under the No Action Alternative; therefore, the potential for growth-inducing effects from Alternative D would not occur. Accordingly, in the absence of project implementation, historic trends are reasonably expected to continue, and any future growth and development at or around the South Bend or Elkhart project sites would be considered a continuation of existing development patterns and be unrelated to implementation of the No Action Alternative.

4.13 CUMULATIVE EFFECTS

Cumulative effects analysis broadens the scope of analysis to include effects beyond those solely attributable to the implementation of the alternatives. Cumulative effects are defined as the effects:

> on the environment which result from the incremental effect of the alternative when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

The analysis in this section expands the geographic and temporal borders to include the effects on specific resources, ecosystems, and human communities that occur incrementally in conjunction with other actions, projects, and trends. The purpose of cumulative effects analysis, as stated by the CEQ is "to ensure that federal decisions consider the full range of consequences" (CEQ 1997).

The term "reasonably foreseeable future actions" is not explicitly defined in CEQ guidance or regulations. But the objectives of NEPA are based upon two important tenets, that being: (1) quality documented analysis of the impacts of the alternatives and (2) public disclosure of those impacts. Thus, it might follow that reasonably foreseeable future actions are those actions for which there has already been documented public disclosure by the proponents. Public disclosure might include, but is not limited to: NEPA documents or similar impact assessments; applications to government agencies for approvals or permits; planning and zoning documents by local governments; engineering and design documents; request for proposal for construction bids; resolutions; press releases; documents obtained under the Freedom of Information Act or public meeting handouts.

The cumulative analysis begins with:

- identifying past, present, and future actions and projects in association with the status of resources, ecosystems, and human communities that may be affected, and

- defining geographic boundaries and time frames of analysis for potential effects to each resource .

A list of related projects has been compiled based on consultations with several federal, state, and local entities (**Appendix K**). Cumulative analysis can also be accomplished by using growth percentages utilized for planning purposes by entities with jurisdiction by law or special expertise for specific resource; for example, traffic growth anticipated for county highways over the next 5 years.

Transportation-related projects involving reconstruction and new construction were acquired through websites, capital improvement plans, or personal communications with the Federal Highway Administration, Federal Railway Association, INDOT, Elkhart and St. Joseph Counties, City of South Bend, and the City of Elkhart. Background traffic growth was determined by consulting with the local Metropolitan Planning Organization, the Michiana Area Council of Governments.

Utility projects were acquired through conversations with municipal engineers with the Cities of Elkhart and South Bend. The utility company, I&M, did not have any awareness of current or future projects in the vicinity that would impact the service development of one of the three alternatives.

Watershed, water and sewage projects were acquired by researching websites or communications from the respective counties, Environmental Protection Agency, Army Corps of Engineers, Federal Emergency Management Agency, Indiana Department of Natural Resources, Department of Transportation, local watershed management groups, and the Cities of Elkhart and South Bend.

Private development projects were compiled from data acquired through websites primarily from the Economic Development Departments within the Cities of Elkhart and South Bend.

Projects included for the cumulative analysis were selected based on geographic boundaries and specific time frames depending on the resource area. The geographic boundaries used for selecting projects for cumulative impacts are defined by selected Area of Potential Effects and are primarily unique to each resource. The list of projects was further refined based on estimated cost and anticipated development dates for private developments. For transportation, utility, or water related projects, those scheduled for development in capital improvement plans were included beginning in 2013. Pertinent projects are listed below if they are considered to be relevant or consequential for each resource area. Figures showing projects within specific APEs are included below as **Figures 4.13-1 through 4.13-10**. A full list of the selected projects is also included in **Appendix K.**

As recommended by CEQ's *Considering Cumulative Effects*, not all potential cumulative effects issues have been included in this EIS; only those that are considered to be relevant or consequential have been discussed in depth (CEQ 1997).

4.13.1 Comparative Impact Assessment – Cumulative Impacts

In its NEPA regulations described in 40 CFR 1502.14, the President's CEQ calls for a comparative impact assessment of all proposed Alternatives. It is critical to recognize that comparative impact assessments help sharply define potential issues and provide a clear basis for choice among Alternative options by the BIA and general public. This is because comparative assessments help analyze and determine how well each of the Alternatives addresses the purpose and need for the proposal as described in Section 1 of this EIS.

Assuming proper mitigation is implemented in a timely manner, Alternatives A, B and C would not have cumulatively significant impacts to land, water, air or biological resources; socioeconomic conditions; resource use patterns; public services; other values, environmental justice or growth-inducing, indirect or unavoidable adverse effects.

However, Alternatives A, B and C would have similar substantial beneficial cumulative effects to contribute to the purpose and need for the proposal as described in Section 1 of this EIS. Alternatives A, B and C would result in BIA approval of an inalienable land base for the purposes of establishing a consolidation site in the vicinity of South Bend, Indiana. Cumulatively, Alternatives A, B and C would result in the establishment of four separate consolidation sites for Band citizens. These alternatives would also include commercial development to generate net revenues to fund a tribal government services center that would cumulatively increase opportunities for Band members. However, Alternative A would generate the greatest net benefits and therefore result in the greatest cumulative amount of governmental services (tribal and non-tribal) for Band members. Alternatives A, B, and C would cumulatively increase housing availability for Band members compared to existing conditions, and likely result in a more culturally appealing setting.

If Alternative A or Alternative C would be chosen for development, there are no foreseeable plans to develop the Elkhart site, and the Elkhart parcels are not included in the fee-to-trust application; thus, no cumulative effects would be expected.

With the No Action Alternative, in the absence of Alternatives A, B and C, the purpose and need for the proposal would not be addressed as described in Section 1 of this EIS. The Pokagon Band would not receive jurisdiction on an inalienable land base to serve tribal members currently living offsite. No tribal village would be developed, therefore, the 44 housing units and community center building where Band members living within approximately 10 miles could receive services such as education, healthcare and cultural enrichment, would not be constructed. No commercial development would occur to generate revenue to pay for government services on the site, to help service the debt for the land the Pokagon Band has already acquired, and to service potential future debt for beneficial alternative development. Conversely, with the No Action Alternative, there would be no demand on offsite utilities, roads, water supply, wastewater, public safety services and government services from adjoining governments. However, the offsite impacts to utilities, roads and infrastructure could be mitigated to less than significant levels with Alternatives A, B and C in

exchange for avoiding the significant impacts of the lost opportunities of the No Action Alternative. In comparing Alternatives A, B and C, all impacts are similarly insignificant with implementation of mitigation measures, except that Alternative A generates the greatest net revenues for the Pokagon Band to use to develop the tribal village and provide government services to Band members living up to approximately 10 miles from South Bend.

4.13.2 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

4.13.2.1 Land Resources

The Preferred Alternative A would have no significant cumulative impacts to land resources. The cumulative impacts from the projects in **Figure 4.13-1** as well as other past, present, and other reasonably foreseeable future actions have and would result in topographic changes to the site. Cut and fill would be required to achieve desired contours to accommodate structures and facilitate adequate drainage. Although the cut and fill would change the topography of the area, the overall volume of fill material is not considered a substantial amount. Additionally, this alternative would incorporate an Erosion Control Plan to minimize potential soil erosion effects. Cumulative impacts are not expected to prevent the conveyance of surface water into natural drainages or cause landslides or excessive erosion or sedimentation within drainage features.

4.13.2.2 Water Resources

Alternative A would have no significant cumulative effects on surface and groundwater quality. The development of Alternative A would include the incorporation of required best management practices to control storm water runoff and the quality of that runoff leaving the site. The EPA's National Pollution Discharge Elimination System permit process involves several practices including an erosion control plan and a monitoring plan to ensure storm water discharge doesn't adversely affect downstream natural drainage waters. BMPs that involve infiltration for groundwater recharge are regulated depending on the level of the current ground water table and local soil conditions to prevent the degradation of groundwater quality. Additional future development in this region would be subject to the same drainage and water management practices; therefore, Alternative A and future development would not have a significant cumulative effect on surface and ground water quality.

Alternative A would not have significant cumulative water quantity impacts to wetlands, storm sewer capacity, downstream FEMA floodplains and other waterways. Storm water runoff would be detained on site through the incorporation of BMPs such as detention ponds. These detention ponds would be sized to retain storm flows on-site and discharging flows slowly over a period of time into wetlands or the storm sewer system. Detention ponds and detention pond outlets would be sized to restrict the post development discharge rate off the property to match the pre development discharge rate up to the 100-year, 24-hour storm event. The 100-year, 24-hour storm

event is the storm used to determine the extent and elevation of the FEMA floodplains mapped downstream of the project site. By controlling storm flows up to this storm event, the FEMA floodplains downstream would not be affected. Other future development within the defined tributary region of mapped floodplains would be subject to the similar water management practices, helping to prevent any cumulative effects up to the level of a 100-year, 24-hour storm event.

With Alternative A, if projected future development occurs in the defined Area of Potential Effects (Figure 4.13-1), the development could cumulatively decrease the ground water quantity for the community. A large ethanol plant that had been in operation for over a decade recently closed. During the plant's operation, neighborhoods developed and homes were built based on the then current conditions of a substantially reduced groundwater table. Within recent years, the plant closed which reduced the quantity of groundwater being pumped and increased the water table level. Mitigation efforts are underway including a contract between the city and with the current owners of the facility to pump water to lower the water table and help alleviate local neighbors' flooding issues. Additional development in this area could reduce the pumped water waste and help alleviate flooding in the local neighborhoods.

4.13.2.3 Air Quality

Methodology

Cumulative air quality impacts were assessed by comparing the incremental emissions associated with operation of each alternative to the air emissions inventory projected for the South Bend-Elkhart Area for the year 2018. As discussed in Section 3.4, for air quality monitoring and planning purposes, the EPA relies on the designation of nonattainment areas for air pollutants within the boundaries of geographical planning units. Because of the location of the proposed alternatives and for consistency with the EPA's designations, the South Bend-Elkhart Area was selected as the appropriate area for consideration of the potential air quality impacts of the proposed alternatives (**Figure 4.13-2**).

The future year emissions inventory was developed for the year 2018 based on the emissions inventory prepared for the Lake Michigan Air Directors Consortium (LADCO) in support of the development of State Implementation Plans (SIPs) for ozone, $PM_{2.5}$, and regional haze in the states of Illinois, Indiana, Michigan, Ohio, and Wisconsin. (LADCO, 2008). An inventory of total air emissions for each of these five states was prepared for LADCO's future year modeling that included base year emissions for the years 2002 and 2005. Emissions inventories were developed for LADCO for 2009 and 2018 by applying growth and control factors to the base year inventory. The year 2009 emissions inventory was the nearest year of data available in the LADCO report for comparison to the 2008 actual emissions inventory provided by the EPA for the South Bend-Elkhart Area. These data provided the basis for projection of the county-wide emissions for 2018 as shown in **Table 4.13-1**.

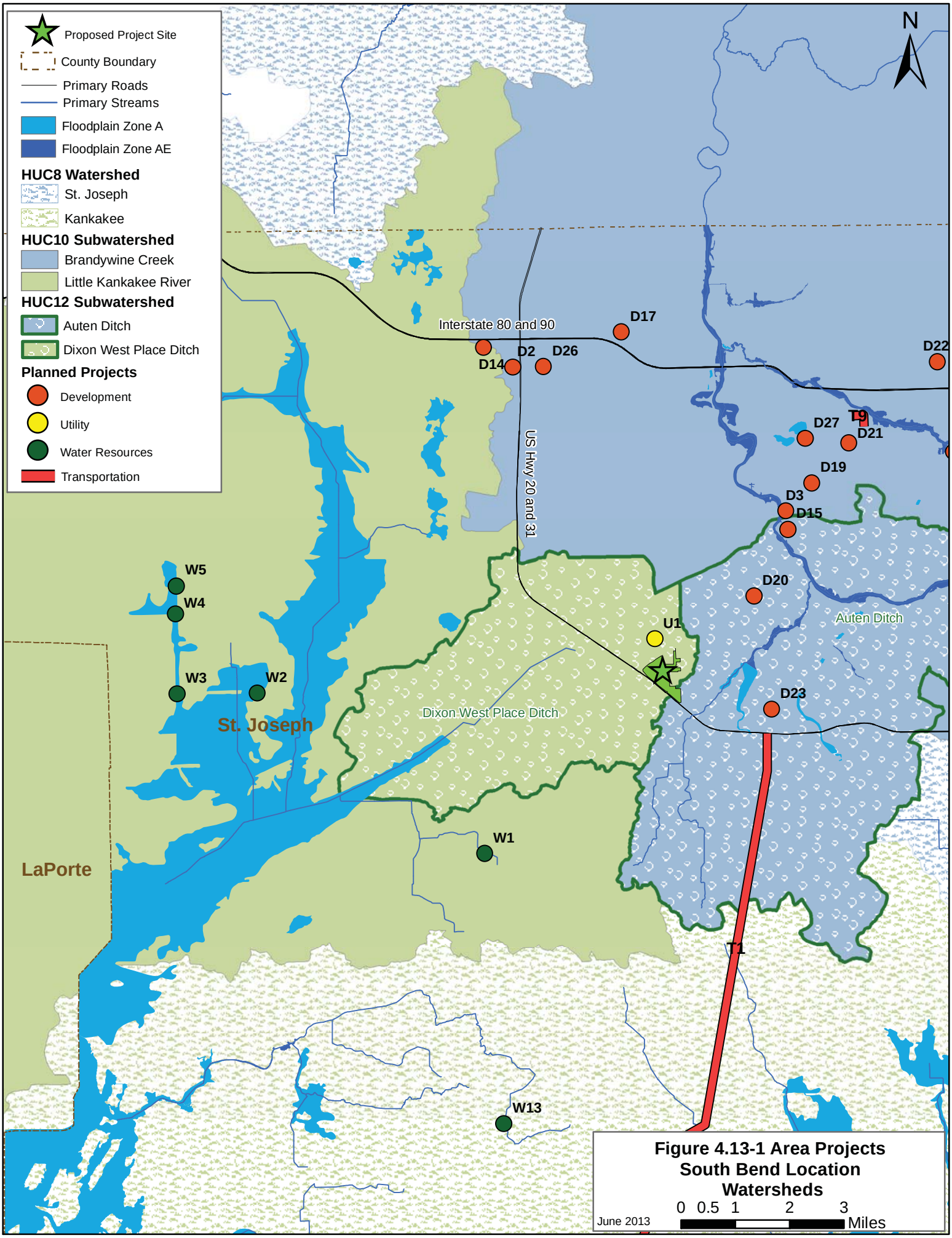

Figure 4.13-1 Area Projects South Bend Location Watersheds

SOURCE: FEMA 2011, GDG 2010a, 2012a, 2012b, 2012c, and NHD 2007

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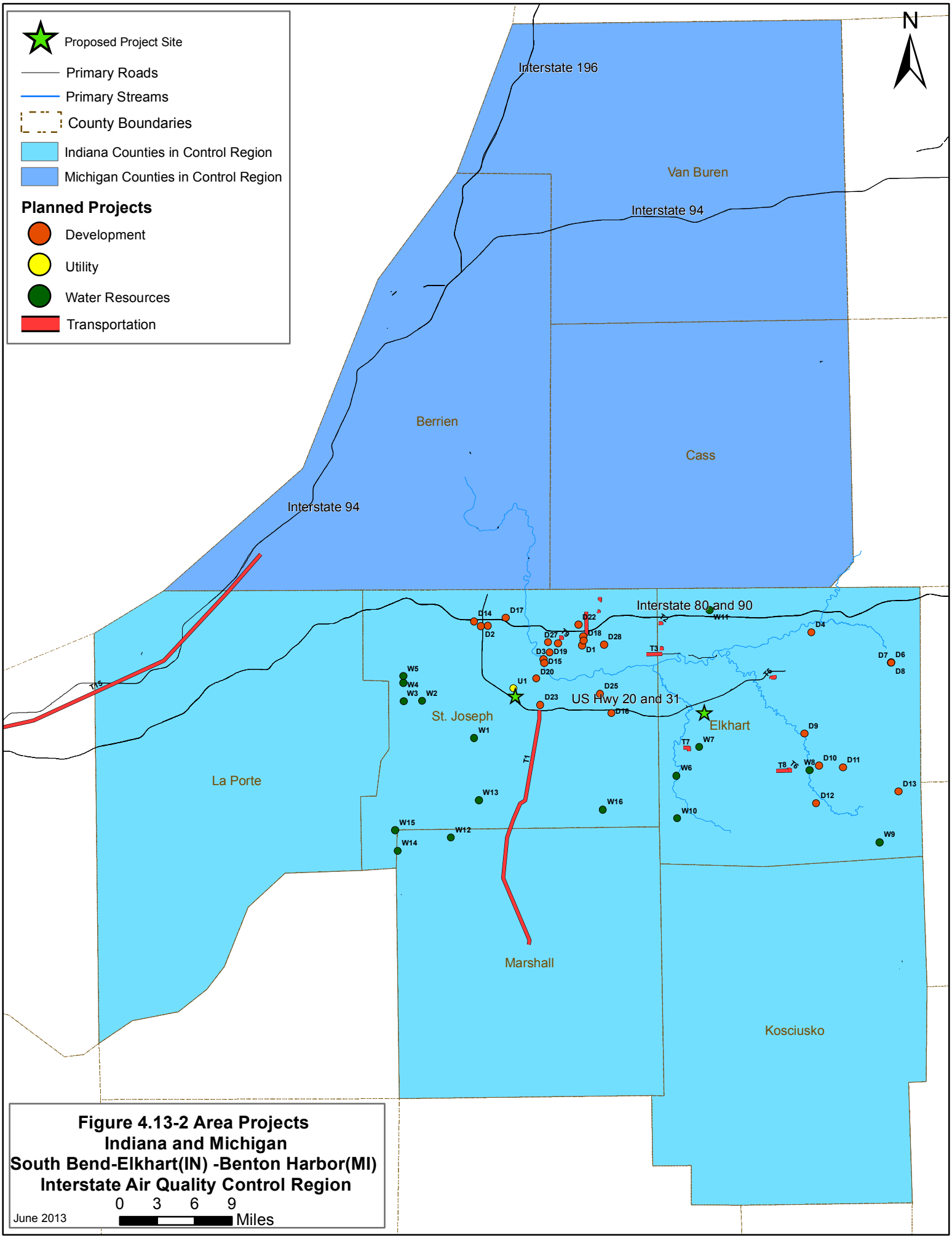

Figure 4.13-2 Area Projects
Indiana and Michigan
South Bend-Elkhart(IN) -Benton Harbor(MI)
Interstate Air Quality Control Region

June 2013

0 3 6 9 Miles

SOURCE: Cornell 2012, GDG 2010a, and NHD 2007

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Table 4.13-1
South Bend – Elkhart Area – 2008 and Projected
Future Year 2018 Air Emissions Inventory

	South Bend-Elkhart Area Emissions 2008 (tpy)	Average % Reduction Projected Based on LADCO Emissions Inventory	Projected Future Year (2018) Emissions Inventory
VOC	56,395	-8%	51,883
PM_{10}	47,593	-2%	46,641
$PM_{2.5}$	10,606	-2%	10,394
CO*	156,383	-3%	151,222
NOx	38,928	-34%	25,692
Sox	18,202	-3%	17,656

* 2018 emissions data were not available for CO in the LADCO emissions inventory. The average % reduction was assumed to be about 3% for this analysis.

Operating and Future Year Emissions

Operating emissions for Alternative A were estimated using the URBEMIS 9.2.4 computer modeling program as discussed in Section 4.4.1. The annual operating emissions estimated for this alternative were compared to the 2018 future year emissions inventory for the South Bend-Elkhart Area emissions inventory as presented in **Table 4.13-2**.

Table 4.13-2
Comparison of Estimated Operating Emissions – Alternative A
to South Bend-Elkhart Area Future Year Emissions Inventory

Air Contaminant	Estimated Operating Emissions 2018 (tpy)	South Bend-Elkhart Area Future Year 2018 Emissions Inventory* (tpy)	% of South Bend-Elkhart Area Future Year 2018 Emissions Inventory
VOC	77.81	51,883	0.1%
PM_{10}	186.57	46,641	0.4%
$PM_{2.5}$	36.25	10,394	0.3%
CO	927.74	151,222	0.6%
NOX	117.87	25,692	0.5%
SO_2	1.02	17,656	0.01%

*Source: LADCO, 2008

As shown in Table 4.13-2, total operating emissions are estimated to contribute less than a 1 percent increase in future year emissions to the area. South Bend is currently in compliance with EPA National Ambient Air Quality Standards (IDEM, 2013). The limited additional air pollution resulting from the project is not anticipated to affect South Bend's compliance with EPA regulations for the target contaminants. Therefore, it is anticipated that a less-than-significant cumulative impact would occur as a result of the operation of this alternative.

4.13.2.4 Biological Resources

Regional Setting

Characteristics of the USEPA Level IV Elkhart Till Plains ecoregion include its physiography, geology, soil, climate, potential natural vegetation and land use/land cover. The location, type and scale of Alternative A and other planned projects (see **Appendix K**) within the surrounding portion of the ecoregion (**Figure 4.13-3)** would not result in significant cumulative effects to these characteristics.

Wildlife and Habitats

Alternative A would result in direct wildlife mortality from construction as well as displacement of wildlife from the areas to be developed to surrounding habitats. The majority of planned projects affect urbanized areas, degraded habitats and existing roads and in combination with Alternative A, cumulative effects on wildlife populations and habitat carrying capacities are not expected to be significant. Wildlife displaced to surrounding habitats would not be affected by cumulative impacts since there are no planned projects close enough to the subject property to impact displaced wildlife.

Federally Listed Species

Alternative A would not directly or indirectly impact federally listed species. The majority of planned projects affect urbanized areas, degraded habitats and existing roads and in combination with Alternative A, cumulative effects on federally listed species are not expected to be significant.

Vegetation

Alternative A is anticipated to result in significant direct or indirect effects to native vegetation. The majority of planned development disturbance is to previously-altered low diversity vegetation. Alternative A would result in conversion of the existing degraded vegetation to impervious and managed turf and landscaped areas.

Given the past use such as annually cropped farmland and grazing, these practices have eliminated native plant communities throughout most of the site. This conversion of native plant communities to farmland and residential development is part of the growth and economic development plan for the area.

Environmentally significant ecosystems or biologically rich communities are not present in the area because previous use such as annually cultivated and grazing land and surrounding urban development has eliminated or altered most of the native ecosystems and biological communities. Because the proposed project is part of future land development in the area, Alternative A would not have significant cumulative impacts on vegetation.

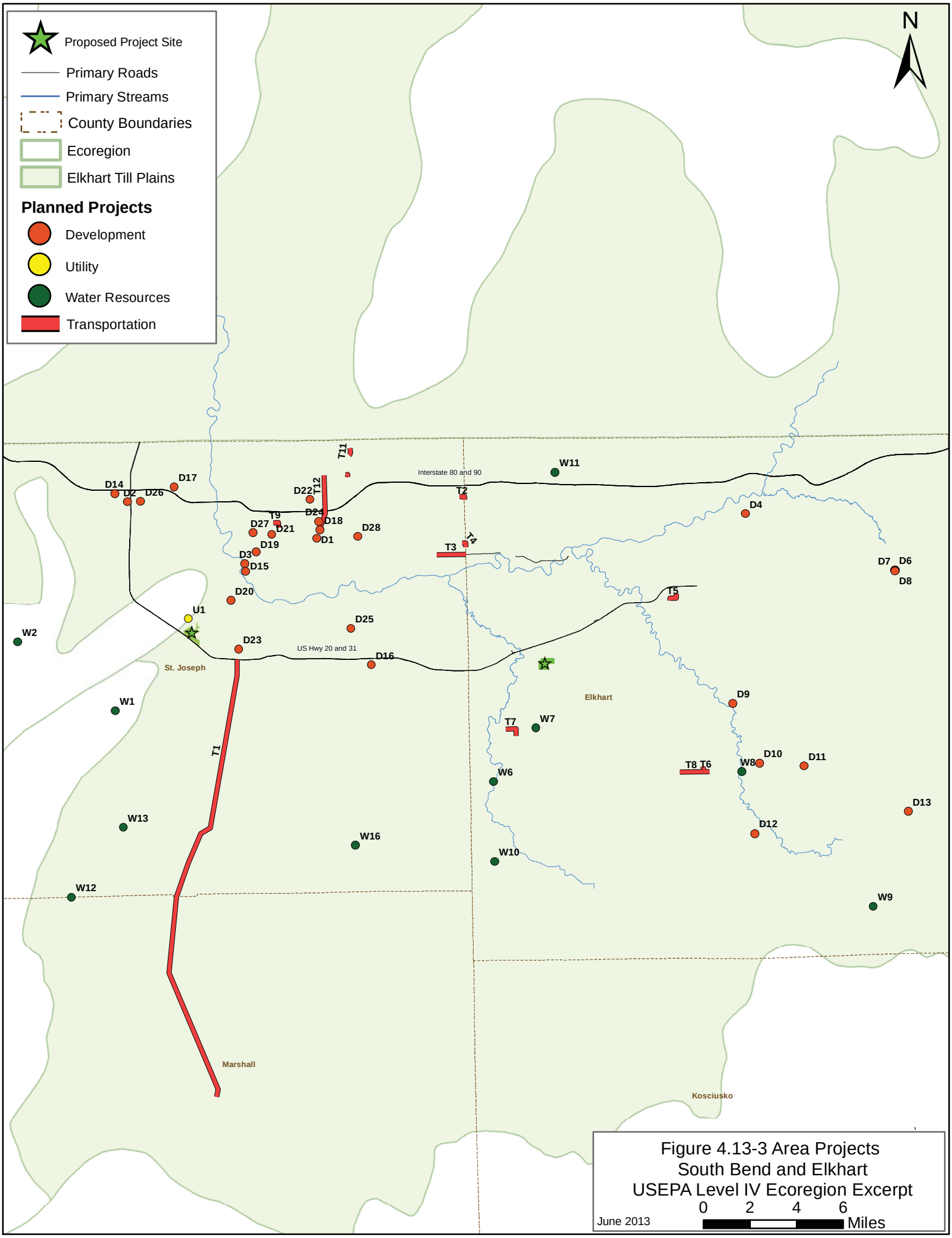

Figure 4.13-3 Area Projects
South Bend and Elkhart
USEPA Level IV Ecoregion Excerpt

June 2013

0 2 4 6 Miles

SOURCE: USEPA 2012, GDG 2010a, and NHD 2007

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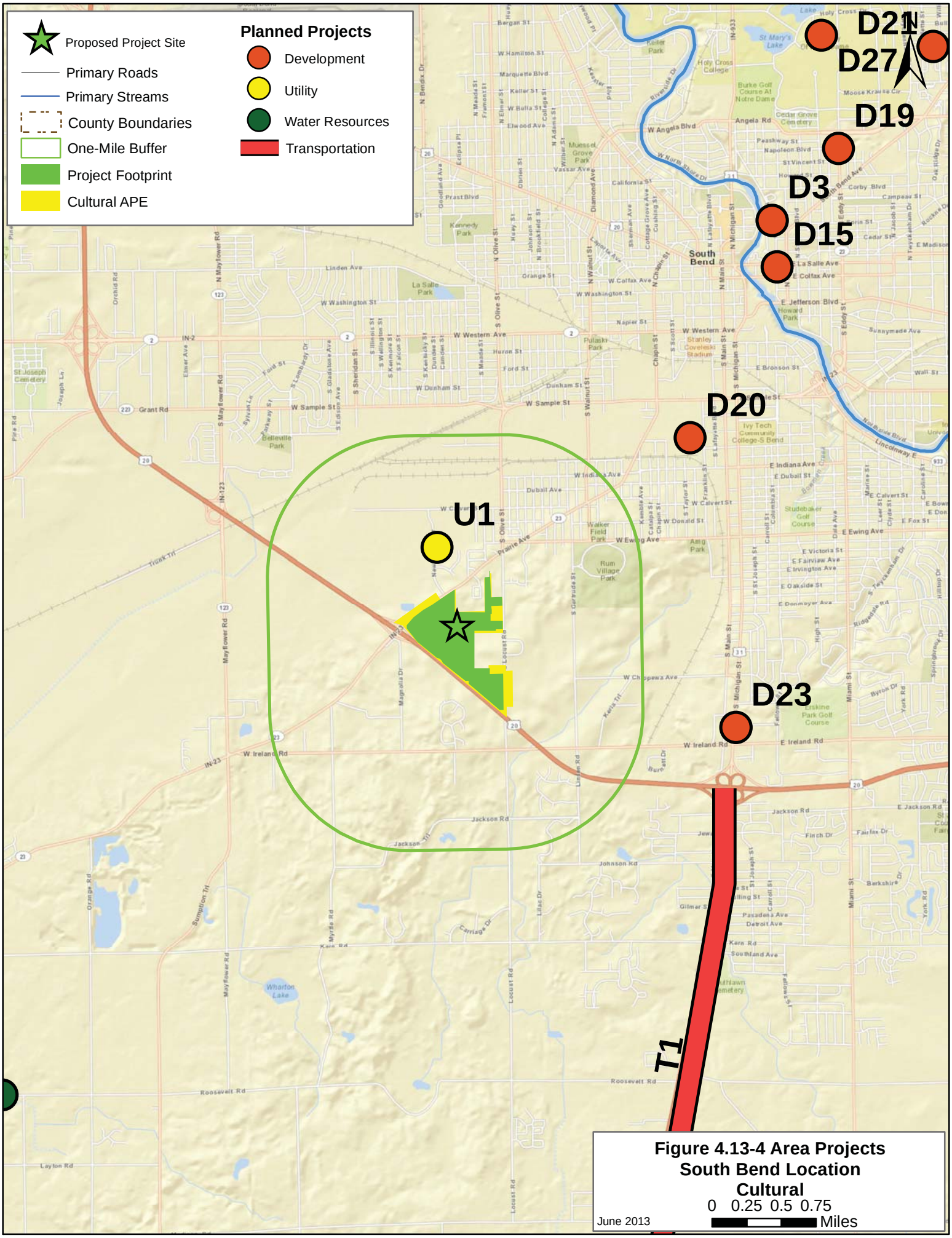

Figure 4.13-4 Area Projects South Bend Location Cultural

Source: ESRI 2013C, GDG 2009, 2010a and 2010b, and NHD 2007

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Related projects within the same project vicinity would cumulatively convert the current land uses of farmland, grassland and existing developed areas to increases in impervious surfaces and managed turf and landscaped areas.

