
1.0 SUMMARY OF THE 1981 FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE US-31 FREEWAY IN BERRIEN COUNTY

On June 9, 1981, the Federal Highway Administration (FHWA) approved the Final Environmental Impact Statement (FEIS) for a US-31 freeway in Berrien County, Michigan. The 1981 FEIS was prepared by the Michigan Department of Transportation (MDOT) for the relocation of 18.4 miles of primarily two lane existing US-31 highway between Matthew Road near Niles, Michigan and I-94 near Benton Harbor. Prior to the release of the 1981 FEIS a segment of US-31 freeway from the Michigan/Indiana state line north to Matthew Road had already been approved and let for construction. Since 1981, the US-31 freeway north of Niles has been constructed in stages and was opened to Napier Avenue in August 2003. Napier Avenue is the southern boundary of the study area for this Final Supplemental Environmental Impact Statement (FSEIS). This FSEIS updates the analysis for the northernmost four miles of freeway approved in the 1981 FEIS. **Figure 1.0** illustrates the study area for this FSEIS in the context of the US-31 freeway alignment approved in 1981.

This section highlights the information presented in the 1981 FEIS pertinent to the current study area. The 1981 FEIS covered an area much larger than the current study area and many of the impacts addressed were not applicable to this study.

1.1 Historical Background

The 1981 FEIS proposed the relocation of 18.4 miles of the existing two lane free access US-31. The replacement freeway was to be 19 miles long and connect to I-94 at the I-196/US-31 interchange with I-94. The 1981 FEIS was the culmination of a series of transportation studies begun by MDOT in 1967 for a US-31 freeway from the Indiana/Michigan state line to I-94. The US-31 freeway was approved in 1972 from the state line north to Matthew Road, the southern terminus of the 1981 FEIS study area. In 1978, a Draft Environmental Impact Statement was released for the segment north of Matthew Road. The 1981 FEIS presented the proposed alignment for the US-31 freeway (1981 FEIS, pages I-5 to I-7).

1.2 Planning Justification and Corridor Deficiencies (Purpose of and Need for the Proposed Action)

The 1981 FEIS identified US-31 as part of the framework system of “Statewide Arterial Highways” and stated that the project would integrate with the existing US-31/I-196 freeway north of Benton Harbor to provide a continuous north-south freeway route through southwestern Michigan.

The 1981 FEIS cited physical deficiencies with the then existing two lane free access US-31 as an important reason for construction of a new freeway. The 1976 Sufficiency Ratings showed the entire 18.4 miles of US-31 under study as having a critical deficiency in operations.

