



Chapter 1: Introduction

This Preferred Alternative and Mitigation Package (PAMP) for the US 31 – Plymouth to South Bend proposed action has been prepared in accordance with Indiana’s Streamlined Environmental Impact Statement (EIS) procedures (July 2001), which were developed by the Federal Highway Administration (FHWA) – Indiana Division, and the Indiana Department of Transportation (INDOT). This document addresses the last issue in the three key milestones of the planning process:

1. Definition of Purpose and Need statement,
2. Identification of Alternatives carried forward for comprehensive study,
3. Designation of Preferred Alternative and identification of mitigation measures.

In the Draft Environmental Impact Statement (DEIS), FHWA and INDOT identified four alternatives – the No-Build Alternative and (Freeway) Preliminary Alternatives Cs, Es and G-C – as alternatives selected for detailed study in the DEIS. Following the DEIS Public Comment Period, which ended on April 26, 2004, several months of additional field work, data analysis and efforts aimed at minimizing impacts to both the human and natural environments were completed. On Thursday, September 23, 2004, INDOT announced their **Preferred Alternative for the US 31 Improvement Project, Plymouth to South Bend, was Alternative G-Es**. Alternative G-Es developed in response to many of the comments received on the DEIS and is a hybrid alternative consisting of a combination of the southern portion of Preliminary Alternative G-C and the northern portion of Preliminary Alternative Es. Figure 1.1 shows Preferred Alternative G-Es in relation to the population centers and existing transportation network in the region. Preliminary Alternatives Cs, Es and G-C and the No-Build Alternative, as identified in the DEIS, are considered Non-Preferred Alternatives.

The purpose of this document is to identify potential mitigation measures for the Preferred Alternative G-Es; however, not all mitigation discussed in this document should be viewed as firm commitments. The identified measures will be further examined and developed, where appropriate, during the final design of the Preferred Alternative. This document also includes substantive public and resource agency comments and the responses and recommendations pertaining to each individual comment. All comments received by the public, resource agencies, and others on the DEIS have been reviewed and substantive comments will be addressed in the Final Environmental Impact Statement (FEIS).

1.1 Summary

For statewide planning purposes, the INDOT 2000-2025 Long Range Transportation Plan establishes a corridor hierarchy of three levels: Statewide Mobility Corridors, Regional Corridors and Local Access Corridors. The 122-mile segment of US 31 from Indianapolis to South Bend (US 20) is among the Statewide Mobility Corridors, which consists of the highest level of highway facilities such as interstates and most principal arterials. Such corridors have upper level design standards, high-speeds, minimal travel delay, free-flowing conditions, and no less than partial access control.

US 31 from Indianapolis to South Bend (US 20) is also among Indiana’s “Commerce Corridors”, which consist of the major commercial routes supporting the state’s economy. A Commerce Corridor connects major population concentrations to the National Highway System (NHS), and provides good connectivity to major manufacturing and trade service concentrations. It also improves access to tourism and recreation areas, economic concentrations, and those