Federally Listed Plant Species

Alternative A would not involve significant direct or indirect effects to any federally listed plant species. Therefore, implementation of Alternative A would not add to any cumulative effects on federally listed plant species from other planned projects in the vicinity.

Wetlands

Adverse direct and indirect impacts to wetlands by Alternative A and planned projects would be addressed through compliance with USACE permitting requirements. The majority of planned projects affect urbanized areas, degraded habitats and existing roads and in combination with Alternative A, cumulative effects to wetlands are not expected to be significant. Alternative A would not have significant cumulative storm water runoff water quality or quantity impacts, either during construction or operation of Alternative A as explained in Section 4.13.1.2 water resources.

Related projects within the same project vicinity would cumulatively convert the current land uses of farmland, grassland and existing developed areas to increases in impervious surfaces and managed turf and landscaped areas.

Federally Listed Plant Species

Alternative A would not involve significant direct or indirect effects to any federally listed plant species. Therefore, implementation of Alternative A would not add to any cumulative effects on federally listed plant species from other planned projects in the vicinity.

Wetlands

Adverse direct and indirect impacts to wetlands by Alternative A and planned projects would be addressed through compliance with USACE permitting requirements. The majority of planned projects affect urbanized areas, degraded habitats and existing roads and in combination with Alternative A, cumulative effects to wetlands are not expected to be significant. Alternative A would not have significant cumulative storm water runoff water quality or quantity impacts, either during construction or operation of Alternative A as explained in Section 4.13.1.2 water resources.

4.13.2.5 Cultural Resources

Although one non-archeological historic resource (BIA Structure 10/Atkins Resource 04A) within the South Bend site is recommended as eligible for inclusion in the NRHP, because there are no additional projects identified within the cultural resources APE or VAPE (**Figure 4.13-4**), cumulative impacts to cultural resources at the South Bend site as well as other past, present and

reasonably foreseeable future actions are not reasonably anticipated. However, if future development occurs in the immediate vicinity of BIA Structure 10/Atkins Resource 04A on the South Bend site, or if alterations to the exterior of BIA Structure 10/ Atkins Resource 04A occur, these actions may indirectly, directly and/or cumulatively adversely affect BIA Structure 10/Atkins Resource 04A, and compliance with Sections 106 and possibly 110 of the NHPA would be required, including mitigation.

4.13.2.6 Socioeconomic Conditions

Effects to the Pokagon Band

Alternative A would have substantial cumulative beneficial impacts to the Pokagon Band to help meet their purpose and need for the proposal, as described in Chapter 1 and Section 3.7.3. Alternative A would result in the trust acquisition of an inalienable land base for the purposes of establishing a consolidation site in the vicinity of South Bend, Indiana.

The government services center in Alternative A would cumulatively increase opportunities for Band members to obtain governmental services. The services provided by the Band would be more targeted toward the specific needs of the Band citizens, than services provided by non-tribal government sources have been in the past. Band citizens living in the South Bend area already have non-Band housing available to them. Alternative A would cumulatively increase housing availability for Band citizens, likely in a more culturally appealing setting.

Direct Economic Effects

There are other development projects proposed in the vicinity of Alternative A (**Figure 4.13-7**). Thus, Alternative A would cumulatively increase construction and on-going economic activity that has a multiplication factor for the vicinity. Information about the proposed projects in the area is somewhat limited, but it appears from the narrow available description that Alternative A would be one of the larger projects in the area. It is known that the total development costs of this alternative for the tribal village, facilities and casino would be approximately $480.0 million. The projected net economic impact from the Preferred Alternative is $458,817,000 for the City of South Bend and $540,269,000 for St. Joseph County.

Employment and Income

Band citizens living within approximately 10 miles of South Bend already have employment opportunities available to them from existing economic activity. Alternative A would cumulatively increase employment opportunities and income generation in the South Bend vicinity that is available to Band members and other citizens, possibly including EJ benefits for minority and low-income individuals. The projected employment impact from on-going operations at the Preferred Alternative would represent an increase of nearly 2.9 percent over the current number of jobs in St. Joseph County.

Housing

Band citizens living in the South Bend area already have housing available to them. Alternative A would cumulatively increase housing availability for Band citizens. The additional housing is likely to be more affordable and better quality for the cost than existing housing available for Band citizens. The total amount of new housing demand due to relocation is projected to be approximately 350 units. This equates to an increase of 0.3 percent in total housing units over current levels. The cumulative demand would not be a significant impact to housing availability because South Bend has an adequate housing stock with surplus housing stock available. Further, there is capacity for development of additional housing if needed.

Community Infrastructure

Alternative A and other foreseeable development projects would cumulatively increase demand for schools, libraries and parks. The cumulative impact to schools would not be significant because Alternative A would increase the demand by 0.8 percent; thus, the cumulative increase in demand for classroom space would probably not exceed a few percent of classroom capacity in St. Joseph County. Alternative A is not likely to have a cumulative significant impact on community infrastructure because of the dispersed nature of the libraries and parks in St. Joseph County.

Potential Social Costs

Alternative A would not have significant cumulative demand on the capacity for local governments to deal with social costs such as compulsive gaming, alcohol addiction, crime, bankruptcies and others. Alternative A could include some mitigation through a future Tribal-State class III gaming compact to help pay for increased capacity if required as described in Section 4.7.3.5. The local governments also plan for increases in the demand for social services because of increasing populations that are not linked to the implementation of Alternative A.

Fiscal Effects

Alternative A would not have significant cumulative effects on property tax base, state sales and related taxes, government expenditures or other mitigative payments to government. In a sense, these fiscal impacts are unique to Alternative A, not the other foreseeable development projects in the area because Alternative A includes a jurisdiction shift of the land from the local governments to the Pokagon Band. Section 4.7.3.6 explains why these effects from Alternative A are not significant. The other foreseeable development would not involve the same jurisdiction shift, so those developments would not result in lost property, sales or related taxes, nor would they involve increased unfunded governmental expenditures or mitigative payments to governments; tax revenues generated by those foreseeable projects would flow to the local governments as it normally would with no jurisdiction shift.

4.13.2.7 Resource Use

Transportation

With timely mitigation measures, Alternative A would not have significant cumulative impacts on traffic LOS grades, as assessed in Section 4.8.3.1. Cumulative impacts from the foreseeable future projects identified in the transportation APE at the South Bend site (**Appendix K**), as well as other past, present and reasonably foreseeable future actions are not reasonably anticipated to have significant traffic impacts, assuming the mitigation measures discussed in Section 5.0 are implemented. None of the specific projects identified in the APE, nor any of the potential Tribal projects on other tribally-owned properties, are expected to cause an increase in traffic volumes near the US 23/US 31 and S.R. 23 interchange that would result in significant cumulative impacts to the intersections evaluated for Alternative A. As previously noted, the traffic analysis completed for Alternative A took into consideration a 1 percent annual future growth rate, which is higher than historical trends show for the area (0.05 percent population growth in St. Joseph County from 2000 to 2010; see Section 4.14.1.1). This assumed growth rate helps account for impacts from other cumulative foreseeable development in the area. In the analysis, the 1 percent annual growth rate resulted in applying a 22 percent growth rate over a 22-year period. Taking this into consideration, it is reasonable to conclude that the growth rate assumed in the analysis accounts for the cumulative (including any induced growth) impacts for the US 31/US 20 and S.R. 23 interchange and the surrounding intersections studied. With the implementation of mitigation measures, all intersections are expected to operate acceptably without significant impacts.

For new developments that may occur in St. Joseph County and the City of South Bend, the sponsors of those developments would be responsible for conducting impact analyses and making any roadway improvements necessary in the vicinity of each of those developments to maintain an acceptable LOS per INDOT, City of South Bend, and St. Joseph County requirements for traffic impact studies as applicable. Additionally, City, County, Metropolitan Planning Organization, and State roadway planning departments monitor traffic patterns and plan roadway improvements to accommodate projected and otherwise identified changes in traffic patterns. This combination of roadway improvements associated with other developments and local planning and monitoring is expected to maintain acceptable LOS in other areas of the county. Thus, it is reasonable to assume that LOS would not fall below acceptable levels, resulting in no significant impacts. Therefore, provided that roadway improvements do not fall behind growth patterns, there would not likely be any significant impacts on the traffic networks within the county resulting from cumulative effects.

Land Use

The development projects listed in **Appendix K** and shown on **Figure 4.13-5** are primarily located in the developed regions of St. Joseph County and would likely have minimal cumulative impact on land use in the County.

Agriculture

The development projects listed in **Appendix K** and shown on **Figure 4.13-5** are primarily located in the developed regions of the St. Joseph County and would likely have minimal cumulative impact on prime farmlands or agricultural lands in the County. Since these lands have already been developed, with soils graded and compacted, the soils in this region have been disturbed and likely no longer exhibit the characteristics displayed for the area on the NRCS Web Soil Survey. Developers of the reasonably foreseeable developments would only need to comply with the Farmland Protection Policy Act if they would apply for federal assistance. These details are not currently known by the Band.

Alternative A would not take any currently cultivated farmlands out of production, but the identified future development projects in non-developed areas of the County could decrease the amount of land with value as farmland available for use in the future. The Band has no intention of using this land for agricultural purposes should this site not be used for the tribal development. If the tribal development is not approved, the land could be sold to another entity and developed according to future land use plans.

4.13.2.8 Public Services

Water Supply and Wastewater

Alternative A would not significantly cumulatively impact the City of South Bend's water supply and wastewater systems. This determination depends on mitigation in both wastewater and water supply systems. The Band would negotiate their portion of the funding for this mitigation, as would the developers of the other reasonably foreseeable future development projects.

As development continues in the area, the City would need to expand and improve its infrastructure in order to meet this higher demand. As discussed in Section 4.9, the City of South Bend's water supply system has adequate capacity for development in this project area with minimal impact on the City's water supply system. The City is currently in the process of updating their long term control plan to separate their now combined sewer system to reduce the number of sanitary sewer bypasses (**Figure 4.13-6**). The city discharge standards are based on EPA and IDEM mandates to reduce the number of sewer bypasses into the St. Joseph River and its tributaries. With the planned upgrades to the system, the additional cumulative wastewater discharge would not adversely affect the future goals of the sewer system.

Solid Waste

Alternative A would not have significant cumulative impacts to the solid waste transfer system or area landfills. Cumulative impacts from the projects listed in **Appendix K** within the County would not significantly impact the local area landfills' capacity, or the ability of multiple waste management companies' to conduct their current state of business. As shown in tables and

discussed in Section 4.9, the amount of waste estimated for Alternative A (6.4 tons/day) would be well within the management capabilities of the local transfer station and this amount would have little impact on the projected lifespans of the local landfills (based on data presented in Section 4.9). The projects listed within St. Joseph County would likely produce less waste than Alternative A, therefore, cumulatively, these projects would have an insignificant impact.

Electricity, Natural Gas, and Telecommunications

Alternative A would not have significant cumulative impacts to electrical, natural gas or telecommunications systems. The cumulative impacts to the utilities could potentially impact public services, but, consider that for past development growth in the vicinity, the utility companies have a history of developing adequate capacity to satisfy growing demands. The addition of a project the size of Alternative A to this area of South Bend would not adversely affect the electrical, natural gas and telecommunication utilities' ability to provide service or continue service to the region. This determination is based on estimated usages for Alternative A (determined using the known utility usage at the Four Winds New Buffalo Casino and Hotel, as this resort is comparable in size and utility usage to the proposed facilities of Alternative A), and the supply capabilities of the utility providers in South Bend (please see Section 4.9 for additional details). The addition of other projects close to this proposed development could actually lessen the cost of the required infrastructure needed to support the needs of the tribal development.

Public Health and Safety Services

Alternative A would not have significant cumulative impacts to public health and safety services with the provision of mitigative payments, if needed, by the Band for impacts from Alternative A. As a consequence of future actions and projects in and around the proposed project area, a potential increase in the demand for law enforcement services could occur, but potential effects would be partially offset by the Band's provision of a fully-equipped Police Department for Alternative A. It is anticipated that the Band would eventually enter into cross-deputization agreements with Indiana police agencies, allowing these jurisdictions to share enforcement personnel and resources, should cumulative development increase the demand for police and emergency services. In November of 2014, in preparation for jurisdictional changes that would result from the proposed transfer of land owned by the Pokagon Band in South Bend to federal trust status, the St. Joseph County Board of Commissioners unanimously adopted Resolution R-12-C-2014 which approved the local governmental cross deputization agreement for law enforcement with the Pokagon Band of Potawatomi Indians (see **Appendix A**). The agreement will allow both Tribal Police deputies and Sheriff's deputies to have reciprocal law enforcement jurisdiction and authority throughout St. Joseph County. This includes land that would be held in trust for the Pokagon Band as detailed within this resolution. Nine private development projects, three combined sewer overflow projects, one utility project, and one transportation project are proposed/currently under construction in the City of South Bend that could add to cumulative effects on public health and safety services. With this increased development in and around the Alternative A project area, a similar increase in

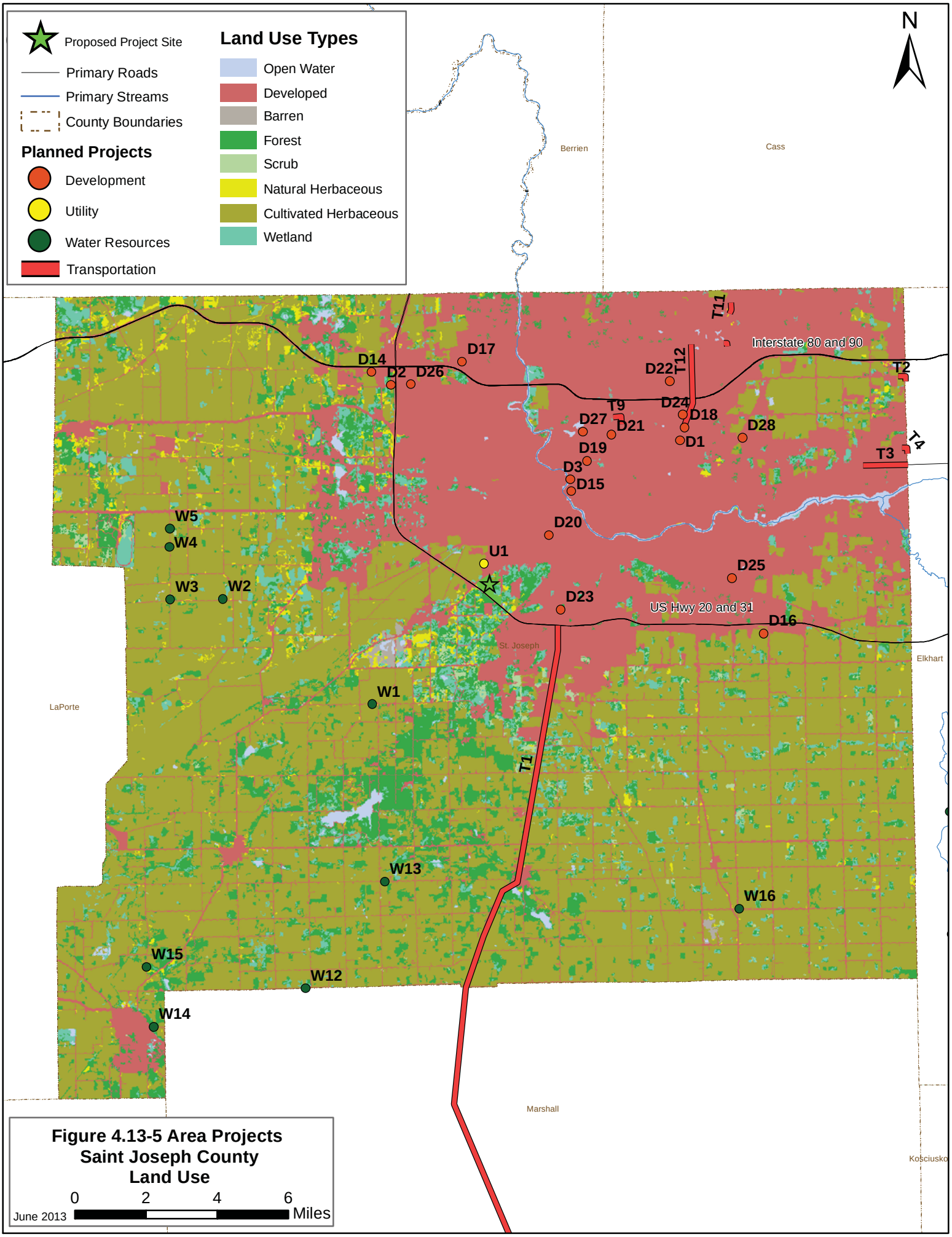

Figure 4.13-5 Area Projects Saint Joseph County Land Use

SOURCE: GDG 2001 and 2010a, and NHD 2007

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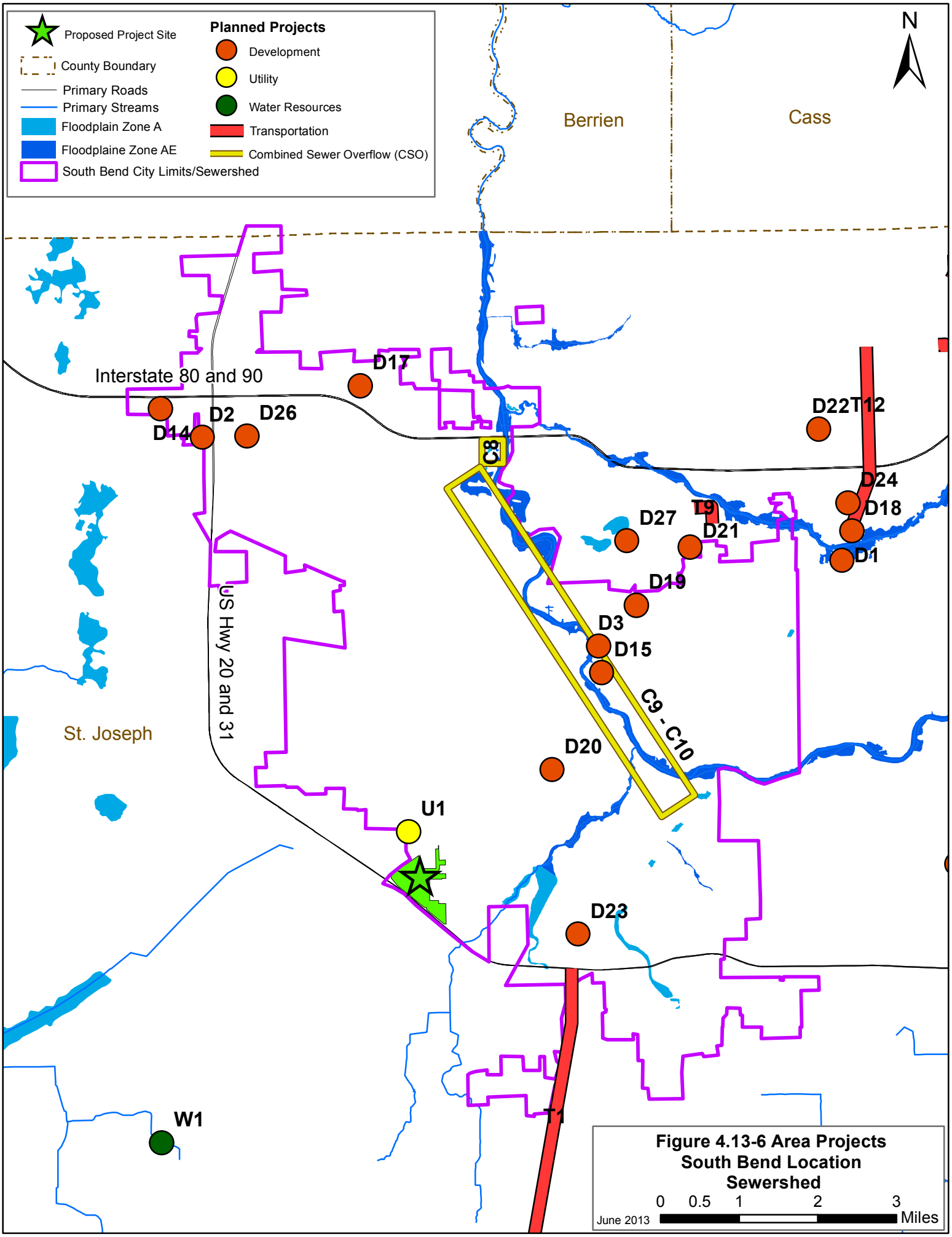

SOURCE: GDG 2010a, FEMA 2011, NHD 2007,and City-Data 2010c

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the demand for fire and EMS services could occur, but the South Bend Fire Department employs sufficient personnel to provide services to the project area. Over 300 firefighters and paramedics are situated at eleven stations throughout the City of South Bend, making the Department well suited to accommodate a potential increase in demand for services. Although unlikely, if demand would increase such that the current staff of the South Bend Police Department and the South Bend Fire Department could no longer provide adequate services, the City of South Bend may need to add law enforcement, fire and/or EMS staff. However, new development on adjacent non-tribal lands would spur higher tax revenues for the area governments, which could offset any additional personnel hiring costs. Thus, significant cumulative impacts associated with the availability of public health and safety services is not reasonably expected to occur from Alternative A.

4.13.2.9 Other Values

Noise

Alternative A would not have significant cumulative impacts on noise levels in South Bend. Cumulative impacts from the projects identified in the APE (see **Appendix K**) at the South Bend site, as well as other past, present and reasonably foreseeable future actions are not reasonably anticipated to significantly impact existing ambient noise levels. The future cumulative noise environment would include noise sources associated with the proposed project, vehicle traffic along area roadways, and surrounding commercial, residential, and agricultural uses. The major source of noise with potential to contribute cumulatively to existing noise sources is traffic. Although development within the project vicinity would generate increased traffic on the area's transportation network, it is not likely enough of an increase in specific locations to cause a concentrated significant noise impact, as the ambient environment is already dominated by traffic noise from US 23/US 31 and S.R. 23. Thus, the relatively small percentage of trips associated with additional cumulative development is not sufficient to significantly increase the noise environment above the estimated noise levels. Accordingly, cumulative impacts associated with Alternative A are not reasonably expected to be significant.

Hazardous Materials

Alternative A would not generate significant cumulative public health and safety impacts related to hazardous materials or petroleum products. This is because Alternative A and each of the cumulative development projects would be required to comply with RCRA regulations, as needed, for use, management, treatment and storage of hazardous materials and wastes. For underground storage of petroleum at any of the sites, the sponsors would need to comply with EPA regulations for underground storage tanks 40 CFR Part 280. There are no existing hazardous materials on the South Bend project site, and only one project (groundwater rehabilitation project due to the closing of New Energy's Ethanol Plant) occurs within a one-mile radius of the project site that could add to cumulative effects from hazardous materials (**Figure 4.13-7).** As Alternative A and the groundwater rehabilitation project would not use or generate significant quantities of hazardous

materials, and mitigation measures would be implemented to decrease the potential for negative environmental effects from incidental spills, significant cumulative impacts are not anticipated. As discussed in Section 3.10, regulated hazardous material sites were recorded within a 1-mile radius of the project South Bend site; therefore, if additional projects would develop adjacent areas within 1 mile of the South Bend site, there would be a higher potential for encountering these hazardous materials. However, the potential for significant impacts associated with future hazardous materials sites depends on the type of development and the locations of the sites, which at this point is unable to be determined. Despite this uncertainty, it is standard practice to evaluate reported releases of hazardous material to determine potential liability for real estate property transactions. This is accomplished by conducting a Phase I Environmental Site Assessment (and potentially a Phase II Environmental Site Assessment should hazardous material sites be suspected) performed in accordance with the ASTM standard practice E-1527-00. If developers follow these standard practices, no significant impacts would be expected. It should be noted, however, that the potential for encountering hazardous materials would increase over time should commercial, industrial, and/or residential development occur in adjacent areas. However, it is reasonably expected that federal, state, and local regulations would be complied with, and thus, significant cumulative impacts from hazardous materials would be unlikely.

Visual Resources

Alternative A would not have cumulatively significant impacts to visual resources, including lighting and landscape impacts. Alternative A plus other cumulative development projects would likely result in increased light sources during night time activities (necessary for general public safety purposes) including increased street and vehicular lighting, signage, lighting at entrances, walkways and parking lots. Land use ordinances require commercial lighting sources to be designed and placed architecturally to minimize off-site spill over and glare effects. Landscaping, berms and architectural features can further help mitigate and buffer adverse offsite impacts.

Section 4.10.1.3 explains the lighting impacts from Alternative A. Regarding cumulative landscape impacts, land use ordinances would require that Alternative A plus each of the other cumulative development projects be landscaped and architecturally designed to blend into the surrounding view sheds as much as possible. The cumulative development would be spread out, not concentrated, and would impact multiple land use zones, further reducing likelihood for non-compliant visual impacts.