Original US-31 Freeway Alignment as Presented in the 1981 FEIS

US-31 Freeway Connection to I-94

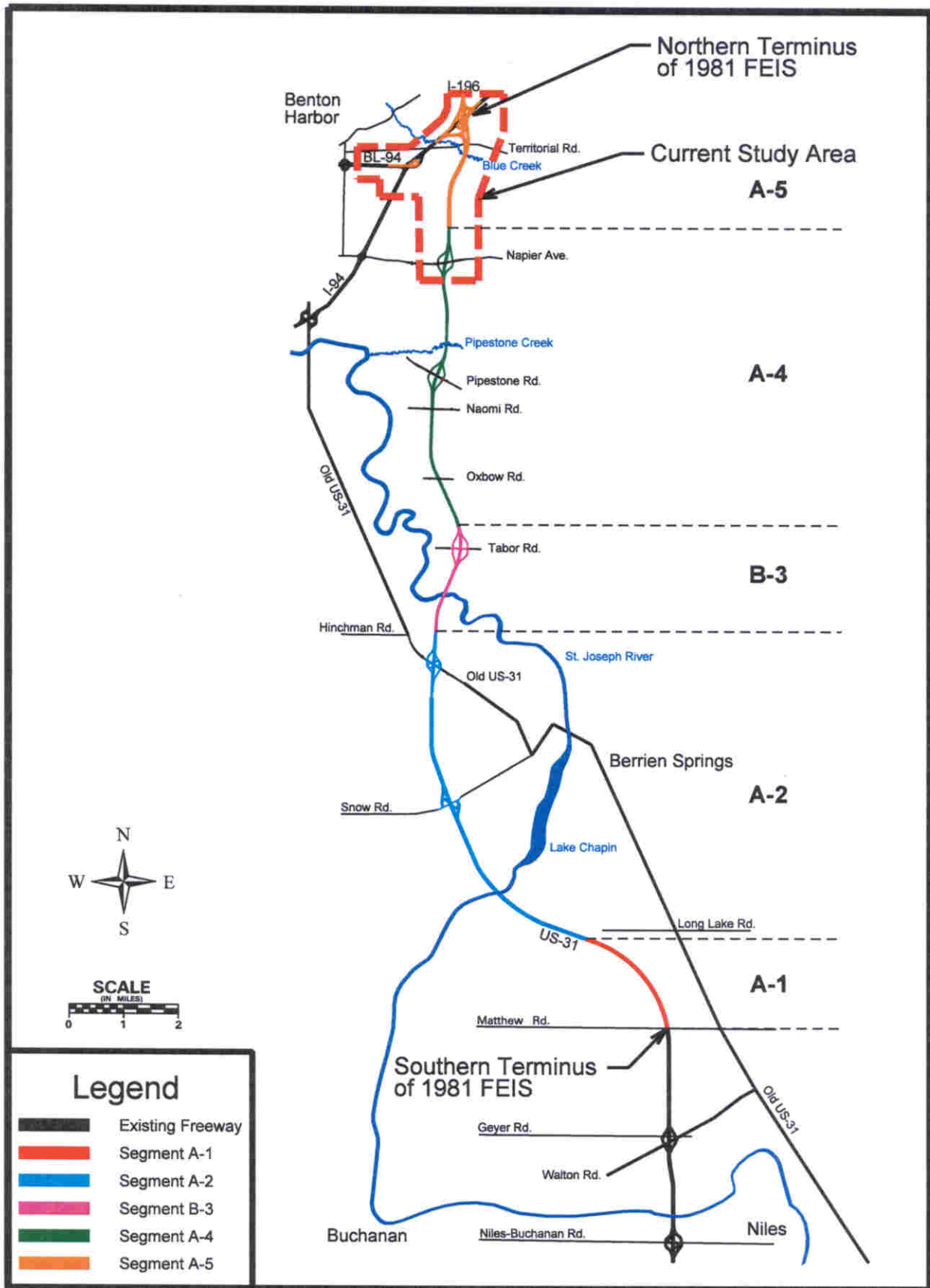


Figure 1.0 Original US-31 Freeway Alignment

Note: Segment A-5 has not been constructed and is the subject of this FEIS
 Segment A-4 construction completed 2003

Existing US-31 was also deficient in its ability to handle the forecast traffic for the corridor. The 1981 FEIS forecast traffic volumes ranged between 27,400 and 53,600 vehicles per day by 2000 on a new US-31 freeway and up to 24,700 vehicles per day on the existing US-31 under a No-Build scenario. The projected traffic on the existing US-31 No-Build Alternative was twice what the roadway could have safely and efficiently carried. In 1981, existing US-31 was operating at level-of-service E and experiencing severe congestion and traffic disruption (1981 FEIS, II-2 to II-32).

As indicated by the analysis conducted for the current study, much of the development and traffic forecast in the 1981 FEIS has not materialized in the proximity of the new US-31 freeway. This allows for the development of a less complex connection at I-94 and the potential for development of alternatives with reduced impacts and construction costs as evaluated in this document.

1.3 Alternatives Considered in the 1981 FEIS

Benchmark/No-Build: The benchmark/No-Build Alternative was not considered a viable alternative since it would mean continued acceptance of an inadequate transportation facility (1981 FEIS, II-33, IV-66).

Low Capital Improvement: This alternative involved making minor improvements to existing US-31 including left turn lanes, widening of lanes, increased signals, and other traffic signing. This alternative would have required minimal additional right-of-way. It also concluded that the existing alignment of US-31 through Berrien Springs could not feasibly be improved to adequately and safely handle the projected traffic (1981 FEIS, II-33, IV-67).

Upgrade Existing US-31: These alternatives involved improving the existing US-31 alignment to: a) a five or seven lane roadway with free access, b) a four or six lane divided roadway with free access, or c) a limited access freeway. The 1981 FEIS concluded that a five or seven lane roadway on the existing alignment would result in an enormous number of adverse impacts while only providing a short-term solution to the highway's deficiencies. It concluded that a four or six lane divided facility would eventually necessitate additional improvements to provide motorists with an efficient means of transportation and that problems with pedestrian crossings and uncontrolled access would remain. The FEIS also documented that tremendous social, economic, and environmental costs would occur as a result of building a freeway on the existing US-31 alignment (1981 FEIS, II-34, IV-67 to IV-84).