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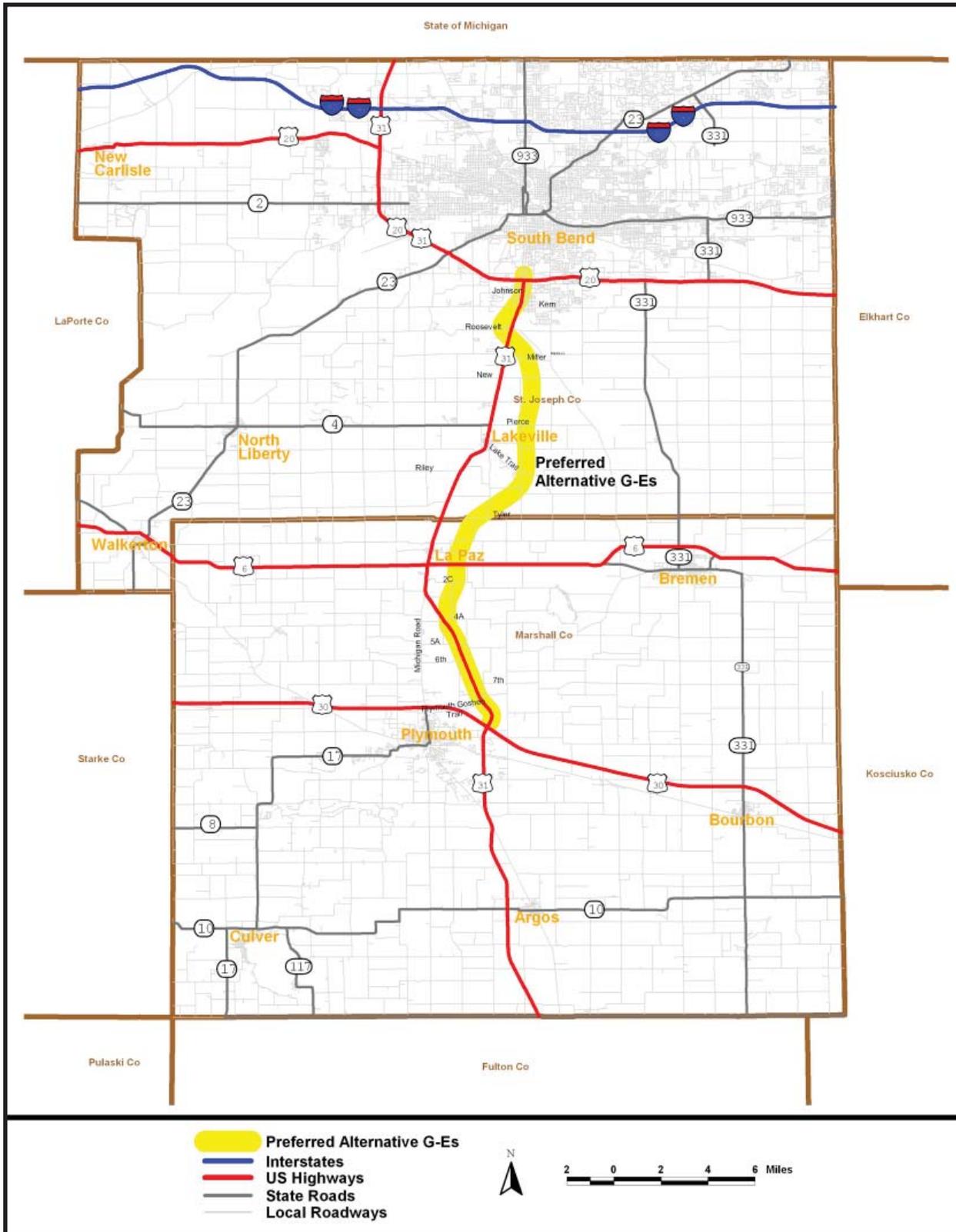


Figure 1.1: US 31 Regional Map



areas with demonstrated and anticipated potential growth.

As a result of the statewide highway needs analysis, the INDOT 2000-2025 Long Range Transportation Plan proposes the “US 31 Freeway Upgrade from Indianapolis to South Bend.” In particular, the Plan identifies the need to improve US 31 in St. Joseph and Marshall Counties, and the associated Statewide Travel Demand Model (TDM) shows unacceptable congestion along portions of US 31 for the years 1998 and 2025 in these counties.

In addition to being a part of the INDOT 2000-2025 Long Range Transportation Plan, the need for improving existing US 31 has also been identified in the regional transportation plan. The transportation plan of the Michigan Area Council of Governments (MACOG), the South Bend Area Metropolitan Planning Organization (MPO), identifies the need to improve existing US 31 to a new limited access road with interchanges at several locations that would continue to US 30 in Marshall County.

This PAMP provides a brief description of the alternatives, the reasoning behind the selection of the Preferred Alternative, and the potential mitigation measures that will accompany the selection of the Preferred Alternative. It further serves as documentation of the review process and the mitigation strategies that follow the publication of the DEIS. The mitigation measures will be further developed as additional information is obtained from the agencies and will be presented in the FEIS.