4.13.2.10 Environmental Justice

Some Band members living in the South Bend vicinity meet the EJ definition for minority or low-income individuals. Alternative A would have substantial cumulative beneficial impacts to Band citizens to help meet their purpose and need for the proposal, as described in Section 1. Alternative A would result in BIA approval of an inalienable land base for the purposes of establishing a consolidation site in the vicinity of South Bend, Indiana to benefit Band members. Cumulatively,

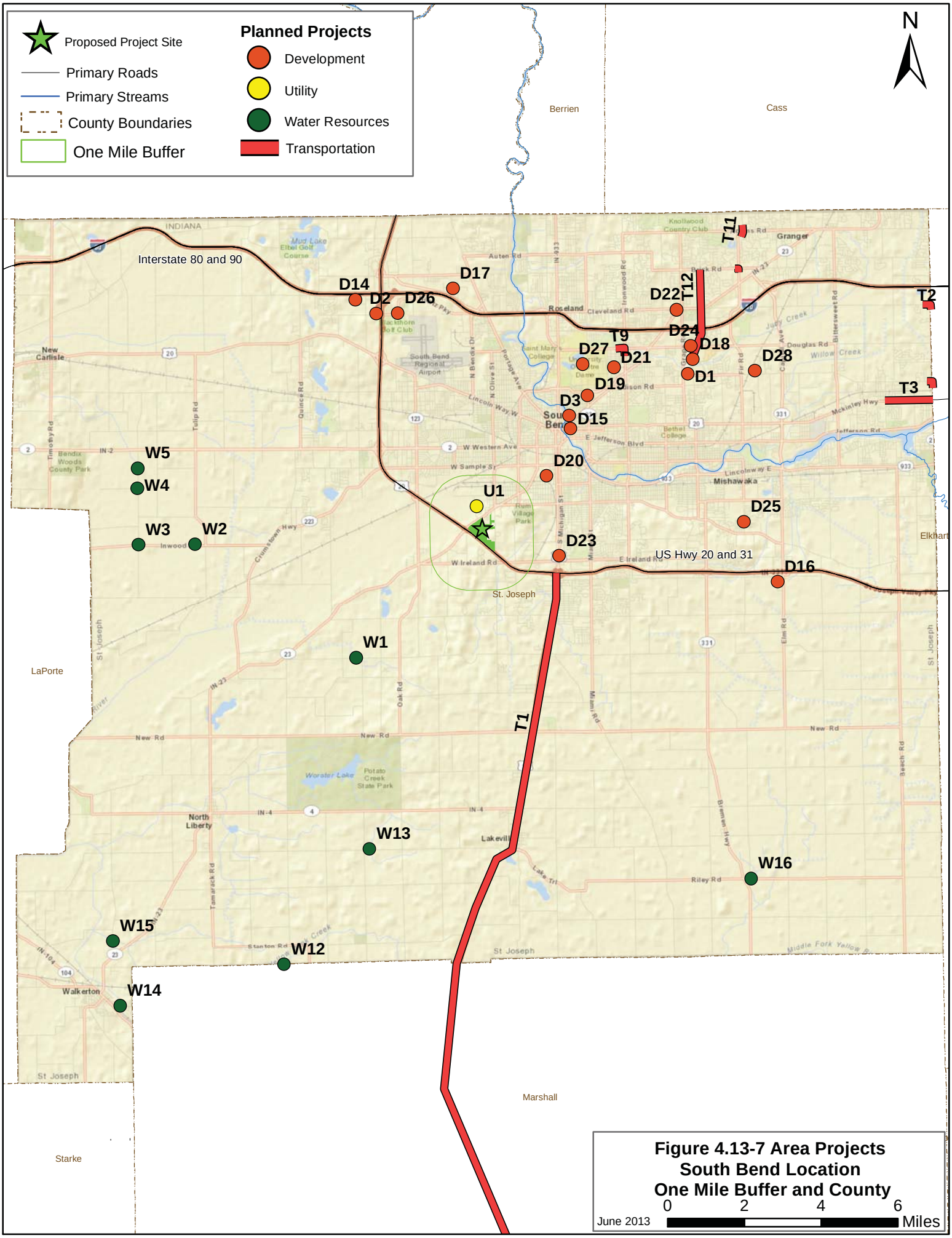

Figure 4.13-7 Area Projects
South Bend Location
One Mile Buffer and County

June 2013

0 2 4 6 Miles

Source: ESRI 2013C, GDG 2009, GDG 2010a, and NHD 2007

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Alternative A would result in the completion of establishment of four separate consolidation sites for Band citizens. To explain, in 1999, the Pokagon Band and the Department of the Interior negotiated an MOU to help implement the broad Congressional mandate of Section 6 of the Pokagon Restoration Act. The MOU set forth the geographic areas within which the Pokagon Band will acquire fee lands to submit to the Secretary for acquisition in trust. In compliance with the terms of the MOU, the Pokagon Band has already acquired lands in fee that the Secretary has already approved for trust status for the first three consolidation sites located in the vicinity of Dowagiac, New Buffalo and Hartford, Michigan. The MOU established that the fourth consolidation site, the site proposed in this EIS, is to be located in the vicinity of South Bend, Indiana. Alternative A would establish the South Bend consolidation site, thereby cumulatively completing the Band's satisfaction with the terms of the MOU with DOI that implements Section 6 of the Pokagon Restoration Act.

The government services center in Alternative A would cumulatively increase opportunities for Band citizens to obtain governmental services. The services provided by the Band would be more targeted toward the specific needs of the Band citizens, than services provided from non-tribal government sources have been in the past. Band citizens living in the South Bend area already have non-Band housing available to them, but Alternative A would cumulatively increase housing availability for Band citizens, likely in a more culturally appealing setting.

Regarding non-Band members in the South Bend vicinity that meet the EJ definition as minority or low income individuals, Alternative A would introduce a new source of economic activity in St. Joseph County that could cumulatively benefit minority or low income people. The casino and hotel components of Alternative A would benefit both Band citizens and non-tribal residents of St. Joseph County by generating revenue and creating approximately 1,470 temporary construction jobs and 3,256 permanent positions related to operation of the hotel and casino (includes direct, indirect, and induced employment opportunities). Similarly, eighteen private development projects, one utility project, and seven transportation projects have occurred or are planned for the future in St. Joseph County; all of these projects could potentially provide additional employment opportunities to low income and/or minority populations. Alternative A would also provide new housing opportunities for Band members, but if Band members or nontribal individuals are in need of additional housing, several of the projects in St. Joseph County include residential development components (specifically, new residential buildings and apartment building additions). Lastly, Alternative A is also proposing to construct facilities to provide social services to Band members. However, if additional services are needed, several development projects in St. Joseph County are providing/would provide various community services (including a retirement center, oral surgical center, dialysis clinic, and other medical facilities); these projects would add to the availability of community services proposed under Alternative A.

Alternative A would allow for the first tribal land base in Indiana, create jobs, and provide much needed housing, and governmental and social services. Cumulative projects in St. Joseph County

have provided/would provide similar opportunities by offering additional jobs, housing facilities, and community services. Thus, both Alternative A and the cumulative development projects in St. Joseph County would be expected to have significant beneficial impacts on environmental justice considerations.

Potential increased social costs associated with casino operation such as alcoholism, problem gambling and associated indices (bankruptcy, divorce, suicide, domestic violence, and crime) may occur in and around the project area and disproportionately affect low-income or minority populations. However, as stated in Section 3.11, negative effects of casino development are usually temporary, decrease over the life of the casino, and are typically offset by positive economic impacts generated from casino operation. For these reasons, and the fact that none of the St. Joseph County projects currently have/would have gaming facilities in the foreseeable future, adverse cumulative effects associated with gaming are unlikely; but if any such impacts to low income or minority populations would occur, they would likely be temporary.

4.13.3 Alternative B – Elkhart Site Tribal Village and Casino

4.13.3.1 Land Resources

Alternative B would not have significant cumulative impacts on land resources. The cumulative impacts from the projects identified on **Figure 4.13-8** as well as other past, present, and other reasonably foreseeable future actions have and would result in topographic changes as necessary amounts of cut and fill would be required in order to achieve desired contours to accommodate structures and facilitate adequate drainage. The cut and fill would change the topography of the area, and the overall volume of cut material would be considered substantial and would need to be taken offsite. The cut material would need to be removed and distributed within a reasonable distance from the project site at a facility that would accept it. Additionally, this alternative would incorporate an Erosion Control Plan to minimize potential soil erosion effects. Cumulative impacts are not expected to prevent the conveyance of surface water into natural drainages or cause landslides or excessive erosion or sedimentation within drainage features. However, a moderate cumulative impact to land resources would be expected from projects expecting to distribute cut material throughout the APE.

4.13.3.2 Water Resources

Alternative B would not have significant impacts on surface and groundwater quality. The development of Alternative B would include the incorporation of required BMPs to control storm water runoff and the quality of that runoff leaving the site. The EPA's NPDES permitting process involves several practices including an erosion control plan and a monitoring plan to ensure storm water discharge does not adversely affect downstream natural drainage waters. BMPs that involve infiltration for groundwater recharge are regulated depending on the level of the current ground water table and local soil conditions to prevent the degradation of groundwater quality. Additional

future development in the APE (**Figure 4.13-8**) would be subject to the same drainage and water management practices; therefore, Alternative B and future development projects would not have a significant cumulative effect on surface and ground water quality.

Alternative B would not have significant cumulative water quality impacts to wetlands, storm sewer capacity, downstream FEMA floodplains or other waterways. Storm water runoff would be detained on site through the incorporation of BMPs such detention ponds. These detention ponds would be sized to retain storm flows onsite and discharge flows slowly over a period of time into wetlands or the storm sewer system. Detention ponds and detention pond outlets would be sized to restrict the post development discharge rate off the property and match the pre development discharge rate up to the 100-year, 24-hour storm event. The 100-year, 24-hour storm event is the storm used to determine the extent and elevation of the FEMA floodplains mapped downstream of the project site. By controlling storm flows up to this storm event level, the FEMA floodplains downstream would not be affected. Other future development within the defined tributary region of mapped floodplains would be subject to similar water management practices, helping to prevent any cumulative adverse effects up to the level of a 100-year, 24-hour storm event.

4.13.3.3 Air Quality

Methodology

Please see Alternative A for a description of assessment methods.

Operating and Future Year Emissions

Operating emissions for Alternative B were estimated using the Urban Emissions (URBEMIS) 9.2.4 computer modeling program as discussed in Section 4.4. The annual operating emissions estimated for this alternative were compared to the 2018 future year emissions inventory for the South Bend-Elkhart Area emissions inventory as presented in Table 4.13-3.

Table 4.13-3
Comparison of Estimated Operating Emissions – Alternative B
to South Bend-Elkhart Area Future Year Emissions Inventory

Air Contaminant	Estimated Operating Emissions 2018 (tpy)	South Bend-Elkhart Area Future Year 2018 Emissions Inventory (tpy)	% of South Bend-Elkhart Area Future Year 2018 Emissions Inventory
VOC	77.85	51,883	0.2%
PM_{10}	186.65	46,641	0.4%
$PM_{2.5}$	36.26	10,394	0.3%
CO	928.18	151,222	0.6%
NOX	117.92	25,692	0.5%
SO_2	1.02	17,656	0.01%

As shown in **Table 4.13-3**, total operating emissions are estimated to contribute less than a 1 percent increase in future year emissions to the area. Elkhart is currently in compliance with EPA National Ambient Air Quality Standards (IDEM 2013). The limited additional air pollution that would result from the project is not anticipated to affect Elkhart's compliance with EPA regulations for the target contaminants. Therefore, it is anticipated that a less-than-significant cumulative impact would occur as a result of the operation of this alternative.

4.13.3.4 Biological Resources

Regional Setting

Characteristics of the EPA Level IV Elkhart Till Plains ecoregion include its physiography, geology, soil, climate, potential natural vegetation and land use/land cover. The location, type and scale of Alternative B and other planned projects (see **Appendix K)** within the surrounding portion of the ecoregion, would not result in significant cumulative effects to these characteristics.

Wildlife and Habitats

Alternative B would not have significant adverse effects to wildlife or habitats. The majority of planned projects affect urbanized areas, degraded habitats or existing roads. In combination with Alternative B, cumulative effects on wildlife populations and habitat carrying capacities from other planned projects in the vicinity are not expected to be significant.

Federally Listed Species

Alternative B would not directly or indirectly impact federally listed species. The majority of planned projects affect urbanized areas, degraded habitats and existing roads and in combination with Alternative B, cumulative effects on federally listed species are not expected to be significant.

Vegetation

Alternative B is not anticipated to result in significant direct or indirect effects to the native vegetation since very little exists due to current farming practices on site. This alternative is not anticipated to result in significant cumulative effects to the existing, already-degraded non-native vegetation. The project site does contain existing row crop farmland, but its removal would not be considered significant to agricultural crop loss within the project vicinity, as it would be a small portion of the existing agricultural lands in the area.

Alternative B would result in conversion of active agricultural land to impervious and managed landscape uses. The current annually cropped farmland has eliminated native plant communities throughout most of the site. This conversion of native plant communities to farmland is part of the growth and economic development plan for the area. Because the proposed project is part of future land development in the area, Alternative B would not have significant impacts on the fence row vegetation.

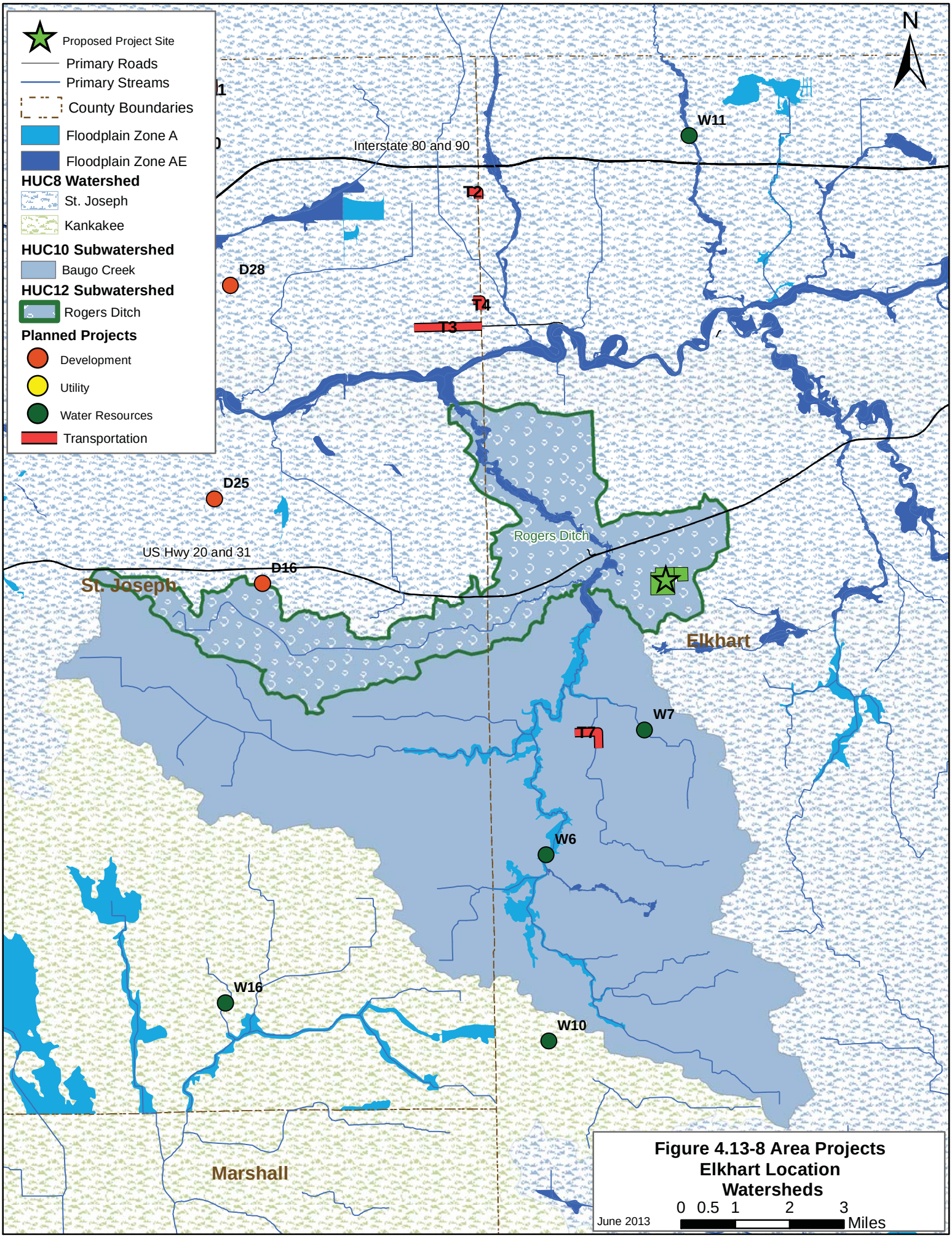

Figure 4.13-8 Area Projects Elkhart Location Watersheds

SOURCE: FEMA 2011, GDG 2010a, 2012a, 2012b, 2012c, and NHD 2007

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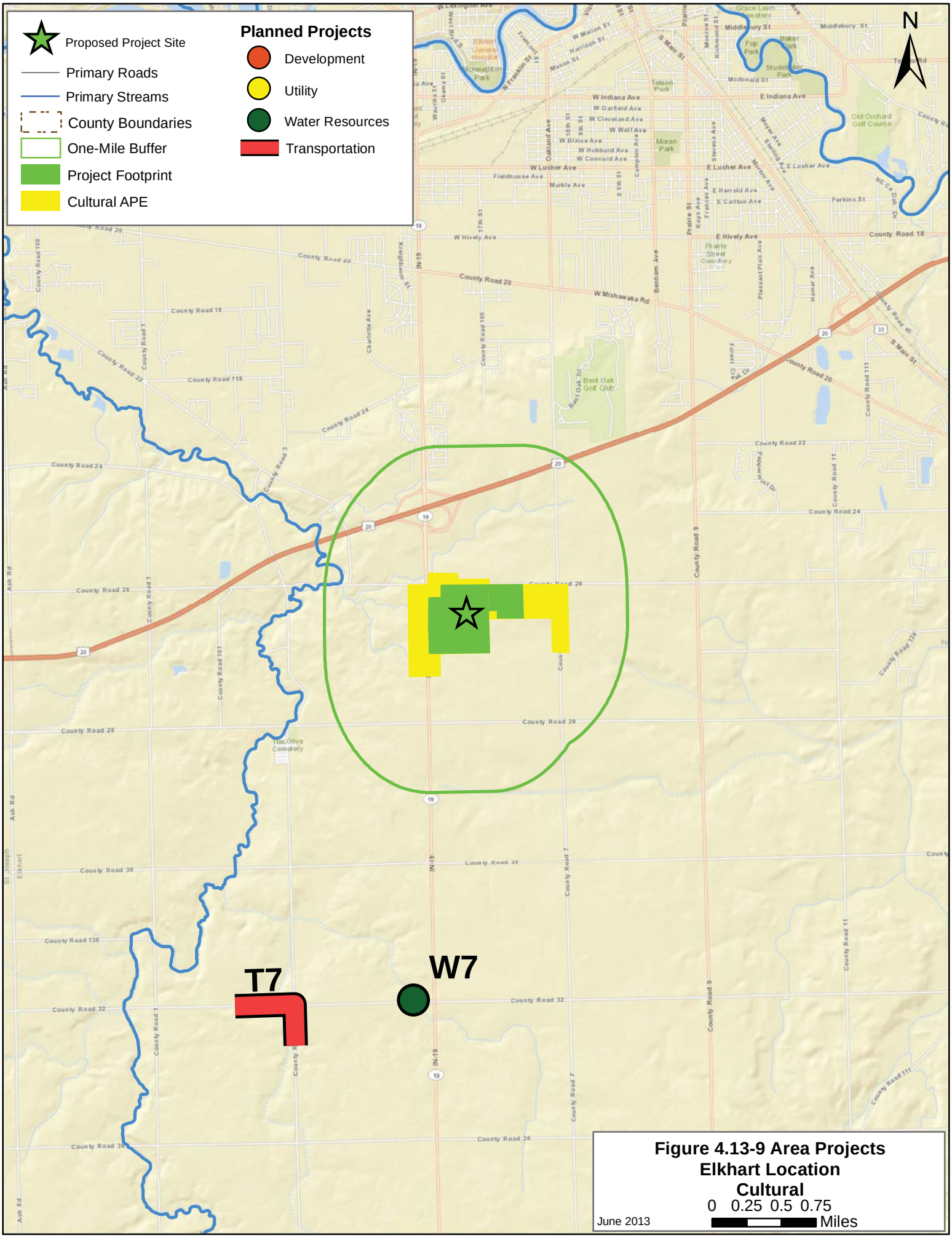

Figure 4.13-9 Area Projects
Elkhart Location
Cultural

June 2013

Source: ESRI 2013C, GDG 2009, 2010a and 2010b, and NHD 2007

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Related projects within the project vicinity would cumulatively convert the current land uses of farmland, grassland and existing developed areas to impervious surfaces, managed turf and landscaped areas, which is consistent with future land development and economic growth for the area.

Federally Listed Plant Species

Alternative B would not involve significant direct or indirect effects to any federally listed plant species. Therefore, implementation of Alternative B would not add to any cumulative effects on federally listed plant species from other planned projects in the vicinity.

Wetlands

There would no direct or indirect impacts to wetlands by Alternative B, and any effects from planned projects would be addressed through compliance with USACE permitting requirements. The majority of planned projects affect urbanized areas, degraded habitats and existing roads, and in combination with Alternative B, cumulative effects to wetlands would are not expected to be significant.

4.13.3.5 Cultural Resources

Because no historic properties were identified within the APE or VAPE (**Figure 4.13-9**), and there are no additional projects identified within the cultural resources APE or VAPE, cumulative impacts to cultural resources at the Elkhart site as well as other past, present and reasonably foreseeable future actions are not reasonably anticipated.

4.13.3.6 Socioeconomic Conditions

Effects to the Pokagon Band

Alternative B would have substantial cumulative beneficial impacts to the Pokagon Band to help meet their purpose and need for the proposal, as described in Section 1. Alternative B would result in BIA approval of an inalienable land base for the purposes of establishing a consolidation site in Elkhart and the near Band citizens living near South Bend, Indiana.

The government services center in Alternative B would cumulatively increase opportunities for Band citizens to obtain governmental services. The services provided by the Band would be more targeted to the specific needs of the Band citizens than services provided from non-tribal government sources have been in the past. Band citizens living in the Elkhart area already have non-Band housing available to them. Alternative B would cumulatively increase housing availability for Band citizens, likely in a more culturally appealing setting. Net revenues from Alternative B commercial activities would be less than the net revenues from Alternative A, thus, Alternative B would have a reduced ability to cumulatively provide governmental service benefits (Band and local governments) to Band citizens.

Direct Economic Effects

There are other development projects proposed in the vicinity of Alternative B (**Figure 4.13-12**). Thus, Alternative B would cumulatively increase construction and on-going economic activity that has a multiplication factor for the vicinity. Information about the proposed projects in the area is somewhat limited but it appears from the narrow available description that Alternative B would be one of the larger projects in the area. It is known that the total development costs of this alternative for the tribal village, facilities and casino is approximately $480.0 million. The projected net economic impact from the Preferred Alternative is $48,824,000 for the City of Elkhart and $479,908,000 for Elkhart County.

Employment and Income

Band citizens living in the vicinity already have employment opportunities available to them from existing economic activities. Alternative B would cumulatively increase employment opportunities and income generation in the Elkhart vicinity available to Band members and other citizens, possibly including EJ benefits for minority and low-income individuals. The projected employment impact from on-going operations at the Preferred Alternative would represent an increase of nearly 2.5 percent over the current number of jobs in Elkhart County.

Housing

Band citizens living in the Elkhart area already have housing available to them. Alternative B would cumulatively increase housing availability for Band citizens. The additional housing is likely to be more affordable and better quality for the cost than existing available housing. The total amount of new housing demand due to relocation is projected to be approximately 325 units. This equates to an increase of 0.4 percent in total housing units over current levels. The cumulative demand would not be a significant impact to housing because Elkhart has an adequate housing stock with surplus housing stock available. Further, there is the capacity for development of additional housing if needed.

Community Infrastructure

Alternative B and other foreseeable development projects would cumulatively increase demand for schools, libraries and parks. However, the cumulative impact to schools would not be significant because Alternative B would only increase the demand by 0.8 percent, thus, the demand for classroom space would probably not exceed a few percent of classroom capacity in Elkhart County. Alternative B is not likely to have a cumulative significant impact because of the dispersed nature of the libraries and parks in Elkhart County.

Potential Social Costs

Alternative B would not have significant cumulative demand on the capacity for local governments to deal with social costs such as compulsive gaming, alcohol addiction, crime, bankruptcies and others. The local governments also plan for increases in demand for social services because of increasing populations that are not linked to the implementation of Alternative B.

Fiscal Effects

Alternative B would not have significant cumulative effects on property tax base, state sales and related taxes, government expenditures or other mitigative payments to government. In a sense, these fiscal impacts are unique to Alternative B, and not the other foreseeable development in the area, because Alternative B includes a jurisdiction shift of the land from the local governments to the Pokagon Band. Section 4.7.3.6 already explained why these effects from Alternative B alone are not significant. The other foreseeable development would not involve the same jurisdiction shift, so those developments would not result in lost property, sales or related taxes, nor would they involve increased unfunded governmental expenditures or mitigative payments to governments; tax revenues generated by those foreseeable projects would flow to the local governments as it normally would with no jurisdiction shift.

4.13.3.7 Resource Use

Transportation

With timely mitigation measures, Alternative B would not have significant cumulative impacts on traffic LOS grades, as assessed in Section 4.8.3.1. The direct, indirect and induced growth impacts are described in other sections of the EIS. Cumulative impacts from the foreseeable future projects identified in the transportation APE at the Elkhart Site (see **Appendix K**), and other past, present and reasonably foreseeable future actions would not likely result in significant impacts to traffic assuming the mitigation measures discussed in Section 5.0 are implemented. None of the specific projects identified in the APE at the Elkhart Site (**Appendix K**), nor any of the potential Tribal projects on other tribally owned properties, are expected to cause an increase in traffic volumes near the US 20 and S.R. 19 interchange that would result in significant cumulative impacts to the intersections evaluated for Alternative B. In addition, unspecified indirect and induced growth and cumulative projects are taken into account under the 1 percent per year growth analysis presented in Section 4.8.2.1. That is, the traffic analysis completed for Alternative B took into consideration a 1 percent annual growth rate, which is approximately equal to the historical trend for the area (0.93 percent growth in Elkhart County from 2000 to 2010, Section 4.14.2.1). In the analysis, the 1 percent annual growth rate resulted in applying a 22 percent growth rate over a 22-year period. Taking this into consideration, it is reasonable to conclude that the growth rate assumed in the analysis accounts for the cumulative impacts for the US 20 and S.R. 19 interchange and the

surrounding intersections studied. With the implementation of mitigation measures, all intersections are expected to operate acceptably without significant impacts.

For new developments that may occur near the project site in Elkhart County, the sponsors of those developments would be responsible for conducting impact analyses and making any roadway improvements necessary to maintain an acceptable LOS per INDOT. Additionally, City, County, Metropolitan Planning Organization, and State roadway planning departments monitor traffic patterns and plan roadway improvements to accommodate projected and otherwise identified changes in traffic patterns. As noted in Section 4.8.2.1, the combination of project-related roadway improvements and local planning and monitoring efforts is expected to maintain acceptable LOS in other areas of the county. Thus, it is reasonable to expect that LOS would not fall below acceptable levels should the recommended site mitigation measures be implemented, resulting in no significant impacts. Therefore, provided that roadway improvements do not fall behind growth patterns, resulting in unacceptable LOS in some areas, there would not likely be significant impacts to traffic networks within the Project Area resulting from cumulative effects.

Land Use

The development projects listed in **Appendix K** and shown on **Figure 4.13-10** are located in both the developed and undeveloped regions of Elkhart County and would likely have minimal cumulative impact on land use in the County.