Alternate Modes of Transportation: This alternative involved consideration of the potential to reduce travel demand in the US-31 corridor to the extent necessary to make the benchmark, low capital or upgrade alternatives practical and desirable. It was concluded that sufficient diversion from automobile trips could not be realized from available modal alternates (1981 FEIS, II-34, IV-85 to IV-87).

Reconstruction of US-31 on a New Location to Freeway Standards: This alternative was comprised of four possible alternate highway alignments. The 1981 FEIS discussed the impacts connected with each of the considered alignments in detail. This summary will focus on the impacts of the identified 1981 Preferred Alternative (1981 FEIS, II-34).

1.4 Social, Economic and Environmental Inventory (Affected Environment)

Many of the issues identified in the 1981 FEIS were relevant only to areas south of the current study area and are not discussed here. Observations in this section reflect the information that was available in the 1970s.

Population: Berrien County was the tenth largest county in Michigan in 1970, with a population of 163,875; the Benton Charter Township population was 22,713, constituting 14% of the Berrien County population (1981 FEIS, III-2 to III-4). The county and township population were both forecast to grow by the year 2000 to 240,000 and 40,000 respectively.

Housing and Economic: In 1970, the county had a housing vacancy rate above the Michigan average. Income levels for the county were slightly lower than the state average, with 9.5% of residents living below the poverty line as defined in the 1970 Census. Manufacturing, specifically food processing, was considered an important part of the county's economy, along with agriculture. Overall, the economy was considered diversified and strong (1981 FEIS, III-5 to III-13).

Land Use: General cropland (37%) and orchards (20%) were the dominant land uses in the 1981 study area. Agriculture made up approximately half of the land-use in Benton Charter Township, with residential (15%), residential farms (13%), public/semi-public land (6%), and unused land (6%) making up the other major land uses. Berrien County was cited as an important source of orchard crops including apples, brambles, tart cherries, grapes, nectarines, peaches, pears, prunes, plums, and strawberries, making it the most productive fruit county in Michigan (1981 FEIS, III-13 to III-20).

Cultural Resources: The 1981 FEIS concluded that there were no archaeological or historic sites of significance that any proposed alignment would affect. However, since the area had archaeological potential, it stated that a more detailed survey would be needed once a specific alignment was adopted. The 1981 FEIS mentioned no affected 4(f) properties in the study area north of Napier Avenue (1981 FEIS III-20 to III-24).

Public Facilities: Water supply systems are still confined to the towns and villages while rural areas depend on local wells, as originally stated in the 1981 FEIS. No community facilities in the current study area were mentioned in the inventory section of the 1981 FEIS (1981 FEIS, III-24 to III-28).

Natural Environmental Features: Mineral deposits identified in the county include sand, gravel, oil, and groundwater; all except oil producing wells exist within the current study area.

Water quality issues in the FEIS focused on the St. Joseph River, which does not flow through the current study area. Blue and Yellow Creeks, the two water resources in the current project area, are tributaries to the Paw Paw River. Blue Creek, as described in the FEIS, is eight feet wide, between one half and five feet deep, flowing in a northwesterly direction. Yellow Creek was described as having an average width of four feet, a depth of three to 18 inches and flowing to the southwest. Both creeks are classified as Second Quality Coldwater streams receiving their water from springs and surface runoff. More recent inspection of Yellow Creek suggests that it has an average width of six feet and a six to 24 inch depth. The area around Blue and

Yellow Creeks was noted in the FEIS (III-33 to III-41, III-44 & 45) for being distinctive because of the unusually rich number of aquatic species found there.

The FEIS identified few wetland sites within the area currently under study. It also stated “no rare or endangered wildlife species listed by the federal authorities inhabit the project area” (1981 FEIS, III-48). The Mitchell’s satyr butterfly (*Neonympha mitchellii*) was identified in the current study area in the late 1980’s and continues to inhabit the Blue Creek Fen. It was subsequently listed as a federally endangered species in 1991. The FEIS stated that the ranges of the then endangered Indiana bat (*Myotis sodalis*) and peregrine falcon (*Falco peregrinus*) and the then state threatened bald eagle (*Haliaeetus leucocephalus*) included Berrien County. Only the peregrine falcon and the bald eagle were mentioned as being reported in the study area. There were no recorded instances of the Indiana bat in Berrien County (1981 FEIS III-48, 49). None of these species were observed as a part of the current study.

1.5 Summary of Environmental Impacts

The 1981 FEIS contained the following generalized summary of the beneficial and adverse impacts of the proposed US-31 freeway.