1.2 Project Description and Setting

Referring to Figure 1.1, this US 31 Improvement Project is located in Marshall and St. Joseph Counties, Indiana between US 30 in Plymouth and the southern junction of US 31 and US 20 in South Bend. This project, approximately 20-miles in length, is the northern-most of the three Environmental Impact Statements within the 122-mile US 31 corridor from I-465 in Indianapolis to US 20 in South Bend. The other two Environmental Impact Statements along the US 31 corridor are an improvement project from I-465 to SR 38 in Hamilton County, near Carmel; and an improvement project from approximately two miles south of SR 26 to approximately one mile north of US 35 in Howard County, near Kokomo.

For the US 31 Improvement Project study area from Plymouth to South Bend, agricultural areas generally dominate the land use in the southern portion of the corridor, from US 30 to the town of LaPaz. Through the towns of LaPaz and Lakeville, and through the south side of South Bend, the land uses along existing US 31 generally include churches, cemeteries, historic structures, businesses and homes.

1.3 Evaluation of Alternatives and Selection of the Preferred Alternative

The Preferred Alternative was selected through a multi-stage process that involved extensive analysis of traffic performance, environmental impacts and costs, as well as consideration of input from resource agencies, local elected and appointed officials and the public. The major steps in the process of selecting a single preferred alternative for this project are as follows:

- **Preliminary Alternatives Analysis and Screening.** Each of the alternatives developed for the US 31 Improvement Project, from Plymouth to South Bend, was evaluated to determine if it would be carried forward for evaluation in the Draft Environmental Impact Statement (DEIS). A two-phase process was used to screen each alternative. Phase 1 screened alternatives with respect to purpose and need, while Phase 2



screened alternatives with respect to potential social and environmental impacts. Only those alternatives that met the purpose and need of the project in the Phase 1 analysis were advanced to Phase 2 of the screening process. Based on this screening process, four of the original eleven freeway alternatives were recommended for further analysis in the DEIS (Alternatives C, E, F and G) as well as the No-Build Alternative.

- **Alternatives Analysis in DEIS.** Following the Preliminary Alternative Analysis and Screening process, there were several meetings held to discuss the screening results. Additionally, numerous written comments and comments from the project's website were received. As additional field data and comments were analyzed and preliminary engineering further developed, a more accurate measure of social and environmental impacts of each of the alternatives (Alternatives C, E, F and G) was determined. A review of these impacts raised concerns related to wetland impacts, residential and business relocations, and historic property impacts. To address these concerns, modifications, or shifts, in the four remaining preliminary freeway alternatives, Alternatives C, E, F and G, were investigated. The goal of these modifications was to minimize impacts to the environment, residents, businesses, and historic properties. A comparison of each alternative and proposed modifications to each alternative was conducted with the following results:
 - Alternative C – Modifications to Alternative C, called Alternative Cs, reduced impacts resulting in Alternative Cs being carried forward for more detailed study in the DEIS.
 - Alternative E – Modifications to Alternative E, called Alternative Es, reduced impacts resulting in Alternative Es being carried forward for more detailed study in the DEIS.
 - Alternative F – Modifications to Alternative F that would relocate it west of the Ullery/Farneman House, in an attempt to minimize impacts and eliminate the Section 4(f) issue, would essentially make the modified Alternative F the same as Alternative E and/or Alternative Es. For this reason, Alternative F and modified Alternative F were eliminated from further consideration.
 - Alternative G – Modifications to Alternative G, called Alternative G-C, which was a hybrid alternative combining Alternatives G and C, reduced impacts resulting in Alternative G-C being carried forward for more detailed study in the DEIS.

Four alternatives, the No-Build Alternative and three Freeway Alternatives Cs, Es and G-C were selected for detailed study in the DEIS.

- **Consideration of Alternative G – Ironwood Road Connection.** During resource agency meetings and in comments received during the comment period on the DEIS, the U.S. Environmental Protection Agency (USEPA) and the US Army Corp of Engineers, Detroit District (USACE) requested a review of options not fully considered in the DEIS. They identified, in particular, modifications to Alternative G that would terminate at the existing US 20 and Ironwood Road interchange. The US 20 and Ironwood Road interchange was the north terminus of Preliminary Alternative K that was eliminated from further consideration during the initial Preliminary Alternatives Analysis and Screening due to its failure to meet the purpose and need of the project. In response to those comments, INDOT and FHWA considered Alternative G – Ironwood Road Connection.