Agriculture

The future development projects listed in **Appendix K** are located in both the developed and undeveloped regions of Elkhart County. The significance of the development of Alternative B in addition to the developments proposed within the county are minimal since compliance with the FPPA is based on the request of federal assistance. Developers of the reasonably foreseeable developments would need to comply with the Farmland Protection Policy Act if they would apply for federal assistance. These details are not currently known by the Band. The direct significance of Alternative B in terms of the conversion of prime farmland-designated soils has been analyzed by the NRCS, and they did not indicate an exceedance of the recommended amount of land conversion. The area is currently zoned agricultural; therefore, the development of Alternative B and other development projects identified could impact prime farmland designated soils. The Band has completed coordination with NRCS and the Form AD 1006 FPPA process.

Alternative B would take any currently cultivated farmlands out of production, and the identified future development projects in non-developed areas of the County could also decrease the amount land with value as farmland available for use in the future, but not to a significant level. If the tribal development is not approved, the land could be sold to another entity and developed according to future land use plans.

4.13.3.8 Public Services

Water Supply and Wastewater

Alternative B would not have significant cumulative impacts on the City of Elkhart's water supply and wastewater systems. This determination depends on mitigation in both the wastewater and water supply systems. The Band would negotiate their portion of the funding for the mitigation, as would the developers of the other reasonably foreseeable future development projects in the APE.

As development continues in the area, the City infrastructure would need to expand and improve in order to meet this higher demand. Currently, the City of Elkhart's water system would have adequate capacity for development in this area with minimal upgrades. With these additions to the system, Alternative B would have minimal significant impact on the City's water supply system (Mike Machlan, City Engineer, pers. comm.). Upgrades to the water main line running along County Road 7 and upgrades to the current booster station are recommended based on a preliminary analysis conducted of the system as discussed in Section 4.9.

The City is currently in the process of updating their long term control plan to separate their now combined sewer system to reduce the number of sanitary sewer bypass. The city discharge standards are based on EPA and IDEM mandates to reduce the number of sewer bypasses into the St. Joseph River and its tributaries. With the planned upgrades to the system, the additional cumulative wastewater discharge would not adversely affect the future goals of the sewer system. **Figure 4.13-11** shows the Elkhart Sewershed with highlighted regions marking current and future combined sewer overflow critical locations for mitigation projects.

Solid Waste

Alternative B would not have significant cumulative impacts to the solid waste transfer system or landfills. Cumulative impacts from the projects listed in **Appendix K** within the County would not significantly impact the local area landfills' capacity, or the ability of multiple waste management companies' to conduct their current state of business. As discussed and shown in tables in Section 4.9, the amount of waste estimated for Alternative B (6.4 tons/day) would be well within the management capabilities of the local transfer station and this amount would have little impact on the projected lifespans of the local landfills based on data presented in Section 4.9. The projects listed within Elkhart County would likely generate less waste than Alternative B, and therefore, cumulatively, these projects would have an insignificant impact.

Electricity, Natural Gas, and Telecommunications

Alternative B would not have significant cumulative impacts to electrical, natural gas or telecommunications systems. The cumulative impacts to the utilities could potentially impact public services, but, consider that for past development growth in the vicinity, the utility companies have a history of developing adequate capacity to satisfy growing demands. The addition of a project the

size of Alternative B to this area of Elkhart would not adversely affect the electrical, natural gas and telecommunication utilities' ability to provide service or continue service to the region. This determination is based on estimated usages for Alternative B (determined using the known utility usage at the Four Winds New Buffalo Casino and Hotel, as this resort is comparable in size and utility usage to the proposed facilities of Alternative B), and the supply capabilities of the utility providers in Elkhart (please see Section 4.9 for additional details). The addition of other projects close to this proposed development could actually lessen the cost of the required infrastructure needed to support the needs of the tribal development.

Public Health and Safety Services

Alternative B would not have significant cumulative impacts to public health and safety services, assuming provision of mitigative payments, if needed, from the Band for impacts from Alternative B. As a consequence of future actions and projects in and around the Alternative B project area, a potential increase in the demand for law enforcement services could occur, but potential effects would be partially offset by the Band's provision of a fully-equipped Police Department for the Alternative B site. It is anticipated that the Band would eventually enter into cross-deputization agreements with Indiana police agencies, allowing these jurisdictions to share enforcement personnel and resources should cumulative development increase the demand for police and emergency services. Ten private development projects and six transportation projects are proposed/currently under construction in Elkhart County that could add to cumulative effects on public health and safety services. With this increased development in and around the project area, a similar increase in the demand for fire and EMS services could occur, but the Elkhart Fire Department employs sufficient personnel to provide services to the project area. Over 150 firefighters and paramedics are situated at seven stations throughout the Elkhart County, making the Department well suited to accommodate a potential increase in demand for services. Although unlikely, if demand would increase such that the current staff of the Elkhart Sherriff's Department or the Elkhart Fire Department could no longer provide adequate services, Elkhart County may need to add law enforcement, fire and/or EMS staff. However, new development on adjacent non-tribal lands would spur higher tax revenues for the area governments, which could offset any additional personnel hiring costs. Thus, significant cumulative impacts associated with the availability of public health and safety services is not reasonably expected to occur from Alternative B.

4.13.3.9 Other Values

Noise

Alternative B would not have significantly cumulative impacts on noise levels in Elkhart. The direct, indirect and induced growth impacts are described in other sections of the EIS. Cumulative impacts from the projects identified in the APE surrounding the Elkhart Site (**Figure 4.13-10**), and other past, present and reasonably foreseeable future actions would not likely result in significant

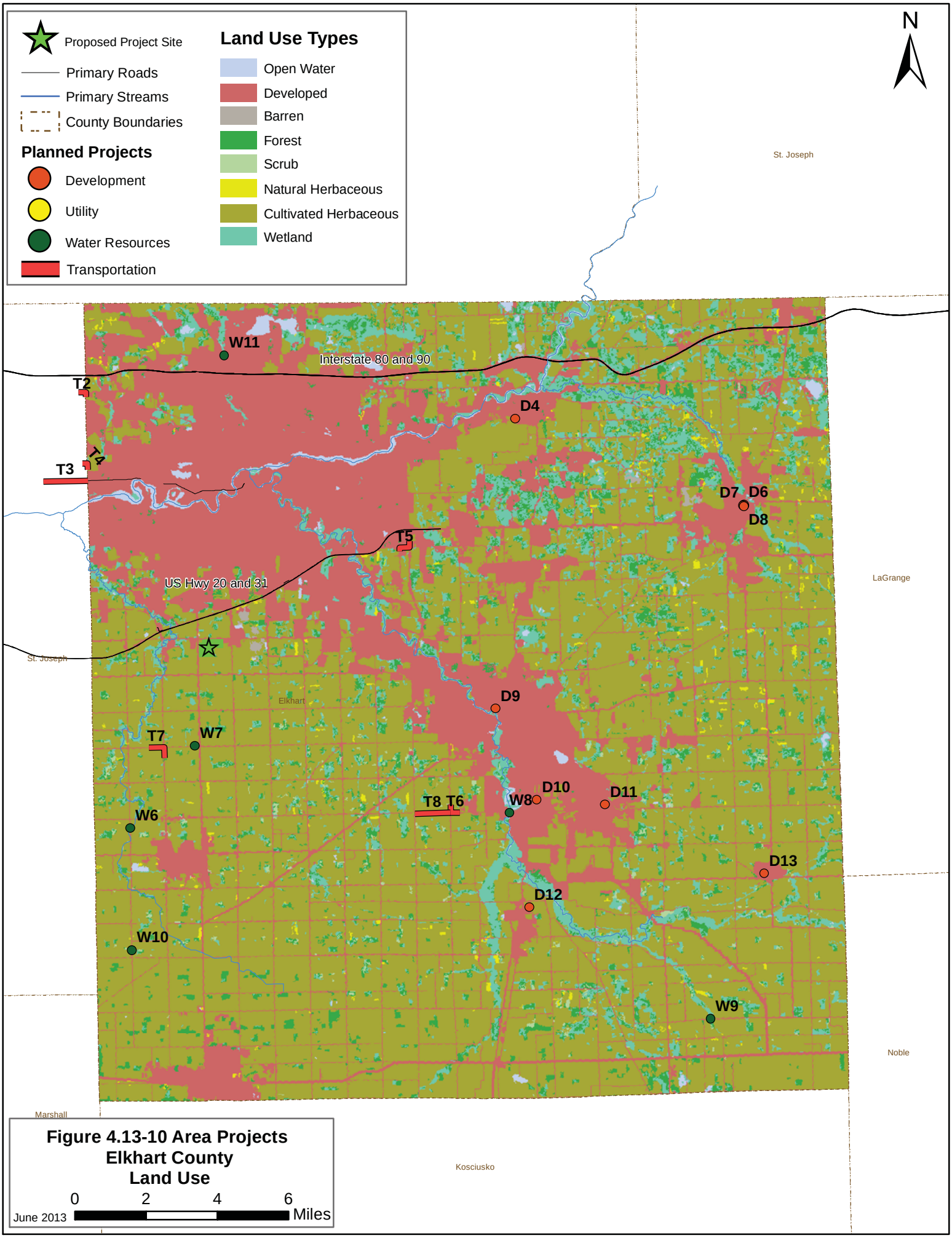

Figure 4.13-10 Area Projects Elkhart County Land Use

SOURCE: GDG 2001 and 2010a, and NHD 2007

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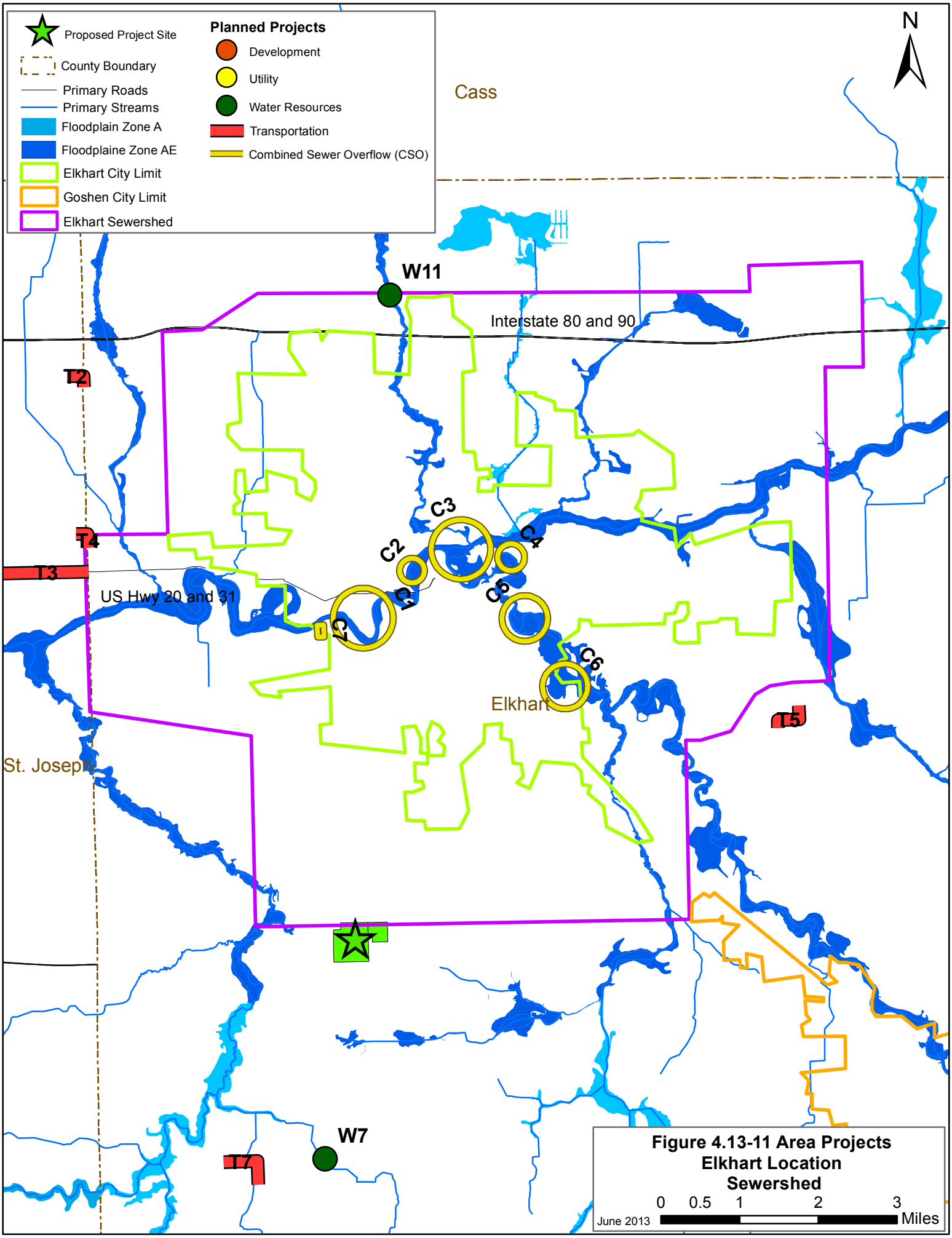

Figure 4.13-11 Area Projects Elkhart Location Sewershed

SOURCE: GDG 2010a,FEMA 2011, NHD 2007
City-Data 2010a and 2010b, and City of Elkhart IN, 2011

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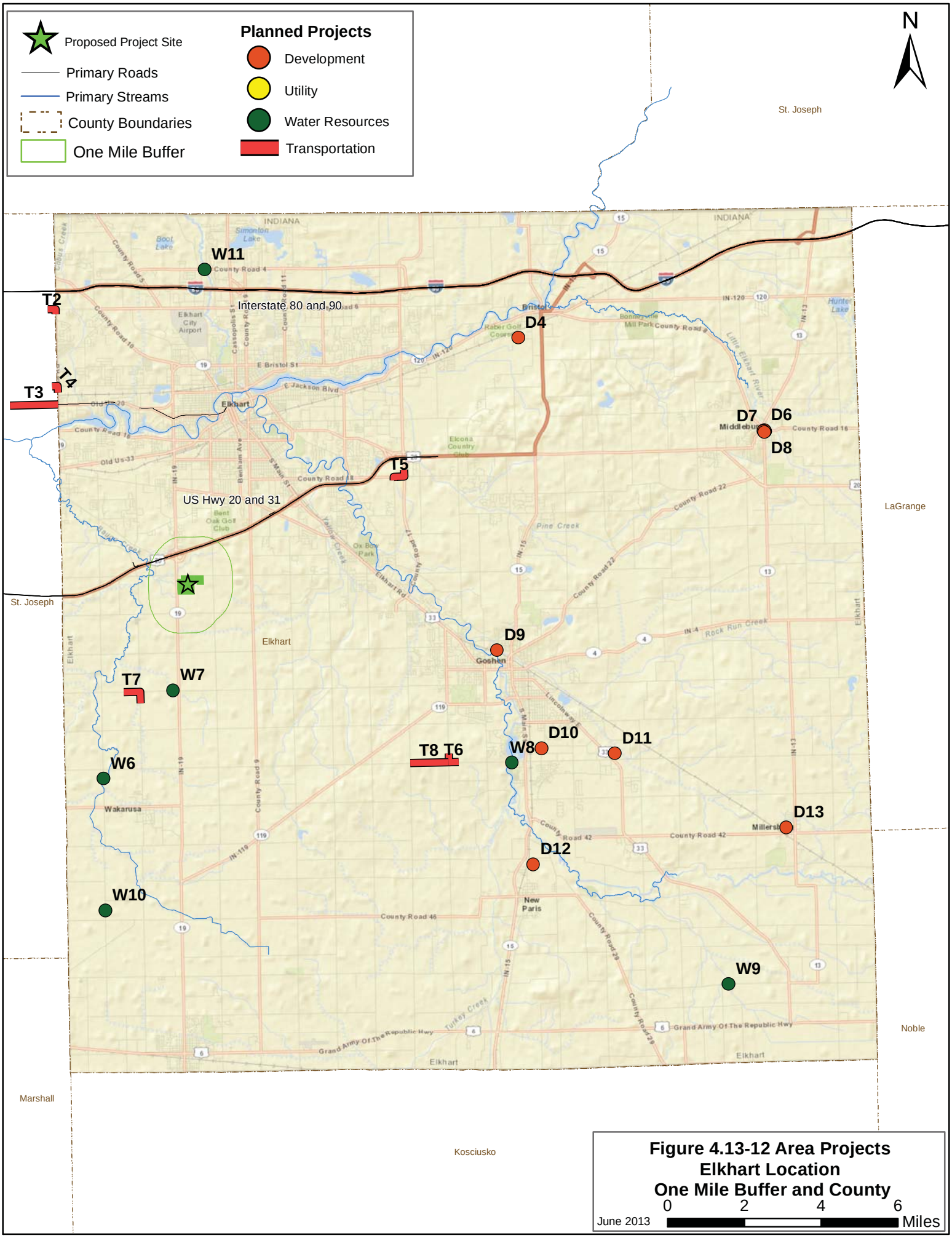

Figure 4.13-12 Area Projects
Elkhart Location
One Mile Buffer and County

June 2013

0 2 4 6 Miles

Source: ESRI 2013C, GDG 2009, GDG 2010a, and NHD 2007

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impacts to the existing ambient noise levels. The future cumulative noise environment would include noise sources associated with the proposed project, vehicle traffic along area roadways, and surrounding commercial, residential, and agricultural uses. The major source of noise with potential to contribute cumulatively to existing noise sources is traffic. Although development within the project vicinity would generate increased traffic on the area's transportation network, it is not likely enough of an increase to cause a significant impact, as the ambient environment is already dominated by traffic noise from US 20 and S.R. 19. Thus, the relatively small percentage of trips associated with additional development is not sufficient to significantly increase the noise environment above the estimated noise levels associated with the 1 percent background growth rate (predicted for the No Action Alternative as shown in Section 4.14.1.1). Accordingly, cumulative impacts associated with Alternative B are not reasonably expected to be significant.

Hazardous Materials

Alternative B would not generate significant cumulative public health and safety impacts related to hazardous materials or petroleum products. This is because Alternative B and each of the cumulative developments would be required to comply with RCRA regulations, as needed, for use, management, treatment and storage of hazardous materials and wastes. For underground storage of petroleum at any of the sites, the sponsors would need to comply with EPA regulations for underground storage tanks 40 CFR Part 280. There are no existing hazardous materials on the Elkhart project site, and there are no other past, present, or reasonably foreseeable future projects within a one-mile radius of the project site that could add to hazardous materials cumulative effects (**Figure 4.13-12**). As Alternative B would not use or generate significant quantities of hazardous materials, mitigation measures would be implemented to decrease the potential for negative environmental effects from incidental spills, and no other development projects have occurred or are proposed on adjacent nontribal lands, significant cumulative impacts are not anticipated. As discussed in Section 3.10, regulated hazardous material sites were recorded in the area surrounding the project Elkhart site; therefore, if additional projects (unknown at this time) would develop adjacent areas within one mile of the Elkhart site, there would be a higher potential for encountering hazardous materials. However, the potential for significant impacts associated with future hazardous materials sites depends on the type of development and the locations of the sites, which at this point is unable to be determined. Despite this uncertainty, it is standard practice to evaluate reported releases of hazardous material to determine potential liability for real estate property transactions. This is accomplished by conducting a Phase I Environmental Site Assessment (and potentially a Phase II Environmental Site Assessment should hazardous material sites be suspected) performed in accordance with the ASTM standard practice E-1527-00. If developers follow these standard practices, no significant impacts would be expected. It should be noted, however, that the potential for encountering hazardous materials would increase over time should commercial, industrial, and/or residential development occur in adjacent areas. However, it is reasonably expected that federal, state, and local regulations would be complied with, and thus, significant cumulative impacts from hazardous materials would be unlikely.

Visual Resources

Alternative B would not have cumulatively significant impacts to visual resources, including lighting and landscape impacts. Alternative B plus other cumulative development would likely result in increased light sources during night time activities (necessary for general public safety purposes), including increased street and vehicular lighting, signage, lighting at entrances, walkways and parking lots. Land use ordinances require commercial lighting sources to be designed and placed architecturally to minimize off-site spill over and glare effects. Landscaping, berms and architectural features can further help mitigate and buffer adverse offsite impacts. Section 4.10.1.3 explains the lighting impacts from Alternative B. Regarding cumulative landscape impacts, land use ordinances would require that Alternative B plus each of the other cumulative development projects be landscaped and architecturally designed to blend into the surrounding view sheds as much as possible. The cumulative development would be spread out, not concentrated, and would impact multiple land use zones, further reducing likelihood for non-compliant visual impacts.

4.13.3.10 Environmental Justice (EJ)

Some Pokagon Band citizens living in the South Bend vicinity meet the EJ definition for minority or low income people. Alternative B would have substantial cumulative beneficial impacts to Band citizens to help meet their purpose and need for the proposal, as described in Section 1. Alternative B would result in BIA approval of an inalienable land base for the purposes of establishing a consolidation site in the vicinity of South Bend, Indiana to benefit Band members. Cumulatively, Alternative B would result in the completion of establishment of four separate consolidation sites for Band citizens. To explain, in 1999, the Pokagon Band and the Department of the Interior entered into an MOU to help implement the broad Congressional mandate of Section 6 of the Pokagon Restoration Act. The MOU set forth the geographic areas within which the Pokagon Band will acquire fee lands to submit to the Secretary for acquisition in trust. In compliance with the terms of the MOU, the Pokagon Band has already acquired lands in fee that the Secretary has already approved for trust status for the first three consolidation sites located in the vicinity of Dowagiac, New Buffalo and Hartford, Michigan. The MOU established that the fourth consolidation site, the site proposed in this EIS, is to be located in the vicinity of South Bend, Indiana. Alternative B would establish the South Bend consolidation site, thereby cumulatively completing the Band's satisfaction with the terms of the MOU with DOI that implements Section 6 of the Pokagon Restoration Act.

The government services center in Alternative B would cumulatively increase opportunities for Band citizens to obtain governmental services. The services provided by the Pokagon Band would be more targeted to the specific needs of the Band citizens than services provided from non-tribal government sources have been in the past. Band citizens living in the Elkhart area already have non-Band housing available to them. Alternative B would cumulatively increase housing availability for Band citizens, likely in a more culturally appealing setting.

Regarding non-Band members in the Elkhart vicinity that meet the EJ definition as minority or low income people, Alternative B would introduce a new source of economic activity in Elkhart County that could cumulatively benefit minority or low income individuals. The casino and hotel components of Alternative B would benefit both Band citizens and non-tribal residents of Elkhart County by generating revenue and creating approximately 1,470 temporary construction jobs and 2,547 permanent positions related to operation of the hotel and casino (includes direct, indirect, and induced employment opportunities). Similarly, ten private development projects and six transportation projects have occurred or are planned for the future in Elkhart County; all of these projects could generate revenue for the County and provide additional employment opportunities to low income and/or minority populations.

Alternative B would allow for the first tribal land base in Indiana, create jobs, and provide much needed housing, and governmental and social services. Cumulative projects in Elkhart County have provided/would provide similar opportunities by generating revenue and offering additional jobs. Thus, both Alternative B and the cumulative development projects in Elkhart County would be expected to have significant beneficial impacts on environmental justice considerations.

Potential increased social costs associated with casino operation such as alcoholism, problem gambling and associated indices (bankruptcy, divorce, suicide, domestic violence, and crime) may occur in and around the project area and disproportionately affect low-income or minority populations. However, as stated in Section 3.11, negative effects of casino development are usually temporary, decrease over the life of the casino, and are typically offset by positive economic impacts generated from casino operation. For these reasons and the fact that none of the Elkhart County projects currently have/would have gaming facilities in the foreseeable future, adverse cumulative effects associated with gaming are unlikely; but if any such impacts to low income or minority populations would occur, they would likely be temporary.

4.13.4 Alternative C – South Bend Site Tribal Village With Commercial Development

4.13.4.1 Land Resources

Alternative C would not have significant cumulative impacts to land resources. The cumulative impacts from the projects identified in **Figure 4.13-1** as well as other past, present, and other reasonably foreseeable future actions have and would result in topographic changes as necessary amounts of cut and fill would be required in order to achieve desired contours to accommodate structures and facilitate adequate drainage. The cut and fill would change the topography of the area, and the overall volume of cut material would be considered moderate. The cut material would need to be removed and distributed within a reasonable distance from the project site at a facility that would accept it. Additionally, this alternative would incorporate an Erosion Control Plan to minimize potential soil erosion effects. Cumulative impacts are not expected to prevent the conveyance of surface water into natural drainages or cause landslides or excessive erosion or

sedimentation within drainage features. Although a modest amount of accumulated material would be expected to occur during construction, a less than significant cumulative impact to land resources would result due to nearby projects distributing cut material throughout the APE.

4.13.4.2 Water Resources

Alternative C would not have significant cumulative impacts on surface or groundwater quality. The development of Alternative C would include the incorporation of required BMPs to control storm water runoff and the quality of that runoff leaving the site. The EPA's NPDES permitting process involves several practices including an erosion control plan and a monitoring plan to ensure storm water discharge does not adversely affect downstream natural drainage waters. BMPs that involve infiltration for groundwater recharge are regulated depending on the level of the current ground water table and local soil conditions to prevent the degradation of groundwater quality. Additional future development in this region would be subject to the same drainage and water management practices; therefore, Alternative C and future development would not have a significant cumulative effect on surface and ground water quality.

Alternative C would not have significant cumulative water quantity impacts to wetlands, storm sewers, downstream FEMA floodplains or other waterways. Storm water runoff would be detained on site through the incorporation of BMPs such as detention ponds. These detention ponds would be sized to retain storm flows onsite and discharge flows slowly over a period of time into wetlands or the storm sewer system. Detention ponds and detention pond outlets would be sized to restrict the post development discharge rate off the property to match the pre development discharge rate up to the 100-year, 24-hour storm event. The 100-year, 24-hour storm event is the storm used to determine the extent and elevation of the FEMA floodplains mapped downstream of the project site. By controlling storm flows up to this storm event, the FEMA floodplains downstream would not be affected. Other future development within the defined tributary region of mapped floodplains would be subject to the similar water management practices, helping to prevent any cumulative effects up to the level of a 100-year, 24-hour storm event.

With Alternative C, if projected future development occurs in the defined APEs, the development could cumulatively decrease the ground water quantity for the community. A large ethanol plant that had been in operation for over a decade recently closed. During the plant's operation, neighborhoods developed and homes were built based on the then current conditions of a substantially reduced groundwater table. Within recent years, the plant closed which reduced the quantity of groundwater being pumped and increased the water table level. Mitigation efforts are underway including a contract with the current owners of the facility to pump unneeded water to lower the water table and help alleviate local neighbors' flooding issues. Additional development in this area could reduce water waste and help alleviate flooding in the local neighborhoods.

4.13.4.3 Air Quality

Methodology

Please see Alternative A for a description of assessment methods.

Operating and Future Year Emissions

Operating emissions for Alternative C were estimated using the Urban Emissions (URBEMIS) 9.2.4 computer modeling program as discussed in Section 4.4-1. The annual operating emissions estimated for this alternative were compared to the 2018 future year emissions inventory for the South Bend-Elkhart Area emissions inventory as presented in Table 4.13-4.

Table 4.13-4
Comparison of Estimated Operating Emissions – Alternative C
to South Bend-Elkhart Area Future Year Emissions Inventory

Air Contaminant	Estimated Operating Emissions 2018 (tpy)	South Bend-Elkhart Area Future Year 2018 Emissions Inventory (tpy)	% of South Bend-Elkhart Area Future Year 2018 Emissions Inventory
VOC	14.31	51,883	0.03%
PM_{10}	34.51	46,641	0.1%
$PM_{2.5}$	6.88	10,394	0.1%
CO	172.68	151,222	0.1%
NOX	21.52	25,692	0.1%
SO_2	0.2	17,656	0.001%

As shown in **Table 4.13-3**, total operating emissions are estimated to contribute less than a 1 percent increase in future year emissions to the area. South Bend is currently in compliance with EPA National Ambient Air Quality Standards (IDEM 2013). The limited additional air pollution resulting from the project is not anticipated to affect South Bend's compliance with EPA regulations for the target contaminants. Therefore, it is anticipated that a less-than-significant cumulative impact would occur as a result of the operation of this alternative.