Beneficial:

1. Provide a roadway with increased traffic capacity and safety, offering improved long distance north-south and east-west vehicular circulation.
2. Provide new and increased opportunities for economic growth and expansion for the major urban areas of the region.
3. Provide improved access to recreational and scenic areas of the region.
4. Provide a focal point from which future economic and transportation expansion can be oriented.
5. Provide opportunities for orderly development.
6. Provide increased accessibility to the St. Joseph-Benton Harbor Area.
7. Provide for the removal of much commercial and through traffic from existing US-31.
8. Provide long-term increase in tax base due to better access.

Adverse:

1. Loss and disruption of an established rural land use pattern.
2. Relocation of families.
3. Short-term loss of tax base for local units of government.
4. Disruption of local transportation patterns.

5. Alteration of the existing aesthetic characteristics of the project area.
6. Alteration of existing topographic features, established drainage patterns, and possible alteration of groundwater and surface water quality.
7. Increase of litter, noise, and air pollution.
8. Increased potential for soil erosion, siltation, and sedimentation.
9. Alteration of aquatic life and fish habitat.
10. Separation or severing and removal of portions of wildlife habitat.

1.6 Impact Analysis for Proposed Alignment

Although the 1981 FEIS featured an impact analysis for each of the alternatives considered, this section will focus on the impacts of the alignment that was proposed for construction (**Figure 1.0**). This is the alignment that has been constructed up to Napier Avenue, the southern terminus of the current study area. The northernmost segment of the proposed alignment (Alternative A-5 from Napier Avenue to I-94) in the 1981 FEIS is presented as Practical Alternative PA-4 in this FSEIS. This section discusses its original impacts. This alternative included road closures for Highland Avenue and Blue Creek Road, crossings of Blue Creek and Yellow Creek, and a northern terminus at I-94 calling for reconstruction of the existing I-196/I-94 interchange.

The total right-of-way required for the entire proposed alignment was 1,599 acres. This included 796 acres of cropland, 253 acres of orchard land, and 245 acres of woods and wetland. The total proposed alignment required 237 separate parcels of land containing 121 buildings. This included 101 residences, 18 businesses and two non-profit organizations. The A-5 segment north of Napier Avenue required 84 parcels, 351 acres of land and relocated 36 residences, two commercial structures, and a church (1981 FEIS, IV-7 to IV-8, IV-46). Some of the proposed right-of-way was acquired north of Napier Avenue and 36 residences were relocated prior to the current Draft Supplemental Environmental Impact Statement (DSEIS) and FSEIS. Potential new relocations for all alternatives currently under study would be less than those identified for segment A-5 in the FEIS.

Socio-Economic Patterns: In addition to the above-mentioned relocations, the FEIS also stated that the shifting of trunkline traffic from the existing roadway would reduce the total potential customers for businesses oriented to through traffic. At the same time land values were expected to rise along the existing alignment due to the reduction in congestion. Within the current study area, segment A-5 of the proposed alignment would have required the encasement of three natural gas pipelines owned by the Michigan-Wisconsin Gas Company (1981 FEIS, IV-6 to IV-9, IV-45).

Agricultural: Approximately 60% (1,049 acres) of the land proposed for acquisition in the 1981 FEIS alignment was agricultural. Alternative A-5 required 143 acres of agricultural land within the current study area, including ten acres classified as prime farmland and 50 acres classified as unique farmland. The FEIS cited a pattern of decline in agricultural land use in Berrien County as a concern connected with the proposed alignment and any secondary development that could occur along with it (1981 FEIS, IV-14, IV-46).

Historical and Archaeological Sites: The 1981 FEIS stated that there were no recorded historic sites in the study area of national, state, or local significance. At the time of publication, a detailed survey of potential archaeological sites had not been conducted in the study area (1981 FEIS, IV-15).

Section 4(f) Lands: The 1981 FEIS stated that there were no 4(f) properties within the study area which would be affected by the proposed freeway alignment (1981 FEIS, IV-16).

Noise: A detailed noise analysis was conducted as part of the 1981 FEIS. Projected 2000 L_{eq} noise levels on the proposed US-31 freeway were between 72 and 75 dBA at the right-of-way line resulting in eight residential structures experiencing noise levels one or two decibels above federal standards (1981 FEIS, IV-16). Due to significant changes in traffic volumes and testing methodologies, the results from the 1981 FEIS are no longer considered to be valid.