The additional analysis included an investigation of the alternative, including additional major roadway improvements to existing roadway facilities that would be required to make the alternative meet the purpose and need of the project. It was found that in addition to construction of the new freeway Alternative G – Ironwood Road Connection, two additional major roadway improvement projects would be required to meet the minimum LOS D for the alternative. The first major additional roadway improvement project



would consist of the improvement of Ironwood Road from US 20 northward to SR 933 (Lincolnway) (approximately 2-miles) from an existing four-lane facility to a seven-lane facility. The second major additional roadway improvement project would consist of the improvement of existing US 31 from Roosevelt Road northward to US 20 (approximately 2-miles) from an existing four-lane facility to a seven-lane facility.

Additional data was also developed for Alternative G – Ironwood Road Connection regarding potential historic impacts (properties eligible or potentially eligible for the National Register of Historic Places (NR), local historic landmarks and adverse impacts requiring mitigation). It was found that the alternative would have a direct impact on one historic property that is eligible for the NR (a Section 4(4) issue), the Ullery/Farneman House, which is located on existing US 31 just south of Kern Road. The alternative would also have direct impacts on two properties that are potentially eligible for the NR as well as adverse effects on several properties that would require mitigation.

Additional data was also developed for Alternative G – Ironwood Road Connection regarding potential socio-economic impacts (commercial and residential relocations, costs, etc.). It was found that the alternative would directly impact the St. Joseph County Fairgrounds, would require from 1.75 to 4 times more residential relocations than any other alternative and would have a total cost that was from 15% to 50% higher than any of the other alternatives.

Additional data was also developed for Alternative G – Ironwood Road Connection regarding potential environmental impacts (wetlands, forests, farmlands, etc.). It was found that the alternative slightly reduced forest and wetland impacts but it slightly increased farmland impacts.

The impacts of Alternative G – Ironwood Road Connection were compared to the impacts of the alternatives studied in detail in the DEIS (Alternatives Cs, Es and G-C) and to the hybrid Alternative G-E, as discussed below in the evaluation of hybrid alternatives. It was found that while the wetland and forest impacts associated with Alternative G – Ironwood Road Connection were slightly less than those of the alternatives studied in the DEIS, they were still higher than the wetland and forest impacts associated with the hybrid Alternative G-E. As discussed above, Alternative G – Ironwood Road Connection had a much higher associated total costs, residential relocations, potential historic impacts including a Section 4(f) issue and farmland impacts. Based on these considerations, as well as data contained in the DEIS, FHWA and INDOT concluded that Alternative G – Ironwood Road Connection is not a reasonable alternative.

- **Evaluation of Hybrid Alternatives.** During resource agency meetings and in comments received during the comment period on the DEIS, the USACE and the U.S. Department of the Interior requested a review of modifications to alternatives that would maximize the use of the existing US 31 corridor. Additionally, the Indiana Department of Natural Resources (IDNR) requested a review of potential modifications to Alternative G-C north of Roosevelt Road to avoid impacts to natural resources. Public comments also requested the investigation of the combination of Alternative Es and G-C north of Roosevelt Road. In response to these requests, a “hybrid” alternative, Alternative G-Es was developed. Alternative G-Es is a hybrid alternative consisting of a combination of the southern portion of Preliminary Alternative G-C and the northern portion of Preliminary Alternative Es. Additional analysis indicated that the hybrid alternative resulted in a reduction of wetland impacts, and avoidance of many high quality wetland complexes west of existing US 31, a reduction in forest impacts, a good traffic performer, an alternative that utilized more of the existing US 31 corridor, and relocation impacts and cost estimates that were consistent with the other alternatives being studied in the DEIS. Therefore, the range of reasonable alternatives in the decision-making process was expanded to include Alternative G-Es, along with the No-Build Alternative and Alternatives Cs, Es and G-C.