4.13.4.4 Biological Resources

Regional Setting

Characteristics of the EPA Level IV Elkhart Till Plains ecoregion include its physiography, geology, soil, climate, potential natural vegetation and land use/land cover. The location, type and scale of Alternative C and other planned projects (see **Appendix K**) within the surrounding portion of the ecoregion (see **Figure 4.13-3**) would not result in significant cumulative effects to these characteristics.

Wildlife and Habitats

Alternative C would result in direct wildlife mortality from construction, as well as displacement of wildlife from the areas to be developed to surrounding habitats. The majority of planned projects in the surrounding APE would affect urbanized areas, degraded habitats and existing roads. In combination with Alternative C, cumulative effects on wildlife populations and habitat carrying capacities are not expected to be significant, as habitat loss would not result in exceedance of carrying capacities. Wildlife displaced to surrounding habitats would not be affected by cumulative impacts since there are no planned projects close enough to the subject property to impact displaced wildlife.

Federally Listed Species

Alternative C would not directly or indirectly impact federally listed species. The majority of planned projects affect urbanized areas, degraded habitats and existing roads and in combination with Alternative C, cumulative effects on federally listed species are not expected to be significant.

Vegetation

Alternative C does not include the construction of the proposed casino, but does include tribal development. Therefore, the potential for cumulative effects to vegetation associated with the Alternative C would still occur. Alternative C would result in conversion of the existing degraded and low diversity vegetation to impervious and managed turf and landscaped areas.

Given the past use such as annually cropped farmland and grazing, these practices have eliminated native plant communities throughout most of the site. This conversion of native plant communities to farmland and residential development is part of the growth and economic development plan for the area.

Environmentally significant ecosystems or biologically rich communities are not present in the area because previous use such as annually cultivated and grazing land and urban development has eliminated or altered most of the native ecosystems and biological communities. Because the proposed project is part of future land development in the area, Alternative C would not have significant cumulative impacts on vegetation.

Related projects within the same project vicinity would cumulatively convert the current land uses of farmland, grassland and existing developed areas to increases in impervious surfaces and managed turf and landscaped areas.

Wetlands

Adverse direct and indirect impacts to wetlands by Alternative C and planned projects would be addressed through compliance with USACE permitting requirements. The majority of planned

projects affect urbanized areas, degraded habitats and existing roads and in combination with Alternative C, cumulative effects to wetlands are not expected to be significant.

Federally Listed Plant Species

Alternative C would not involve significant direct or indirect effects to any federally listed plant species. Therefore, implementation of Alternative C would not add to any cumulative effects on federally listed plant species from other planned projects in the vicinity.

4.13.4.5 Cultural Resources

Cumulative impacts as it relates to Alternative C would be similar to those described above in Alternative A.

4.13.4.6 Socioeconomic Conditions

Effects to the Pokagon Band

Alternative C would have substantial cumulative beneficial impacts to the Band to help meet their purpose and need for the proposal, as described in Section 1. Alternative C would result in BIA approval of an inalienable land base for the purposes of establishing a consolidation site in South Bend and the near Band citizens living in South Bend, Indiana.

The government services center in Alternative C would cumulatively increase opportunities for Band citizens to obtain governmental services. The services provided by the Band would be more targeted to the specific needs of the Band citizens than services provided from non-tribal government sources have been in the past. Band citizens living in the South Bend area already have non-Band housing available to them. Alternative C would cumulatively increase housing availability for Band citizens, likely in a more culturally appealing setting. Net revenues from Alternative C commercial activities would be less than the net revenues from Alternative A, thus, Alternative C would have a reduced ability to cumulatively provide governmental service benefits (Band and local governments) to Band citizens.

Direct Economic Effects

There are other development projects proposed in the vicinity of Alternative C (**Figure 4.13-7**). Thus, Alternative C would cumulatively increase construction and on-going economic activity that has a multiplication factor for the vicinity. Information about the proposed projects in the area is somewhat limited but it appears from the narrow available description that Alternative C would be one of the larger projects in the area. It is known that the total development costs of this alternative for the tribal village, facilities and casino is approximately $16.5 million. The projected net economic impact from the preferred alternative is $7,843,300 for the City of South Bend and $9,358,000 for St. Joseph County.

Employment and Income

Band citizens living in the vicinity already have employment opportunities available to them from existing economic activity. Alternative C would cumulatively increase employment opportunities and income generation in the South Bend vicinity available to Band members and other citizens, possibly including EJ benefits for minority and low-income individuals. The projected employment impact from on-going operations at Alternative C would represent an increase of nearly 0.4 percent over the current number of jobs in St. Joseph County.

Housing

Band citizens living in the South Bend area already have housing available to them. Alternative C would cumulatively increase housing availability for Band citizens. The additional housing is likely to be more affordable and better quality for the cost than existing housing for Band citizens. The total amount of new housing demand due to relocation is projected to be approximately 44 units. This equates to an increase of 0.04 percent in total housing units over current levels. The cumulative demand would not be a significant impact to housing because South Bend has an adequate housing stock with surplus housing stock available. Further, there is capacity for development of additional housing if needed.

Community Infrastructure

Alternative C plus other foreseeable development projects would cumulatively increase demand for schools, libraries and parks. The cumulative impact to schools would not be significant because Alternative C would increase the demand by 0.8 percent; thus, the cumulative increase in demand for classroom space would probably not exceed a few percent of classroom capacity in St. Joseph County. Alternative C is not likely to have a cumulative significant impact on community infrastructure because of the dispersed nature of the libraries and parks in St. Joseph County.

Potential Social Costs

Alternative C would not have significant cumulative demand on capacity for local governments to deal with social costs such as alcohol addiction, crime, bankruptcies and others. The local governments also plan for increases in demand for social services because of increasing populations that are not linked to the implementation of Alternative C.

Fiscal Effects

Alternative C would not have significant cumulative effects on property tax base, state sales and related taxes, government expenditures or other mitigative payments to government. In a sense, these fiscal impacts are unique to Alternative C, not the other foreseeable development in the area, because Alternative C includes a jurisdiction shift of the land from the local governments to the Pokagon Band. Section 4.7.3.6 already explained why these effects from Alternative C alone are not

significant. The other foreseeable development would not involve the same jurisdiction shift, so those developments would not result in lost property, sales or related taxes, nor would they involve increased unfunded governmental expenditures or mitigative payments to governments; tax revenues generated by those foreseeable projects would flow to the local governments as it normally would with no jurisdiction shift.

4.13.4.7 Resource Use

Transportation

With timely implementation of mitigation measures, Alternative C would not have significant cumulative effects on traffic LOS grades, as assessed in Section 4.8.3.1. In addition to the direct, indirect and induced growth impacts discussed in other sections of the EIS, cumulative impacts include additional impacts from the projects identified in the transportation APE at the South Bend site (**Appendix K**) as well as other past, present and reasonably foreseeable future actions. Since these additional cumulative impacts are not dependent upon the particular alternative, they are the same for Alternative C as Alternative A. Because of the reduced size in the proposed development and type of facility proposed in Alternative C, the trip generation study suggest transportation related impacts for Alternative C would be less than Alternative A. However, improvements are required (as discussed in Section 4.8) to mitigate the direct and indirect impacts. Since the additional cumulative impacts are not dependent upon the alternative, the cumulative impacts resulting from the implementation Alternative C are expected to be generally the same as those described for Alternative A in Section 4.13.1.1. With the implementation of mitigation measures, all intersections are expected to operate acceptably without significant impacts.

Land Use

The development projects listed in **Appendix K** and shown on **Figure 4.13-5** are primarily located in the developed regions of St. Joseph County and would likely have minimal cumulative impact on land use in the County.

Agriculture

The development projects listed in **Appendix K** and shown on **Figure 4.13-5** are primarily located in the developed regions of the St. Joseph County and would likely have minimal cumulative impact on prime farmlands or agricultural lands in the County. Since these lands have been developed with soils graded and compacted, the soils in this region have already been disturbed and likely do not exhibit the characteristics displayed for the area on the NRCS Web Soil Survey. The development of Alternative C and anticipated future development identified in the county would not take currently cultivated farmlands out of production, but would decrease the amount of prime farmlands available for use in the future. Developers of the reasonably foreseeable developments would only need to comply with the Farmland Protection Policy Act if they would apply for federal assistance. These details are not currently known by the Band.

Alternative C would not take any currently cultivated farmlands out of production, but the identified future development projects in non-developed areas of the County could decrease the amount of land with value as farmland available for use in the future. The Band has no intention of using this land for agricultural purposes should this site not be used for the tribal development. If the tribal development is not approved, the land could be sold to another entity and developed according to future land use plans.

4.13.4.8 Public Services

Water Supply and Wastewater

Alternative C would not have significant cumulative impacts on the City of South Bend's water supply and wastewater systems. This determination depends on mitigation in both the wastewater and water supply systems. The Band would negotiate their portion of the funding for the mitigation, as would the developers of the other reasonably foreseeable future development projects.

As development continues in the area, the City infrastructure would need to expand and improve in order to meet this higher demand. Currently, the City of South Bend's water system has adequate capacity for development in this area and minimal significant impact on the City's water supply system would occur (Mike Mecham, City Engineer, pers. comm.). The City is currently in the process of updating their long term control plan to separate their now combined sewer system to reduce the number of sanitary sewer bypass. The city discharge standards are based on EPA and IDEM mandates to reduce the number of sewer bypasses into the St. Joseph River and its tributaries. With the planned upgrades to the system, the additional cumulative wastewater discharge would not adversely affect the future goals of the sewer system.

Solid Waste

Alternative C would not have significant cumulative impacts to the solid waste transfer system or area landfills. Cumulative impacts from the projects listed in **Appendix K** within the County would not significantly impact the local area landfills' capacity, or the ability of multiple waste management companies' to conduct their current state of business. The amount of waste estimated for Alternative C was not calculated, but is estimated to be much less than the 6.4 tons/day calculated for Alternatives A and B. As discussed and shown in tables in Section 4.9, this amount would be well within the management capabilities of the local transfer station and this amount would have little impact on the projected lifespans of the local landfills.

Electricity, Natural Gas and Telecommunications

Alternative C would not have significant cumulative impacts to electrical, natural gas or telecommunications systems. The cumulative impacts to the utilities could potentially impact public services, but, consider that for past development growth in the vicinity, the utility companies have a history of developing adequate capacity to satisfy growing demands. The addition of a project the

size of Alternative C to this area of South Bend would not adversely affect the electrical, natural gas and telecommunication utilities' ability to provide service or continue service to the region. This determination is based on the fact that Alternative C would require similar or less electric, natural gas, and telecommunication requirements than Alternatives A or B, which as described above, would not adversely affect the utilities' ability to provide service or continue services to the region. The addition of other projects close to this proposed development could actually lessen the cost of the required infrastructure needed to support the needs of the tribal development.

Public Health and Safety Services

Alternative C would not have significant cumulative impacts to public health and safety services with the provision of mitigative payments, if needed, by the Band for impacts from Alternative C. The proposed project site for Alternative C is identical to the site proposed for Alternative A, and consequently, the projects that are currently under construction/proposed in the City of South Bend that could add to cumulative effects on public health and safety services, are also identical. Resolution R-12-C-2014 made with the St. Joseph Board of Commissioners has already been adopted (see **Appendix A**). Similar to Alternative A, cross-deputization agreements between the Band and other Indiana police agencies, and sufficient fire and EMS staff employed at the South Bend Fire Department would assist in managing any increase in demand for public health and safety services from Alternative C and adjacent projects. However, should additional personnel be required to accommodate an increase in demand, development on adjacent non-tribal lands could spur higher tax revenues and help offset the costs of hiring additional law enforcement, fire, and EMS staff. Alternative C and the surrounding South Bend projects should not create any significant adverse cumulative effects on public health and safety services.

4.13.4.9 Other Values

Noise

Alternative C would not have significant cumulative impacts on noise levels in South Bend. In addition to the direct, indirect and induced growth impacts discussed above, cumulative impacts include additional impacts from the projects identified in the APE (**Appendix K**) as well as other past, present and reasonably foreseeable future actions. Since these additional cumulative impacts are not dependent upon the particular alternative, they are the same for Alternative C as they are for Alternative A.

Hazardous Materials

Alternative C would not generate significant cumulative public health and safety impacts related to hazardous materials or petroleum products. This is because Alternative C and each of the cumulative developments must each comply with RCRA regulations, as needed, for use, management, treatment and storage of hazardous materials and wastes. There are no existing hazardous materials on the South Bend project site, but potentially adverse effects from hazardous

materials could result from implementation of Alternative C, as operation of the gas station facility would require underground storage tanks for gasoline, and wastewater generated from the car wash could contain oil and grease, detergents, phosphates, solvent-based solutions, and/or organic debris. The underground storage of petroleum would require the sponsors to comply with EPA regulations for underground storage tanks 40 CFR Part 280. There is only one project (a groundwater rehabilitation project due to the closing of New Energy's Ethanol Plant) that occurs within a one-mile radius of the project site that could add to cumulative effects from hazardous materials. However, as the groundwater rehabilitation project does not/would not generate significant quantities of hazardous materials, any impacts from hazardous materials would be directly related to Alternative C (please see Section 4.10 for more information) and not to the adjacent utility project; thus, no significant cumulative effects would be anticipated.

Compliance with all federal mandates and implementation of mitigation measures and spill prevention protocols would decrease the potential for negative environmental effects from incidental releases, spills, overflows, or corrosion to a less than significant level. However, as discussed in Section 3.10, regulated hazardous material sites were recorded in the area surrounding the project South Bend site; therefore, if adjacent areas were to be developed, there would be a higher potential for encountering hazardous materials. However, the potential for significant impacts associated with future hazardous materials sites depends on the type of development and the locations of the sites, which at this point is unable to be determined. Despite this uncertainty, it is standard practice to evaluate reported releases of hazardous material to determine potential liability for real estate property transactions. This is accomplished by conducting a Phase I Environmental Site Assessment (and potentially a Phase II Environmental Site Assessment should hazardous material sites be suspected) performed in accordance with the ASTM standard practice E-1527-00. If developers follow these standard practices, no significant impacts would be expected. It should be noted, however, that the potential for encountering hazardous materials would increase over time should commercial, industrial, and/or residential development occur in adjacent areas. However, it is reasonably expected that federal, state, and local regulations would be complied with, and thus, significant cumulative impacts from hazardous materials would be unlikely.

Visual Resources

Alternative C would not have cumulatively significant impacts to visual resources, including lighting and landscape impacts. Alternative C plus other cumulative development projects would likely result in increased light sources during night time activities (necessary for general public safety purposes) including increased street and vehicular lighting, signage, lighting at entrances, walkways and parking lots. Land use ordinances require commercial lighting sources to be designed and placed architecturally to minimize off-site spill over and glare effects. Landscaping, berms and architectural features can further help mitigate and buffer adverse offsite impacts. Section 4.10.1.3 explains the lighting impacts from Alternative C. Regarding cumulative landscape

impacts, land use ordinances would require that Alternative C plus each of the other cumulative development projects be landscaped and architecturally designed to blend into the surrounding view sheds as much as is feasible. The cumulative development would be spread out, not concentrated, and would impact multiple land use zones, further reducing likelihood for non-compliant visual impacts.

4.13.4.10 Environmental Justice (EJ)

Some Pokagon Band citizens living in the South Bend vicinity meet the EJ definition for minority or low- income individuals. Alternative C would have substantial cumulative beneficial impacts to Band citizens to help meet their purpose and need for the proposal, as described in Section 1. Alternative C would result in BIA approval of an inalienable land base for the purposes of establishing a consolidation site in the vicinity of South Bend, Indiana to benefit Band members. Cumulatively, Alternative C would result in the completion of establishment of four separate consolidation sites for Band citizens. To explain, in 1999, the Pokagon Band and the Department of the Interior entered into an MOU to help implement the broad Congressional mandate of Section 6 of the Pokagon Restoration Act. The MOU set forth the geographic areas within which the Pokagon Band will acquire fee lands to submit to the Secretary for acquisition in trust. In compliance with the terms of the MOU, the Pokagon Band has already acquired lands in fee that the Secretary has already approved for trust status for the first three consolidation sites located in the vicinity of Dowagiac, New Buffalo, and Hartford, Michigan. The MOU established that the fourth consolidation site, the site proposed in this EIS, is to be located in the vicinity of South Bend, Indiana. Alternative C would establish the South Bend consolidation site, thereby cumulatively completing the Band's satisfaction with the terms of the MOU with DOI that implements Section 6 of the Pokagon Restoration Act.

The government services center in Alternative C would cumulatively increase opportunities for Band citizens to obtain governmental services. The services provided by the Band would be more targeted toward the specific needs of the Band citizens than services provided from non-tribal government sources have been in the past. Band citizens living in the South Bend area already have non-Band housing available to them, but Alternative C would cumulatively increase housing availability for Band citizens, likely in a more culturally appealing setting.

Regarding non-Band members in the South Bend vicinity that meet the EJ definition as minority or low income people, Alternative C would introduce a new source of economic activity in St. Joseph County that could cumulatively benefit minority or low-income people. The travel center (including a convenience store, gas station and car wash), retail shopping outlets, outdoor activities center, and family entertainment center would benefit both Band citizens and non-tribal residents of St. Joseph County by generating revenue and creating approximately 102 temporary construction jobs and 49 permanent positions related to operation of the proposed facilities (includes direct, indirect, and induced employment opportunities). As construction of Alternative C is proposed on the same site as Alternative A, descriptions of cumulative development projects in St. Joseph County are the

same as those listed under Section 4.15.1.10. As discussed under Alternative A, both Alternative C and nearby development projects have provided/would provide employment opportunities, much needed housing, and governmental and social services to low income and minority populations. Accordingly, both Alternative A and the cumulative development projects in St. Joseph County would be expected to have significant beneficial impacts on environmental justice considerations.

No cumulative impacts related to casino operation (i.e., alcoholism, problem gambling and associated indices [bankruptcy, divorce, suicide, domestic violence, and crime]) would occur to low income or minority populations, as no gaming facilities are proposed under Alternative C and no known casinos are proposed for development in other portions of St. Joseph County.

4.13.5 Alternative D – No Action

Under Alternative D, no project-related activities would occur at the South Bend or Elkhart sites. Therefore, the No Action Alternative would not add to potential adverse impacts from past, present, or reasonably foreseeable future actions and/or projects in the vicinity. Accordingly, in the absence of project implementation, historic trends are reasonably expected to continue, which could include future development at or around the South Bend or Elkhart project sites. Any such development would be considered a continuation of historic patterns and be unrelated to implementation of the No Action Alternative; thus no significant cumulative impacts are expected, with the exception that the No Action Alternative would represent a missed opportunity to contribute cumulatively to the purpose and need of the proposal as described in Section 1.

However, the No Action Alternative would have significant cumulative adverse impacts on the Pokagon Band, by preventing them from addressing their purpose and need for the proposal, as described in Section 1. The No Action Alternative would not result in BIA approval of an inalienable land base for the purposes of establishing a consolidation site in South Bend. Cumulatively, the No Action Alternative would result in the failure of BIA and Pokagon Band to establish the final of four separate consolidation sites for Band citizens, as the final site outlined in the MOU was to be located in the vicinity of South Bend. The No Action Alternative would not establish this consolidation site in South Bend, thereby cumulatively failing to complete BIA's and the Band's satisfaction with the terms of the MOU with DOI that implements Section 6 of the Pokagon Restoration Act.

The No Action Alternative would not result in development of the government services center proposed in Alternatives A, B and C and would fail to cumulatively increase opportunities for Band citizens to obtain governmental services. The failure of the No Action Alternative to cumulatively increase government services to Band citizens would be a particularly intense adverse impact because the provision of services proposed under Alternatives A, B, and C would be more acutely targeted to the specific needs of the Band citizens than services provided from non-tribal government sources have been in the past. Additionally, the No Action Alternative would fail to cumulatively increase housing availability for Band citizens. Lastly, the No Action Alternative would

completely fail to generate any net revenues from commercial activities and would prevent the creation of increased employment opportunities and other economic benefits for Band citizens.

4.14 INDIRECT EFFECTS

The CEQ Regulations for Implementing NEPA (40 CFR 1508.8) define indirect effects as impacts that are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Within Section 4.14, indirect effects from each alternative are identified for each specific resource area with indirect impacts. **Figure 4.14-1** displays the areas of potential effects for each resource area. Economists and other professionals sometimes refer to indirect impacts, a term with specific NEPA meaning, as growth-inducing or secondary effects. For purposes of this assessment, "growth-inducing" and "secondary" effects are equivalent to the NEPA definition for indirect effects. In some cases, indirect effects also happen to overlap with effects that meet the NEPA definition of cumulative. CEQ's NEPA regulations are not specific as to exactly how direct, indirect and cumulative effects are categorized in the EIS, just that the significance of all categories of impacts is assessed in the EIS. So to be certain that BIA has detailed, quality information regarding these effects, Chapter 4 includes this indirect effects assessment, as well as subsections on growth-inducing and cumulative effects assessments. Note that indirectly induced development is somewhat speculative and not as foreseeable at this time, in part because BIA has not yet determined which alternative to select. So other potential developers have not yet publicly proposed or documented their developments that might be indirectly induced by the alternatives.

4.14.1 Comparative Impact Assessment of Alternatives – Indirect Impacts

The President's Council on Environmental Quality calls for this comparative assessment in its NEPA regulations in 40 CFR 1502.14, first paragraph. It is critical for the reader to recognize that comparative impact assessments help sharply define the issues and help provide a clear basis for choice among options by BIA and the public. That is because comparative assessments help compare how well the alternatives address the purpose and need for the proposal as described in Chapter 1 and Section 3.7.3 of this EIS.

With the No Action Alternative, in the absence of Alternatives A, B and C, the purpose and need for the proposal would not be addressed as described in Chapter 1 and Section 3.7.3 of this EIS. The Pokagon Band would not receive jurisdiction on an inalienable land base to use to serve tribal members currently living offsite. No tribal village would be developed with 44 housing units and a community center building where Band members living within approximately 10 miles could receive services such as education, health and cultural. No commercial development would occur to generate revenues to pay for government services on the site and to service the debt for the land the Pokagon Band has already acquired and potential future debt for beneficial alternative development. On the other hand, with the No Action Alternative there would be no demand on offsite utilities, roads, water supply, waste water, public safety and government services from

adjoining governments. However, the offsite impacts to utilities, roads and infrastructure could be mitigated to less than significant levels with Alternatives A, B, and C in exchange for avoiding the significant impacts of the lost opportunities of the No Action Alternative. Between Alternatives A, B, and C, all impacts are similarly insignificant with mitigation, except that Alternative A generates the greatest net revenues for the Pokagon Band to use to develop the tribal village and provide government services to Band members living up to approximately 10 miles from South Bend.

4.14.2 Alternative A – South Bend Site Tribal Village and Casino (Preferred Alternative)

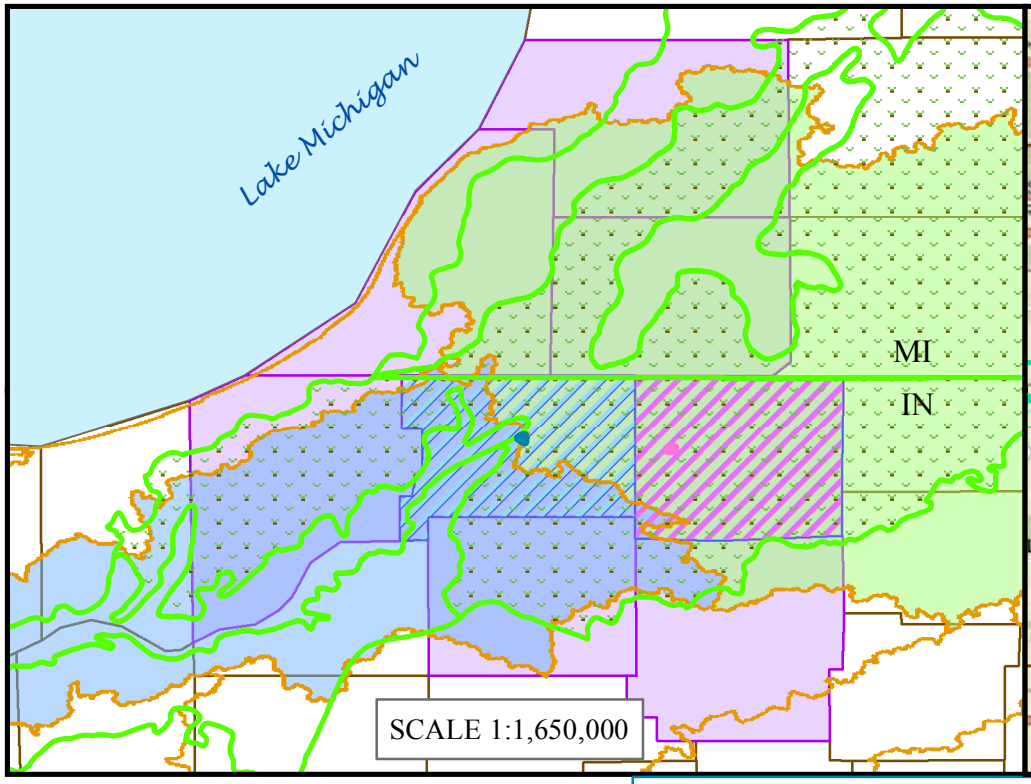
4.14.2.1 Land Resources

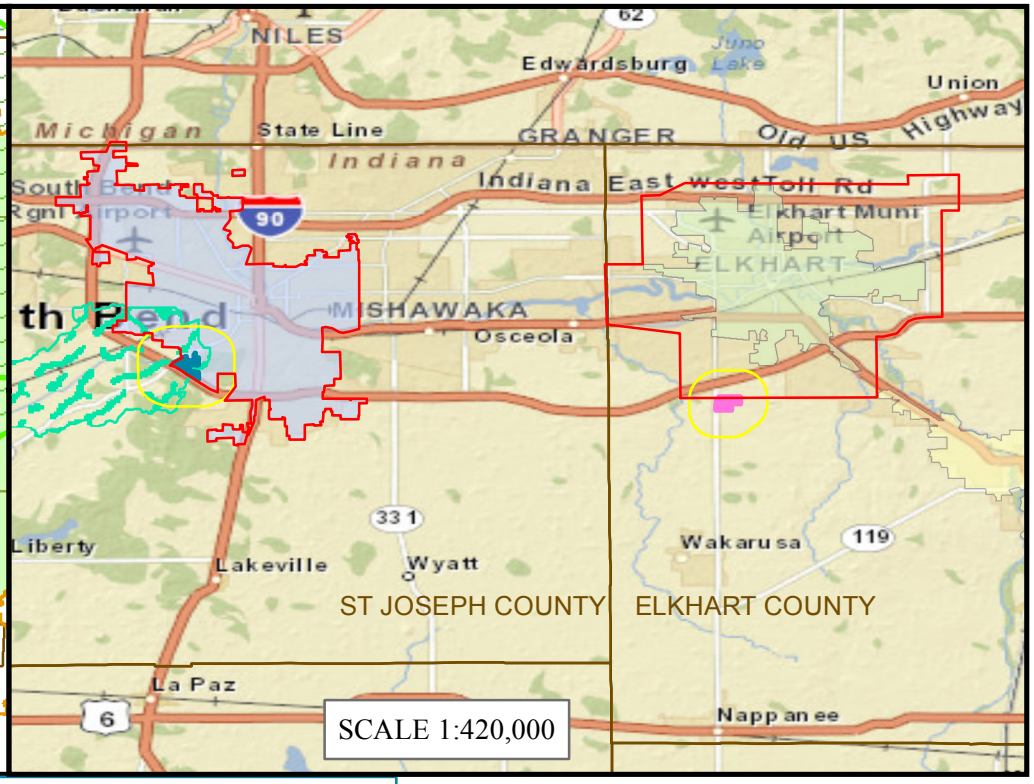
Indirect impacts as a result of Alternative A could include changes in the chemical and structural properties of soils due to increased construction machinery (including vehicles), and the mixing of several different soil horizons. These activities could alter the natural permeability and large-scale drainage patterns that exists onsite. Indirect impacts to topography associated with Alternative A are not expected to be significant as a result of adherence to appropriate mitigation practices such as erosion control requirements for earth disturbing activities and the proper design of building foundations. For the same reasons, the proposed action is not expected to prevent the conveyance of surface water into natural drainages or cause landslides or excessive erosion or sedimentation within drainage features. Therefore, indirect impacts to topography and soils are considered less than significant.