Air Quality: The 1981 FEIS stated that the study area was located in a region designated by the United States Environmental Protection Agency to receive special attention regarding ambient air quality standards. The project was not expected to cause adverse air quality effects and was consistent with the state implementation plan for meeting air quality standards (1981 FEIS, IV-16). Several changes have been made to the Clean Air Act since the publication of the 1981 FEIS with the most recent being the 1990 Clean Air Act Amendments. These changes, along with considerable changes in the forecasted traffic volumes, updated air quality modeling techniques, and a reclassification of the study area as a maintenance attainment area for all pollutants render the original air quality analysis impertinent to this study.

Construction Impacts: The 1981 FEIS stated that during construction of the proposed project, the project area would be temporarily subjected to decreased environmental quality due to noise, dust, debris, and erosion (1981 FEIS, IV-17).

Energy Consideration: The 1981 FEIS stated that energy use would improve with the new US-31 freeway because it would provide for an energy efficient configuration of steady flow traffic and eliminate stop and go traffic (1981 FEIS, IV-19).

Groundwater: The proposed freeway was expected to have very minor impacts on the water table but was expected to cause some long-range degradation of groundwater quality in the shallow unconfined upper granular outwash and spillway deposit aquifer (1981 FEIS, IV-20).

Mineral Resources: Glacial deposits of sand, gravel, and clay were the only mineral deposits cited as being directly affected by the proposed route (1981 FEIS, IV-20).

Soil Erosion: The 1981 FEIS discussed the existence of the Coloma Soils Series north of Empire Road (in the current study area), which are relatively low in water holding capacity and are subject to wind erosion where vegetation has been removed. There were no proposed deep cut sections in the Coloma soils in the proposed alignment (1981 FEIS, IV-21).

Vegetation: The 1981 FEIS proposed alignment required the clearing of 245 acres of forest cover. The 1981 FEIS stated that approximately ten acres of vegetation along Blue Creek and 15 acres of vegetation along Yellow Creek would be impacted by the proposed alignment. The 1981 FEIS stated that the Yellow Creek crossing could disturb a rare occurrence of Balsam fir (1981 FEIS, IV-22).

Wildlife: The 1981 FEIS identified no rare or endangered wildlife species listed by federal authorities that would be affected by the project (1981 FEIS, IV-22). The Mitchell's satyr butterfly located in the Blue Creek Fen was not listed as endangered until 1991, after the 1981 FEIS was approved.

Wetlands and Stream Crossings: The 1981 FEIS stated that the proposed freeway would impact wetlands and require muck removal. A map and summary of wetland impacts was included in the document. The 1981 FEIS proposed alternative crossed a number of rivers and streams including Blue and Yellow Creeks within the current boundaries. The 1981 FEIS stated that crossings could change the velocity, temperature, or water quality of the rivers and streams through rechannelization, the placement of culverts, and sedimentation.

1.7 Planning and Measures to Minimize Adverse Impacts

The 1981 FEIS provided standard mitigation information and discussion for the following impacts (1981 FEIS, V-2 to V-7):

- Relocations of Individuals, Families, and Businesses
- Loss of Taxable Property
- Control of Urban Sprawl
- Control of Air Pollution
- Noise Levels
- Continuance of Public Utility Service
- Disposal of Solid Waste
- Traffic Maintenance
- Litter
- Ground Cover
- Erosion and Sedimentation Control
- Alteration of Existing Groundwater Hydrological Systems
- Groundwater Quality

Each of these discussions provided general information and standard mitigation procedures for projects of this type in the State of Michigan but did not provide information that was unique to the US-31 study area.

The 1981 FEIS identified special, project specific mitigation measures for stream and wetland crossings. To minimize loss of the natural channel and impacts to the fisheries habitat for Blue Creek and Yellow Creek, the FEIS proposed that the new channel widths should be no greater than the average stream width. It also proposed laying a three-foot strip of riprap along the banks of impacted channels and riprapping to the top of the slope of outside curves with the greatest stream velocity (1981 FEIS, V-8 to V-9). Following the identification and listing of the Mitchell's satyr butterfly and further analysis of the value of the habitat in the Blue Creek Fen, a much more detailed mitigation plan was developed for the approved alignment that involved avoiding any impacts to the creek bed. These updates occurred several years after the 1981 FEIS was published. The Recommended Alternative presented within this FSEIS proposes no new structures over Blue Creek, Yellow Creek, or the Blue Creek Fen.

1.8 Comments and Responses

The 1981 FEIS documented all of the comments received from both the public hearing on the Draft Environmental Impact Statement and from governmental agencies and provided explanations and responses where appropriate.