- **Consideration of Section 404 Requirements.** During resource agency meetings and in comments received during the comment period on the DEIS, the USACE stated that due to the magnitude of the projected wetland impacts, it may be difficult to grant a permit for the project as proposed for the alternatives carried forward in the DEIS. Additionally, the USEPA emphasized the importance of selecting a preferred alternative in accordance with the wetlands permitting requirements under Section 404 of the Clean Water Act. In particular, the USEPA mentioned the need to ensure consistency with the Section 404(b)(1) Guidelines, which require (in the context of Section 404 permit decisions) selection of the “least environmentally damaging practicable alternative” or “LEDPA”. The USEPA also mentioned that the selection of one of the DEIS build alternatives as the preferred alternative might not be consistent with the selection of the least environmentally damaging practicable alternative (LEDPA). In response to this, FHWA and INDOT considered all of the alternatives in terms of both their practicability and their relative impact on wetlands. A Section 404(b)(1) consistency analysis will be included in the FEIS.
- **Final Selection of Single Preferred Alternative.** Following a comparison of the remaining alternatives (the No-Build Alternative and Alternatives Cs, Es, G-C and G-Es), Alternative G-Es was identified as the single preferred alternative. The Preferred Alternative meets the projects’ purpose and need; performs the best in most of the environmental considerations; impacts the least amount of wetlands; falls within the range of the other alternatives when considering engineering cost estimates and residential and commercial relocations; and is among the best of the traffic performers. Additional information related to Alternative G-Es will be discussed in **Chapter 3**.

1.4 Major Issues

INDOT received over 2,300 comment letters during the DEIS Public Comment Period and many additional comments during public meetings and resource agency reviews. From these comments, a wide range of issues emerged. These issues were considered and addressed and were very beneficial in the process of selecting the Preferred Alternative G-Es. Responses to all substantive comments will be included in the FEIS. The issues addressed in this document include:

- Safety and local access to neighborhoods and businesses,
- Impacts to the human environment, particularly residential and business relocations,
- Modify alternatives to reduce environmental impacts (wetlands, forests and forest fragmentation, threatened and endangered species, etc.),
- Visual, noise and aesthetics impacts associated with the proposed elevated roadway between Kern Road and US 20,
- Maximize use of existing US 31 corridor.

1.5 Preliminary Mitigation Measures

The proposed mitigation measures contained in Chapter 6 of this document range from specific commitments to general recommendations that will be considered during the final design process for the project. Some of the major mitigation measures include:



- **Wetlands Mitigation** – Wetlands will be replaced at various mitigation ratios for emergent wetlands, scrub/shrub wetlands, and forested wetlands. The actual mitigation will depend on quality, location and size of the wetland.
- **Noise Mitigation** – Mitigating traffic noise impacts may involve measures such as constructing a noise barrier in the form of an earthen berm and/or vertical wall or changing the horizontal and vertical alignment of the roadway. The noise analysis conducted for the DEIS was of sufficient detail to identify potential impact areas associated with each study alternative. A preliminary noise barrier analysis in the DEIS identified likely reasonable and feasible noise abatement measures for the two alternatives that were combined to become the Preferred Alternative. A more detailed noise barrier analysis will be conducted for the FEIS and noise barriers and other abatement measures will also be analyzed in more detail during the design phase.
- **Local Access Mitigation** – Local access, especially for emergency service needs, will be provided across the Preferred Alternative G-Es and across US 20.
- **Context Sensitive Solutions Mitigation** – Context Sensitive Solutions are mitigation measures that insure the Preferred Alternative G-Es will be designed and constructed with sensitivity to aesthetic values, historic cultural landscapes, and community values. Interchanges and overpasses along US 31 would provide effective opportunities for aesthetic enhancements. The INDOT will work with the City of South Bend on the segment of preferred alternative between Kern Road and US 20 to provide a gateway sense of arrival to the City of South Bend. Items included in Context Sensitive Solutions in design for similar projects around the state include special landscaping, signing, bridge treatments, aesthetic treatments of surfaces, etc. that complement the natural, cultural, historical and scenic resources of the study area.

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