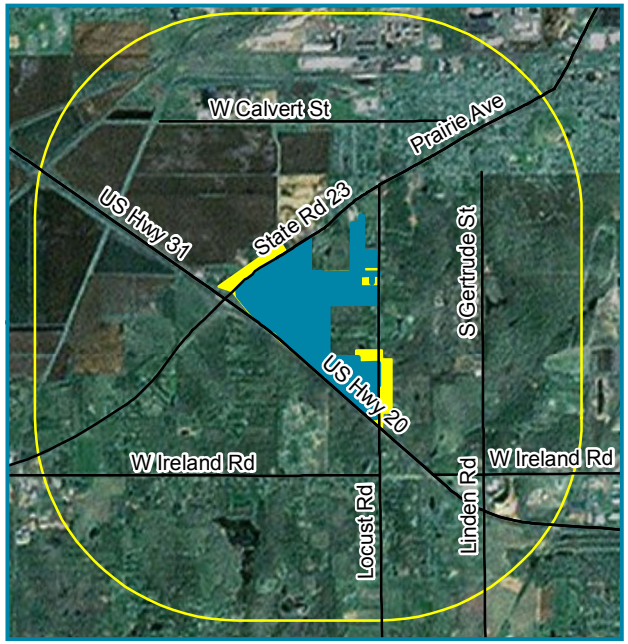
4.14.2.2 Water Resources

The Preferred Alternative A would not have significant indirect impacts to the levels and quality of aquifers that supply the City of South Bend's public water supply. The City of South Bend's Water Department currently produces about 16.1 million gallons per day, and has the present capacity to produce 60 million gallons per day without impacting the groundwater source (John Wiltrout, Director of Water Treatment, pers. comm.). The amount of water the casino would use per day (267,400 gallons per day) and any additional development associated with the casino is well within the additional present capacity of the City's water supply system. The Preferred Alternative may include storage of petroleum, such as for the emergency generators, and may require minimal use of hazardous or toxic materials, such as lead-acid vehicle batteries or some cleaning supplies. If released, such contaminants could migrate offsite at a later time causing indirect impacts by contaminating groundwater or other water resources, if not for compliance with applicable protective regulations including the Resources Conservation and Recovery Act and Toxic Substances Control Act.

As development occurs, indirect and induced growth impacts could include commercial development such as lodging facilities, restaurants and convenience stores/gas stations. The most foreseeable location for these developments would be at or near the highway interchange of the St.







SCALE 1:60,000
SOUTH BEND

FIGURE 4.14-1.
AREAS OF POTENTIAL EFFECT

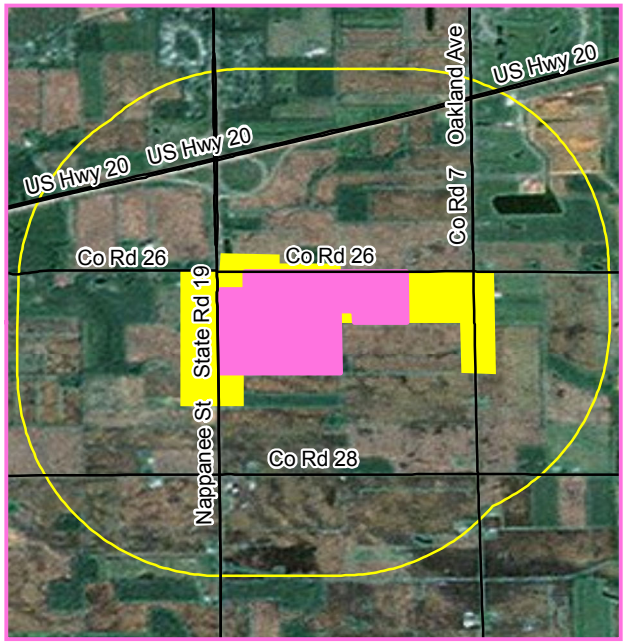
- LEVEL 4 ECOREGION
- ELKHART TILL PLAINS
- AIR QUALITY CONTROL REGION
- COUNTY LINE
- ST JOSEPH COUNTY
- ELKHART COUNTY
- SEWER SHED BOUNDARY
- ONE MILE BUFFER
- SOUTH BEND CITY LIMITS
- ELKHART CITY LIMITS
- GOSHEN CITY LIMITS
- SOUTH BEND PROJECT AREA
- ELKHART PROJECT AREA
- CULTURAL APE

N

- WATERSHEDS

HUC 8
- Kankakee
- St. Joseph

HUC 12
- Auten Ditch
- Dixon West-Place Ditch
- Rogers Ditch



SCALE 1:60,000
ELKHART

SOURCE: GDG 2010 (Streets, Streams, Counties, and HUCs), GDG 2012 (NAIP), World Street Map 2013

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Joseph Valley Parkway (U.S. 31) and Prairie Avenue (Indiana 23). Municipal water and sanitary sewer service would be available and therefore there would not be an adverse impact to water resources.

The Preferred Alternative includes larger areas of impervious surface that, without mitigation, would increase stormwater runoff volumes that could raise 100-year flood levels offsite and cause water quantity and quality impacts to offsite wetlands and waterways. These potential indirect impacts are mitigated by retaining the 100-year, 24-hour stormwater runoff on site using stormwater design that complies with local stormwater ordinances.

4.14.2.3 Air Quality

Indirect emissions associated with the Preferred Alternative A would be primarily from the additional vehicle trip generation in the area, both from customers and workers. As discussed in Section 4.8, with the implementation of the Preferred Alternative A, the City of South Bend would oversee traffic analysis to ensure intersections and lane groups affected by Alternative A would operate adequately and thus minimize indirect air quality impacts. In addition, air emissions from vehicular traffic are estimated to be less than 1 percent of the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. Therefore, the increase in vehicular traffic is not expected to cause an exceedance of the NAAQS.

4.14.2.4 Biological Resources

Wildlife and Habitats

Site development would result in some fragmentation of habitats in the northern portion of the property which would interfere with existing wildlife movement patterns, including extensions to offsite patterns. Mobile bird and mammal species would be less susceptible to the effect than smaller mammals, reptiles and amphibians. Habitat fragmentation can create crowding with increased competition and can reduce breeding opportunities for species which are confined to the small remaining habitat areas. Competition can have varying results ranging from elimination of a species from that habitat to eventual coexistent of all species (Brewer 1994). The creation of the detention ponds for indirect development would provide some habitat for waterfowl feeding and loafing as well as potential habitat for some common species of frogs and toads.

The Preferred Alternative A could result in habitat fragmentation on adjoining or nearby lands. Habitat fragmentation can also lead to the increase in edge effect, as the ratio of border to interior rises. For small remaining plots it is likely to be all edge habitat, subject to higher light intensities, more wind and other biotic factors more typical of a transition zone between a grassland and a forest. Many wildlife species avoid the edge habitat and it has been documented that reproductive success is adversely affected because nest-parasitizing cowbirds and other predators like blue jays, raccoons, foxes and domestic cats often enter the forest from the edges (Brewer 1994).

Indirect effects associated with the operation of the proposed facilities and occupation of the residences would introduce vehicular traffic, noise, light and human activity which would disrupt future wildlife use of the site. Vehicular activity would likely result in some insignificant accidental loss of wildlife while noise, light and human activity could diminish the use of remaining habitat that directly adjoins Alternative A lands and displace wildlife to other onsite or offsite habitats where increased competition or predation could result in mortality. This mortality is likely to occur to a small amount of local wildlife and is not likely to have a significant effect on local wildlife populations.

Federally Listed Species

Habitats on the proposed site and adjoining areas are fragmented and are not the Indiana Bat's preferred forested riparian habitat, so these areas are less likely to be used by the Indiana Bat. Therefore the Indiana Bat is not likely to be indirectly affected by the Preferred Alternative. Similarly, the Northern long-eared bat is not likely to be indirectly affected by the Preferred Alternative as there are no known occurrences documented near the project area (Indiana DNR 2016). The two listed snake species in the vicinity are typically associated with wetland habitats and surface water features. Given the very limited amount and low quality of their preferred habitat on site, no impacts, indirect or otherwise, are expected to these two snake species.

Vegetation

Within the proposed project development, the extent of the disturbed or altered vegetation from past agricultural practice, grazing, timbering and the extent of human activity in the immediate vicinity (e.g. residences, commercial, roads, transmission lines), it is unlikely that Alternative A would result in significant adverse indirect impacts to vegetation. Changes in the surface and subsurface hydrology from site development may change vegetative species composition over time. Exotic and /or nuisance species introduction is always a concern during site development but also when establishing new vegetative communities. The transition from agricultural land to native meadow could result in the introduction of non-native seeds. Nuisance and exotic species can be aggressive and can quickly spread in pioneer communities becoming a dominant vegetative cover. The resulting lack of plant diversity can decrease the overall habitat value of the system to wildlife and insects.

The increase in edge habitat resulting from the habitat fragmentation can result in a shift in vegetative species within the edge habitat and an increase in nuisance and exotic species. As noted above, the biotic conditions are different within the edge habitat and are typically more favorable to vine and shrub species.

Wetlands

Potential indirect effects to the wetlands located both on-site and off-site could include changes in wetland hydrology due to site development. Site development could increase or decrease surface

and/or groundwater flows to wetlands on adjoining lands through the addition of impervious surfaces, underground utilities and storm water management features. Maintaining existing wetland hydrologic regimes through the pre-development assessment of contributing hydrologic inputs, use of culverts and swales to maintain existing onsite surface water patterns and use of storm water best management practices to treat water quality prior to release into wetlands would all serve to minimize indirect effects.

Site development can increase the potential for the establishment of invasive species through introduction of seeds by machinery and the presence of disturbed ground during construction. If established in areas of disturbance, invasive species can spread to existing offsite wetlands and reduce their value.

With the proposed development would come users and residents of the site in close proximity to remaining wetland areas. Cutting and removal of vegetation by site users or residents could occur to prevent personal or property damage or to facilitate personal interest in physical access, visual access or aesthetics.

4.14.2.5 Cultural Resources

Indirect Effects within the APE

Alternative A includes 4 potentially historic-age resources that were identified by the BIA (4 (Atkins Resource 01), 5 (Atkins Resource 02), 6 (Atkins Resource 03) and 10 (Atkins Resource 04)) within the South Bend site, only BIA Structure 10 (Atkins Resource 04) and may be indirectly impacted by Alternative A (**Figure 4.6-2**). Buildings associated with BIA Structure 10 (Atkins Resources 04B, 04C and 04D) were not recommended for NRHP inclusion and therefore, no indirect effects to these resources a result of Alternative A.

Furthermore, BIA Structure 10 (Atkins Resource 04A) within the South Bend site is eligible for inclusion in the NRHP under Criteria C. Although BIA Structure 10 (Atkins Resource 04A) was identified within the South Bend site and is eligible for inclusion in the NRHP, no disturbance to the immediate vicinity of BIA Structure 10 (Atkins Resource 04A) is anticipated as part of Alternative A. Therefore, there are no indirect adverse effects to non-archeological historic-age resources by Alternative A.

Indirect Effects within the VAPE

Although 16 potentially historic-age resources were identified by the BIA (1, 2, 3, 7, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 and 24) within the VAPE of the South Bend site (**Figure 4.6-2**), according to the DHPA, no historic properties listed in or eligible for inclusion in the NRHP were identified within the VAPE for Alternative A (Smith, 2013). Therefore, no historic properties are affected within the VAPE by Alternative A.

4.14.2.6 Socioeconomic Conditions

Alternative A would have offsite impacts over time to schools, libraries, parks, social services, social costs, taxes and governmental expenditures. But none of those indirect impacts would be significant as assessed in Section 4.7 socioeconomic conditions.

Alternative A could have indirect effects on existing non-tribal gaming operations that those developers consider to be significant. But indirect effects of Alternative A would not be significant to two existing tribal gaming facilities operated by the Pokagon Band. The concept of a substitution effect was discussed in Section 4.7. Substitution effects also apply on an indirect basis for gaming tax revenue derived from existing Indiana casino operations and for the true net incremental increase in income to the Pokagon Band from Alternative A.

A portion of the gaming revenue captured by Alternative A would come from casino customers captured from other existing Indiana gaming operations. As a result, gaming tax payments from those operations would be lower than otherwise expected, an indirect impact. Based upon a market analysis by KlasRobinson Q.E.D., the indirect effect of Alternative A on other Indiana casinos would result in a reduction in gaming tax payments of 3.4 percent from what would otherwise occur without the addition of Alternative A.

A portion of gaming revenue from Alternative A would also come from casino customers captured from other Pokagon Band gaming operations. As a result, income from those operations to the Pokagon Band would be lower than otherwise expected. Based upon a market analysis by Klas Robinson Q.E.D., the incremental income before debt service to the Pokagon Band from Alternative A, net of income lost at other Pokagon Band gaming operations due to substitution effects, would be approximately 82 percent of the total income before debt service from Alternative A. The net amount after indirect substitution effects would still represent a major increase in the total funds available to the Pokagon Band for tribal government operations and programs, improvement of the general welfare of the Indian tribe and its members, promotion of economic development, donations to charitable organizations, and/or funding of operations of local government agencies.

4.14.2.7 Resource Use

Transportation

Alternative A would cause offsite increases in traffic levels that without mitigation would have significant indirect impacts. But because Alternative A includes traffic mitigation features located offsite on adjoining roadways, Alternative A would not have significant indirect impacts to LOS levels on local roadways or the public transportation system. Some of the traffic mitigation features would also be indirect from the perspective that it would be implemented later because some of the predicted traffic increase would not occur until the Alternative A features had operated for some time to generate visitation at levels closer to ultimate levels.

Construction of Alternative A would likely result in both induced growth impacts and secondary impacts. These types of impacts are referred to as indirect impacts for the purposes of this report. These impacts are unlikely to include substantial new non-Tribal housing development but could, over a period of time, include commercial development such as lodging facilities, restaurants, and convenience stores, especially at the highway interchange nearest the project site (US 31/US 20 and S.R. 23).

The background growth rate of 1 percent per year was recommended by MACOG (see Section 4.8.1) and is expected to encompass traffic increases caused by reasonably foreseeable non-Tribal development surrounding the project site as described above, as well as increases in traffic that are expected to occur under normal growth patterns in the region. This would include the potential growth in housing and commercial development mentioned in the first paragraph. The 2000 census data for St. Joseph County indicates a total population of 265,559. In 2010, the census indicates that the total population increased to 266,931 (USCB 2011). This equates to approximately a linear 0.05 percent background growth rate in population. Therefore, the 1 percent per year increase utilized for the traffic analysis conservatively encompasses growth that would be expected to normally occur and growth anticipated to result indirectly and cumulatively from implementation of Alternative A.

As new development occurs in the vicinity of the Project Site, the sponsors of those developments would be responsible for conducting impact analyses and making any roadway improvements necessary to maintain an acceptable LOS. Additionally, City, County, and State roadway planning departments monitor traffic patterns and plan roadway improvements to accommodate projected and otherwise identified changes in traffic patterns.

The LOS values reported for Alternative A should be consistent with what would be reasonably expected with all traffic volume increases from induced growth.

The possible mitigation measures discussed in Section 4.8.1 are expected to improve all offsite study area intersections to acceptable LOS, including the traffic from background growth and other potential indirect development, as shown in Table 4.8-4. Because the traffic analysis considered a "worst case" scenario (peak of existing roadway traffic occurring simultaneously with the peak of casino patron traffic, including a reasonable number of employees as well as an over-estimate of growth for the area at 1 percent per year), it is reasonable not to expect that a LOS of E or F would occur at any of the study intersections or critical stop controlled approaches even with potential induced growth traffic included. Thus significant impacts to traffic as a result of induced growth are not reasonably expected to occur.

It is unlikely that Alternative A or the indirect growth associate with it would significantly impact public transportation needs. Patrons visiting the casino and hotel might use offsite public transportation immediately and into the future, and indirect impact on public transportation. The surrounding communities may seek to further develop the public transportation system near the

Project Site in the future. If so, then the cost would be borne by the community that implements or supports further development of public transport.

Land Use

The Preferred Alternative's indirect effects are minimal to land use because the lands surrounding the site are primarily developed. Land use intensity would be expected to increase as a result of the development of the Preferred Alternative; however the area surrounding the site is already considered mixed land use and therefore would be consistent with the vicinity.

Agriculture

The Preferred Alternative's indirect effects are minimal to prime and unique farmland because the lands surrounding the site are primarily developed. These developments have already altered the soil characteristics defined by NRCS and therefore indirect effects from the development of the Preferred Alternative would be minimal.

With the proposed development, it is likely that new development in the immediate vicinity could occur on undeveloped lands, including agricultural lands, to support and capitalize on the increase of population to this region of the county. The likely indirect impact of future development on agricultural lands lies to the northwest of the property. Other areas surrounding this property are already developed designations.

4.14.2.8 Public Services

Water Supply

Alternative A would not have significant indirect effects on the City of South Bend's water supply. Alternative A would increase demand offsite for water plant capacity and demand on the water main system. The City of South Bend's Water Department currently produces about 16.1 million gallons per day, and has the present capacity to produce 60 million gallons per day (John Wiltrout, Director of Water Treatment, pers. comm.). The daily amount of water that would be used by the commercial portion of Alternative A, approximately 267,400 gallons per day, plus any demand from additional indirect development associated with the casino would be within the present capacity of the City's water supply system. Therefore, there would be no significant, adverse, indirect effects on water supply from Alternative A.

Wastewater

Alternative A would not significantly indirectly impact the City of South Bend's wastewater conveyance system and treatment facility. Approximately 207,400 gallons per day of wastewater would be created by Alternative A and transferred offsite into the South Bend Waste Water Treatment System. The WWTF currently runs at 31.77 MGD with a dry weather design capacity of 48 MGD (Kim Thompson, Manager of Environmental Compliance, pers. comm.). Alternative A

wastewater generation represents a 0.65% increase in running wastewater offsite flow to the WWTF and is within the management capacity of the plant during dry weather conditions.

The City of South Bend is working to eliminate a long-term problem with the conveyance system to its WWTF. Alternative A would contribute, but not significantly, to wastewater flows that the City is addressing. The conveyance system to the treatment facility was built at a time when it was customary to combine sanitary and storm sewer flows into one conveyance system. With increased development over time, increasing amounts of storm water enters the system and mixes with the sanitary flows during storm events. To avoid complete inundation of the waste water treatment facility during intense storms, sewer overflows into the St. Joseph River are common and are monitored by the facility, the city and regulated by IDEM and the EPA. The City of South Bend has developed a Long Term Control Plan to reduce the frequency and volume of untreated sewage from sewer bypass to the river. The city developed the Long Term Control Plan with concurrence from the EPA which includes increasing the volume capacity within the conveyance system and at the treatment facility as well as separating the sewer systems in priority regions of the system. The cost of the 20 year Long Term Control Plan is significant and estimated at more than $500,000,000 (City of South Bend et al. 2012)

Although the introduction of 207,400 gallons per day is within the wastewater treatment conveyance system capacity during dry weather flows, the introduction of any additional flows to the system combined with wet weather conditions indirectly impacts the St. Joseph River's water quality. As elements of the LTCP are implemented over the next 20 years, the indirect effects of the addition of 207,400 gallons per day would be increasingly less significant.

Solid Waste

Alternative A would not have significant indirect impacts on the solid waste management infrastructure in the area of project impact. The indirect effects of the development of Alternative A include the increased production of solid waste during and after construction that would be transported by offsite transfer equipment to an offsite landfill, causing indirect impacts at those locations. It would also induce growth in the immediate vicinity of the project site which would create additional pre and post construction waste streams. The lifespans of the current landfills and available capacities of the local landfills would reach capacity sooner with this development but not significantly sooner than projected based on conversations with the local landfills and transfer station staff as presented in Section 4.9.

Electricity, Natural Gas, and Telecommunications

Alternative A would not have significant indirect impacts on the electrical, natural gas and telecommunications infrastructure in the area of project impact. An indirect effect of the proposed development includes increased infrastructure to a less developed region of the county. This infrastructure can aid other area developments and future development by lessening the burden of

the utility installation costs and providing the ability to upgrade business services that would not have been financially feasible before for smaller business owners. The utility companies in this region are capable of providing these services as discussed in Section 4.9 and therefore, the development of the Alternative A would not have an adverse indirect impact to the region in terms of utility service.

Public Health and Safety Services

Alternative A would not have significant indirect impacts to public health and safety services based offsite. Alternative A may result in both induced growth and indirect impacts in the City of South Bend. Over time, casino and hotel development may facilitate construction of new commercial, industrial, and/or residential facilities in the surrounding areas. Any indirect development resulting from Alternative A could contribute to a less than significant increase in the demand for public services such as; court systems, jails, inspection services, police, fire control, and EMS in the City of South Bend. New development that may occur on adjacent non-trust lands would be subject to property tax and sales tax, of which a portion would be allocated to local, county, and state government entities for providing police, fire control, and EMS. These allocations from commercial businesses to government agencies are structured in a manner where government agencies receive adequate funding to meet an increase in demand for services as new development occurs over time; therefore, impacts associated with indirect and induced growth are not expected to be significant. Additionally, there could be incremental effects on public health and safety services associated with the relocation of Band citizens to the Band property in the future. However, the number of Band families and non-tribal individuals relocating to the City of South Bend would be unlikely to exceed the local public service capacities of the City.

Lastly, it is important to note that the demand for law enforcement services would be partially offset by the Band's provision of a fully-equipped police department on trust lands. This Band affiliated police force would decrease the service area for local and state law enforcement by reducing their calls to Band lands, while also allowing for more adequate provision of services to the rest of the City of South Bend, should indirect development resulting from Alternative A lead to an increase in demand. In November of 2014, in preparation for jurisdictional changes that would result from the proposed transfer of land owned by the Pokagon Band in South Bend to federal trust status, the St. Joseph County Board of Commissioners unanimously adopted Resolution R-12-C-2014 which approved the local governmental cross-deputization agreement for law enforcement with the Pokagon Band of Potawatomi Indians (see **Appendix A**). The agreement will allow both Tribal Police deputies and Sheriff's deputies to have reciprocal law enforcement jurisdiction and authority throughout St. Joseph County.. This includes land that would be held in trust for the Pokagon Band as detailed within this resolution. It is anticipated that the Band could also enter into cross-deputization agreements with other Indiana police agencies, which would allow these jurisdictions to share enforcement personnel and resources. Indirect impacts to public health and safety services are not anticipated from Alternative A.

4.14.2.9 Other Values

Noise

Alternative A would not have significant indirect impacts to offsite noise levels. Construction of Alternative A would likely result in increased offsite noise levels from increased traffic on nearby roads. But the increased noise levels are not predicted to exceed transportation noise standards, such as those used by the Federal Highways Administration.

Ambient noise levels in the project vicinity would be expected to increase slightly with the potential induced development of commercial businesses associated with Alternative A. This increase would be primarily caused by increased vehicle traffic rather than noise generated at the commercial establishments themselves. Because the ambient noise environment within the project vicinity is dominated by traffic noise and the additional vehicle trips related to Alternative A would be relatively small in relation, it is unlikely that the additional traffic would significantly increase noise levels. The reasonably foreseeable impact caused by indirect growth associated with the project, therefore, would not be considered significant.

Hazardous Materials

Alternative A would not have significant indirect impacts regarding public safety risks from hazardous materials. Alternative A may result in both induced growth and indirect economic impacts in a one-mile radius of the South Bend property. Over time, casino and hotel development may facilitate construction of new commercial, industrial, and/or residential facilities in surrounding areas; however, no indirect effects related to hazardous materials are anticipated because no developments that use or produce hazardous materials are proposed on the South Bend property. Regulated hazardous material sites were recorded within a one-mile radius of the project boundaries (see Section 3.10); therefore, if implementation of Alternative A would facilitate future development in adjacent areas, there would be a higher potential for encountering these sites with known hazardous materials. It is standard practice to evaluate reported releases of hazardous materials to determine potential liability for real estate property transactions. This is accomplished by conducting a Phase I Environmental Site Assessment (and potentially a Phase II Environmental Site Assessment should hazardous material sites be suspected) in accordance with the ASTM standard practice E-1527-00. If developers follow these standard practices, no significant impacts would be expected. It should be noted, however, that the potential for encountering hazardous materials would increase over time should commercial, industrial, and/or residential development occur in adjacent areas. However, it is reasonably expected that federal, state, and local regulations would be complied with, and thus, significant impacts from hazardous materials would be unlikely.

Visual Resources

Alterations to visual resources on-site would indirectly affect the APE within the line-of-site of the project area. The effects to visual resources would result in the development of a service road

adjacent to Prairie Avenue. This site development would result in the removal or alteration of significant areas of the vegetation along Prairie Avenue. The remaining site development would not result in the removal or alteration of significant areas of the surrounding woodland vegetation. Therefore, a less than significant effect at the site perimeter is expected. Removal of existing Eurasian meadow, interior woodlands and hedgerow vegetation and alteration to the topography in the interior of the site would be significant.

Construction of Alternative A could potentially result in visual effects to the surrounding area from construction activity and equipment on a daily basis. However, because construction activities would be temporary in nature and would occur during daytime hours, a less than significant effect is expected.

4.14.2.10 Environmental Justice

Alternative A may result in both induced growth and indirect impacts in St. Joseph County. Over time, casino and hotel development may facilitate construction of new commercial, industrial, and/or residential facilities in surrounding areas. Any offsite or later indirect economic activity resulting from Alternative A could result in an increase in employment opportunities and commerce that could benefit minority or low income people. These economic and employment opportunities could positively affect EJ populations in St. Joseph County through subsequent increases in median annual income, decreases in the percentage of individuals living below the poverty line, and decreases in unemployment rates. Band members living both on and off tribal land could also benefit from the additional employment opportunities and economic ventures associated with indirect development resulting from Alternative A.

Additionally, St. Joseph County may experience an increase in population if Band members and other non-tribal minorities choose to relocate to the area as a result of Alternative A and/or other indirect development that may ensue. As a result, the County may experience an increase in low-income housing demand; however, adverse impacts are not anticipated, as the American Community Survey estimates that there are 13,667 vacant housing units in St. Joseph County that would be available to accommodate a potential increase in population (USCB 2012). Therefore, despite a possible increase in the population within St. Joseph County, no disproportionately high or adverse indirect impacts to minority or low-income populations are anticipated.

4.14.3 Alternative B – Elkhart Site Tribal Village and Casino

4.14.3.1 Land Resources

Indirect impacts as a result of Alternative B would include the same aspects of topography and soil that were discussed for Alternative A. For the same reasons, the Alternative B is not expected to prevent the conveyance of surface water into natural drainages or cause landslides or excessive

erosion or sedimentation within drainage features. Therefore, indirect impacts to topography and soils are considered less than significant.

4.14.3.2 Water Resources

Water resources in the Elkhart area include the aquifers used for water supply. Alternative B uses water supplies that originate from offsite aquifers. But Alternative A would not indirectly significantly impact the levels of the aquifers that the City of Elkhart's Water Department uses as sources of water for public drinking water supplies. The City of Elkhart's Water Department currently produces about 15 million gallons per day from groundwater, and has the present capacity to produce 25 million gallons per day without impacting the groundwater source (Mike Machlan, City Engineer, pers. comm.). The amount of water the casino would use per day (267,400 gallons per day) and any additional development associated with the casino is within the additional present capacity of the City's water supply system. As development occurs, indirect and induced growth impacts could include commercial development such as lodging facilities, restaurants and convenience stores/gas stations. The most foreseeable location for these developments would be at or near the highway interchange of the St. Joseph Valley Parkway (U.S. 20) and Nappanee Street (Indiana 19). Municipal water and sanitary sewer service would be available and therefore there would not be a significant impact to groundwater.

For Alternative B, storm water runoff up to the 100-year 24-hour design storm would be retained on site and thus would not have any offsite, indirect impacts on 100-flood levels or the water quality or quantity in offsite wetlands or waterways. Stormwater would be handled onsite by best management practices determined by the required SWPPP; therefore there would be no significant impacts to the water resources. Stormwater flows from large storms, that exceed the design storm, would periodically partially escape the stormwater retention features and cause offsite, indirect impacts.

One potential beneficial indirect impact would be the reduction of onsite agricultural area which would correlate to a reduction in pesticides and herbicide use and corresponding reduction in heavy metals and nitrate concentrations in the surface and ground water. But areas converted to impervious parking surface would generate increased volumes of runoff that contain hazardous substances from vehicles that would need to be retained on site with BMPs

4.14.3.3 Air Quality

Alternative B would not significantly indirectly impact air quality by threatening to violate National Ambient Air Quality Standards. Indirect emissions associated with this alternative would be primarily from the additional vehicle trip generation in the area, including later and offsite emissions, both from customers and workers. As discussed in Section 4.8, with the implementation of potential improvements, the intersections and lane groups affected by the alternative would operate adequately. In addition, air emissions from vehicular traffic are estimated to be less than 1

percent of the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. Therefore, the increase in vehicular traffic is not expected to cause an exceedance of the NAAQS.

4.14.3.4 Biological Resources

Wildlife and Habitats

Onsite development of Alternative B would almost entirely within active agricultural fields with the exception of a small area of previous residential use. During construction, the limited amount of wildlife which uses this site for feeding or travel to other habitats would be displaced to other onsite and offsite habitats where indirect competition and predation may result in some mortality.

Indirect effects associated with the operation of Alternative B and occupation of the residences would introduce offsite vehicular traffic, noise, exposure to onsite lighting and human activity which could disrupt future wildlife use near the site. Vehicular activity would likely result in some insignificant offsite accidental loss of wildlife while noise, light and human activity could diminish the use of habitat which directly adjoins the developed areas and displace wildlife to other onsite or offsite habitats where increased competition or predation could result in mortality. This mortality is likely to occur to a small amount of local wildlife and is not likely to have a significant effect on local wildlife populations.

Federally Listed Species

Habitats on the site are not likely to be used by federally listed species and are therefore Alternative B is not likely to affect offsite populations of threatened or endangered species.

Vegetation

Within the Alternative B development, the extent of the disturbed or altered vegetation from current agricultural practice and the extent of human activity in the immediate vicinity (e.g. residences, roads, transmission lines), it is unlikely that Alternative B would result in significant adverse indirect impacts to nearby vegetation. Exotic and/or nuisance species introduction is always a concern during site development but also when establishing new vegetative communities, such as might be included in Alternative B. The transition from agricultural land to native meadow could result in the introduction of native seeds that could result in offsite transport of exotic/nuisance species at a later date. Nuisance and exotic species can be aggressive and can quickly spread in pioneer communities becoming a dominant vegetative cover. The resulting lack of plant diversity can decrease the overall habitat value of the system to wildlife and insects, including offsite habitat.

The increase in edge habitat resulting from the habitat fragmentation can result in a shift in vegetative species within the edge habitat and an increase in nuisance and exotic species both on

and offsite. As noted above, the biotic conditions are different within the edge habitat and are typically more favorable to vine and shrub species.

Wetlands

Stormwater generated on-site, both during construction and operation phases would be managed to minimize off-site transport of nutrients, contaminants and problematic volumes of water to wetlands located off-site.

4.14.3.5 Cultural Resources

Indirect Effects Within The APE

Because the BIA did not identify any potentially historic-age resources within the Elkhart site (see **Figure 4.6-3**), no non-archeological historic-age resources will be indirectly affected by Alternative B.

Indirect Effects Within The VAPE

Although 14 potentially historic-age resources were identified by the BIA within the VAPE of the South Bend site (see **Figure 4.6-2**), according to the DHPA, no historic properties listed in or eligible for inclusion in the NRHP were identified within the VAPE for Alternative B (Smith, 2013). Therefore, no historic properties are affected within the VAPE by Alternative B.

4.14.3.6 Socioeconomic Conditions

Alternative B would have offsite impacts over time to schools, libraries, parks, social services, social costs, taxes and governmental expenditures. But none of those indirect impacts would be significant as assessed in Section 4.7, SOCIOECONOMIC CONDITIONS.

Alternative B could have indirect effects on existing non-tribal gaming operations that those developers consider to be significant. But indirect effects of Alternative B would not be significant to two existing tribal gaming facilities operated by the Pokagon Band. The concept of a substitution effect was discussed in Section 4.7. Substitution effects also apply on an indirect basis for gaming tax revenue derived from existing Indiana casino operations and for the true net incremental increase in income to the Pokagon Band from Alternative B.

A portion of the gaming revenue captured by Alternative B would come from casino customers captured from other existing Indiana gaming operations. As a result, gaming tax payments from those operations would be lower than otherwise expected. Based upon a market analysis by KlasRobinson Q.E.D., the indirect effect of Alternative B on other Indiana casinos would result in a reduction in gaming tax payments of 2.9 percent from what would otherwise occur without the addition of Alternative B.

A portion of gaming revenue from Alternative B would also come from casino customers captured from other Pokagon Band gaming operations. As a result, income from those operations to the Pokagon Band would be lower than otherwise expected. Based upon a market analysis by KlasRobinson Q.E.D., the incremental income before debt service to the Pokagon Band from Alternative B, net of income lost at other Pokagon Band gaming operations due to substitution effects, would be approximately 83 percent of the total income before debt service from Alternative B. The net amount after indirect substitution effects would still represent a major increase in the total funds available to the Pokagon Band for tribal government operations and programs, improvement of the general welfare of the Indian tribe and its members, promotion of economic development, donations to charitable organizations, and/or funding of operations of local government agencies.

4.14.3.7 Resource Use

Transportation

Alternative B would cause offsite increases in traffic levels that without mitigation would have significant indirect impacts. But because Alternative B includes traffic mitigation features located offsite on adjoining roadways, Alternative B would not have significant indirect impacts to LOS levels on local roadways or the public transportation system. Some of the traffic mitigation features would also be indirect from the perspective that such features would be implemented later because some of the predicted traffic increase would not occur until the Alternative B features had operated for some time to generate visitation at levels closer to ultimate levels.

Similar to Alternative A as described in Section 4.13.1.1, construction of Alternative B at the Elkhart site would likely result in both induced growth impacts and secondary impacts. These indirect impacts are unlikely to include substantial new non-Tribal housing development but could, over a period of time, include commercial development such as lodging facilities, restaurants, and convenience stores, especially at the highway interchange nearest the project site (US 20 and S.R.19).

The 2000 census data for Elkhart County indicates a total population of 182,791. In 2010, the census indicates that the total population increased to 199,699 (USCB 2011). This equates to approximately a linear 0.93 percent background growth rate in population. Therefore, the 1 percent per year increase utilized for the traffic analysis would encompass growth that would be expected to normally occur and traffic increases caused by reasonably foreseeable non-Tribal development anticipated to result indirectly from implementation of Alternative B.

As new development occurs in the vicinity of the project site, the sponsors of those developments would be responsible for conducting impact analyses and making any roadway improvements necessary to maintain an acceptable LOS. Additionally, City, County, and State roadway planning

departments monitor traffic patterns and plan roadway improvements to accommodate projected and otherwise identified changes in traffic patterns.

The LOS values reported for Alternative B should be consistent with what would be reasonably expected with all traffic volume increases from induced growth.

The possible mitigation measures discussed in Section 4.8.2 are expected to improve all offsite study area intersections to acceptable LOS including the traffic from background growth and other potential indirect development, as shown in Table 4.8-6. Because the traffic analysis considered a "worst case" scenario (peak of existing roadway traffic occurring simultaneously with the peak of casino patron traffic, including a reasonable number of employees as well as an over-estimate of growth for the area at 1 percent per year), it is reasonable not to expect that a LOS of E or F would occur at any of the study intersections or critical stop controlled approaches, even with potential induced growth traffic included. Thus, significant impacts to traffic as a result of induced growth are not reasonably expected to occur.

It is unlikely that Alternative B or the indirect growth associated with it would significantly impact on public transportation needs. Patrons visiting the casino and hotel might use offsite public transportation when developed and into the future, increasing indirect impact on public transportation. The surrounding communities may seek to further develop the public transportation system near the Project Site in the future. If so, then the cost would be borne by the community that implements or supports the development.

Land Use

Alternative B's indirect effects are minimal to land use because the lands surrounding the site are zoned for planned developed. Land use intensity would be expected to increase as a result of the development of the Alternative B; however the area surrounding the site is already considered mixed land use and therefore would be consistent with the vicinity.

Agriculture

Alternative B's indirect effects are minimal to prime and unique farmland although the site is currently used for agriculture and have prime and unique designated soils. The NRCS calculated the abundance of farmland for the county and indicated the 172 acres for removal did not exceed their allowed amount.

By developing Alternative B, it is likely that new development in the immediate vicinity could occur on undeveloped lands, including agricultural lands, to support and capitalize on the increase of population to this region of the county. The likely indirect impact with Alternative B with future development on agricultural lands lies to the north of the site up to the highway access point along Nappanee Street.

4.14.3.8 Public Services

Water Supply

Alternative B would not have significant indirect effects on the City of Elkhart's water supply system. Alternative B would increase demand offsite for water plant capacity and demand on the water main system, however, the City of Elkhart's Water Department currently produces about 15 million gallons per day, and has the present capacity to produce 25 million gallons per day (Mike Machlan, City Engineer, pers. comm.). The daily amount of water that would be used by commercial portion of Alternative B (267,400 gallons per day) plus any demand from additional indirect development associated with the casino is well within the additional present capacity of the City's water supply system. Therefore, there would be no significant, adverse, indirect effects on the water supply from Alternative B.

Wastewater

Alternative B would not significantly indirectly impact the City of Elkhart's wastewater conveyance system and WWTF. Approximately 207,400 gallons per day of wastewater would be introduced into the Elkhart Waste Water Treatment System with the development of Alternative B. The WWTF currently has an average daily flow demand of 20 MGD with a peak flow capacity of 40 MGD (Mike Machlan, City Engineer, pers. comm.). Alternative B wastewater generation represents a 1.0% increase in running wastewater flow from Alternative B offsite to the plant and is within the management capacity of the plant during dry weather conditions.

The City of Elkhart is working to eliminate a long-term problem with its conveyance system. The conveyance system to the treatment facility however was built at a time when it was customary to combine sanitary and storm sewer flows into one conveyance system. With increased development over time, increasing amounts of storm water enters the system and mixes with the sanitary flows during storm events. To avoid complete inundation of the waste water treatment facility during intense storms, sewer overflows into the Elkhart and St. Joseph Rivers are common and are monitored by the facility, the city and regulated by IDEM and the EPA. The City of Elkhart has developed a Long Term Control Plan to reduce the frequency and volume of untreated sewage from sewer bypass to the river. The city developed the Long Term Control Plan with concurrence from the EPA which includes increasing the volume capacity within the conveyance system and at the treatment facility as well as separating the sewer systems in priority regions of the system. The cost of the 25 year Long Term Control Plan is significant and estimated at more than $134,000,000 (City of Elkhart 2011)

Although the introduction of 207,400 gallons per day is within the wastewater treatment conveyance system capacity during dry weather flows, the introduction of any additional flows to the system combined with wet weather conditions indirectly impacts the Elkhart and St. Joseph

Rivers' water quality. As elements of the LTCP are implemented, the indirect effects of the addition of 207,400 gallons per day would be increasingly less significant.

Solid Waste

Alternative B would not have significant indirect impacts on the solid waste management infrastructure in the area of project impact. The indirect effects of the development of Alternative B include the increased production of solid waste during and after construction that would be transported by offsite transfer station equipment to an offsite landfill, causing indirect impacts at those locations. It would also induce growth in the immediate vicinity of the project site which would create additional pre and post construction waste streams. The lifespans of the current landfills and available capacities of the local landfills would reach capacity sooner with this development but not significantly sooner than projected based on conversations with the local landfills and transfer station staff as presented in Section 4.9.

Electricity, Natural Gas, and Telecommunications

Alternative B would not have a significant indirect impact on the electrical, natural gas and telecommunications infrastructure in the area of project impact. An indirect effect of the proposed development includes increased infrastructure to a less developed region of the county. This infrastructure can aid other area developments and future development by lessening the burden of the utility installation costs and providing the ability to upgrade business services that would not have been financially feasible before for smaller business owners. The utility companies in this region are capable of providing these services as discussed in Section 4.9 and therefore, the development of the Alternative B would not have an adverse indirect impact to the region in terms of utility service.

Public Health and Safety Services

Alternative B would not have significant indirect impacts to public health and safety services based offsite. Alternative B may result in both induced growth and indirect impacts in Elkhart County. Over time, casino and hotel development may facilitate construction of new commercial, industrial, and/or residential facilities in the surrounding areas. Patrons at the casino and hotel could increase demand for services based offsite including demand for public services, such as; court systems, jails, inspection services, police, fire control, and EMS in Elkhart County. New development that may occur on adjacent non-trust lands would be subject to property tax and sales tax, of which a portion would be allocated to local, county, and state government entities for providing police, fire control, and EMS. These allocations from commercial businesses to government agencies are structured in a manner where government agencies receive adequate funding to meet an increased demand for service as new development occurs over time; therefore, impacts associated with indirect and induced growth are not expected to be significant. Additionally, there could be incremental effects on public health and safety services associated with the relocation of Band citizens to the Band

property in the future. However, the number of Band families and non-tribal individuals relocating to Elkhart County would be unlikely to exceed the local service capacities of the County.

Lastly, it is important to note that the demand for law enforcement services would be partially offset by the Band's provision of a fully-equipped police department. This Band-affiliated police force decrease the service area for local and state law enforcement by reducing their calls to Band lands, while also allowing for more adequate provision of services to the rest of Elkhart County, should indirect development resulting from Alternative B lead to an increase in demand. It is anticipated that the Band would eventually enter into cross-deputization agreements with Indiana police agencies, which would allow these jurisdictions to share enforcement personnel and resources. Indirect impacts to public health and safety services are not anticipated from Alternative B.

4.14.3.9 Other Values

Noise

Alternative B would not have significant indirect impacts to offsite noise levels. As assessed in Section 4.12, construction of Alternative B at the Elkhart site would likely result in increased offsite noise levels from increased traffic on nearby roadways. But the increased noise levels are not predicted to exceed transportation noise standards, such as those used by the Federal Highway Administration.

These indirect impacts are unlikely to include substantial new non-Tribal housing development but could, over a period of time, include commercial development such as lodging facilities, restaurants, and convenience stores, especially at the highway interchange nearest the project site (US 20 and S.R.19).

Ambient noise levels in the project vicinity would be expected to increase slightly with the potential induced development of commercial businesses associated with Alternative B. This increase would be primarily caused by increased vehicle traffic rather than noise generated at the commercial establishments themselves. Because the ambient noise environment within the project vicinity is dominated by traffic noise and the additional vehicle trips related to new development would be relatively small in relation, it is unlikely that the induced traffic would significantly increase noise levels. The reasonably foreseeable impact caused by indirect and induced growth associated with the project, therefore, would not be considered significant.

Hazardous Materials

Alternative B would not have significant indirect impacts regarding public safety risks from hazardous materials. Alternative B may require storage, treatment or disposal of hazardous substances, but it would be accomplished in compliance with RCRA so no hazardous materials would improperly migrate or be transported offsite. Alternative B could result in indirect impacts in

a one-mile radius of the Elkhart property. Regulated hazardous material sites were recorded within a one-mile radius of the project boundaries (see Section 3.10); therefore, if implementation of Alternative B would facilitate future residential and/or commercial development in adjacent areas, there would be a higher potential for encountering sites with known hazardous materials. It is standard practice to evaluate reported releases of hazardous material to determine potential liability for real estate property transactions. This is accomplished by conducting a Phase I Environmental Site Assessment (and potentially a Phase II Environmental Site Assessment should hazardous material sites be suspected) in accordance with the ASTM standard practice E-1527-00. If developers follow these standard practices, no significant impacts would be expected. It should be noted, however, that the potential for encountering hazardous materials would increase over time should commercial, industrial, and/or residential development occur in adjacent areas. However, it is reasonably expected that federal, state, and local regulations would be complied with, and thus, significant indirect impacts from hazardous materials would be unlikely.

Visual Resources

Alterations to visual resources on-site would indirectly affect the APE within line-of-sight of the project area. Implementation of Alternative B would result in the development of a tribal village and casino replacing the current agricultural setting with various types of housing units and a community facility along with planned managed landscapes of both adaptive and native plantings. The site development would not result in the removal or alteration of adjacent hedgerow vegetation. Therefore, a less than significant effect at the site perimeter is expected. Alteration to the topography in the interior of the site would be significant.

Construction of Alternative B could potentially result in visual effects to the surrounding area from construction activity and equipment on a daily basis. However, because construction activities would be temporary in nature and would occur during daytime hours, a less than significant effect is expected.

4.14.3.10 Environmental Justice

Alternative B may result in indirect economic impacts in Elkhart County. Over time, casino and hotel development may facilitate construction of new commercial, industrial, and/or residential facilities in surrounding areas. Indirect economic activity resulting from Alternative B could result in an offsite increase in employment opportunities and commerce. These economic and employment opportunities could positively affect EJ populations in Elkhart County through subsequent increases in median annual income, decreases in the percentage of individuals living below the poverty line, and decreases in unemployment rates. Band members living both on and off tribal land could also benefit from the additional employment opportunities and economic ventures associated with indirect economic activity resulting from Alternative B.

Additionally, Elkhart County may experience an increase in population if Band members and other non-tribal minorities choose to relocate to the area as a result of Alternative B and/or other indirect development that may ensue. As a result, the County may experience an increase in low-income housing demand; however, adverse impacts are not anticipated, as the American Community Survey estimates that there are 7,298 vacant housing units in Elkhart County that would be available to accommodate a potential increase in population (USCB 2012). Therefore, despite a possible increase in the population within Elkhart County, no disproportionately high or adverse indirect impacts to minority or low-income populations are anticipated.

4.14.4 Alternative C – South Bend Site Tribal Village With Commercial Development

4.14.4.1 Land Resources

Indirect impacts as a result of Alternative C would include the same aspects of topography and soil that were discussed for Alternatives A and B. However, Alternative C could have increased chemical hazards to soils associated with the proposed fueling station and car wash (further discussed in Section 4.14.3.9). For the same reasons, Alternative C is not expected to prevent the conveyance of surface water into natural drainages or cause landslides or excessive erosion or sedimentation within drainage features; however, the quality of soil resources would be at risk. Other site specific practices (for example, application for an NDPES MS4 permit to control car wash wastewater, and adherence to all federal requirements for installation, operation, and maintenance of gasoline USTs) in addition to the standard BMPs designed for Alternatives A and B, would mitigate indirect impacts to topography and soils from Alternative C to a less than significant level.

4.14.4.2 Water Resources

Alternative C would not have significant indirect impacts to the levels and quality of aquifers that supply the City of South Bend's public water supply. The aquifers, wells and water mains that would bring water to Alternative C are located offsite, so the impacts to these resources are indirect. The City of South Bend's Water Department currently produces about 16.1 million gallons per day, and has the present capacity to produce 60 million gallons per day without impacting the groundwater source (John Wiltrout, Director of Water Treatment, pers. comm.). The amount of water Alternative C would use per day (55,171 gallons per day) is well within the present capacity of the City's water supply system. As development occurs, indirect and induced growth impacts could include commercial development such as lodging facilities, restaurants and convenience stores/gas stations. The most foreseeable location for these developments would be at or near the highway interchange of the St. Joseph Valley Parkway (U.S. 31) and Prairie Avenue (Indiana 23). Municipal water and sanitary sewer service would be available and therefore there would not be an adverse impact to water resources.

Alternative C would include storage of petroleum in underground storage tanks for the service station. Alternative C may also require minimal use of hazardous or toxic materials, such as lead-acid vehicle batteries or some cleaning supplies. If released, such contaminants could migrate offsite at a later time causing indirect impacts by contaminating aquifers or other water resources, if not for compliance with applicable protective regulations including the Resources Conservation and Recovery Act and Toxic Substances Control Act. Alternative C must comply with UST regulations found at 40 CFR 280.

Alternative C includes larger areas of impervious surface that, without mitigation, would increase stormwater runoff volumes that could raise 100-year flood levels offsite and cause water quantity and quality impacts to offsite wetlands and waterways. These potential indirect impacts are mitigated by retaining the 100-year 24-hour stormwater runoff on site using stormwater design that complies with applicable stormwater ordinances. Alternative C would require a NPDES construction stormwater permit that would help reduce and mitigate indirect water quality impacts offsite to wetlands and other water resources.

4.14.4.3 Air Quality

Indirect emissions associated with Alternative C would be primarily from the additional vehicle trip generation in the area, both from customers and workers. As discussed in Section 4.8, with the implementation of potential improvements, the City of South Bend would oversee offsite traffic analysis and improvements to ensure the intersections and lane groups affected by Alternative C would operate adequately and thus help minimize indirect air quality impacts. In addition, air emissions from vehicular traffic are estimated to be less than 1 percent of the corresponding South Bend-Elkhart area inventory of emissions for each air contaminant. Therefore, the increase in vehicular traffic is not expected to cause an exceedance of the NAAQS.

4.14.4.4 Biological Resources

Wildlife and Habitats

Site development would result in some fragmentation of habitats in the northern portion of the property which would interfere with existing wildlife movement patterns, including movements to offsite adjoining habitat. Habitat fragment can create crowding with increased competition and can reduce breeding opportunities for species which are confined to the small remaining habitat areas. Competition can have varying results ranging from elimination of a species from that habitat to eventual coexistent of all species (Brewer 1994). The creation of the detention ponds would provide some habitat for waterfowl feeding and loafing as well as potential habitat for some common species of frogs and toads.

Habitat fragmentation can also lead to the increase in edge effect, as the ratio of border to interior rises. For small remaining plots it is likely to be all edge habitat, subject to higher light intensities, more wind and other biotic factors more typical of a transition zone between a grassland and a

forest. Many wildlife species avoid the edge habitat and it has been documented that reproductive success is adversely affected because nest-parasitizing cowbirds and other predators like blue jays, raccoons, foxes and domestic cats often enter the forest from the edges (Brewer 1994).

Indirect effects associated with the operation of the proposed facilities and occupation of the residences would introduce vehicular traffic, noise, light and human activity which would disrupt future wildlife use of the site. Vehicular activity would likely result in some insignificant accidental loss of wildlife while noise, light and human activity could diminish the use of remaining habitat that directly adjoins areas Alternative C lands and displace wildlife to other onsite or offsite habitats where increased competition or predation could result in mortality. This mortality is likely to occur to a small amount of local wildlife and is not likely to have a significant effect on local wildlife populations.

Federally Listed Species

Habitats on the Alternative C site and adjoining areas are fragmented and are not the Indiana Bat's preferred forested riparian habitat, so these areas are less likely to be used by the Indiana Bat. Therefore the Indiana Bat is not likely to be indirectly affected by the Preferred Alternative. Similarly, the Northern long-eared bat is not likely to be indirectly affected by the Preferred Alternative as there are no known occurrences documented near the project area (Indiana DNR 2016). The two listed snake species in the vicinity are typically associated with wetland habitats and surface water features. Given the very limited amount and low quality of their preferred habitat on site, no impacts, indirect or otherwise, are expected to these two snake species. Habitats on the site are not likely to be used by federally listed species and are therefore federally listed species are not likely to be indirectly affected.

Vegetation

Within the Alternative C site, the extent of the disturbed or altered vegetation from past agricultural practice and grazing and the extent of human activity in the immediate vicinity (e.g. residences, commercial, roads, transmission lines), it is unlikely that Alternative B would result in significant adverse indirect impacts to vegetation. Changes in the surface and subsurface hydrology from site development may change vegetative species composition over time. The native landscape plan along with the Stewardship/Management Plan associated with Alternative C would result in the creation of native vegetation communities and restoration of the remaining marginal vegetative communities.

Wetlands

Potential indirect effects of Alternative C to wetlands located both on-site and off-site could include changes in wetland hydrology due to site development. Site development could increase or decrease surface and/or groundwater flows to wetlands through the addition of impervious surfaces, underground utilities and storm water management features. Maintaining existing

wetland hydrologic regimes through the pre-development assessment of contributing hydrologic inputs, use of culverts and swales to maintain existing on-site surface water patterns, and use of storm water best management practices to treat water quality prior to release into wetlands would all serve to minimize indirect effects.

Site development can increase the potential for the establishment of invasive species through introduction of seeds by machinery and the presence of disturbed ground during construction. If established in areas of disturbance, invasive species can spread to existing offsite wetlands and reduce their value.

With the proposed development would come users and residents of the site in close proximity to remaining wetland areas. Cutting and removal of vegetation by site users or residents could occur to prevent personal or property damage or to facilitate personal interest in physical access, visual access or aesthetics.

4.14.4.5 Cultural Resources

Indirect Effects Within The APE

Indirect effects within the APE to non-archeological historic-age resources resulting from Alternative C would be similar to those described above in Alternative A.

Indirect Effects Within The VAPE

Indirect effects within the VAPE to historic properties resulting from Alternative C would be similar to those described above in Alternative A.

4.14.4.6 Socioeconomic Conditions

The scale of development under Alternative C would not cause any significant indirect socioeconomic effects. The substitution effects of Alternative C have already been included in the analysis presented in Section 4.7. Alternative C could have offsite impacts to schools, libraries, parks, social service providers, social costs, taxes and government expenditures for services. Although these indirect effects would not be significant.

4.14.4.7 Resource Use

Transportation

Alternative C is located on the same site as Alternative A (South Bend site), however the character of the development is such that there would be considerably less patron and employee traffic accessing the site without the casino component. Despite this, there is some potential that the construction of Alternative C would result in both induced growth impacts and secondary impacts as described in Section 4.13.1.1, although on a lesser scale. These impacts are unlikely to include

substantial new non-Tribal housing development but could, over a period of time, include commercial development such as lodging facilities, restaurants, and convenience stores, especially at the highway interchange nearest the project site (US 31/US 20 and S.R. 23).

The possible mitigation measures recommended in Section 4.8.3 are expected to improve all study area intersections to acceptable LOS including the traffic from background growth and other potential indirect development, as shown in Table 4.8-9. Because the traffic analysis considered a "worst case" scenario (peak of existing roadway traffic occurring simultaneously with the peak of development traffic, as well as an over-estimate of growth for the area at 1 percent per year), it is reasonable not to expect that a LOS of E or F would occur at any of the study intersections or critical stop controlled approaches, even with potential induced growth traffic included. Thus, significant impacts to traffic as a result of induced growth are not reasonably expected to occur.

Alternative C has the same considerations for indirect impacts to public transportation or transit as Alternative A.

Land Use

Alternative C's indirect effects are minimal to land use because the lands surrounding the site are primarily developed. Land use intensity would be expected to increase as a result of the development of the Alternative C; however the area surrounding the site is already considered mixed land use and therefore would be consistent with the vicinity.

Agriculture

Alternative C's indirect effects are minimal to prime and unique farmland because the lands surrounding the site are primarily developed. These developments have already altered the soil characteristics defined by NRCS and therefore indirect effects from the development of the Alternative C would be minimal.

With the proposed development, it is likely that new development in the immediate vicinity could occur on undeveloped lands, including agricultural lands, to support and capitalize on the increase of population to this region of the county. The likely indirect impact of future development on agricultural lands lies to the northwest of the property. Other areas surrounding this property are already developed designations.

4.14.4.8 Public Services

Water Supply

Alternative C would not have significant indirect effects on the City of South Bend's water supply system. Alternative C would increase demand offsite for water plant capacity and the water main system. The City of South Bend's Water Department currently produces about 16.1 million gallons

per day, and has the present capacity to produce 60 million gallons per day (John Wiltrout, Director of Water Treatment, pers. comm.). The daily amount of water that would be used by Alternative C (55,171gallons per day) and any demand from additional indirect development associated with it is well within the additional present capacity of the City's water supply system. Therefore, there would be no significant, adverse, indirect effects on water supply from Alternative C.

Wastewater

Alternative C would not significantly indirectly impact the City of South Bend's wastewater conveyance system and WWTF. Approximately 25,171 gallons per day of wastewater would be transferred offsite into the South Bend Waste Water Treatment System with the development of Alternative C. The waste water treatment plant currently runs at 31.77 MGD with a dry weather design capacity of 48 MGD (Kim Thompson, Manager of Environmental Compliance, pers. comm.). Alternative C wastewater generation represents 0.08% increase in running wastewater offsite to the WWTF and is within the management capacity of the WWTF during dry weather conditions.

The City of South Bend is working to eliminate a long-term problem with the wastewater conveyance system to its WWTF. Alternative C would contribute, but not significantly, to wastewater flows that the City is addressing. The conveyance system to the treatment facility however was built at a time when it was customary to combine sanitary and storm sewer flows into one conveyance system. With increased development over time, increasing amounts of storm water enters the system and mixes with the sanitary flows during storm events. To avoid complete inundation of the waste water treatment facility during intense storms, sewer overflows into the St. Joseph River are common and are monitored by the facility, the city and regulated by IDEM and the EPA. The City of South Bend has developed a Long Term Control Plan to reduce the frequency and volume of untreated sewage from sewer bypass to the river. The city developed the Long Term Control Plan with concurrence from the EPA which includes increasing the volume capacity within the conveyance system and at the treatment facility as well as separating the sewer systems in priority regions of the system. The cost of the 20 year Long Term Control Plan is significant and estimated at more than $500,000,000 (City of South Bend et al. 2012)

Although the introduction of 25,171 gallons per day is within the wastewater treatment conveyance system capacity during dry weather flows, the introduction of any additional flows to the system combined with wet weather conditions indirectly impacts the St. Joseph River's water quality. As elements of the LTCP are implemented over the next 20 years, the indirect effects of the addition of 25,171 gallons per day would be increasingly less significant.

Solid Waste

Alternative C would increase impacts, but not have significant indirect impacts to solid waste transfer and landfill facilities located off the site of Alternative C. The indirect effects of the development of Alternative C include the increased production of solid waste during and after

construction that would need to be transferred to a landfill located offsite. It would also induce growth in the immediate vicinity of the project site which would create additional pre and post construction waste streams. The lifespans of the current landfills and available capacities of the local landfills would reach capacity sooner with this development but not significantly sooner than projected based on conversations with the local landfills and transfer station staff as presented in Section 4.9.

Electricity, Natural Gas, and Telecommunications

Alternative C would not have significant adverse indirect impacts to utility capacity in the region. Alternative C would increase demand for offsite capacity for electricity, natural gas and telecommunications. An indirect effect of Alternative C includes increased infrastructure to a less developed region of the county. This infrastructure can aid other area developments and future development by lessening the burden of the utility installation costs and providing the ability to upgrade business services that would not have been financially feasible before for smaller business owners. The utility companies in this region are capable of providing these services as discussed in Section 4.9.

Public Health and Safety Services

Alternative C would not have significant indirect impacts to public health and safety services based offsite of Alternative C. Alternative C may result in both induced growth and indirect impacts in the City of South Bend. Over time, the Band's proposed mixed-use development may facilitate construction of new commercial, industrial, and/or residential facilities in the surrounding areas. Any indirect development resulting from Alternative C could contribute to a moderate increase in the demand for public services such as; court systems, jails, inspection services, police, fire control, and EMS in the City of South Bend. New development that may occur on adjacent non-trust lands would be subject to property tax and sales tax, of which a portion would be allocated to local, county, and state government entities for providing police, fire control, and EMS. These allocations from commercial businesses to government agencies are structured in a manner where government agencies receive adequate funding to meet an increase in demand for service as new development occurs over time; therefore, impacts associated with indirect and induced growth are not expected to be significant. Additionally, there could be incremental offsite effects on public health and safety services associated with the relocation of Band citizens to the Band property in the future. However, the number of Band families and non-tribal individuals relocating to the City of South Bend would be unlikely to exceed the local service capacities of the City.

Lastly, it is important to note that the demand for law enforcement services would be partially offset by the Band's provision of a fully-equipped police department. This Band-affiliated police force decrease the service area for local and state law enforcement by reducing their calls to Band lands, while also allowing for more adequate provision of services to the rest of the City of South Bend, should indirect development resulting from Alternative C lead to an increase in demand. In

November of 2014, in preparation for jurisdictional changes that would result from the proposed transfer of land owned by the Pokagon Band in South Bend to federal trust status, the St. Joseph County Board of Commissioners unanimously adopted Resolution R-12-C-2014 which approved the local governmental cross-deputization agreement for law enforcement with the Pokagon Band of Potawatomi Indians (see **Appendix A**). The agreement will allow both Tribal Police deputies and Sheriff's deputies to have reciprocal law enforcement jurisdiction and authority throughout St. Joseph County. This includes land that would be held in trust for the Pokagon Band as detailed within this resolution. It is anticipated that the Band could also enter into cross-deputization agreements with other Indiana police agencies, which would allow these jurisdictions to share enforcement personnel and resources. Indirect impacts to public health and safety services are not anticipated from Alternative C.

4.14.4.9 Other Values

Noise

Alternative C would not have significant impacts on noise. Alternative C would be smaller in size and would likely draw fewer visitors than Alternatives A or B. Accordingly, the indirect and induced growth associated with Alternative C may be somewhat less than anticipated for Alternative A or B. Thus, indirect and induced growth impacts associated with Alternative C would likewise not be expected to result in significant sound and noise impacts.

Ambient noise levels in the project vicinity would be expected to increase slightly with the potential induced development of commercial businesses associated with Alternative C. This increase would be primarily caused by increased vehicle traffic onsite and offsite on nearby roadways, rather than noise generated at the commercial establishments themselves. Because the ambient noise environment within the project vicinity is dominated by traffic noise, and the additional vehicle trips related to Alternative C would be relatively small in relation, it is unlikely that the offsite indirect traffic increases would significantly increase noise levels. The reasonably foreseeable indirect impact and induced growth from Alternative C, therefore, would not be considered significant.

Hazardous Materials

Alternative C may result in both induced growth and indirect impacts in a one-mile radius of the South Bend property. Over time, the Band's proposed mixed-use development may facilitate construction of new commercial, industrial, and/or residential facilities in surrounding areas. This potential indirect development resulting from Alternative C could result in increased risk of offsite release of petroleum and hazardous materials from operation of the travel center and gas station facility that would require underground storage tanks for gasoline. Any indirect development resulting from Alternative C could realistically increase fuel demands (i.e., for construction equipment, as a result of increases in vehicular visitation rates, etc.) and consequently increase

utilization of the Band's proposed convenience store and gas station. With heavy use over time, the risk of releases, spills, overflows and corrosion of underground tanks may also increase. While these risks might be expected to increase over time and potentially affect natural resources and/or public safety indirectly in areas outside the South Bend property, it is also reasonably expected that compliance with the EPA's regulations would reduce these risks to a less than significant level. Even if there would be an actual release, EPA regulations require leak detection and accounting systems that would trigger timely cleanups of releases of petroleum or hazardous materials. The effects of potential cleanups would extend offsite to deal with indirect impacts, as needed. Similarly, operation of the travel center and car wash could over time, produce wastewater high in oil and grease, detergents, phosphates, solvent-based solutions, and organic debris that would be transported offsite in the city's wastewater interceptors to the city's WWTF for treatment. While carwash wastewater could create potential water quality concerns in areas outside the South Bend property, it is reasonably expected that compliance with mandates of the Clean Water Act would reduce these risks to a less than significant level.

Additionally, while not observed on the South Bend property, regulated hazardous material sites were recorded within a one-mile radius of the project boundaries (see Section 3.10); therefore, if implementation of Alternative C would facilitate future development in adjacent areas, there would be a higher potential for encountering sites with known hazardous materials. It is standard practice to evaluate reported releases of hazardous material to determine potential liability for real estate property transactions. This is accomplished by conducting a Phase I Environmental Site Assessment (and potentially a Phase II Environmental Site Assessment should hazardous material sites be suspected) in accordance with the ASTM standard practice E-1527-00. If developers follow these standard practices, no significant impacts would be expected. It should be noted, however, that the potential for encountering hazardous materials would increase over time should commercial, industrial, and/or residential development occur in adjacent areas. However, it is reasonably expected that federal, state, and local regulations would be complied with, and thus, significant indirect impacts from hazardous materials would be unlikely.

Visual Resources

Alternative C would indirectly change visual resources from offsite vantage points in the vicinity, but would not have significant effects on visual resources due to mitigative efforts to use appropriate architectural treatments and land use buffering techniques for the Alternative C development to be reasonably consistent with residential and commercial properties already developed in the viewshed. Alterations to visual resources on-site would indirectly affect the APE within line-of-sight of the project area. Implementation of Alternative C would result in the development of a tribal village replacing the current landscape setting with various types of housing units and a community facility along with planned managed landscapes of both adaptive and native plantings which would be landscaped and architecturally designed to blend into the surrounding view sheds as much as possible. The site development would remove most of the

interior vegetation and most of the perimeter vegetation. Therefore, a significant effect at the site perimeter is expected. Alteration to the topography in the interior of the site would be significant.

Construction of the commercial facilities with Alternative C could potentially result in visual effects to the surrounding area from construction activity and equipment on a daily basis. However, because construction activities would be temporary in nature and would occur during daytime hours, a less than significant effect is expected. There would be long-term visual effects cause by the commercial development that extends to offsite vantage points.

4.14.4.10 Environmental Justice

Alternative C may result in both induced growth and indirect EJ impacts in St. Joseph County. Over time, the Band's proposed mixed-use development may facilitate construction of new commercial, industrial, and/or residential facilities in surrounding areas and could create an associated increase in employment opportunities and commerce. Alternative C would generate fewer indirect development activities (and subsequently fewer jobs and economic outlets than Alternatives A or B), but any new jobs and economic activity from Alternative C could positively indirectly affect EJ populations living offsite in St. Joseph County. Increases in employment opportunities and commerce could benefit EJ populations through subsequent increases in median annual income, decreases in the percentage of individuals living below the poverty line, and decreases in unemployment rates. Band members living both on and off the Alternative C site could also benefit from the additional employment opportunities and economic ventures associated with indirect development resulting from Alternative C.

Additionally, St. Joseph County may experience an increase in population if Band members and other non-tribal individuals choose to relocate to the area as a result of Alternative C and/or other indirect development that may ensue. As a result, the County may experience an indirect increase in housing demand; however, adverse impacts are not anticipated, as the American Community Survey estimates that there are 13,667 vacant housing units in St. Joseph County that would be available to accommodate a potential increase in population (USCB 2012). Therefore, despite a possible increase in the population within St. Joseph County, no disproportionately high or adverse impacts to minority or low-income populations are anticipated.

4.14.5 Alternative D – No Action

4.14.5.1 Environmental Justice

Alternative D would result in significant adverse indirect environmental justice impacts to minority or low income people that would otherwise be employed by Alternatives A, B or C and live in the vicinity. The No Action Alternative would be a lost opportunity to improve indirect socioeconomic conditions for potential environmental justice objectives of the Pokagon Band to address the purpose and need for the proposal.

4.14.5.2 Purpose and Need Not Addressed

No changes in existing land uses would occur under the No Action Alternative; therefore, the potential for indirect development and impacts resulting from Alternative D would not occur. Accordingly, in the absence of Alternatives A, B, and C, the purpose and need for the proposal would not be addressed as described in Chapter 1 and Section 3.7.3 of this EIS. The Pokagon Band would not receive jurisdiction on an inalienable land base to use to serve tribal members currently living offsite. No tribal village would be developed with 44 housing units and a community center building where Band members living within approximately 10 miles could receive services such as education, health and cultural. No commercial development would occur to generate revenues to pay for government services on the site and to service the debt for the land the Pokagon Band has already acquired and potential future debt for beneficial alternative development. On the other hand, there would be no demand on offsite utilities, roads, water supply, waste water, public safety and government services from adjoining governments. However, the offsite impacts to utilities, roads and infrastructure could be mitigated to less than significant levels with Alternatives A, B, and C in exchange for avoiding the significant impacts of the lost opportunities of the No Action Alternatives.

Historic trends are reasonably expected to continue, and any future development at or around the South Bend or Elkhart project sites would be considered a continuation of existing development patterns and be unrelated to implementation of the No Action Alternative.

4.15 UNAVOIDABLE ADVERSE EFFECTS

This section of the EIS summarizes unavoidable adverse environmental effects that would result from the development of each alternative. These effects cannot be avoided. This summary is based on the environmental analysis provided in the preceding subsections of Section 4.0. Potential effects were evaluated for both the construction and operation phases. Construction effects would only occur during the grading and building activities. Operational effects would be expected to occur for the lifespan of the facility, or indefinitely.

4.15.1 Comparative Impact Assessment of Alternatives – Unavoidable Adverse Effects

In its NEPA regulations described in 40 CFR 1502.14, the President's CEQ calls for a comparative impact assessment of all proposed Alternatives. It is critical to recognize that comparative impact assessments help sharply define potential issues and provide a clear basis for choice among Alternative options by the BIA and general public. This is because comparative assessments help analyze and determine how well each of the Alternatives addresses the purpose and need for the proposal as described in Section 1 of this EIS.

For this EIS, comparison of unavoidable adverse effects does not help sharply define issues and will not greatly assist the BIA in selecting an alternative. This is partially because with mitigation, the anticipated adverse impacts are not drastically different between Alternatives A, B, and C. Because the purpose and need for this proposal is primarily socioeconomic in nature, the comparative impact assessment in Section 4.7.2 provides the best information for sharply defining the differences between the Alternatives, and is most effective in demonstrating why Alternative A is the Preferred Alternative.

4.15.2 Unavoidable Adverse Effects by Resource Category

4.15.2.1 Land Resources

Construction of Alternatives A and B would involve extensive grading to accommodate commercial facilities, which would represent an unavoidable adverse impact on land resources. Although volumes of cut and fill for the commercial development of Alternative A are the highest of the three development alternatives due to the project area's hilly topography, the total net disturbance for the site is the lowest of all the Alternatives, at 1,592 cu. yds. of fill material (Table 4.2-1). The majority of soil augmentation for Alternative B would be in the form of cutting; the large net volume of soil (151, 154 cu. yds. as per Table 4.2-2) would need to be hauled from the project location.

Construction of Alternative C would involve moderate grading to accommodate proposed facilities within the project site. The soil augmentation that would occur during construction would be in the form of cutting, thus keeping the naturally occurring soil as the primary ground constituents. Although these aspects resulting from the proposed action would be unavoidable, they would not be inherently adverse effects.

During the operation of Alternatives A, B, or C, adverse effects to land resources would be mitigated through standardized BMPs.

4.15.2.2 Water Resources

No unavoidable adverse effects to water resources would be anticipated from any of the proposed alternatives.

4.15.2.3 Air Quality

It is expected that air contaminant emissions from construction activities would result in minor short-term impacts on air quality in the immediate vicinity of the construction site, including increased levels of particulate matter and vehicular exhaust emissions. However, due to the anticipated short-term duration of construction activities, there would be no long-term impacts and therefore, emissions from the construction activities are not expected to contribute to regional haze, adversely impact long-term visibility, or adversely impact the long-term air quality in the area.

Air emissions that may affect ambient air quality during commercial operation would be from area sources and vehicular sources. Because the increase in estimated air emission rates resulting from the operation of the proposed alternatives, including the increase in vehicular traffic, is anticipated to be small compared to existing emissions for the South Bend-Elkhart Area, the incremental increase is not expected to cause an exceedance of the NAAQS. The increase in air emissions resulting from commercial operation may be minimized with the use of mitigation measures and with the implementation of potential improvements to traffic intersections and lane groups affected by each alternative.

4.15.2.4 Biological Resources

Wildlife and Habitats

Alternative A would result in the removal of approximately 80 acres of existing wildlife habitat. Of this total area, approximately 8 acres are mature woods, while the remaining habitats have been historically disturbed by human activities such as agriculture or residential use. The proposed development would result in the loss of most of the old field/meadow habitat and associated hedgerows, as well as fragmentation of remaining habitats. Terrestrial wildlife dependent on these habitats for foraging or breeding would likely be displaced to other similar habitats in the vicinity of the site. Similarly, avian fauna would also likely be displaced to similar habitats and would not be adversely affected. Preservation of 85 percent of the high quality woodland habitat, primarily in one contiguous area, would not adversely affect wildlife associated with that habitat type. No adverse effects would occur to wildlife habitat that is special or unique to the area.

Approximately 97 percent of the habitat that would be removed by Alternative B is active agricultural cropland. Given its current limited wildlife value, no unavoidable adverse effects to wildlife habitat would be anticipated.

Alternative C would result in the removal of approximately 43 acres of existing wildlife habitat. Of this total area, approximately 5 acres are mature woods, while the remaining habitats have been historically disturbed by human activities such as agriculture or residential use. The development would result in the loss of primarily old field / meadow habitat and associated hedgerows. While most of area occupied by these habitat types would not be affected, the amount that would be affected or fragmented could cause terrestrial wildlife dependent on these habitats for foraging or breeding to be displaced to other similar habitats near the project area. Similarly, avian fauna would also likely be displaced to similar habitats found in the vicinity of the site and would not be adversely affected. Preservation of 90 percent of the high quality woodland habitat, primarily in one contiguous area, would not adversely affect wildlife associated with that habitat type. No adverse effects would occur to wildlife habitat that is special or unique to the area.

Federally Listed Species

No unavoidable adverse effects to federally listed species would be anticipated from any of the proposed alternatives, given that the continued existence of a listed species would not be jeopardized by the proposed action(s) and no impacts to critical habitat for listed species would occur.

Vegetation

Development of Alternative A would primarily affect the old field and Eurasian meadow, shrub/tree, and fence row trees/shrub vegetation zones by removing 48 percent of these low quality vegetation communities. Development of Alternative C would remove 26 percent of these same communities. As a result of past disturbance from agricultural practices, grazing, and timbering, the natural vegetation communities have already been altered, thus, additional impacts to these low quality vegetative communities from Alternatives A or C would be unavoidable, but not inherently adverse.

Development of Alternative B would affect the active annual row crop agriculture and homestead landscape vegetation communities by removing 98 percent of the total vegetation. As a result of past disturbance from agricultural practices, the natural vegetation communities have already been altered, thus, additional impacts from Alternative B would be unavoidable, but not inherently adverse.

Wetlands

Alternative A proposes to directly impact 0.96 acre forested wetland, 0.71 acre emergent wetland and 0.67 acre (3,300 linear feet) riverine wetlands; this represents impacts to approximately 19% of the total 12.69 acres of jurisdictional wetlands on the site, thus avoiding impacts to 10.35 acres of wetlands. No wetland impacts are anticipated for Alternative B. Alternative C proposes to directly impact 0.19 acre forested wetland, 0.62 acre emergent wetland and 0.46 acre (2,000 linear feet) riverine wetlands; this represents impacts to approximately 10% of the total 12.69 acres of jurisdictional wetlands on the site, thus avoiding impacts to 11.42 acres of wetlands. Wetland impacts would require a permit from the USACE which would necessitate demonstration of compliance to avoid, minimize and mitigate jurisdictional wetland impacts. No adverse effects to wetlands would be anticipated once compliance with USACE permitting requirements has been achieved.

4.15.2.5 Cultural Resources

No direct, unavoidable adverse effects to cultural resources would be anticipated from any of the proposed alternatives, because although archaeological sites were identified at the South Bend and Elkhart sites, these sites are not listed in or likely eligible for inclusion in the NRHP (see Section 4.6 for additional details); and although BIA Structure 10 (Atkins Resource 04A) has been determined

eligible for inclusion in the NRHP, impacts to this resources are not anticipated as result of the proposed undertaking. However, if future development occurs in the immediate vicinity of BIA Structure 10 (Atkins Resource 04A) on the South Bend alternative site or if alterations to the exterior of BIA Structure 10 (Atkins Resource 04A) occur, these actions my indirectly and/or directly adversely affect BIA Structure 10 (Atkins Resource 04A) and compliance with Sections 106 and possibly 110 of the NHPA would be required including mitigation.

4.15.2.6 Socioeconomic Conditions

Adverse effects under Alternatives A and B would include fiscal impacts from lost property taxes and gaming taxes, as well as possible increases in governmental expenditures for emergency services and other social impacts. Increased output, employment and earnings from Alternatives A and B, and the resulting increases in related tax revenue would mitigate any adverse impacts. Potential adverse effects under Alternative C would not be considered to be material in magnitude. Under Alternative D, the Band would be prevented from providing additional housing and community resources for Band members living in Indiana, and would be prevented from generating the additional economic activity for the benefit of tribal government and membership made possible under Alternative A, B or C. No other means of mitigating those adverse effects are currently known to be available.

4.15.2.7 Resource Use

Transportation

The following intersections or stop controlled approaches at unsignalized intersections are forecast to operate at LOS E or worse without traffic from any of the Alternatives:

- S.R. 19 at County Road 28 - 2020 and 2035 AM and PM peak hours
- S.R. 23 at Ewing Avenue – 2020 AM peak hour, 2035 AM and PM peak hours
- S.R. 23 at US 31/20 Eastbound Ramps – 2035 PM peak hour

With the addition of Alternative A, B, or C traffic, the intersections listed above would experience higher delays and would be adversely affected by the addition of development traffic. The potential mitigation measures listed in Section 4.8 would mitigate background, anticipated indirect and secondary, and direct project-related traffic impacts at these intersections and approaches to acceptable LOS (i.e., LOS D or better). Therefore, there are no unavoidable adverse impacts expected for either the South Bend or Elkhart sites if the proposed mitigation measures are implemented.

Land Use

Under all Alternatives (A–D), there would be no unavoidable, adverse effects on land use.

Agriculture

For Alternatives A and C at the South Bend site, unavoidable effects from the federal action would occur through permanent conversion of 109 acres of Prime and Unique Farmland designated soils to non-agricultural uses. The property is not currently zoned nor used for agricultural purposes by the current owner.

For Alternative B at the Elkhart site, the federal action would cause unavoidable adverse effects to both parcels by converting up to 172 acres of Prime and Unique Farmland designated soils to non-agricultural purposes.

4.15.2.8 Public Services

Public Services (including water supply, wastewater, solid waste, electricity, natural gas, and telecommunications)

Under all Alternatives (A–D), there would be no unavoidable, adverse effects on public services that would render South Bend or Elkhart jurisdictional entities unable to maintain their current level of service to their customers, if the proposed mitigation measures are implemented.

Public Health and Safety Services (including law enforcement, fire, and EMS)

No adverse effects to public health and safety services would be anticipated from implementation of any of the alternatives if proposed mitigation measures are implemented. Please see Section 5.0 for mitigation measures that would be utilized by the Band to avoid adverse effects to law enforcement, fire, and EMS.

4.15.2.9 Other Values

Noise

Construction. Mitigation measures would minimize noise from construction activities to the extent feasible by requiring that construction activities be limited to the hours of 7:00 AM to 8:00 PM and that stationary source equipment be placed as far as feasible from adjacent noise receptors. However, because construction of Alternatives A, B, and C would occur near some noise receptors and could generate substantial noise levels for an extended period of time, construction noise impacts are considered potentially unavoidable and adverse. Please see Sections 4.10.1.1, 4.10.2.1, and 4.10.3.1 for more detailed descriptions of anticipated noise impacts for Alternatives A, B, and C, respectively.

Site Noise. Noise levels from Alternatives A, B, and C would be lower than the existing ambient noise levels and would not change existing noise levels. As a result, no unavoidable adverse impacts are anticipated.

Traffic Noise. With the addition of Alternatives A and C, there would be an increase in traffic volumes on area roads near the South Bend site compared to the No Action Alternative. This increase in traffic would lead to an increase in ambient noise levels within the project area. Noise levels at NRGs A, B, and C would exceed the NAC and would be considered an impact. Similarly, with the addition of Alternative B, there would be an increase in traffic volumes on area roads near the Elkhart site compared to the No Action Alternative. This increase in traffic would lead to an increase in ambient noise levels within the project area. Noise levels at NRGs A and C would exceed the NAC and would be considered an impact.

No feasible mitigation measures are available to reduce noise impacts associated with the increase in traffic noise generated by project-related traffic or the project's contribution to cumulative noise impacts. Consequently, noise impacts would remain unavoidable and adverse.

Hazardous Materials

If a spill of substantial quantity were to occur (i.e., an accident involving a service or refueling vehicle) onsite during construction of Alternatives A, B, or C (or during operation of Alternative C), this release could pose a hazard for construction employees and the environment. While not expected, a large spill would be considered an unavoidable adverse effect. The risk level would be increased for Alternative C, as operation of the gas station component would incorporate an UST for gasoline. Mitigation measures discussed in Section 5.0 and spill prevention procedures would be implemented to prevent and reduce adverse effects from potential hazardous materials spills to the greatest extent practicable.

Visual Resources

Alternatives A and C would contribute to the visual transformation of the landscape within the surrounding South Bend area. This transformation trend began long ago with St. Joseph County's and the City of South Bend's approval of site development to accommodate population growth. This trend will continue into the future with the planned development recently approved by the County and the City, in accordance with future land use decisions by these local governments.

Alternative B would contribute to the visual transformation of the farmland south of the City of Elkhart. This transformation trend began long ago with Elkhart County's and the City of Elkhart's approval of site development to accommodate population growth. This trend will continue into the future with the planned development recently approved by the County and the City, in accordance with future land use decisions by these local governments.

While each alternative does incorporate and preserve a substantial amount of open space within the project sites, the new development features would contribute to the cumulative development trend and landscape transformation already established by the County and the City. Landscape

effects would be minimized though adaptive design techniques and native plantings to allow the landscape to blend into the existing vegetation.

Alternatives A, B, and C would likely result in increased light source from nighttime traffic, signage, and building/parking lot lights. With the addition of proposed lighting mitigation measures, there would be no unavoidable adverse impacts expected for either the South Bend or Elkhart sites.

4.15.2.10 Environmental Justice

It is possible that problem gambling and related social issues such as bankruptcy, divorce, domestic violence, suicide, and crime may initially increase following construction of the casino proposed in Alternatives A and B. However, as discussed in Section 3.11 and 4.11, current literature suggests that the incidence of adverse social impacts from gambling is highest following the initial introduction of gaming facilities, but then progressively declines over the life of the casino. While problem gambling and associated indices may be unavoidable adverse effects of casino introduction, these effects are expected to be temporary and decline over time. As there is no casino component included under Alternative C, no unavoidable adverse social impacts related to the introduction of gaming facilities would be expected to negatively impact EJ populations.

Alternative D would not meet the essential needs of the Band as described in Section 1 of this EIS, and would thus result in unavoidable adverse EJ impacts; these impacts would be disproportionately focused on the Band's citizens, which qualify as minority and possibly low-income individuals. This Alternative would not create an increased tribal land base and the first land base in Indiana, no suitable and healthy housing would be provided for Band citizens, no community-focused spaces would be created, tribal governmental and social services would not be delivered, and no economic or employment opportunities would be created. Similarly, no employment opportunities or economic benefits would be created for non-tribal minority and low-income populations.

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